

**1.5 Line**

Put one-and-a-half line spaces between lines.

**2nd Y Axis & Grids**

Update the selected chart's second Y axis and grid properties. This command is only available when the chart contains a second Y axis.

**About Approach**

Display the Approach release number and copyright.

**Active Windows**

Switch to the active window. All active windows appear in the list.

**Add Column**

Add a calculated field to the worksheet.

**Add Field**

Add a field from the current or related database to the view.

**Add Footer**

Insert a footer that appears at the bottom of each page of the report.

**Add Header**

Insert a header that appears at the top of each page of the report.



**Add Page**

Add a page to the current view.

**Add Title Page**

Insert a title page at the beginning of the report.

**Align**

Align selected objects to each other or to the grid.

**Apply**

Apply a named chart style to the selected chart.

**Approach File Properties**

Display or update information about the current Approach file.

**Approach Preferences**

Set default options for display, order, navigation, passwords, and other options.

**Ascending**

Sort the data in a selected field in ascending order.

**Average**

Calculate the average value in the selected column. Display the average at the end of the column if no summary bands exist, or in all summary bands.



**Bold**

**Bold** selected text.

**Bring Forward**

Bring the selected object(s) one layer forward.

**Bring to Front**

Place the selected object(s) in front of other objects.

## **Browse menu**

The Browse menu appears when you are in Browse, and viewing a form.

### **Find>**

- [Find](#)
- [Find Assistant](#)
- [Find Again](#)
- [Find All](#)

### **Sort>**

- [Ascending](#)
- [Descending](#)
- [Define](#)

### **New Record**

**Duplicate Record**

**Hide Record**

**Delete Record**

**Delete Found Set**

**Dial**

**Fill Field**

### **Insert>**

- [Today's Date](#)
- [Current Time](#)
- [Previous Value](#)

**Refresh Data**

**Browse & Data Entry**

Change to Browse to enter, review, find, and sort data. A context-sensitive menu item appears depending on the view or object you select.

**Button**

When in Design, draw a button. This is the same as selecting the Button tool in the Tools palette.

**Cascade**

Arrange active windows diagonally, leaving the title bars visible.

**Cells Only**

Select only the cells in a highlighted column.



**Center**

Align selected text to the center.

**Chart**

Create a new chart using the Chart Assistant.

**Chart**

When in Design, draw a chart. This is the same as selecting the Chart tool in the Tools palette.

## **Chart menu**

The Chart menu appears when you are in Design and select a chart.

### **Chart Type**

#### **Chart Style>**

- Apply
- Create
- Set Default Chart

### **Chart Properties**

**Title**

**Legend**

#### **Axes & Grids>**

- X Axis & Grids
- Y Axis & Grids
- 2nd Y Axis & Grids
- Z Axis

### **Series**

**Series Labels**

**Plot**

**Note**

**Table**

**Drill Down to Data**

**Chart Properties**

Open the InfoBox to modify the properties of the selected chart.

**Chart this Crosstab**

Create a chart from the crosstab data.

**Chart Type**

Change the selected chart type and layout.

**Check Box**

When in Design, draw a check box. This is the same as selecting the Check box tool in the Tools palette.



**Check Spelling**

Find and correct misspelled and duplicate words.

**Clean Screen**

Hide SmartIcons, status bar, action bar, and view tabs. Clean the screen to get the maximum work area.

**Clear**

Delete the selection. The original is removed from the file.

**Close**

Close the current file or active window.

**Close & Return**

Close the current file or active window, and return to the original application.

## **Column menu**

The Column menu appears when you are in Design and select a column in a report.

### **Column Properties**

#### **Report Properties**

##### **Find>**

- [Find](#)
- [Find Assistant](#)

##### **Sort>**

- [Ascending](#)
- [Descending](#)

##### **Arrange>**

- [Bring to Front](#)
- [Send to Back](#)
- [Bring Forward](#)
- [Send Backward](#)

##### **Align**

##### **Group**

##### **Ungroup**

##### **Delete Report**

##### **Duplicate Report**

##### **Delete Page**

##### **Duplicate Page**

##### **Add Field**

##### **Add Header**

##### **Add Footer**

##### **Add Title Page**

##### **Insert>**

- [Today's Date](#)
- [Current Time](#)
- [Page Number](#)

##### **Groups & Totals>**

- [Sum](#)
- [Average](#)
- [Count](#)
- [Minimum](#)
- [Maximum](#)
- [Standard Deviation](#)
- [Variance](#)

- [Leading Summary](#)
- [Trailing Summary](#)

**[Show Title Page](#)**

**[Turn on Columns](#)**

**[Edit OLE Object](#)**

**[Named Style](#)**

**[Fast Format](#)**

**Column Properties**

Open the InfoBox to modify the properties of the selected column.



**Copy**

Copy the selection to the Clipboard. The original remains in the file.

**Copy View**

Copy the current view to the Clipboard.

**Count**

Calculate the number of items in the selected column. Display the count at the end of the column if no summary bands exist, or in all summary bands.

**Create**

Define named chart styles to apply to other charts.

**Create menu**

**Form**

**Report**

**Worksheet**

**Crosstab**

**Chart**

**Form Letter**

**Mailing Label**

**Envelope**

**Repeating Panel**

**Summary**

**Drawing>**

- [Text](#)
- [Line](#)
- [Ellipse](#)
- [Rectangle](#)
- [Rounded Rectangle](#)

**Control>**

- [Field Box](#)
- [Radio Button](#)
- [Check Box](#)
- [PicturePlus Field](#)
- [Chart](#)
- [Button](#)
- [Custom Control](#)

**Custom Menu**

**Named Find/Sort**

**Join**

**Field Definition**

**Object**

**Crosstab**

Create a new crosstab using the Crosstab Assistant.

## **Crosstab menu**

The Crosstab menu appears when you are viewing a crosstab.

### **Crosstab Properties**

#### **Find>**

- Find
- Find Assistant
- Find Again
- Find All

#### **Delete Crosstab**

#### **Duplicate Crosstab**

#### **Add Field**

#### **Select>**

- Header Only
- Cells Only

#### **Edit Column Label**

#### **Summarize Rows**

#### **Summarize Columns**

#### **Chart this Crosstab**

#### **Drill Down to Data**

#### **Refresh Data**

#### **Named Style**

#### **Fast Format**

**Crosstab Properties**

Update the crosstab name, printing information, and attached macros.



**Current Time**

Insert the current time in the selected field.

**Custom Control**

Insert a custom designed control. Custom controls are OLE objects with .OCX extensions. Add custom controls to the Tools palette for easy access.

**Custom Menu**

Create and modify menus for using in Browse.

**Cut**

Cut the selection to the Clipboard. The original is removed from the file.

**Define**

Define a sort order.

**Delete Approach File**

Delete an Approach file or database.

**Delete Found Set**

Delete all the records in the found set.

**Delete Page**

Delete the current page.



**Delete Record**

Delete the selected record(s).

**Delete [View]**

Delete the current view (form, report, worksheet, etc.).

**Descending**

Sort data in a selected field in descending order.

**Design**

Change to Design to edit and layout views. You can edit forms, reports, form letters, and mailing labels. A context-sensitive menu item appears depending on the view or object you select.

**Dial**

Dial the phone number in the selected field, or dial a number manually.

**Double Line**

Put double line spacing between lines.

**Drill Down to Data**

Display records from the selected region of the crosstab on the designated drill-down view.

**Duplicate Page**

Duplicate the current page.



**Duplicate Record**

Duplicate the selected record(s).

**Duplicate [View]**

Duplicate the current view (form, report, worksheet, etc.).

**Edit Column Label**

Edit the label of the selected column.

**Edit menu**

**Undo**

**Cut**

**Copy**

**Copy View**

**Paste**

**Clear**

**Select All**

**Paste Special**

**Picture>**

- [Import](#)
- [Export](#)

**Find & Replace Text**

**Check Spelling**

**Manage Links**

**Record Transcript**

**Show Script Editor**

**Macros**

**Run Macro**

**Edit OLE Object**

Edit the selected OLE object.

**Edit Route**

Edit the route of a message sent to you, so it goes to the next recipient in the list.

**Ellipse**

When in Design, draw a circle or an ellipse. Hold down SHIFT to draw a circle. This is the same as selecting the Ellipse tool in the Tools palette.

**Envelope**

Create a new envelope using the Envelope Assistant.



## **Envelope menu**

The Envelope menu appears when you are in Design and select an envelope.

### **Envelope Properties**

**Add Field**

**Delete Envelope**

**Duplicate Envelope**

**Delete Page**

**Duplicate Page**

**Insert>**

- Today's Date
- Current Time
- Page Number
- Field Value

**Envelope Properties**

Open the InfoBox to modify the properties of the selected envelope.

**Exit Approach**

End the Approach session. Approach prompts you to save all unsaved files.

**Exit & Return**

End the Approach session and return to the originating application.

**Export**

Copy the selected graphic to a file.

**Export Data**

Export data to other data formats. You can export selected or all records from selected or all fields.

**Fast Format**

Pick up and apply attributes of one object to another.

**Field Box**

When in Design, draw a field box. This is the same as selecting the Field Box tool in the Tools palette.



**Field Definition**

Create new fields, and define field types and options.

**Field Value**

Insert special symbols to display field data.

## **File menu**

**New Database**

**Open**

**Open/Edit SQL**

**Close**

**Close & Return**

**Save Approach File**

**Save As**

**Save View As**

**Delete Approach File**

**Import Approach File**

**Import Data**

**Export Data**

**Approach File Properties**

**TeamMail>**

- [Send New Message](#)
- [Send to Next Stop](#)
- [Edit Route](#)

**TeamSecurity**

**Internet>**

- [Publish as Web Pages\(s\)](#)
- [Open from Internet](#)
- [Save to Internet](#)
- [FTP Connection Setup](#)

**Print**

**Print Preview**

**Page Setup**

**User Setup>**

- [Approach Preferences](#)
- [SmartIcons Setup](#)

**Exit Approach**

**Exit & Return**

**Recent files list**

**Fill Field**

Fill the selected field in every record in the found set, with a predefined value.

**Find Again**

Display the previous find conditions so you can narrow the search.

**Find All**

Display all the records in the database. This is the same as clicking Find All on the action bar.

**Find Assistant**

Search for records using the Find Assistant.

**Find**

Search for records based on selected criteria. This is the same as clicking Find on the action bar.



**Find & Replace Text**

Find specified text and optionally change it.

**Form**

Create a new form using the Form Assistant.

**Form Letter**

Create a new form letter using the Form Letter Assistant.

## **Letter menu**

The Letter menu appears when you are in Design and select a form letter.

### **Form Letter Properties**

**Add Field**

**Delete Form Letter**

**Duplicate Form Letter**

**Delete Page**

**Duplicate Page**

**Insert>**

- Today's Date
- Current Time
- Field Value

**Form Letter Properties**

Open the InfoBox to modify the of the selected form letter.

## **Form menu**

The Form menu appears when you are in Design, and viewing a form with nothing selected.

### **Form Properties**

**Delete Form**

**Duplicate Form**

**Delete Page**

**Duplicate Page**

**Add Page**

**Add Field**

### **Insert>**

- Today's Date
- Current Time
- Page Number
- Field Value

**Form Properties**

Update the form name, margin, border, and fill information, and attached macros.

**FTP Connection Setup**

Configure Internet connection options.



**Full Justify**

Align selected text flush with the left and right sides of text block.

**Group**

Group selected objects.

**Header Only**

Select only the header in a highlighted column.

## **Help menu**

### **Help Topics**

#### **Lotus Internet Support>**

- [Lotus Home Page](#)
- [Lotus Customer Support](#)
- [Lotus FTP Site](#)

#### **Year 2000**

#### **About Approach**

**Help Topics**

Display a list of Help Topic categories, or the Help index.

**Hide Record**

Hide the selected record(s).

**Import Approach File**

When in Design, insert an existing Approach file.

**Import**

Insert a graphic or OLE object from a file. You can link the picture to the original, so if the original changes, Approach updates the picture in the file.



**Import Data**

Add or merge data from different data formats.

**Italic**

*Italicize selected text.*

**Join**

Join databases together to create relationships. You can use fields from joined databases in a view.

**Leading Summary**

Group the selected column; create a summary band at the beginning of the group.

**Left**

Align selected text to the left.

**Legend**

Update the selected chart's legend. Changes the font and frame style and color, and position in relation to the chart.

**Line**

When in Design, draw a line. Hold down SHIFT to draw a vertical, horizontal or 45 degree diagonal line. This is the same as selecting the Line tool in the Tools palette.

**Lotus FTP Site**

Connect to the Internet and access the Lotus FTP site.



**Lotus Home Page**

Connect to the Internet and view the Lotus Home Page.

**Lotus Customer Support**

Connect to the Internet and view the Lotus Customer Support page.

**Macros**

Edit, create, copy, delete, or run macros to automate tasks.

**Mailing Label**

Create a new mailing label using the Mailing Label Assistant.

## **Mailing Label menu**

The Mailing Label menu appears when you are in Design and select a label.

### **Mailing Label Properties**

#### **Find>**

- Find
- Find Assistant

#### **Sort>**

- Ascending
- Descending
- Define

### **Delete Mailing Label**

### **Duplicate Mailing Label**

### **Delete Page**

### **Duplicate Page**

### **Add Field**

#### **Insert>**

- Today's Date
- Current Time
- Page Number
- Field Value

**Mailing Label Properties**

Open the InfoBox to modify the properties of the selected mailing label.

**Manage Links**

Edit, delete, or update links to data in other Windows applications. You can choose to create automatic or manual links to the original file.

**Maximum**

Display the maximum value in the selected column if no summary bands exist, or in all summary bands.



**Minimum**

Display the minimum value in the selected column if no summary bands exist, or in all summary bands.

**Named Find/Sort**

Create a named find/sort.

**Named Style**

Define, edit, and apply named styles to objects.

**New Database**

Create a new database and Approach file.

**New Record**

Create a new record. This is the same as clicking New Record on the action bar.

**Normal**

Remove style and formatting from selected text.

**Note**

Update the selected chart's note properties. You can change the font and frame style and color, and the position of the note in relation to the chart.

**Object**

When in Design, insert an OLE object into the current view.



## **Context Object menu**

The Object menu appears when you are in Design and select a field, button, line, rectangle, ellipse or rounded rectangle. One other Properties command, for the view, also appears.

The Context Object menu appears when you are in Design and select a field, button, line, rectangle, ellipse or rounded rectangle.

If you select an OLE object, the menu name reflects the type of object, for example Bitmap Image, and the Edit command appears for the object.

A Properties command for the type of object appears in the menu. One other Properties command, for the view, also appears.

## **Context Object Properties**

### **Form Properties**

### **Report Properties**

### **Worksheet Properties**

### **Crosstab Properties**

### **Chart Properties**

### **Form Letter Properties**

### **Mailing Label Properties**

### **Envelope Properties**

### **Arrange>**

- Bring to Front
- Send to Back
- Bring Forward
- Send Backward

### **Align**

### **Group**

### **Ungroup**

### **Delete [View]**

### **Duplicate [View]**

### **Delete Page**

### **Duplicate Page**

### **Add Field**

### **Insert>**

- Today's Date
- Current Time
- Page Number
- Field Value

### **Edit OLE Object**

**Named Style**

**Fast Format**

**Object Properties**

Open the InfoBox to modify the properties of the selected object.

**Open**

Open an existing Approach file or database.

**Open/Edit SQL**  
Open an SQL file.

**Open from Internet**

Download a read-only .APT file containing Approach views and data from an Internet server, or a read-only .HTM file from the Internet.

**Page Number**

Insert a special symbol to display the current page. The page number appears in Design, Print Preview, or when you print the report.

**Page Setup**

Change the page settings.



**Paste**

Insert the Clipboard contents at the cursor or last placed clicked.

**Paste Special**

Insert the Clipboard contents as a linked object, embedded object or other special format.

**PicturePlus Field**

When in Design, draw a PicturePlus field. This is the same as selecting the PicturePlus tool in the Tools palette.

**Plot**

Update the selected chart's plot properties.

**Previous Value**

Insert the contents of the field in the previous record in the selected field.

**Print**

Print the current view.

**Print Preview**

Preview the current view.

**Publish as Web Page(s)**

Save the current view as an .HTM file, and upload the file to your preferred Web server in a single step.



**Radio Button**

When in Design, draw a radio button. This is the same as selecting the Radio Button tool in the Tools palette.

**Recent files list**

Open a recently accessed file.

**Record Transcript**

Record a transcript of the actions you perform in Approach.

**Rectangle**

When in Design, draw a square or rectangle. Hold down SHIFT to draw a square. This is the same as selecting the Rectangle tool in the Tools palette.

**Refresh Data**

Update the data to display changes made by others working in the same file.

**Repeating Panel**

When in Design, add a panel to list records from a related database.

**Report**

Create a new report using the Report Assistant.

## **Report menu**

The Report menu appears when you are in Design and select a report.

### **Report Properties**

#### **Find>**

- Find
- Find Assistant

#### **Sort>**

- Ascending
- Descending
- Define

### **Delete Report**

**Duplicate Report**

**Delete Page**

**Duplicate Page**

**Add Field**

**Add Header**

**Add Footer**

**Add Title Page**

#### **Insert>**

- Today's Date
- Current Time
- Page Number
- Field Value

### **Show Title Page**

**Turn on Columns**

**Named Style**

**Fast Format**



**Report Properties**

Open the InfoBox to modify the report's properties. You can change the report name, view options, and associated macros.

**Right**

Align selected text to the right.

**Rounded Rectangle**

When in Design, draw a square or rectangle with rounded corners. Hold down SHIFT to draw a rounded square. This is the same as selecting the Rounded Rectangle tool in the Tools palette.

**Run Macro**

Run the selected macro. Macros only appear in this menu if you chose Show in Menu when you created or edited it.

**Save Approach File**

Save the current Approach file.

**Save As**

Save a copy of the current Approach file and database. You can save the copy with or without data and password protection.

**Save Copy as File**

Save a copy of the current Approach file and database.

**Save to Internet**

Save views and data as an .APT file and upload it to an Internet server directory.



**Save View As**

Save form, worksheet, crosstab or report views in .HTM, .TXT, or .RTF file format.

**Select All**

In Design, select all objects in the current view.

In Browse, select the contents of the current field box.

**Send Backward**

Send the selected object(s) one layer backward.

**Send New Message**

Send or route a message through your E-Mail system, including the current or all views in the current database.

**Send to Back**

Place the selected object(s) behind other objects.

**Send to Next Stop**

Send a message to the next recipient.

**Series**

Update the selected chart's series properties. You can change the color and type of each series in the chart.

**Series Labels**

Update the selected chart's series labels properties.



**Set Default Chart**

Set a default chart type and style. Approach creates new charts using this default type.

## Shortcut menus



### Are you in Design?

When you click the right mouse button on a view or object, a shortcut menu appears.

The shortcut menu lists the most frequently used commands for the selected view or object.

**Show Action Bar**

Show or hide the action bar. Hide the action bar to enlarge your work area.

**Show Data**

When in Design, display actual data instead of field names.

**Show Grid**

When in Design, show or hide the grid lines.

**Show Internet Tools**

Show or hide the Internet Tools palette.

**Show Panel Labels**

When in Design, show or hide the report panel labels.

**Show Rulers**

When in Design, show or hide the ruler.



**Show Script Editor**

Open the LotusScript Editor window.

**Show SmartIcons**

Show or hide the SmartIcons. Hide SmartIcons to enlarge your work area.

**Show Status Bar**

Show or hide the status bar. Hide the status bar to enlarge your work area.

**Show Tab Order**

When in Design, change or review the tab order.

**Show Title Page**

Show or hide the report title page.

**Show Tools Palette**

When in Design, show or hide the Tools palette.

**Show View Tabs**

Show or hide the tabs at the top of each view. Hide view tabs to enlarge your work area.

**Single Line**

Put a single-line space between lines.



**SmartIcons Setup**

Modify and save sets of SmartIcons.

**Snap to Grid**

When in Design, snap objects to the grid.

**Standard Deviation**

Calculate the standard deviation of the values in the selected column. Display the calculation at the end of the column if no summary bands exist, or in all summary bands.

**Strikethrough**

Strike a line through selected text.

**Summarize Columns**

Add crosstab columns to summarize the data.

**Summarize Rows**

Add crosstab rows to summarize the data.

**Summary**

When in Design, add a panel that groups data in a report.

**Sum**

Sum the values in the selected column. Display the total at the end of the column.



**Table**

Update the selected chart's table properties.

**TeamSecurity**

Define privileges and passwords for Approach files, databases, and views.

**Text**

When in Design, draw a text box. This is the same as selecting the Text tool in the Tools palette.

## **Text menu**

The Text menu appears when you are in Design and select a text block in a view. One other Properties commands, for the view, also appears.

### **Text Properties**

### **Form Properties**

### **Report Properties**

### **Form Letter Properties**

### **Envelope Properties**

### **Mailing Label Properties**

### **Normal**

#### **Attributes>**

- Bold
- Italic
- Underline
- Strikethrough

#### **Alignment>**

- Left
- Center
- Right
- Full Justify

#### **Line Spacing>**

- Single Line
- 1.5 Line
- Double Line

### **Delete [View]**

### **Duplicate [View]**

### **Delete Page**

### **Duplicate Page**

#### **Insert>**

- Today's Date
- Current Time
- Page Number
- Field Value

**Text Properties**

Open the InfoBox so you can change the style and properties of the selected text block.

**Tile Left-Right**

Arrange active windows side by side.

**Tile Top-Bottom**

Arrange active windows horizontally.

**Title**

Update the selected chart's title. Changes the font and frame style and color, and position of the title in relation to the chart.



**Today's Date**

Insert the current date in the selected field.

**Trailing Summary**

Group the selected column, create a summary band at the bottom of the group.

**Turn on Columns**

Keep heading and column together as you move them.

**Underline**

Underline selected text.

**Undo**

Reverse the last command or action.

**Ungroup**

Ungroup selected grouped objects.

**Variance**

Calculate the variance of the values in the selected column. Display the variance at the end of the column if no summary bands exist, or in all summary bands.

## **View menu**

### **Browse & Data Entry**

#### **Design**

#### **Zoom In**

#### **Zoom Out**

#### **Zoom To>**

- 25%
- 50%
- 75%
- 85%
- 100%
- 200%

#### **Show Data**

#### **Show Grid**

#### **Snap to Grid**

#### **Show Rulers**

#### **Show Tools Palette**

#### **Show Panel Labels**

#### **Show Tab Order**

#### **Show SmartIcons**

#### **Show Internet Tools**

#### **Show Status Bar**

#### **Show Action Bar**

#### **Show View Tabs**

#### **Clean Screen**



**Window menu**

**Tile Left-Right**

**Tile Top-Bottom**

**Cascade**

**Active Windows**

**Worksheet**

Create a new worksheet using the Worksheet Assistant.

## **Worksheet menu**

The Worksheet menu appears when viewing a worksheet.

### **Worksheet Properties**

#### **Find>**

- [Find](#)
- [Find Assistant](#)
- [Find Again](#)
- [Find All](#)

#### **Sort>**

- [Ascending](#)
- [Descending](#)
- [Define](#)

#### **Delete [View]**

#### **Duplicate [View]**

#### **Records>**

- [New](#)
- [Duplicate](#)
- [Hide](#)

#### **Delete>**

- [Selected Records](#)
- [Found Set](#)

#### **Add Field**

#### **Add Column**

#### **Fill Field**

#### **Dial**

#### **Insert>**

- [Today's Date](#)
- [Current Time](#)
- [Previous Value](#)

#### **Select>**

- [Header Only](#)
- [Cells Only](#)

#### **Edit Column Label**

#### **Refresh Data**

#### **Named Style**

#### **Fast Format**

**Worksheet Properties**

Update the worksheet name, printing information and attached macros.

**X Axis & Grids**

Update the selected chart's X axis and grid properties.

**Y Axis & Grids**

Update the selected chart's Y axis and grid properties.

**Zoom In**

When in Design or Print Preview, enlarge the current view. In Print Preview, the cursor changes to a mouse. Click the right and left mouse buttons to enlarge or reduce the view respectively.

**Zoom Out**

When in Design or Print Preview, reduce the current view.



**Zoom to 100%**

When in Design or Print Preview, change the view to actual size.

**Zoom to 200%**

When in Design or Print Preview, change the view to twice the actual size.

**Zoom to 25%**

When in Design or Print Preview, change the view to 25% of the actual size.

**Zoom to 50%**

When in Design or Print Preview, change the view to 50% of the actual size.

**Zoom to 75%**

When in Design or Print Preview, change the view to 75% of the actual size.

**Zoom to 85%**

When in Design or Print Preview, change the view to 85% of the actual size.

**Z Axis**

Update the selected chart's Z axis and grid properties. This command is only available when the chart is a 3D chart.

**Abs**

*Abs(number)* returns the absolute value of *number*.

The absolute value is the positive equivalent of a number.

**Examples**

- *Abs(6.8)* returns 6.8
- *Abs(-6.8)* returns 6.8
- *Abs(0)* returns 0
- *Abs(Total)* returns 10, where the Total field contains -10



**Acos**

`Acos(number)` returns the arc cosine of *number*, where *number* is between -1 and 1.

The arc cosine is expressed in radians in the range 0 to pi.

Use [Degree](#) to convert radians to degrees.

**Examples**

- `Acos(0.75)` returns 0.7227342478134
- `Degree(Acos(Result))` returns 90, where the Result field contains the value 0.00

**Asc**

`Asc('character')` returns the ASCII value of *character*.

If you give more than one character as a parameter, `Asc` returns a value for the first character only.

See also [Chr](#).

**Examples**

- `Asc('a')` returns 97, the ASCII value of a
- `Asc('Aqua')` returns 65, the ASCII value of A

**Asin**

*Asin(number)* returns the arc sine of *number*, where *number* is between -1 and 1.

The arc sine is expressed in radians in the range  $-\pi/2$  to  $\pi/2$ .

Use [Degree](#) to convert radians to degrees.

**Examples**

- *Asin(0.5)* returns 0.5235987755983
- *Degree(Asin(Result))* returns 30, where the Result field contains the value 0.5

**Atan2**

`Atan2(number1,number2)` returns the arc tangent of *number1* divided by *number2*.

The arc tangent is expressed in radians in the range  $-\pi$  to  $\pi$ .

Use [Degree](#) to convert radians to degrees.

**Example**

`Atan2(0.75,-1.25)` returns 2.6011731533192

**Atan**

*Atan(number)* returns the arc tangent of *number*.

The arc tangent is expressed in radians in the range  $-\pi/2$  to  $\pi/2$ .

Use Degree to convert radians to degrees.

**Example**

- *Atan(-1.25)* returns -0.8960553845713
- *Degree(Atan(Result))* returns -45, where Result field contains the value -1.00

## **Avg**

*Avg(number1, number2, ... numberN)* calculates the average of the listed values within the same record.

If any fields in *number list* are blank, those fields are not included in the average. To consider a zero value in the average, enter a zero (0) in the field. Any number of fields can be in the list.

The fields must all be in the same record.

To average values over a range of records, use SAverage.

### **Examples**

- *Avg(2.8,-5.6,14,5.9)* returns 4.275
- *Avg(Score1,Score2,Score3)* returns 4, where the Score1 field contains 3, Score2 contains 8, and Score3 contains 1
- *Avg(Score1,Score2,Score3)* returns 5.5, where the Score1 field contains 3, Score2 contains 8, and Score3 is blank
- *Avg(Score1, Score2, Score3)* returns 3.7, where the Score1 field contains 3, Score2 contains 8, and Score3 contains 0.

**Blank**

Blank(*field,value*) returns *value* if *field* is blank; otherwise, Blank returns the value in *field*.

*Value* can be any type (text, numeric, date, time, or Boolean) but should match the type of *field*.

**Examples**

- Blank(Cost,2.75) returns 3.95, where the Cost field contains 3.95
- Blank(Cost,Minimum) returns 2.5, where the Cost field is blank and Minimum contains 2.5

**Chr**

Chr(*number*) returns the ASCII character for *number*.

See also [Asc](#).

**Examples**

- Chr(97) returns a
- Chr(65) returns A



## **Combine**

Combine(*list*) concatenates all text strings in *list* to form one text string.

### **Examples**

Combine('Monthly ','Expenses') returns Monthly Expenses. Because these parameters are text strings, the space is included inside the quotation marks (after Monthly).

Combine("First Name",' ','Last Name") returns Mary Jones, where the First Name field contains Mary and Last Name contains Jones. The second parameter is a space. Because the other parameters are field names, the space could not be included with them.

Combine(City,' ','State',' ',Zip) returns San Francisco, California 94504, where the City field contains San Francisco, State contains California, and Zip contains 94504.

Combine(Company,Chr(10),Chr(13)) returns Blue Moon followed by a return and a new line, where the Company field contains Blue Moon, 10 is ASCII value for a return, and 13 is the ASCII value for a new line.

**Cos**

`Cos(number)` returns the cosine of *number*, where *number* is expressed in radians.

The result is always between -1 and 1.

Use [Radian](#) to convert degrees to radians.

**Examples**

- `Cos(1.243)` returns 0.330465108
- `Cos(Radian(Result))` returns 0.5, where the Result field contains 60

**CurrTime**

CurrTime() returns the current time on the system clock.

CurrTime does not use any parameters.

**Example**

CurrTime() returns 1:15:00, where the system-clock time is 1:15:00

## **DateToText**

DateToText(*date*,*format*) converts *date* to a text string.

Use DateToText in formulas involving text or text-oriented functions, or for display or export. For information about specifying *format*, see [Formatting dates](#).

### **Example**

- DateToText(Date,'MMM DD, YYYY') returns Jan 11, 1994, where the Date field contains the date 1/11/94

Use the following formula to convert a date to the quarter when it occurs:

- DateToText(ORDERS.Date,'YY 4Q') returns 91 1Q where the Date field contains January 12, 1991

## Date and time constants

Date and time constants require the order and separator specified by the operating system settings. Generally, date constants require slashes (/) and time constants require colons (:).

Approach gives the results of time calculations as numbers represented in hundredths of a second. Format these results using the [Time](#) function.

<u>Unit</u>	<u>In hundredths of a second</u>
second	100
minute	6,000
hour	360,000
day	8,640,000

---

{button ,AL(`H\_INSERTING\_DATES\_OR\_TIMES\_STEPS;H\_OPERATORS\_OVER;`,`0)} [See related topics](#)

**Date**

Date(*month,day,year*) returns a date corresponding to numbers in *month*, *day*, and *year*.

**Examples**

- Date(10,31,1993) returns October 31, 1993
- Today() - Date(1,1,1996) returns the number of days between today and the beginning of 1996.

## **DayName**

DayName(*number*) returns the name of the day corresponding to *number*.

*number* must be from 1 to 7, with 1 being Sunday, or a date enclosed in single quotation marks.

### **Examples**

- DayName(5) returns Thursday
- DayName('1/1/94') returns Saturday
- DayName(Date) returns Sunday, where the Date field contains the date 1/2/94

## **DayOfWeek**

DayOfWeek(*date*) returns a number representing the day of the week in *date*.

Sunday = 1, Monday = 2, and so on.

### **Examples**

- DayOfWeek('1/1/94') returns 7
- DayOfWeek(Date) returns 7, where the Date field contains the date 1/1/94
- "Start date" - DayOfWeek("Start date") + 1 returns a number representing the first day of the week (Sunday) in which the date falls.



**DayOfYear**

DayOfYear(*date*) returns a number representing the number of days since January 1 of the year in *date*.

**Example**

DayOfYear('2/1/94') returns 32

## **Day**

Day(*date*) returns a number from 1 to 31, representing the day of the month for *date*.

### **Examples**

- Day("10/31/93") returns 31
- Day(Date) returns 25, where the Date field contains the date 3/25/94

## **Degree**

Degree(*radians*) converts *radians* from radians to degrees.

All Approach trigonometric functions return radians.

### **Examples**

- Degree(2) returns 114.5915590261646
- Degree(Acos(Result)) returns 90, where the Result field contains the value 0.00

**Exact**

Exact(*text1*,*text2*) compares *text1* and *text2*.

If the two strings match exactly, including case, Exact returns Yes; if they do not match, Exact returns No.

See also [Like](#).

**Examples**

- Exact('receipts','receipts') returns Yes
- Exact('ORDER','Order') returns No
- Exact (STATE, 'California') returns No when the text in the field STATE is CalAfornia

**Exp**

Exp(*number*) calculates the constant e to the power of *number*.

The constant e is the base of the natural logarithm, equal to 2.718281828545904.

**Example**

Exp(5) returns 148.413159102657660

**Factorial**

Factorial(*number*) returns the factorial of *number*.

If *number* has decimals, Factorial truncates the decimals.

**Example**

Factorial(4) returns 24 (that is,  $4*3*2*1$ )

**Fill**

Fill(*text,number*) returns *text* repeated *number* times.

**Example**

Fill('Baden',2) returns BadenBaden

## Formulas

Follow the guidelines given here to create a formula. For a list of tasks that might need a formula, see the section called "When might I need to write a formula?" at the end of this topic.

### Double-click items to ensure accuracy

Type as little of the formula as possible; instead, select items for your formula by double-clicking them.

When you double-click items from the "Fields," "Operators," and "Functions" drop-down boxes, Approach enters them correctly in the "Formula" box.

For example, if you select a field name instead of entering it, Approach automatically surrounds it with quotation marks if it contains spaces or special characters.

### How to get rid of the X on the flag

When you generate a formula that works (that is, Approach can calculate a value using the formula), the checkered flag is no longer crossed out:



Approach evaluates the formula and enters the result in the field or completes the find.

### Components of a formula

Use these components to write a formula:

- [Functions](#)
- [Operators](#)
- [Constants](#)
- [Field references](#)

### Unexpected field types in formulas

If the field type of a field used in a formula does not match what Approach expects to use in the formula, Approach converts the data to the type it expects.

For example, suppose a field called Amount\_Due is defined as a text field, even though it would work better as a numeric field. Approach can still use the numbers in Amount\_Due in a formula that multiplies each number by 0.05, to find the commission due on the sale.

### Null values in fields

If a field that is used in a formula is blank (it has a null value or no value), Approach cannot use it in a calculation. If you want Approach to use the field even when users have not entered anything in it, define a [default value](#) for the field.

### Order of precedence

Approach evaluates a formula from left to right, performing multiplication and division first and then addition and subtraction. To change the order that the formula is calculated, use parentheses to enclose the expressions you want evaluated first. For example:

- $4 + 8 * 3$  equals 28
- $(4 + 8) * 3$  equals 36

### When might I need to write a formula?

You must write a formula when you define a [calculated field](#).

You might also write a formula when doing any of the following tasks:

- [Adding formula columns to worksheets](#)
- [Entering data automatically in a field](#)
- [Entering the same data into many records](#)
- [Summarizing data of records in reports](#)
- [Summarizing data of records in repeating panels](#)
- [Using the Run macro command](#)
- [Using the Set macro command](#)



### Verifying the accuracy of entered data

#### **Writing a formula to use in a find**

You can use a formula to find field values. The Formula dialog box, however, is not available during a find.

**Tip** If you want to use the Formula dialog box to write an accurate formula for a find, do the following:

1. Go to Browse.
2. From the Browse menu, choose Fill Field.
3. Click Formula.  
The Formula dialog box appears.
4. Write the formula.
5. In the "Formula" box, highlight the entire formula and press CTRL+C to copy the formula to the Clipboard.
6. Click Find in action bar.
7. In the blank view, select the field you want to use in the find.
8. Press CTRL+V to paste the formula into the field.
9. Click OK.

---

{button ,AL(^H\_FUNCTIONS\_ALPHA\_REF;H\_FUNCTIONS\_OVER;H\_CREATING\_FIND\_REQUESTS\_STEPS',0)}  
[See related topics](#)

## Functions

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P  
Q  
R  
S  
T  
U  
V  
W  
X  
Y  
Z

Click a function name for information about it.

### A

[Abs](#)  
[Acos](#)  
[Asc](#)  
[Asin](#)  
[Atan](#)  
[Atan2](#)  
[Avg](#)

### B

[Blank](#)

### C

[Chr](#)  
[Combine](#)  
[Cos](#)  
[CurrTime](#)

### D

[Date](#)  
[DateToText](#)  
[Day](#)  
[DayName](#)  
[DayOfWeek](#)  
[DayOfYear](#)

Degree

## **E**

Exact

Exp

## **F**

Factorial

Fill

FV

## **G**

(None)

## **H**

Hour

Hundredth

## **I**

If

IsBlank

IsLastRecord

## **J**

(None)

## **K**

(None)

## **L**

Left

Length

Like

Ln

Log

Lower

## **M**

Middle

Minute

Mod

Month

MonthName

## **N**

NPeriods

NumToText

NumToWord

## O

(None)

## P

Pi

PMT

Position

Pow

Prefix

Proper

PV

## Q

(None)

## R

Radian

Random

Replace

Right

Round

## S

SAverage

SCount

Second

Sign

Sin

SLN

SMax

SMin

SNPV

SoundsLike

Span

SpanUntil

Sqrt

SSTD

SSum

STD

Svar

## T

Tan

TextToBool

TextToDate

TextToTime

Time

Today

Translate

Trim

Trunc

**U**

Upper

**V**

Var

**W**

WeekOfYear

**X**

(None)

**Y**

Year

**Z**

(None)

## Functions are built-in formulas

Functions are built-in formulas that perform a specialized calculation automatically, often by using values that you supply.

Some functions perform simple calculations. For example, the function Abs returns the absolute value of a number.

Many functions, however, can save you time by performing complex calculations. For example, the function NPV calculates the net present value of an investment based on a series of periodic cash flows and a discount rate.

## Where are the functions in Approach?

Whenever you might need to write a formula, Approach gives you access to the Formula dialog box. Approach displays the list of functions in that dialog box. You can use functions alone or inside a larger formula.

## Parts of a function: name, parentheses, parameters

A function consists of a name and a pair of parentheses, for example, CurrTime().

Often, Approach requires you to supply more information in the function. Put this information, called a parameter, inside the parentheses.

- Parameters can be constants, field references, expressions, or other functions.
- You must use the same number of parameters given in the syntax and match the order shown for them.
- You must separate multiple parameters with commas or another separator specified in your operating system settings. If you double-click a function to add it to the "Formula" box, Approach supplies the separators automatically.

## Example: Supplying the parameters of a function

Suppose you double-click the function DateToText. Approach enters the function in the "Formula" box this way:

```
DateToText( , )
```

Below the "Formula" box, a description of the function shows you the parameters you must supply:

```
DateToText(date, format)
```

When you fill in the parameters for the function, it might look like this:

```
DateToText(5/5/95,'MMM DD,YYYY')
```

**Note** When you write a formula, type only what you have to. The more components you select from the "Fields," "Operators," and "Functions" boxes, the more you ensure the accuracy of the formula.

## Functions in finds and If statements

- When you use a function in a find, precede the function name with @ (at sign).
- When you use a function in an If statement, do not use the @.

---

{button ,AL(^H\_FORMULAS\_OVER;H\_FUNCTIONS\_ALPHA\_REF;H\_OPERATORS\_OVER;';0)} [See related topics](#)

## **FV**

$FV(payment, rate, periods)$  calculates the future value of an investment given *payment*, periodic interest *rate*, and number of *periods*.

The formula used is

$$(payment * ((rate + 1)^{periods} - 1)) / i$$

where *periods* is an exponent and *i* is the square root of -1.

**Note** The period used to calculate *rate* must be the same period used for *periods*. For example, if you are calculating a monthly payment, enter the *rate* and *periods* in monthly increments. Usually, this means you must divide the interest rate by 12 and multiply the number of years in *periods* by 12.

### **Example**

To calculate the value of an investment in which you pay \$50 per month for five years at 11% annual interest, the formula is as follows:

$FV(50, .11/12, 5*12)$  returns 3975.90

The second parameter specifies the rate as 11% over 12 months.

## Hour

Hour(*time*) returns a number representing the hours in *time*.

### Examples

- Hour('10:12:19') returns 10
- Hour(Time) returns 9, where the Time field contains the time 9:12:19.14



## **Hundredth**

Hundredth(*time*) returns a number representing the hundredths of a second in *time*.

### **Examples**

- Hundredth('12:15:23.34') returns 34
- Hundredth(Time) returns 14, where the Time field contains the time 8:15:30.14

## If

If(*condition*,*true value*,*false value*) evaluates *condition* as true or false and returns *true value* if true and *false value* if false.

You can nest an If function inside another If function.

### Examples

- If(State='CA','Yes','No') returns No, where the State field contains the text AZ
- If(Total>=1000,50,0) returns 50, where the Total field contains the value 1234
- If(Amount<1000,0,If(Amount<2000,50,100)) returns
  - 0, where the Amount field contains a value less than 1000
  - 50, where the Amount field contains a value greater than 1000 and less than 2000
  - 100, where the Amount field contains a value greater than 2000
- If(Amount>1000 AND Type='B',200,100) returns
  - 200, where the Amount field contains a value greater than 1000 and the Type field contains B
  - 100, where the Amount field contains a value less than 1000 or the Type field does not contain B

## **IsBlank**

IsBlank(*field*) returns Yes if *field* is blank; otherwise, IsBlank returns No.

### **Examples**

- IsBlank(Customer) returns No, where the Customer field contains a value
- If(IsBlank(Quantity),100,Quantity) returns
  - 100, where the Quantity field is blank
  - Value of Quantity, where the Quantity field contains a value

**IsLastRecord**

IsLastRecord() returns Yes if the current record is the last record in the sort order of the found set; otherwise, IsLastRecord returns No.

**Example**

This example uses IsLastRecord to update a variable field, Current State.

If(IsLastRecord(),'CA',"Current State") returns

- CA if the current record is the last record
- NM if the current record is not the last record, where Current State contains NM

## **Left**

`Left(text,number)` returns the specified *number* of characters in *text*, counting from the left.

### **Examples**

- `Left('Mississippi',2)` returns Mi
- `Left(State,2)` returns Ca, where the State field contains California
- `Combine(Alpha1,Left(Alpha2,3))` returns ABCDEF, where the Alpha1 field contains ABC and the Alpha2 field contains DEFG

## **Length**

Length(*text*) returns the number of characters in *text*, including all spaces, numbers, and special characters.

### **Examples**

- Length('Customer No.') returns 12
- Length(SalesRep) returns 5, where the SalesRep field contains Jerry
- Length(Combine(Item1,Item2)) returns 11, where the Item1 field contains Orange and the Item2 field contains Lemon

## Like

Like(*text1*,*text2*) compares *text1* and *text2*.

If the two strings match (without considering case), Like returns Yes; if they do not match, Like returns No.

You can use these wildcards in *text2*:

<u>Wildcard</u>	<u>Represents</u>
*	Any number of characters including zero or no characters
?	One character

See also [Exact](#).

### Examples

- Like('Cola','cola') returns Yes
- Like ('their','th\*r') returns Yes
- Like('their','th?r') returns No
- Like(Color1,Color2) returns Yes, where the Color1 field contains red and Color2 contains R?D
- Like(SalesRep,Combine('\*','Contact','\*')) returns
  - Yes, where the SalesRep field contains Jerry Jones and Contact contains Jerry
  - No, where the SalesRep field contains Jerry Jones and Contact contains Paul
- If(Like(SalesRep,Contact),'Match','No Match') returns
  - Match, where the SalesRep field contains Jerry and Contact contains Jerry
  - No Match, where the SalesRep field contains Jerry and Contact contains Chris

**Ln**

$\text{Ln}(\textit{number})$  returns the natural logarithm of *number*, where *number* must be positive.  
This is the logarithm to the base e.

**Example**

$\text{Ln}(10)$  returns 2.3025851



**Log**

$\text{Log}(\textit{number})$  calculates the logarithm of *number* to the base 10 (decimal logarithm).  
The value returned is the power to which 10 is raised to produce *number*.

**Example**

$\text{Log}(1000)$  returns 3

**Lower**

Lower(*text*) converts all letters in *text* to lowercase.

**Examples**

- Lower('Gourmet Emporium') returns gourmet emporium
- Lower(Country) returns usa, where the Country field contains USA

**Middle**

Middle(*text*,*start*,*size*) extracts the number of characters specified by *size* from *text*, beginning at *start*.

**Examples**

- Middle('Germany',4,3) returns man
- Middle(Product,7,8) returns Approach, where the Product field contains Lotus Approach 96

**Minute**

Minute(*time*) returns a number representing the minutes in *time*.

**Examples**

- Minute('12:10:05') returns 10
- Minute(Time) returns 11, where the Time field contains the time 12:11:05

## Mod

$\text{Mod}(\textit{number1}, \textit{number2})$  divides *number1* by *number2* and returns the remainder.

The result is the modulus.

### Examples

- $\text{Mod}(12,5)$  returns 2.
- $\text{Mod}(\text{Month}(\text{"Start Date"}), 12)+1$  returns the number of the next month, where the Mod function corrects for the change from December to January.
- $\text{Mod}(\text{Product\_number}, 100)$  returns the number 05 from the last digits of a product code number, where *Product\_number* contains 1010497105. Useful if the last two digits always indicate a feature of the product, like the product color.

Use the following time formula to convert the result into a time:

- $\text{Time}(\text{Hund\_diff}/360000, \text{Mod}(\text{Hund\_diff}/6000, 60), \text{Mod}(\text{Hund\_diff}/100, 60), 0)$  returns the time duration between two times, where *Hund\_diff* is the end time minus the start time. The Mod function corrects for the roll-over at the minute and hour.

**Note** When times are used in calculations, the result (*Hund\_diff*) is a number of hundredths of a second.

## MonthName

MonthName(*number*) returns the name of the month corresponding to *number*.

*number* must be from 1 to 12, with 1 being January, or a date enclosed in single quotation marks.

### Examples

- MonthName(9) returns September
- MonthName('10/20/93') returns October
- MonthName(Date) returns March, where the Date field contains the date 3/29/94
- Combine('Sales for ',MonthName(Date),' ',Year(Date)) returns Sales for July 1994, where the Date field contains the date 7/6/94

## **Month**

Month(*date*) returns a number representing the month in *date*.

### **Examples**

- Month('10/20/93') returns 10
- Month(Date) returns 12, where the Date field contains the date 12/5/1995

## **NPeriods**

`NPeriods(rate,principal,payment)` calculates the number of periods necessary to pay off *principal* with a periodic *payment* at a periodic interest rate specified by *rate*.

The formula used is

$$(\log (\text{payment} / \text{payment} - (\text{principal} * \text{rate}))) / \log (1 + \text{rate})$$

**Note** The period used to calculate *rate* must be the same period used for *periods*. For example, if you are calculating a monthly payment, enter the *rate* and *periods* in monthly increments. Usually, this means you must divide the interest rate by 12 and multiply the number of years in *periods* by 12.

### **Example**

To calculate the number of \$100 monthly payments required to pay off a \$1000 loan with a monthly interest rate of 1 percent, or yearly rate of 12 percent, the formula is as follows:

`NPeriods(.01,1000,100)` returns 11



## **NumToText**

NumToText(*number*,*format*) converts *number* to a text string formatted with *format*.

Use the result of NumToText with formulas involving text or text-oriented functions, or for display or export.

See [Formatting numbers](#).

### **Examples**

- NumToText(200,'##0.00') returns the text string 200.00
- NumToText(5694.08,'###,##0.00') returns the text string \$5,694.08

## NumToWord

NumToWord(*number*, *number\_of\_decimals*) converts *number* to words, where *number\_of\_decimals* describes how many decimal digits should be included in the final words.

If *number* contains more decimals than specified in *number\_of\_decimals*, the remaining decimals are truncated. If *number* contains fewer decimals than *number\_of\_decimals*, trailing zeros are added.

Use the result of NumToWord in printing amounts on checks.

### Example

- NumToWord(25.13,0) returns Twenty five
- NumToWord(25.13,1) returns Twenty five and one tenths
- NumToWord(25.13,2) returns Twenty five and thirteen hundredths
- NumToWord(25.13,3) returns Twenty five and one hundred thirty thousandths
- Combine(NumToWord("Amount Due"),'\_dollars') returns One hundred fifty two and twenty three hundredths dollars, when Amount Due contains 152.23

## Overview: Field references, constants, and operators

### Field references in formulas

A field reference instructs Approach to use the value of the field in the current record.

For example, in the formula

Quantity \* 8.95

the name Quantity is a reference to the value in the Quantity field. In one record, this formula might calculate 48 \* 8.95; in another, 31 \* 8.95.

When you write a formula, double-click the field name to enter a field reference in the formula.

If you enter a field reference by typing in the formula, you must enclose the field name with double quotation marks if it contains spaces, periods, commas, or any of the following characters: / \* + - < > ( ). For example:

"Quarterly Results" "Results(Quarter)" "Start/End"

### References to fields in joined databases

Include the name of the database in a field reference to a joined database, and separate the database name and field name with a period. In Approach, the database reference appears in all caps:

ORDERS.Quantity

Make sure you select a field from the correct database. For example, two databases may contain fields with the same name:

CUSTOMERS.FirstName

SUPPLIERS.FirstName

### Constants

A constant is a value that is used exactly as you type it; it does not change from one record to another. Constants can be numbers, dates, text, times, spaces, or Boolean values. Text, spaces, dates, and times must be enclosed in single quotation marks, like this:

'Price'

'1/1/94' + 15

'11:30:00'

"FirstName",',',"LastName"

Enter constants directly in the formula box.

### Operators

Operators are symbols that specify an arithmetic, comparison, or logical expression.

#### Arithmetic operators: + - \* /

Values on both sides of an arithmetic operator must be numbers, dates, or times.

#### Comparison operators: < <= = <> > >=

Values on both sides of a comparison operator must be numbers, text, dates, times, or Boolean values. The calculation returns Yes or No.

For example, the expression Price >= 4 returns Yes if the value in the field Price is greater than or equal to 4.

Use these operators to build conditions for If functions.

#### Logical operators: AND, OR, NOT

Both sides of AND and OR operators must evaluate to Yes or No. The NOT operator requires one expression that evaluates to Yes or No.

The logical expression itself returns Yes or No.

For example, suppose the Orders field contains 462 and the ShipDate field contains the date 1/15/94:

- Orders >= 500 AND ShipDate >= '1/1/94' returns No
  - Orders >= 500 OR ShipDate >= '1/1/94' returns Yes
  - NOT (Orders >= 500) returns Yes
-

{button ,AL(^H\_FORMULAS\_OVER;H\_FUNCTIONS\_ALPHA\_REF;H\_FUNCTIONS\_OVER;','0)} [See related topics](#)

**Pi**

Pi() returns the constant 3.14159.

This function does not use any parameters.

**Example**

Pi()\*15 returns 47.124

## **PMT**

$\text{PMT}(\text{principal}, \text{rate}, \text{periods})$  calculates the payment required to pay off a loan given *principal*, periodic interest *rate*, and *periods*.

The formula used is

$$(\text{principal} * \text{rate} * (1 + \text{rate})^{\text{periods}}) / (1 + \text{rate})^{(\text{periods} - 1)}$$

where *periods* and (*periods* - 1) are exponents.

**Note** The period used to calculate *rate* must be the same period used for *periods*. For example, if you are calculating a monthly payment, enter the *rate* and *periods* in monthly increments. Usually, this means you must divide the interest rate by 12 and multiply the number of years in *periods* by 12.

### **Example**

To finance \$92,000 toward the purchase of office equipment at an annual interest rate of 6.9% over 48 monthly payments, the formula is as follows:

$\text{PMT}(92000, .069/12, 48)$  returns \$2198.79 (The second parameter specifies the rate as 6.9% over 12 months.)

## **Position**

`Position(text,string,start)` begins at *start* to scan *text* for the first occurrence of *string*, and returns a number indicating where the string was found in text.

If text does not contain the search string, the result is zero.

## **Examples**

- `Position('California','if',1)` returns 4.
- `Position(City,' ',1)` returns 7, where the City field contains Mexico City. The space is the search string.
- `Left(Region,Position(Region,' ',1)-1)` returns West, where the Region field contains West Central.

**Pow**

`Pow(number1,number2)` returns the value of *number1* raised to the power of *number2*.

**Examples**

- `Pow(2,3)` returns 8
- `Pow(30,8)` returns 656,100,000,000



**Prefix**

Prefix(*text1*,*text2*) returns Yes if all the characters in *text1* match the same number of characters at the start of *text2*; otherwise, Prefix returns No.

**Example**

- Prefix('quo','quantity') returns No
- Prefix(Item1,Item2) returns Yes, where the Item1 field contains Aqua and the Item2 field contains Aqua Spring Water

## **Proper**

Proper(*text*) converts the first letter of each word in *text* to uppercase and all other letters to lowercase.

### **Examples**

- Proper('SOS') returns Sos
- Proper('europe') returns Europe
- Proper(Region) returns Pacific Northwest, where the Region field contains Pacific northwest

## **PV**

$PV(payment, rate, periods)$  calculates the present value of an ordinary annuity given *payment*, periodic interest *rate*, and number of *periods*.

An ordinary annuity is a series of payments to be made at equally spaced intervals. The present value is the value in today's dollars of the payments to be made or received later.

The formula used is

$$(payment * (((1 + rate)^{periods} - 1)) / (rate * (1 + rate)^{periods}))$$

where *periods* is an exponent.

**Note** The period used to calculate *rate* must be the same period used for *periods*; for example, if you are calculating a monthly payment, enter the *rate* and *periods* in monthly increments. Usually, this means you must divide the interest rate by 12 and multiply the number of years in *periods* by 12.

### **Example**

If an annuity returns \$250.50 per year for 5 years and the discount rate is 12%, the formula is as follows:

$PV(250.5, 0.12, 5)$  returns 902.996438

This means that the present value of the annuity is \$903.

## **Radian**

Radian(*degrees*) converts *degrees* to radians.

All Approach trigonometric functions require angles expressed in radians.

### **Examples**

- Radian(90) returns 1.5708
- Radian(30) returns 0.5236
- Sin(Radian(60)) returns 0.866025404

**Random**

Random() returns a random number between 0 and 1.

This function does not use any parameters.

**Example**

Trunc(Random()\*10)+1 returns a random integer between 1 and 10

## Replace

`Replace(text1,start,size,text2)` substitutes the series of characters in *text1* (the original text) with those in *text2* (the replacement text), beginning at *start*.

*Size* specifies the number of characters to replace in *original text*. *Replacement text* can be longer or shorter than the number specified in *size*, resulting in a new character string of a different length.

### Example

`Replace(Phone_number,1,3,'510')` returns 5106330101 where `Phone_number` contains 4156330101.

Be sure that you determine the size from the value in the database rather than the formatted value in an Approach view. In this case, `Phone_number` may be formatted to appear as (415) 633-0101; however, the value stored in `Phone_number` does not include the punctuation or spacing.

## Right

`Right(text,number)` returns *number* of characters in *text*, counting from the right.

### Examples

- `Right('sideview',4)` returns view.
- `Right(Region,4)` returns Asia, where the Region field contains Southeast Asia.
- `Right(Name,Length(Name) - Position(Name,' ',1))` returns the text to the right of the space in Name, as specified by the Position function. So, this example would return the last name, where the Name field contains a first and last name.
- `Combine(Alpha1,Right(Alpha2,3))` returns ABCGHI, where the Alpha1 field contains ABC and the Alpha2 field contains DEFGHI.

## Round

Round(*number*,*precision*) rounds *number* to the number of decimal places specified by *precision*.  
If *precision* is zero or not specified, Approach rounds *number* to the nearest integer.

### Examples

- Round(23.509) returns 24
- Round(Amount,1) returns 23.8, where the Amount field contains 23.849



## **SAverage**

SAverage(*number field*) returns the average of the values in *number field* for a summary range of records.

If the field is blank in any of the records, those records are not included in the average.

### **Example**

- SAverage(Amount) returns 3, where the Amount field contains 2, 3, 1, and 6 in a summary range of records
- SAverage(Amount) returns 1.25, where the Amount field contains 2, 3, 1 and 0 in a summary range of records.
- SAverage(Amount) returns 2, where the Amount field contains 2, 3, and 1 in three records and is blank in the fourth record in a summary range

**SCount**

SCount(*field*) returns the number of nonblank occurrences in *field* for a summary range of records.

Fields with blank values are not counted.

**Example**

- SCount(Paid) returns 5, where the Paid field contains a value in five records of the current database.
- SCount(Paid) returns 3, where the Paid field contains a value in three records of the current found set.

**Second**

Second(*time*) returns a number representing the number of seconds in *time*.

**Examples**

- Second('10:35:18') returns 18
- Second(Time) returns 20, where the Time field contains the time 8:45:20.14

## Sign

`Sign(number)` returns -1, 0, or 1, representing whether *number* is negative, zero, or positive.

### Examples

- `Sign(21)` returns 1
- `Sign(-21)` returns -1
- `If(Sign(Profit)>=0,Profit,Combine('(',Abs(Profit),')))` returns the absolute value of Profit in parentheses if Profit is negative; otherwise it returns the value of Profit without parentheses.

## Sin

`Sin(angle)` returns the trigonometric sine of *angle*, where *angle* is in radians.

The result is always between -1 and 1.

Use [Radian](#) to convert degrees to radians.

### Example

- `Sin(1.243)` returns 0.943818209
- `Sin(Radian(60))` returns 0.866025404

**SLN**

SLN(*cost*,*salvage*,*life*) calculates the straight-line depreciation of an asset for a single period, given *cost*, *salvage*, and *life*.

The formula used is

$(cost - salvage) / life$

**Example**

SLN(7500,3000,10) returns 450

**SMax**

SMax(*field*) returns the largest number or latest date or time in *field* for a summary range of records.

The field can be a number, date, or time field, or a text field filled with numbers.

**Examples**

- SMax(Amount) returns 200, where Amount contains 25, 40, 200, and 75 in a summary range of records
- SMax("End date") returns 3/8/96, where End date contains 12/12/95, 1/13/95, and 3/8/96 in a summary range of records

**SMin**

SMin(*field*) returns the smallest number or earliest date or time in *field* for a summary range of records.

The field can be a number, date, or time field, or a text field filled with numbers.

**Examples**

- SMin(Amount) returns 25, where the Amount field contains 25, 40, 200, and 75 in a summary range of records
- SMin("End date") returns 1/13/95, where End date contains 12/12/95, 1/13/95, and 3/8/96 in a summary range of records



## **SNPV**

SNPV(*value*,*discount*) calculates the net present value of an investment based on a series of periodic cash flows (*value*) and *discount* rate.

The net present value of an investment is today's value of a series of future payments (negative values) and income (positive values).

### **Example**

Suppose that someone wanted to borrow \$12,000 from you today, and would pay you an annual income of \$1500, \$4000, \$3500, and \$4100 in the four following years. Assuming an annual discount rate of 8 percent, the formula is as follows:

SNPV(Payment,.08) returns -1286.78, where the Payment field contains the values -12000, 1500, 4000, 3500, and 4100. Since the number is negative, you would probably decide not to make the investment.

## **SoundsLike**

SoundsLike(*text1*,*text2*) returns Yes if *text1* sounds phonetically like *text2*.

### **Example**

- SoundsLike('fill','Phil') returns Yes
- SoundsLike("Sales Rep",'Steven') returns Yes when the field Sales Rep contains Stephen or Steven

## SpanUntil

SpanUntil(*text1*,*text2*) returns the number of characters in *text1* that are not in *text2* until it finds a match in *text2*.

See also [Span](#).

### Example

- SpanUntil('radio','eiu') returns 3

Use the following for finding whether a character exists in *text1* at all:

- If(SpanUntil('ABCDE','F')>0, 'Yes', 'No') returns No

## Span

Span(*text1*,*text2*) returns the number of characters in *text1* that also exist in *text2* until a character is found in *text1* that is not in *text2*.

See also [SpanUntil](#).

### Examples

- Span('automobile','muato') returns 6
- Span(OrderNo,PartNo) returns 0, where the OrderNo field contains 23241 and the PartNo field contains 413
- Span(Product1,Product2), where Product1 and Product2 are codes containing digits for company, product type, product, and color, returns
  - 1 if Product1 and Product2 are from the same company
  - 2 if the products are from the same company and are the same product type
  - 3 if the products are from the same company, are the same product type, and are the same product
  - 4 if the products are from the same company, are the same product type, are the same product, and are the same color

## **Sqrt**

Sqrt(*number*) returns the square root of *number*.

### **Examples**

- Sqrt(13.69) returns 3.7
- Sqrt(100) returns 10

**SStd**

SStd(*field*) calculates the standard deviation of a population given the entire population as a field within a summary range of records.

The standard deviation is a measure of how widely values are dispersed from the average value (the mean). *Field* must be a numeric field or a text field filled with numbers.

**Example**

SStd(Score) returns 1.87, where the Score field contains 2, 3, 1, and 6 in a summary range of records

**SSum**

SSum(*field*) returns the sum of all the values in a number field for a summary range of records.

*field* must be a numeric field or a text field filled with numbers.

**Examples**

- SSum(Amount) returns 375, where the Amount field contains 100, 25, 50, and 200 in a summary range of records

**Std**

Std(*number1,number2, ... numberN*) calculates the standard deviation of a population given the entire population as parameters.

The standard deviation is a measure of how widely values are dispersed from the average value (the mean).

If fields are used as parameters, they must all be in the same record. To calculate the standard deviation over a range of records, use SStd.

**Example**

Std(4,5,9,2) returns 2.549510



**SVar**

*SVar(field)* calculates the variance of a population given the entire population as a summary range of records. *field* must be a numeric field or a text field filled with numbers.

**Example**

*SVar(Score)* returns 3.5, where the Score field contains 2, 3, 1, and 6 in a summary range of records

## Tan

Tan(*angle*) returns the tangent of *angle*, where *angle* is expressed in radians.

Use [Radian](#) to convert degrees to radians.

### Examples

- Tan(1) returns 1.557407725
- Tan(Radian("Height angle")) returns 1, where Height angle contains 45

## **TextToBool**

`TextToBool(text)` returns No if *text* is N, n, No, no, or zero (0); otherwise, returns Yes.

Use `TextToBool` to convert text strings to values defined with the Boolean data type. You can then use these values as parameters in logical functions.

### **Examples**

- `TextToBool(No)` returns No
- `TextToBool(Answer)` returns Yes

**TextToDate**

TextToDate(*text*) converts *text* to a date value.

Use TextToDate to convert dates imported or entered as text strings to values defined with the Date data type. You can then use these dates as parameters in date functions.

The date string must be in the format MM/DD/YY or the date format is specified in the operating system settings for dates.

**Example**

TextToDate('1/11/94') + 30 returns 2/10/94

**TextToTime**

TextToTime(*text*) converts *text* to a time value.

Use TextToTime to convert times imported or entered as text strings to values defined with the time data type. You can then use these times as parameters in time functions.

The time string must be in the format HH:MM:SS.00 (the seconds are optional). You can also use AM or PM at the end of the time.

Some countries use a different separator. Use whatever time separator is specified in the operating system settings for times.

**Example**

TextToTime('11:30PM') returns 23:30:0.0

## Time

Time(*hours,minutes,seconds,hundredths*) returns a time corresponding to *hours*, *minutes*, *seconds*, and *hundredths*.

See also [Date and time constants](#).

### Example

- Time(2,15,30,0) returns 2:15:30
- Hours(CurrTime() - Time (12,0,0)) returns the number of hours between the current time and 12:00 noon

Use the following to convert the result into a time:

- Time(Hund\_diff/360000, Mod(Hund\_diff/6000,60),Mod(Hund\_diff/100,60),0) returns the difference between two times in the form of a time, where Hund\_diff is the end time minus the start time. The Mod function corrects for the roll-over at the minute and hour.

**Note** When times are used in calculations, the result (Hund\_diff) is a number of hundredths of a second.

**Today**

Today() returns the current system date.

This function does not use any parameters.

**Example**

Today() returns 2/14/96, where the system date is February 14, 1996

**Translate**

Translate(*text*,*character1*,*character2*) replaces all occurrences of *character1* with *character2* in *text*.

**Example**

Translate('grey','e','a') returns gray

Translate('ABC CDE','C','D') returns ABD DDE



## **Trim**

Trim(*text*) returns *text* without its leading and trailing spaces.

### **Examples**

- Trim('New York ') returns New York
- Trim(City) returns Paris, where the City field contains ' Paris '
- Combine(Trim("First Name"),' ','Last Name") returns Mary Smith with correct spacing regardless of how many extra spaces exist in First Name

## **Trunc**

`Trunc(number,precision)` truncates *number* to the number of decimal places specified by *precision*.  
If *precision* is zero or not specified, Approach truncates the number to an integer.

### **Examples**

- `Trunc(13.1374,2)` returns 13.13
- `Trunc(13.1374)` returns 13

## Upper

Upper(*text*) converts all letters in *text* to uppercase.

### Examples

- Upper('Ca') returns CA
- Upper(Country) returns KENYA, where the Country field contains Kenya

**Var**

Var(*number1*, *number2*, ..., *numberN*) returns the variance of a population given the entire population as parameters.

To calculate variance for a field over a range of records, use [SVar](#).

**Example**

Var(1,4,7) returns 6

**WeekOfYear**

`WeekOfYear(date)` returns a number representing the number of weeks since January 1 of the year in *date*.

**Example**

`WeekOfYear('11/15/1993')` returns 47

## **Year**

Year(*date*) returns a number representing the year within which *date* occurs.

### **Examples**

- Year('10/21/93') returns 1993
- Year(Date) returns 1994, where the Date field contains the date 1/1/94

**action bar**

A set of buttons located initially at the top of the Approach work area, below the SmartIcons. The set of buttons you see most often lets you

- Switch to the Browse or Design environment
- Create a new record
- Create a find request in the current view or the Find Assistant
- Execute a named find

To hide or move the bar, use the right mouse button to click the bar in a space between buttons; then choose a location from the menu.

You can also drag the action bar to a new location, or let it float.

**alias**

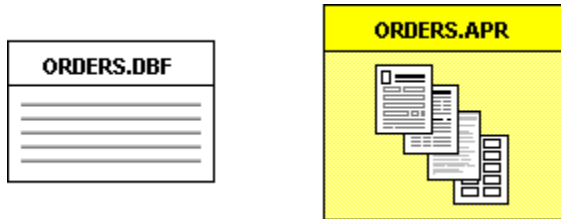
A virtual copy of a database file, for use in special types of joins. An alias is not a physical duplicate of a database, but acts like it for the purposes of joining.

Use an alias to join a database to itself for advanced kinds of summaries and groupings, or to be able to join to a single database in multiple ways.



### Approach file

The Approach file does not store data; instead, it stores the views you create. Through these views, you can look at and work with your data, which is stored in the database file(s) associated with the Approach file.



An Approach file can contain as many views (forms, reports, worksheets, and so on) as you need for your database application. The Approach file also stores calculated fields, variable fields, macros, and scripts.

When you create or open a database file, Approach automatically creates an Approach file for it.

Approach file extension: .APR

**Approach file password**

A sequence of characters you must enter before you can work in an Approach file.

- Passwords can have up to 16 characters.
- They are not case-sensitive.

One file can have more than one password. Different passwords for the same file can give you different privileges in that file.

For example, one password can give you complete access to edit and enter data in the associated databases as well as change the design of the views. Another password for the same file might let you do nothing except look at data. This is useful for files on networks; such files often must be available to many users, not all of whom should be able to change the file.

To define a password for an Approach file, choose File - TeamSecurity.

You can also define passwords for dBASE and FoxPro database files associated with the Approach file.

**scrolling list**

Three kinds of data-entry types for fields offer a predefined list of values, from which users select one value. When the predefined list is long enough, Approach adds a vertical scroll bar to the list. The following data-entry types are scrolling lists:

- Drop-down box
- Field box and list
- List box

**arithmetic expression**

An expression that performs a basic calculation on numeric, date, or time values. For example:

ShipDate + 15 returns a date equal to 15 days from the date in the ShipDate field of the current record.

Operators used in arithmetic expressions:

- + Addition
- Subtraction
- \* Multiplication
- / Division

**ascending order**

The sort order that arranges records from

- A to Z, for text (usually case-insensitive)
- Smallest to largest, for numbers
- Earliest to latest, for dates and times

**Boolean field**

A field that stores a single value, either Yes or No. You can enter these values in a Boolean field:

<u>For Yes</u>	<u>For No</u>
Yes, yes	No, no
Y, y	N, n
1	0

If you enter any other values (even, for example, False), Approach returns Yes.

A check box, which you define to have a checked and an unchecked value, is a good data-entry type to use with a Boolean field.

**Browse**

The environment in Approach for entering, editing, and viewing data in a database.

To go to Browse, do one of the following:

- Click the Browse button in the action bar.
- Click the Environment button in the status bar and select Browse.
- From the View menu, choose Browse & Data Entry.
- Press CTRL+B.

Any changes you make to records or any new records you create are saved automatically by Approach.

**calculated field**

A field that stores a formula using data from a record.

Enter the formula as part of the field definition. Write the formula to calculate with data

- In one record at a time.
- Across a range of records, using a summary function. For example, SCount(Account\_Name).

After you add the calculated field to a view, Approach displays the result of the formula for each record. If the formula uses a summary function, go to Print Preview or Design to see the result.

Calculated fields are stored in the Approach file (.APR), not the database. They appear at the bottom of the Field Definition list and, in italics, at the bottom of the Add Field list.



**check box**

A data-entry type for fields. In Browse, to enter data in the field, you must select the check box or deselect it.

Usually, a field is represented by only one check box. A check box is especially useful as a data-entry type for a Boolean field, which accepts only Yes or No as values.

To make a field a check box: In Design, double-click the field to display the InfoBox. In the Basics tab, select Check boxes as the data-entry type. Define one checked value, one unchecked value, and a label for each check box.

When you first add a new field to a view and make it a check box, it appears to be deselected (no check mark). Actually, it has a null value—that is, the field has neither the checked value nor the unchecked value in it. In the Default Value tab of the Field Definition dialog box, you can define the checked or unchecked value as default data. This is called initializing the check box.

 I will attend

**client**

- In network terminology, a computer used to gain access to files or applications on a network.
- In OLE terminology, an application that receives data from a server application.

**column gutter**

The area at the top of worksheets and crosstabs.

To add fields to a worksheet or crosstab, drag them to the column gutter.

**comparison expression**

An expression that compares two values and evaluates to Yes or No. For example:

Total <= 100 evaluates to Yes if the value in the Total field of the current record is less than or equal to 100; to No if the value is greater than 100.

Comparison expressions are useful when doing finds, creating calculated fields, and writing formulas used to validate field data.

Operators used in comparison expressions:

- < Less than
- <= Less than or equal to
- = Equal
- <> Not equal
- > Greater than
- >= Greater than or equal to

**compound document**

A document that contains a linked or embedded OLE object.

For example, if you have an OLE object from another application in an Approach file, the Approach file is a compound document.

**constant**

A value in a formula that is used exactly as you type it; it does not change from one record to another.

Constants can be numbers, dates, text, times, or Boolean values. Text, dates, and times must be enclosed in single quotation marks, like this:

'Price'

'1/1/95'

'11:30:00'

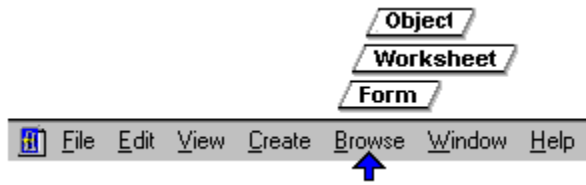
**container application**

An application that contains an OLE object.

For example, if you have an OLE object from another application in an Approach file, Approach is the container application.

**context menu**

The context menu always appears between Create and Window on the menu bar.



The context menu changes depending on the selected object or view. It provides commands appropriate for the selected object or view.



**crosstab**

Also called a cross-tabulation worksheet: A view that categorizes and summarizes data from many records. For example, here's a worksheet in a sales database. Notice that some records repeat the same data in the same field:

Sales Rep	Product	# Cases
Lindsay	90 Cabernet	3,000
Lindsay	90 Pinot Noir	1,500
Lindsay	90 Merlot	1,600
Renault	90 Cabernet	2,700
Renault	90 Merlot	3,400

A crosstab lets you collapse the five sales records into two summaries, one for each sales rep:

	Lindsay # Cases	Renault # Cases	Total
90 Cabernet	3,000	2,700	5,700
90 Merlot	1,600	3,400	5,000
90 Pinot Noir	1,500		1,500
Total	6,100	6,100	12,200

Summary column

Summary row

Crosstab values

**current record**

The active record in a view. In Browse, you can enter and edit data in the current record.

In a form, the record showing is the current record.

In a worksheet, columnar report, or mailing label, the current record is the record you click. If no record is selected, the current record is the first record.

As you switch between views based on the same database, the current record stays the same.

**database**

A collection of data organized into fields and records.

An Approach file (.APR) is not itself a database, but it is associated with at least one database. When you choose File - New Database, you create (1) a database, in which you store data (for example, names, addresses, and so on), and (2) an Approach file, in which you create views that let you work with the data.

When you enter data, Approach immediately saves the data in the database.

You can join databases so that more than one database is associated with a single Approach file.

Approach works with many database file types, but you can work in Approach without having another database product on your computer.

Other database products use the terms "table" or "data file" for a collection of data organized into fields and records; unlike Approach, they reserve the term "database" for a collection of tables.

**database password**

A sequence of characters you must enter before you can access the data in a database.

The password grants you read-only or read-write access to the database(s) associated with an Approach file.

To define a password for a dBASE or FoxPro database, use File - User Setup - Approach Preferences and click the Password tab.

**data**

The information entered in a field within a record and stored in a database. Typically, data is text, numbers, dates, or times.

Approach automatically saves data as you enter and edit records.

**date field**

A field that can hold a single date. You can perform finds, sorts, and calculations on dates in a date field.

To format a date, in Design, double-click the field and use the InfoBox.

Regardless of the format of the date field, in Browse, you must enter a date month first, then day, then year.

**default style**

A collection of style and layout information that Approach uses to create new views, unless you select a SmartMaster template or application.

To modify the default style, choose File - User Setup - Approach Preferences and choose Default Style in the Display tab.

**delimited text file**

A text file that uses separators such as commas, spaces, or tabs to break up the text into discrete units. One row in a delimited text file represents one record.

When you open a delimited text file as a database in Approach, the units of text become data in fields.



**descending order**

The sort order that arranges records from

- Z to A, for text (usually case-insensitive)
- Largest to smallest, for numbers
- Latest to earliest, for dates and times

## **Design**

The environment in Approach for laying out and designing views. In Design, you do tasks such as adding fields to views, adding color, changing label text, changing fonts, and creating text blocks.

To go to Design, do one of the following:

- Click the Design button in the action bar.
- Click the Environment button in the status bar and select Design.
- From the View menu, choose Design.
- Press CTRL+D.

You must save the work you do in Design by choosing Save Approach File from the File menu.

**detail database**

When an Approach file is associated with joined databases, each view not only can display the data of its main database; it can also display supplementary information from the other databases, giving details about the records of the view's main database.

When a database provides supplementary information, it's called a detail database.

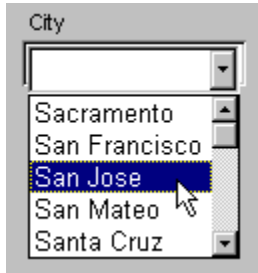
If the main and detail databases have a one-to-many relationship, a repeating panel is a good way to display data from the detail database. The panel displays the "many" details of "one" record of the main database

A view can have only one main database, but it can have many detail databases.

**drop-down box**

A data-entry type for fields. In Browse, it offers a predefined list of values. Because it limits the values users can select and doesn't allow users to enter new values, this kind of field can help prevent the introduction of inaccurate data into your database.

To make a field a drop-down box: In Design, double-click the field to display the InfoBox. In the Basics tab, select Drop-down list as the data-entry type.



**embed**

To insert an OLE object in Approach. An embedded object gives you access to a server application when you are working inside Approach. When you embed an object

- You edit the embedded object by opening the server application from within Approach.
- The data is stored with the database associated with the Approach file, not in the server application.
- There is no link to the server application.

When you embed an object

- In Browse, in a PicturePlus field, it becomes part of a record.
- In Design, it becomes part of the background of a view.

**expression**

A combination of operators, operands, and functions that yields a single result. In Approach, you can create arithmetic, comparison, and logical expressions.

A formula can consist of one or more expressions.

**field box**

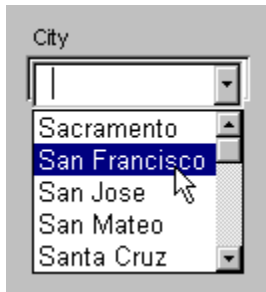
A data-entry type for fields. In Browse, type in the field box to enter data in the field.

The field box is the default data-entry type, so when you add a field to a view, Approach adds it as a field box. To change to another data-entry type: In Design, double-click the field to display the InfoBox. In the Basics tab, select another data-entry type.

**field box and list**

A data-entry type for fields. In Browse, it offers a predefined list of values and a field box that lets users enter a new value. The new value becomes part of the list.

To make a field a field box and list: In Design, double-click the field to display the InfoBox. In the Basics tab, select Field box & list as the data-entry type.





**field**

The smallest unit of data in a database. It's a good idea to break your information into as many meaningful fields as you can, especially if you plan to do finds on the data in the field.

For example, in an address database, rather than have just two fields for name and address, break the information into at least six separate fields: first name, last name, street, city, state, and postal code. You can then do finds for all persons living in the same city, all persons with the same last name using the same postal code, and so on.

- To define a field for a database: From the Create menu, choose Field Definition.
- After you define a field, you can add it to a view: In Design, from the context menu, choose Add Field.



**field definition**

A set of attributes that includes the field name, the type of data the field can contain, a maximum field length for some field types, and optional settings for controlling and validating data as it's entered in the field.

Every field in a database has a definition. Choose Create - Field Definition to define a field.

**field mapping**

Approach uses field mapping to ensure the accuracy of field definitions or the relationship between fields and data. You may need to map fields when you

- Open an Approach file in which previous changes to field definitions have not been saved in the Approach file.
- Import data from one database into another. Field mapping defines which fields should receive the data being imported.
- Import one Approach file (.APR) into another. Field mapping defines what kind of data, stored in fields that already exist in the receiving file, should appear in the fields of the views being imported.

**field name**

A name for a field, stored in the database as part of the field definition.

Follow these guidelines when you name a field: Begin the name with a character; use only letters, numbers, and underscores; use no more than 10 characters; avoid spaces and characters like \$, &, @, and so on.

A field name is different from the label that identifies a field in a view:



Approach uses the field name as the label when you add the field. You can, however, change the label without changing the field name, and vice versa.

**field reference**

In formulas, a reference to a field. When calculating the formula, Approach uses the value in the referenced field from the current record.

For example, the calculated field Commission contains the formula

INVOICE.Amount \* 0.05

The name INVOICE.Amount is a reference to the value in the Amount field of the INVOICE database. In one record, Amount is 3500; in another, 2800; so the formula result varies according to the value in the referenced field.

You must add the name of the database to the field reference when the Approach file has joined databases. The name of the database must be all uppercase letters, separated by a period (no spaces) from the field name.

**field type**

Also called "data type," the specification for the type of data you can enter in a field. Assign a field type to a field in the Field Definition dialog box.

Possible field types: Boolean, calculated, date, memo, numeric, PicturePlus, text, time, variable.

**file type**

The specification for the way a program stores and organizes data in files. In Approach, you can use a variety of database file types.

**find condition**

An instruction you give to Approach to find records in a database. A find consists of one or more find conditions.

A find condition can range from the simple, such as a single value you want to find, to the advanced, such as find conditions that use operators (=, <>, >, <, and so on) or formulas or If statements. You can also combine find conditions in a single find when you link the conditions with AND or OR.

The following is an example of a simple find condition expressed in English language format:

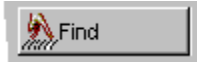
In database "Offices," find all records in field "City" that are exactly equal to "Tokyo"

When Approach finds records that match the find conditions, it displays only those records as the found set.



**find**

Also known as a search or query: To search for a set of records that satisfy one or more conditions you specify about data in one or more fields. For example, you might want to find all records in which the field Country contains France. In Browse, click Find in the action bar to start a find.



Approach then gives you two ways to do a find:

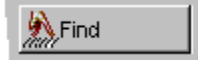
- Find request. Use the blank view to enter your find conditions.
- Find Assistant. The assistant is especially useful for finding duplicate records, distinct records, and top or lowest values in a field.

The set of records that is the result of a find is called the found set. After a find, Approach keeps the found set as the only data you work with until you show all the records in the database or do another find.

If you know that you'll do the same find often, name the find so you can use it again.

**Find (environment)**

The environment in Approach in which you specify find conditions. In Browse, click Find in the action bar to go to the Find environment.



Then use the buttons that now appear in the action bar to create and execute the find.

When Approach finds records that match the find conditions, it returns you to Browse and displays only those records as the found set.

**find request**

One of the two ways Approach gives you to do finds. (The other is the Find Assistant.)

A find request is a blank view that you use for entering find conditions.

To create a find request, in Browse, click Find in the action bar. Approach then displays the tools for doing a find using a find request: a blank view in which to enter find conditions; buttons in the action bar to create, execute, and cancel the find; and a set of SmartIcons representing the operators you can use in the find conditions.

**fixed-length text file**

A text file in which the text is broken into blocks of a specific length. If you open a fixed-length text file as a database in Approach, the blocks of text become data in fields.

**form**

A kind of view that focuses on a single record. You can use the same form to see every record in the database, but the form shows you only one record at a time.

Forms are useful for entering and editing data for a record.

Forms can have up to five pages. They can also be converted into dialog boxes for use in macros or scripts.

To create a form: From the Create menu, choose Form.

**form letter**

A view that combines text you type with names and addresses from a database record, so you can send copies of the same letter addressed to many different people. You can also create envelopes printed with addresses for the form letters.

To create a form letter, choose Create - Form Letter.

**found set**

The group of records that match your find conditions.

After a find, Approach keeps the found set as the only data you work with until you show all the records in the database or do another find.

**full record locking**

A method of network data-sharing in which only one user at a time can edit a record, although more than one person can look at a record at the same time; the opposite of optimistic record locking.

To turn on full record locking, choose File - User Setup - Approach Preferences. In the General tab, deselect optimistic record locking.



**function**

A built-in formula that performs a specialized calculation automatically, often by using values that you supply. Such values are called parameters.

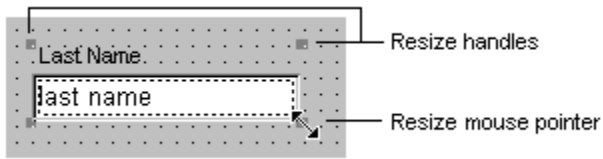
Some functions perform simple calculations. Many, however, simplify your work by performing complex calculations; for example, NPV calculates the net present value of an investment based on a series of periodic cash flows and a discount rate.

**grid**

A non-printing matrix of dotted lines that you can show in Design. The grid provides a background to help you lay out objects in a view.

## handles

In Design, squares at the edges of a selected object. To resize the object, drag one of its handles.



If you are enlarging a field that is in a report panel or repeating panel, be sure the resized field stays completely inside the panel.

**index**

A file that contains a list of the values of a field, with pointers to the records in the database that contain those values. Finds and sorts on a field go faster when the field is indexed.

Approach creates an index for a field (excluding memo fields) the first time you do a find or sort on that field. It maintains the index as you enter data.

Approach index files have the file extension .ADX. Each .APR can have only one .ADX file associated with it. Approach stores indexes for all the fields in the single .ADX file.

If you delete the .ADX file, Approach creates a new one with the next sort or find that you do. When you compress a file, Approach rebuilds the index file.

## InfoBox

A window that shows the properties of the selected object, such as its name, color, borders, alignment, and so on.

The InfoBox can display the properties of every object in a view, including the view itself. To display the InfoBox so you can change those properties, go to Design and then do one of the following:

- Double-click the object whose properties you want to change. For a view, double-click the background, away from any other object.
- From the context menu, choose the Properties command of the object.
- Select the object and click the InfoBox icon:



You can keep the InfoBox open as you work in Design.

The InfoBox displays the object's properties on one or more tabs. Click the tabs to see the properties.

Changes you make to a property happen either at once or as soon as you click elsewhere, so you can see the effects of your changes immediately and decide whether you like the results.

**join**

To link two databases so that you can work with the data of all the databases from inside a single Approach file; show relationships between the data of the joined databases; do finds; and so on.

You create a join by linking one or more fields that the databases have in common.

For example, the following illustration shows a diagram of two joined databases, one with data about authors, the other with data about publishers. They're joined on the Publisher and Name fields because those fields contain data that both databases have in common.

bmc join.bmp

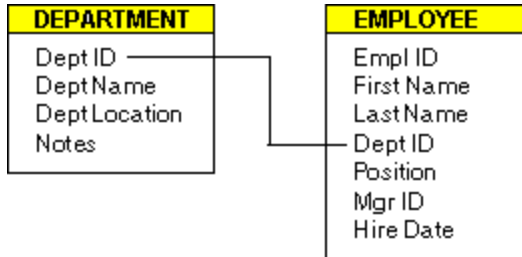
Joined databases are a fundamental part of a relational database application like Approach. They reduce the amount of data entry you have to do and increase the power and ease with which you can manipulate your data.

To join databases: From the Create menu, choose Join.

**join field**

A field in one database linked to a field in another database, thus joining the databases. Join fields don't have to have the same name, nor do they have to be defined as the same data type; but they must contain the same kind of data.

Often, a join field is a numeric ID field created specifically for joining. In the following illustration, the employee database contains personal data, such as first and last names, address and phone number. The department database contains department information, such as manager, location, and cost center. The two databases are joined on the Dept ID field because that is how the two databases are related: each employee is assigned to a department, and every department comprises employees.



**key field**

One or more fields that can identify each record in a database as unique, for example, an invoice number or an ID number.

When exporting data from Approach or saving a database file to a different file format, you must specify one or more key fields. If you do not specify a key field that is unique, an error message displays indicating that you can't export or save the file because a duplicate key exists.



**label**

Text used to identify a field in a view, stored in the Approach file (.APR) as part of the design of a view.

Approach uses the field name as the label when you add the field to the view. You can, however, change the label without changing the field name, and vice versa.



**link**

To place a copy of an OLE object in Approach, with a connection to the original object in the server application. If the original object changes, the copy also changes in Approach.

When you link an object

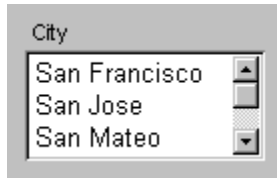
- In Browse, in a PicturePlus field, it becomes part of a record.
- In Design, it becomes part of the background of a view.

**list box**

A data-entry type for fields. In Browse, it offers a predefined list of values. Because it limits the values users can select and doesn't allow users to enter new values, this kind of field can help prevent the introduction of inaccurate data into your database.

Unlike a drop-down box or field box and list, however, you can size the list box to display as many of its values as you like.

To make a field a list box: In Design, double-click the field to display the InfoBox. In the Basics tab, select List box as the data-entry type.



**logical expression**

An expression that evaluates one or more comparison expressions and returns a result of Yes or No.

For example, suppose the field Orders contains 462 and the field ShipDate contains the date 1/15/95:

- (Orders >= 500) AND (ShipDate >= '1/1/95') returns No
- NOT (Orders >= 500) returns Yes

Operators used in logical expressions:

AND Returns Yes if both expressions are true

OR Returns Yes if either or both are true

NOT Evaluates a comparison expression and returns Yes if it's false, No if it's true

**lookup**

An automatic display of data from a many-to-one or one-to-one relationship.

**macro button**

A control that you can add to a form, report, or other view. When you click the button, it executes an attached macro or script.

To create a button, choose Create - Control - Button.

Attach a macro to the button in the Macros tab of the InfoBox for the button.

**macro**

A single command that executes a sequence of other commands. You define this sequence when you create the macro.

Use macros to automate Approach tasks.

To create a macro, choose Edit - Macros - New.

**mailing label**

A view that displays database fields and text in a mailing address format. You can then print the addresses on standard or custom mailing labels.



**main database**

Every view in an Approach file represents a database. The database represented by the view is called its main database. The main database determines how many, and what kind of, records can be visible in the view.

When an Approach file is associated with joined databases, each view can have a different main database. A view must have one main database, and it can have many detail databases.

To find out what the main database of a view is, in Design, select the view and then look in the Basics tab of the InfoBox.

Example: Suppose a company has two joined databases, DEPT (departments) and EMP (employees). One view has DEPT as its main database. The company has five departments, so that view can show a maximum of five records.

The company has 100 employees. A view that has EMP as its main database can show a maximum of 100 records.

**many-to-many**

A relationship in which two or more records in one database can be related to two or more records in a joined database. For example, each order can include several products, and each product can appear on several orders.

In Approach, you can create a many-to-many relationship between databases, but it is better to design your databases so that you can create one-to-many or many-to-one relationships.

**many-to-one**

A relationship in which two or more records in one database can be related to only one record in a joined database. For example, several employees can be in the same department.

**memo field**

A field that can hold large amounts of text (maximum size: 64K). Define a field as memo instead of text if the field has to store more than approximately 254 characters, for example, customer profiles or specifications of products.

Design your database so that you can avoid doing finds or sorts on memo fields.

Data of memo fields is not stored in the database file itself; rather, it is stored in a file with the extension .DBT (for dBASE), .DBQ (for Paradox 3.5), or .MB (for Paradox 4.0).

Another way to store a large document as part of a record: Define a PicturePlus field and embed the document in it as an OLE object.

**named style**

A set of layout and style properties, such as font and color, that you name and save as a group. You can then apply the set of properties again, as a group, rather than applying individual properties one at a time.

You can apply a named style to a particular object or to a view as a whole; Approach uses only the properties that pertain to the selected object.

To create or apply named styles, in Design, double-click the view or object and click the Named Style tab in the InfoBox.

**numeric field**

A field that can hold numbers and can be formatted with numeric symbols, such as a currency symbol. You can perform arithmetic calculations on data in a numeric field.

To format a number, in Design, double-click the field and use the InfoBox.

**OLE object**

An object you embed or link in Approach through OLE. The object can be

- Part of the layout of a view. In Design, choose Create - Object.
- Data in a PicturePlus field, if you define the field to accept an OLE object. In Browse, select the field to activate the OLE server application.

Double-click an OLE object to edit it using the tools from the server application without leaving Approach.

Approach also lets you use OLE in the other direction--that is, you can embed an Approach OLE object inside another application.

**OLE (Object Linking & Embedding)**

A method for data exchange, using links, and for the creation of compound documents, using embedded objects, that lets you use one application from inside another.

For example, in Approach, you can use OLE to

- Add data to a record by embedding a Lotus WordPro document in a PicturePlus field.
- Use a SmartMaster background from Lotus Freelance Graphics as the background of an Approach view.

Approach also lets you use OLE in the other direction--that is, you can embed an Approach OLE object inside another application.



**one-to-many**

A relationship in which a record in one database can be related to two or more records in a joined database. For example, one department can have several employees. In a form, you use a repeating panel to represent the "many" data from a one-to-many relationship.

**one-to-one**

A relationship in which a record in one database is related to only one record in a joined database. For example, a vehicle number can be related to a license number for a single vehicle.

**operand**

A value in a formula, used in conjunction with one or more operators. Operands can be either constants (numbers, dates, text, or times) or field references. In the following formula, INVOICE.Amount (a field reference) and 0.05 are operands; \* is the operator:

INVOICE.Amount \* 0.05

**operator**

A symbol in a formula that defines the calculation or other evaluation to be performed. A plus sign (+) and a less-than sign (<) are examples of operators.

**optimistic record locking**

A method of network data-sharing in which two users can edit a record at the same time; the opposite of full (or pessimistic) record locking.

When the second user tries to enter changes, Approach warns that the second user's changes will write over those of the first user.

Approach uses optimistic record locking unless you deselect this option in File - User Setup - Approach Preferences, the General tab.

Approach runs faster with optimistic record locking on because it does not have to check whether to lock a record when a user tries to view it. Use this method when no more than one user at a time is likely to try to edit a record.

**panel**

A report component, visible in Design, that determines how field data appears in the report.

**parameter**

A value to be operated on in a function. Parameters appear in parentheses after the function name and can be either constants or field references. For example, the function `Fill(text,number)` could take the parameters

`Fill('Baden',2)`

to return BadenBaden.

**PicturePlus field**

A field that can contain graphics or OLE objects.

To allow freehand drawing with the mouse on top of a graphic or OLE object in a PicturePlus field: go to Design, double-click the field to display its InfoBox, and then on the Basics tab, select Allow drawing.



### PowerClick reporting

An Approach feature that allows you to modify an existing columnar report. Use PowerClick reporting to reorganize and summarize data.

In Design, be sure View - Show Data is turned on.



Select the field to use for grouping records. Then, from the Column menu, choose Groups & Totals. Then choose a leading or trailing summary option. You can also use these PowerClick icons:



Next, select the column to summarize. From the Column menu, choose Groups & Totals and choose a calculation option. You can also use these PowerClick icons:

Sum (grand total):



Maximum:



Standard deviation:



Count:



Minimum:



Variance:



Average:



**Print Preview**

The environment in Approach that shows views on the screen as they appear when printed.

**radio button**

A data-entry type for a field that accepts only one of a small number of predefined values.

In Browse, to enter data in the field, you must select one of the values offered.

To make a field a set of radio buttons: In Design, double-click the field to display the InfoBox. In the Basics tab, select Radio buttons as the data-entry type. Define a clicked value and a label for each button.

Check

Cash

Credit

**read-only access**

Permission to read data, but not to modify it.

- Make individual fields read-only. In Design, double-click the field to bring up the InfoBox and click the Basics tab.
- Assign a database password to your files to grant read-only permission to users who know the password. Choose File - User Setup - Approach Preferences and click the Password tab.

**read-write access**

Permission to read and modify data in a database. You can assign a database password to your files to grant read-write permission to users who know the password.

Assign a database password to your files to grant read-write permission to users who know the password. Choose File - User Setup - Approach Preferences and click the Password tab.

**record**

One set of related information in a database. For example, in an employee database, the information on each employee (name, address, date of birth, and so on) is a record.

**relational database application**

A database application that lets you bring together data from more than one database in a single form, report, or other view. Approach is a relational database application.

The distribution of data among several databases, which you then join, is a basic concept of a relational database application such as Approach. If you create multiple databases and join them rather than try to put all your data into a single database, you save yourself work and increase the variety of ways you can view and manipulate your data.

Plan your databases and store your information so as to take advantage of the power and efficiency of joined databases.

**repeating panel**

In an Approach file that has joined databases, a repeating panel is an object you add to a form to display the "many" side of a one-to-many relationship between the main database of the form and one of its detail databases.

The repeating panel shows data from multiple records in a detail database that are related to the current record of the main database.

For example, a repeating panel in a department form might list all the employees in the department.

To create a repeating panel: In Design, from the Create menu, choose Repeating Panel.



**report**

A view used for organizing, summarizing, and presenting data from many records. A report shows all the records in the database or the current found set on one or more pages.

**row gutter**

The area at the left side of worksheets and crosstabs that holds row headers.

To convert a worksheet to a crosstab, drag a column header from a worksheet and drop it in the row gutter.

**server application**

An application used to create an OLE object.

**server**

One or more central computers that store files and applications to which users have access across a network.

**SmartIcons**

Buttons (icons) in the Approach window that let mouse users choose commonly used commands and macros.

To select SmartIcons, click them.

To see a short description of what an icon does, leave the mouse pointer on the icon for a few seconds.

To change the set of SmartIcons, choose File - User Setup - SmartIcons Setup.

**SmartMaster application**

An Approach file with one or more associated databases, designed to be a ready-to-use application for business or personal use.

To create an application based on a SmartMaster application, choose File - New and select a SmartMaster application.

To create a SmartMaster application, save an Approach file as an .MPR file to the SmartMaster directory. Define the directory in the General tab of the Approach Preferences dialog box.

**SmartMaster template**

A predefined set of field definitions for a single database file. Approach provides SmartMaster templates for many common business and personal uses, such as a customer database and an employee database.

To create a new database from a template rather than defining all of your fields from scratch, choose File - New and select a SmartMaster template.

To start from the basis of an even more fully developed sample business application, select a SmartMaster application.

**sort**

To organize records alphabetically, numerically, or chronologically by data in one or more fields. You also designate whether to organize the records in ascending (for example, A - Z) or descending order (Z - A).

You can sort an entire database or a found set.



**sort field**

A text, numeric, date, or time field used for sorting records in a database.

The first field you select is the primary sort field. Subsequent fields you select resolve conflicts in the sort order that arise when the same data appears in the primary sort field in different records.

For example, when sorting a database of names, select Last Name as the primary sort field and First Name as the second sort field so that Smith, John and Smith, Alice appear in correct alphabetical order.

**status bar**

The bar at the bottom of the Approach work area.

The information available from the status bar changes depending on the current environment. You can always, however, click the buttons on the far right to change to another view or environment.

In Browse, the status bar indicates whether you are working with all records of a database or a found set.

**summary function**

A function that applies to a group of records. For example, the SSum(Amount) summary function adds the values in the Amount field in a range of records you specify.

**summary panel**

An area in a report that may contain a calculated field that summarizes data.

**summary report**

A report that omits record-by-record detail and displays only summary information.

**tab order**

The order in which you move through the fields in a view when you press TAB. Also referred to as data-entry order.

To change the tab order, in Design, choose View - Show Tab Order and then change the numbers that appear. Use the buttons in the action bar to confirm your changes.

Calculated fields cannot be included in the tab order.

**text field**

A field that can hold any characters you can type, including letters, numbers, and symbols. The maximum length of a text field is approximately 250 characters. If you need to hold larger amounts of text in a field, define the field as memo.

You can search on a text field using any character in the field.

**time field**

A field that can hold a single time. You can perform finds, sorts, and calculations on times in a time field.

To format a time, in Design, double-click the field and use the InfoBox.



**Tools palette**

In Design, a set of buttons for drawing shapes and lines, creating text blocks, and adding fields.

To show the Tools palette, choose View - Show Tools palette.

To move the palette around in the work area, drag its title bar.

**variable field**

A field that temporarily stores a value, which can be text, a number, a date or time, or a Boolean value. When you define a variable field, set its data type and initial value. The value is the same for every record in your database application.

Use variable fields to store intermediate values in calculations and macros, and to pass values between Approach and Notes using Notes/FX.

Variable fields are stored in the Approach file (.APR).

**view**

An interface that you create in an Approach file (.APR). Views let you look at and work with the data stored in the file's associated database files. Views are stored in the Approach file.

When you create a new file, Approach provides a standard form and a worksheet. You can modify these views and add as many other views as you need.

You can design each view. In Design, double-click the background and the objects to display the properties of objects, including the view itself, in the InfoBox. To save design work: From the File menu, choose Save Approach File.

Approach provides these kinds of views: form (for looking at one record at a time), report, form letter, mailing labels, worksheet, crosstab, chart, and envelope.

**view tab**

The folder tab that appears at the top of the window for each view in the Approach file.



Click the tab to go to that view.

Go to Design to

- Double-click the tab to change the name. (Maximum number of characters: 79.)
- Drag the tab to move the view to another position.

**worksheet**

A view that presents data from many records in a grid of columns and rows. Each record occupies a single row in the worksheet.

A worksheet shows all the records in the database or the current found set.

**zoom**

To change the magnification of a view on the screen. You can zoom in for a closer look or zoom out for the big picture. Zooming does not affect the size of a view when you print it, only how it appears on the screen.

### Details: Adding all groups to crosstabs

Approach supports two ways of presenting crosstab entries made up of zero values. Choose which method shows your data appropriately.

### Showing all subgroup values in every group

Turning off "Show only related rows or columns" changes the crosstab behavior so that all subgroup entries appear for each group, even if the subgroup records do not match the header.

For example, if a crosstab shows products sold by city and the cities are grouped into countries, every city in the database appears as a category for each country. So New York and San Francisco would appear under Germany, and Berlin and Munich would appear under USA. Probably not the desired result.

In other situations, however, showing all subgroup values can be useful.

For example, if a crosstab shows the number of products sold by sales representative, you might want to show all products for each sales rep, even if the subgroup record does not match the header: in this example, that would mean that products the sales rep hadn't sold would show up as a subgroup under the rep's name.

		Quantity
AG	product1	100
	product2	200
	product3	
JF	product1	100
	product2	
	product3	150

### Showing only nonzero subgroup values in every group

The default behavior of a crosstab is to show only the headers with values relevant to the next larger group in the crosstab. For the country and city example above, accepting the default means the crosstab would display only the cities in the United States in the USA country grouping:

		Product Sales
USA	New York	200
	San Francisco	150
Canada	Toronto	250
	Vancouver	100
Germany	Berlin	175
	Munich	225

---

{button ,AL('H\_ADDING\_ALL\_GROUPS\_TO\_CROSSTABS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_ADDING\_SUMMARIES\_TO\_CROSSTABS\_STEPS;H\_GROUPING\_RECORDS\_IN\_NEW\_REPORT\_S\_AND\_CROSSTABS\_REF;H\_crosstabs\_over;',0)} [See related topics](#)

## Adding all groups to crosstabs

By default, a crosstab displays only subgroups with records related to the next larger group.

For example, zero values, by default, do not appear under groups.

Follow these steps to display all subgroups even if no record values correspond to the group and subgroup combination.

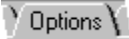


### Are you in Design?

1. Click a crosstab body cell to select the crosstab.
2. Choose Crosstab - Crosstab Properties.



3. Click the Options tab in the InfoBox.



4. Deselect "Show only related rows or columns."
5. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_ADDING\_ALL\_GROUPS\_TO\_CROSSTABS\_DETAILS',1)} [See details](#)

{button ,AL('H\_ADDING\_SUMMARIES\_TO\_CROSSTABS\_STEPS;H\_GROUPING\_RECORDS\_IN\_NEW\_REPORT\_S\_AND\_CROSSTABS\_REF;H\_crosstabs\_over;',0)} [See related topics](#)



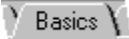
## Adding and deleting items in scrolling lists

You can add or remove items in a [scrolling list](#) field on a form.



### Are you in [Design](#)?

1. Double-click the field.
2. Click the Basics tab of the [InfoBox](#).



3. Click Define List.  
A dialog box appears.
4. To add an item to the list:
  - Scroll through the list and click on the item you want to appear below the new item.
  - Click Insert to create a blank line above the current item.
  - Enter the new item.
5. To delete an item:
  - Select the item in the list.
  - Click Delete.
6. Click OK.
7. (Optional) [Move, collapse, or close](#) the InfoBox.

---

```
{button ,AL(`H_DISPLAYING_FEWER_VALUES_IN_A_SCROLLING_LIST_STEPS;H_DISPLAYING_THE_CONTENTS_OF_DROPDOWN_BOXES_AUTOMATICALLY_STEPS;H_DISPLAYING_DESCRIPTIVE_VALUES_IN_A_SCROLLING_LIST_STEPS;`,0)} See related topics
```

## Aligning and distributing objects

Align objects along their tops, bottoms, sides, or centers to put them all in the same row or column. Distribute objects vertically or horizontally to place an equal amount of space between them.

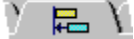


### Are you in Design?

1. Select two or more objects.
2. Choose Multiple Objects - Align.



The Align tab of the InfoBox appears.



3. Select whether to align the objects to each other or to the grid under Align selections.
4. Under Object alignment:
  - To align the objects horizontally, click Left, Center, or Right.



- To align the objects vertically, click Bottom, Middle, or Top.



5. Under Spacing options, select whether to space objects horizontally or vertically.
6. To include field labels in the alignment calculation, select "Include field label."

**Note** This option is available only if one of the selected objects is a field. If you do not include field labels, fields are layered on top of each other and aligned.

7. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(^H\_SELECTING\_OBJECTS\_STEPS;H\_ADDING\_MULTIPLE\_OBJECTS\_TO\_A\_VIEW\_STEPS;H\_SETTING\_OBJECTS\_AND\_FIELDS\_TO\_SLIDE\_WHEN\_PRINTING\_STEPS;';0)} [See related topics](#)

## Alternating the color of records in a repeating panel



Are you in Design?

1. Select the repeating panel.
2. From the Panel menu, choose Panel Properties.
3. Click the Lines & Colors tab in the InfoBox.



4. Select "Alternate fill color."
5. Under Fill color, select the alternate color.
6. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H\_LINE\_AND\_COLOR\_PROPERTIES\_CS';,0)} See related topics

## Applying found sets to crosstabs

By default, crosstabs reflect the results of any finds, but you can specify that a crosstab always include data from all records in all databases joined in the current Approach file.

**Want the big picture?** See [Overview: Crosstabs](#).

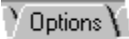


### Are you in Design?

1. Click a crosstab body cell to select the crosstab.
2. Choose Crosstab - Crosstab Properties.



3. Click the Options tab in the [InfoBox](#).



4. Deselect "Apply found set to crosstab headers."
5. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL('H\_FINDING\_RECORDS\_THAT\_MAKE\_UP\_CROSSTABS\_STEPS','0)} [See related topics](#)

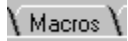
## Changing dialog boxes back to forms



### Are you in Design?

When you are in Design, a dialog box displays as a form with a tab.

1. Double-click the background of the form that represents the dialog, away from any object.
2. Click the Macros tab of the InfoBox.



3. Deselect "Show form as dialog."

When you switch to Browse, the form continues to display with a tab as it did in Design.

4. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_CREATING\_DIALOG\_BOXES\_FROM\_FORMS\_STEPS;H\_CREATING\_DIALOG\_BOXES\_FROM\_FORMS\_DETAILS';,0)} See related topics

## Changing the color of objects and views



### Are you in Design?

1. Double-click the text block, the object, or the background of a view.
2. Click the Lines & Colors tab in the InfoBox.



3. Select the color you want
  - For views, select "Fill color."
  - For shadows, select "Shadow color."
  - For lines around an object or view, under Border select "Color."
4. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H\_MAKING\_OBJECTS\_AND\_VIEWS\_TRANSPARENT\_STEPS;`,0)} [See related topics](#)

## Displaying baselines in fields

A baseline is like the dashed or dotted line you often see on typical official forms, such as job applications.

Steps 1 through 3 of this task explain how to create dashed or dotted lines in fields. Steps 4 through 6 explain how to continue enhancing the style of the fields so that they look like those on official forms.



### Are you in Design?

1. Double-click the field.
2. Click the Lines & Colors tab in the InfoBox.



3. Under Border, select "Baseline."
4. Display the label to the left of the field.
5. Turn off field borders.
6. Make the field boxes transparent.
7. (Optional) To apply these styles to other fields, create a named style for the field.
8. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_CHANGING\_THE\_POSITION\_OF\_LABELS\_STEPS;H\_MAKING\_OBJECTS\_AND\_VIEWS\_TRANSPARENT\_STEPS;H\_CREATING\_PARTIAL\_BORDERS\_STEPS;','0)} See related topics

## Displaying field labels inside field boxes

When you display a label within the borders of a field box, the label has the same background as the data in the field.

If you're trying to change the position of the label relative to the field, see [Changing the position of labels](#).



### Are you in Design?

1. Double-click the field.
2. Click the Lines & Colors tab in the [InfoBox](#).



3. Under Border, select "Enclose field label."
4. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL('H\_CHANGING\_THE\_POSITION\_OF\_LABELS\_STEPS';,0)} [See related topics](#)



## How do I get rid of the space between objects?

Oftentimes, when you place an object such as a field on a form, a report, an envelope, or a mailing label, the data that you enter in the field varies in length. So you may end up in some records with too much blank space between fields when you print.

In Approach, you can adjust the boundaries (the borders within which you enter data) of fields and slide the fields closer together when you are in Design, or when you preview or print. This gets rid of the unnecessary space between fields.

Although you'll probably do this mostly with the space between fields, you can do this with all objects. For example, you may want to reduce the space between a field box and a text block.

Adjusting field boundaries and closing up the extra space between fields involves three steps:

- Adjusting the boundaries of a field
- Aligning fields to each other
- Sliding fields together

**Note** Approach automatically slides mailing label fields up and to the left to remove extra space. However, if you add a field to an existing mailing label, you must set the field to slide.

### Step 1: Adjusting the boundaries of fields

Suppose you have a field called "First Name" on a view. In one record, the field contains the value "Anastasia," which is nine characters long. In another record the field contains the value "Jon," which is only three characters long.

If you defined the field as having a size of 20 characters, it would contain 17 spaces.

In the Anastasia record, the value takes up more space in the field than in the Jon record, so there is less blank space. In both cases, however, there is still a substantial amount of blank space that remains to the right of the name. This means that any data to the right of the First Name field, like Last Name, would print too far away from the data in the First Name field.

The first step in getting rid of this space is to simply reduce the boundaries of the field. The boundaries actually shrink so that they adjust according to the size of the data in the field.

Now the field looks smaller. Its rightmost boundary is right after the last letter in "Anastasia." Notice, however, that there are also selection marks (which display only in Design) that go beyond the border. This indicates the defined length of the field (20 characters).

At print time, the field looks only as long as the value in it, in this case nine characters for the length of "Anastasia." The Jon record would print the field with a length of three characters. But at data entry time, when the record is being created or modified, the field displays with the length of its field definition, in this case, 20 characters.

### Step 2: Aligning fields to prepare them for sliding

After you reduce the size of the field so that it doesn't print with a lot of blank spaces, you need to make it line up with other fields in a way that lets users read them together easily. For example, the view that has a field called First Name also has a field called Last Name.

First of all, Last Name, which is defined with a length of 30 characters, has a lot of blank spaces in it. So, you need to reduce the boundaries of Last Name. But notice also that Last Name appears quite a bit to the right of First Name. This is because First Name is defined as having 20 characters, but it really only displays as having the nine characters of the value "Anastasia." So, while the boundaries of First Name field have been reduced to nine characters, Approach still knows that First Name is really 20 characters long, and so Last Name starts in the place on the view where you originally placed it, in this case directly after the twentieth character of First Name.

How do you deal with this? Easily. You just slide Last Name over to the left toward First Name, to the spot where the value in First Name ends. This means that Last Name will start at a different spot for each record, depending on how long the value in First Name is for that record.

But before you can slide Last Name over to First Name, you need to align the two fields. Otherwise, the field on the right won't slide next to the one on the left. If you are working with more than two fields, select all the fields you want to align and slide together.

### Step 3: Sliding fields together

Now that the fields are lined up, you can slide them together. Keep in mind that you are sliding fields to the left, so the first field in the series, the one toward which you are sliding the other, remains stationary, that is, it doesn't actually slide.

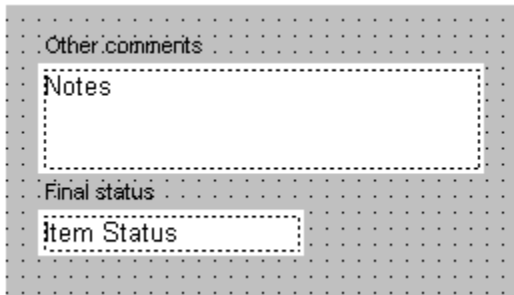
Notice that the selection marks around First name appear "behind" the Last Name field. This is because when you slid Last Name to the left, it overlapped the true right-hand boundary of First Name (which is defined as having 20 characters), even though First Name has been visually reduced to the size of the value of "Anastasia." (nine characters).

### Sliding fields up

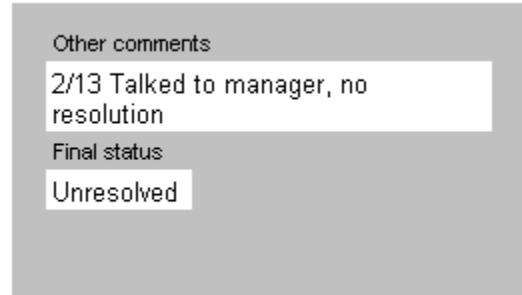
You can also slide fields up. For example, if you design a form to have four lines of information, and a user only enters data in the first, third, and fourth lines, you can set fields to slide up, removing the unnecessary second blank line.

Another situation in which sliding fields is useful occurs when the field on the top is a memo field that can have a variable amount of data in it, depending on the record. You must mark both fields, the memo field and the other field, to slide up.

To do this, [align the fields](#). Then, with the fields still selected, click the Size tab in the InfoBox, and under "When printing, slide," select Up.



A screenshot of a form design tool interface. The background is a light gray grid. There are four text input fields arranged vertically. The top field is labeled "Other comments" and contains the text "Notes". The second field is labeled "Final status" and is empty. The third field is labeled "Item Status" and is empty. The fields are outlined with a dashed border.



A screenshot of a form design tool interface showing the result of sliding the "Notes" field up. The background is a light gray grid. There are three text input fields arranged vertically. The top field is labeled "Other comments" and contains the text "2/13 Talked to manager, no resolution". The second field is labeled "Final status" and contains the text "Unresolved". The third field is labeled "Item Status" and is empty. The fields are outlined with a dashed border.

## Details: Attaching macros

### User actions

Fields, views, buttons, and objects have different types of user actions that determine when an attached macro is activated.

**Note** You can attach a macro to a group of radio buttons and check boxes, or to individual radio buttons and check boxes. To attach a macro to a single radio button or check box, first ungroup them, then attach the macro to the individual object.

### Field user actions

<u>This option</u>	<u>Activates the macro when the user</u>
On tab into	Tabs into or clicks this field
On tab out of	Tabs out of this field or clicks elsewhere
On data change	Changes the data in this field

### View (form) user actions

<u>This option</u>	<u>Activates the macro when the user</u>
On switch to	Displays this view
On switch out	Changes from this view to another view

### Object user actions

<u>This option</u>	<u>Activates the macro when the user</u>
On tab into	Tabs into or clicks this object
On tab out of	Tabs out of this object or clicks elsewhere
On selected	Selects this object

### Macro button user actions

<u>This option</u>	<u>Activates the macro when the user</u>
On tab into	Tabs to this button
On tab out of	Tabs away from this button
On clicked	Clicks the button

---

{button ,AL(^H\_ATTACHING\_MACROS\_STEPS',1)} [Go to procedure](#)

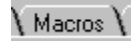
## Attaching macros

Attach a macro to a button or object, view, or field. The macro runs when you click the button or object, switch to or out of the view, or tab into or out of the field.



### Are you in Design?

1. Double-click the object.
2. Click the Macros tab of the InfoBox.



3. (Optional) Click Define Macro to create a new macro.
4. Select a user action that activates the macro.
5. Select a macro from the list.
6. To attach additional macros, repeat steps 4 and 5.
7. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H\_ATTACHING\_MACROS\_DETAILS',1)} See details

## Basic properties of objects and fields



### Choose a task

- [Preventing objects and fields from printing](#)
- [Naming views and objects](#)
- [Putting objects and fields in the tab order](#)
- [Removing objects and fields from the tab order](#)
- [Displaying fields as check boxes](#)
- [Displaying fields as radio buttons](#)
- [Displaying fields as scrolling lists](#)

### For fields displayed as scrolling lists

- [Displaying fewer values in a scrolling list](#)
- [Displaying descriptive values in a scrolling list](#)
- [Adding and deleting items in scrolling lists](#)

### For PicturePlus fields

- [Drawing in PicturePlus fields](#)

### For repeating panels

- [Setting a default sort order for a repeating panel](#)
- [Modifying repeating panels](#)

---

{button ,AL(`H\_BASIC\_PROPERTIES\_OF\_VIEWS\_CS';,0)} [See related topics](#)

## Basic properties of views



### Choose a task

- [Changing the color of objects and views](#)
- [Naming views and objects](#)
- [Selecting a main database for a view](#)
- [Changing the menu for a view](#)
- [Hiding views](#)
- [Showing more of the view by hiding its margins](#)
- [Changing dialog boxes back to forms](#)
- [Creating dialog boxes from forms](#)

### For reports

- [Choosing which records go into a summary](#)
- [Changing the number of columns in reports](#)
- [Paginating reports](#)
- [Reducing or expanding sections of reports when printing](#)

### For crosstabs

- [Selecting drill-down views](#)

### For charts

- [Drilling down to data for charts](#)

### For mailing labels

- [Changing or deleting custom mailing label types](#)

---

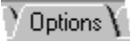
{button ,AL('H\_LINE\_AND\_COLOR\_PROPERTIES\_CS';0)} [See related topics](#)

## Changing display options for a PicturePlus field



### Are you in Design?

1. Double-click the PicturePlus field.
2. Click the Options tab of the InfoBox.



3. Drag the graphic where you want it to appear in the field.
4. Select the method for resizing the graphic, if it is too large or too small for the field.
5. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_SETTING\_OLE\_OPTIONS\_FOR\_PICTUREPLUS\_FIELDS\_STEPS';,0)} See related topics

## Changing or deleting custom mailing label types

If you want a different arrangement of labels on the page once you have created the label, create a new mailing label view.



Are you in Design?

### Changing mailing label types

1. Choose Mailing Label - Mailing Label Properties.



2. Click Edit Label Options in the Basics tab.



The Mailing Label Options box appears.

3. Select the label layout you want to change in the "Custom label" box.
4. Change the settings for the custom label.
5. Click Change to apply your changes to the current label definition.
6. Click Done to close the Mailing Labels Options box.
7. (Optional) Move, collapse, or close the InfoBox.

### Deleting custom mailing label types

1. Select the layout in the "Custom Label" box.
2. Click Delete.
3. Click Done.

---

{button ,AL('H\_ADDING\_TEXT\_TO\_MAILING\_LABELS\_STEPS;H\_CREATING\_CUSTOM\_MAILING\_LABEL\_TYPE  
S\_STEPS;H\_CREATING\_MAILING\_LABELS\_STEPS;H\_MOVING\_OR\_RESIZING\_MAILING\_LABEL\_FIELDS\_S  
TEPS;H\_SETTING\_FIELDS\_TO\_SLIDE\_STEPS;',0)} [See related topics](#)

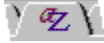


## Changing properties of text in text blocks

In a text block

- Selecting the entire text block changes the properties for all text in the text block.
- Selecting only some of the text changes the properties for only that text.

1. Double-click the text block.
2. Click the Font tab in the [InfoBox](#).



3. Select options to change text attributes.
4. (Optional) [Move, collapse, or close](#) the InfoBox.

---

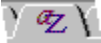
{button ,AL(^H\_CHANGING\_TEXT\_ATTRIBUTES\_OF\_LABELS\_OR\_DATA\_STEPS;H\_CUTTING\_OR\_COPYING\_OBJECTS\_OR\_TEXT\_STEPS;'0)} [See related topics](#)

## Changing text attributes of labels or data



### Are you in Design?

1. Double-click the field.
2. Click the Font tab in the InfoBox.



3. Click Data or Label depending on what you want to change.



4. Select options to change text attributes.
5. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H\_CHANGING\_THE\_POSITION\_OF\_LABELS\_STEPS;H\_EDITING\_LABELS\_STEPS;H\_HIDING\_LABELS\_STEPS;','0)} [See related topics](#)

## Changing the date format on form letters



### Are you in Design?

1. Click to enter the text block.  
The insertion point appears when you click.
2. Double-click <<DATE>> to select it.
3. Choose Letter - Form Letter Properties.



4. Click the Format tab in the InfoBox.



5. Change the format of the date.
6. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H\_ADDING\_FIELDS\_TO\_FORM\_LETTERS\_STEPS;H\_ADDING\_THE\_SALUTATION\_TO\_FORM\_LETTERS\_STEPS;H\_ENTERING\_TEXT\_IN\_FORM\_LETTERS\_STEPS;H\_MOVING\_OR\_DELETING\_FORM\_LETTERS\_FIELDS\_STEPS;',0)} See related topics

**Details: Changing the menu for a view**

An attached menu is available when you go to the view in Browse.

Approach lets you attach the default menu, the short menu, or a custom menu you create.

The short menu is a subset of the default menu. It does not include commands for modifying the file. For example, the short menu does not contain Create - Form.

---

{button ,AL('H\_CHANGING\_THE\_MENU\_FOR\_A\_VIEW\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_CREATING\_A\_CUSTOM\_MENU\_BAR\_STEPS;H\_HIDING\_VIEWS\_STEPS;H\_NAMING\_VIEWS\_AND\_OBJECTS\_STEPS;H\_SELECTING\_A\_MAIN\_DATABASE\_FOR\_A\_VIEW\_STEPS;H\_SHOWING\_MORE\_OF\_THE\_VIEW\_BY\_HIDING\_ITS\_MARGINS\_STEPS;',0)} [See related topics](#)

## Changing the menu for a view

You can change the menu bar of the current view. The selected menu bar displays when you go to the view in Browse.



### Are you in Design?

1. Double-click the background of the view, away from any object.  
For worksheets or crosstabs, choose Worksheet Properties or Crosstab Properties on the context menu.
2. Click the Basics tab of the InfoBox.



3. Select a menu from the "Attached menu bar" box.
4. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_CHANGING\_THE\_MENU\_FOR\_A\_VIEW\_DETAILS',1)} See details

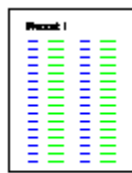
{button ,AL('H\_CREATING\_CUSTOM\_MENUS\_STEPS;H\_HIDING\_VIEWS\_STEPS;H\_NAMING\_VIEWS\_AND\_OBJECTS\_STEPS;H\_SELECTING\_A\_MAIN\_DATABASE\_FOR\_A\_VIEW\_STEPS;H\_SHOWING\_MORE\_OF\_THE\_VIEW\_BY\_HIDING\_ITS\_MARGINS\_STEPS;',0)} See related topics

## Changing the number of columns in reports

If the fields on the report don't take up much room left to right but run onto many pages, increase the number of columns on the report to use fewer pages.



1 Column



2 Column



### Are you in Design?

1. Choose Report Properties on the context menu.
2. Click the Basics tab in the InfoBox.



3. Enter the number of columns in the "Number of columns" box.
4. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_EDITING\_COLUMN\_HEADER\_TEXT\_STEPS;H\_MOVING\_AND\_RESIZING\_REPORT\_COLUMNS\_STEPS;H\_reports\_over;',0)} See related topics

## Changing the position of labels

If you're trying to make the label appear inside the border of the field with the field data, see [Displaying field labels inside field boxes](#).



Are you in [Design](#)?

1. Double-click the field.
2. Click the Font tab in the [InfoBox](#).



3. Select "Label."
4. Select a position for the label in the "Label position" box.  
**Note** To remove the label from the form, select No label.
5. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL('H\_CHANGING\_TEXT\_ATTRIBUTES\_OF\_LABELS\_OR\_DATA\_STEPS;H\_EDITING\_LABELS\_STEPS;H\_HIDING\_LABELS\_STEPS;H\_APP\_DISPLAYING\_FIELD\_LABELS\_INSIDE\_FIELD\_BOXES\_STEPS';,0)} [See related topics](#)

## Changing the width of lines or borders

If you're trying to modify reports, you change the width of the view border in individual panels.



### Are you in Design?

1. Double-click the object, or the background of a view.
2. Click the Lines & Colors tab in the InfoBox.



3. Under Style, select the first frame or line style.
4. Select a width.
5. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H\_CREATING\_PARTIAL\_BORDERS\_STEPS;H\_LINE\_AND\_COLOR\_PROPERTIES\_CS;');0)} See related topics



## Selecting drill-down views

Select the view that records appear in when you use Drill Down to Data. If you don't choose a drill-down view, Approach creates a new worksheet for the drill-down results and sets this worksheet as the default drill-down view.

**Want the big picture?** See [Overview: Drill down to data](#).

1. Click a body cell in the crosstab.
2. Choose Crosstab - Crosstab Properties.



3. Click the Basics tab in the [InfoBox](#).



4. Select a view in the "Drill down view" box.
5. From the Crosstab menu, choose Drill Down to Data to [obtain drill-down results](#).  
For charts, see [Drilling down to data for charts](#).
6. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL(`H\_drill\_down\_to\_data\_over;H\_finding\_records\_that\_make\_up\_crosstabs\_steps;H\_DRILL\_DOWN\_TO\_DATA\_FOR\_CHARTS\_STEPS;`,0)} [See related topics](#)

## Choosing which records go into a summary

Summary panels appear on reports only.

**Tip** Do the following to make the report design clearer:

- Deselect View - Show Data.
- Select View - Show Panel Labels



### Are you in Design?

1. Double-click the summary panel.

The title bar of the InfoBox should say "Properties for: Summary Panel."

**Tip** Don't click a field in the panel. Otherwise, you'll get the InfoBox for the field.

2. Click the Basics tab in the InfoBox.



3. Select an option from "Summarize."

You can summarize

- A fixed number of records, such as the number that fit on a page.
- All records.
- Records that correspond to the values used for grouping. Select a field from the "records grouped by" box.

4. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(^H\_MOVING\_SUMMARIES\_STEPS;H\_reports\_over;',0)} [See related topics](#)

## Closing up extra space between objects

When you're in Design or when you want to print or preview, you can remove unwanted space between fields, or between fields and other kinds of objects, such as text blocks. To do this, perform these tasks:

- Adjust the boundaries of objects
- Align the objects to each other
- Slide the objects together

**Want the big picture?** See [How do I get rid of the space between objects?](#)



Are you in [Design](#)?

## Adjusting the boundaries of objects

1. [Select the objects](#) whose boundaries you want to adjust.
2. From the Multiple Objects menu, choose Object Properties.



3. Click the Size tab in the [InfoBox](#).



4. Under When printing, select "Reduce boundaries."

## Aligning objects

1. Select the objects that you want to slide together.
2. From the Multiple Objects menu, choose Object Properties.



3. Click the Align tab in the InfoBox.



4. Align the objects
  - Along the bottom if you are sliding the objects left



- Along the left if you are sliding the objects up



## Sliding objects

1. Select the object(s) that you want to slide left or up.  
**Note** If you are sliding left, do not select the object that is farthest to the left. If you are sliding up, select all objects.
2. Click the Size tab in the InfoBox.



3. Under When printing, slide, select "Left" or "Up."
4. (Optional) [Move, collapse, or close](#) the InfoBox.

The objects you selected will slide together up or down in Design or when you print or preview the view.

---

{button ,AL('H\_CLOSING\_EXTRA\_SPACE\_BETWEEN\_FIELDS\_DETAILS',1)} [See details](#)

{button ,AL('H\_moving\_objects\_steps',0)} [See related topics](#)

## Creating a shadow



### Are you in Design?

1. Double-click the text block, object, or repeating panel.
2. Click the Lines & Colors tab in the InfoBox.



3. Under "Shadow color," select a color.  
Select T, for transparent, if you want to see through the shadow to objects underneath.
4. (Optional) Move, collapse, or close the InfoBox.

**Note** If a repeating panel has records of alternating colors, the records that are the same color as the form take on the color you select for the shadow.

---

{button ,AL('H\_LINE\_AND\_COLOR\_PROPERTIES\_CS';,0)} [See related topics](#)

## Details: Creating custom formats for currency

### Decoding number formats

Approach specifies currency formats with the following characters. Use them to create your own formats:

0	Required digit.
#	Optional digit. Does not display zero.
. (period)	Decimal point position. Your operating system may be set to use a different decimal indicator.
, (comma)	Thousands separator, if used between digits. Your operating system may be set to use a different thousands separator.
\$ F DM	Literal characters displayed as they appear. These and other literal characters like spaces must be enclosed in double quotation marks (") in the format.

### Entering currency in Browse

Select "Show data entry format" on the Format tab of the [InfoBox](#) to make the format visible when the field is selected in Browse.

### Storing currency in the database

Data in numeric fields are stored in the database without any formatting and in the order specified by your operating system.

**Note** When you format a text field for currency, "Show data entry format" stores the text in the database with the formatting.

---

{button ,AL('H\_CREATING\_CUSTOM\_FORMATS\_FOR\_CURRENCY\_STEPS',1)} [Go to procedure](#)

## Creating custom formats for currency

To create a custom format for currency, modify an existing format. To restore the original format, you must change the custom format back to the original. So take note of the original format.



### Are you in Design?

1. Double-click a currency field.
2. Click the Format tab in the [InfoBox](#).



3. Make sure that Currency is selected in the "Format type" box.
4. Select the format you want to modify in the "Current format" box.
5. Click Edit Format.

The Edit Format dialog box appears.

6. In the "Format code" box, edit the codes for the new currency format.

**Note** Edit the format for both positive and negative values. The negative format is to the right of the separator (;).

7. Click OK to close the Edit Format dialog box.
8. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL('H\_CREATING\_CUSTOM\_FORMATS\_FOR\_CURRENCY\_DETAILS',1)} [See details](#)

### Details: Creating custom formats for dates

Use the following tables to determine how to enter the format code.

#### Day, month, and year formats

<u>Format</u>	<u>Appears as</u>	<u>Sample</u>
D	Date without leading zero	8
DD	Date with leading zero	08
DDD	3-letter day	Thu
DDDD	Day of the week in full	Thursday
M	Month without leading zero	5
MM	Month with leading zero	05
MMM	3-letter month	Sep
MMMM	Month in full	September
Y	Year in full	1997
YY	Last two digits of year	97
YYY	Year in full	1997
YYYY	Year in full	1997

#### Numbers indicate periods

To indicate the year broken into different periods, use the following number codes:

4	Quarter
3	Third
2	Semiannual period
1	Entire year

Repeat the number in the format to specify how the period appears in the field:

<u>Format</u>	<u>Appears as</u>
3	1, 2, or 3
33	1st, 2nd, or 3rd
333	First, Second, or Third

A format can also include literal text (such as Quarter). If the literal text includes the character D, M, Y, 2, 3, 4, or includes a space, enclose the text in double quotation marks.

#### Examples

<u>Format</u>	<u>For the date 7/1/86</u>
Q4	Q3
YYT3	86T2
22 Half YY	2nd Half 86
333 "Year" YYYY	Third Year 1986

Your modifications to the date format appear in the field when you press ENTER or TAB or click the view.

#### Storing dates

Dates are stored in the database in the order specified by your operating system without any formatting.

#### International and system dates

Date formats marked [ISO] are international date formats. Date formats marked with a computer icon are system dates, such as regional settings.



Approach reads these formats from the operating system. If you change system settings, they are automatically updated in the current Approach session.

International and system date and time formats are not saved with the Approach document, as are other date and time formats.

System dates change according to the operating system you are using. If you do not want your date formats to change when you change operating systems, select a date format in the Format type box that is not marked with a computer icon.

**Note** When you format a text field for dates or times, and you select "Show data entry format," Approach stores the text in the database with the date or time formatting.

---

{button ,AL('H\_CREATING\_CUSTOM\_FORMATS\_FOR\_DATES\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_ENTERING\_DATES\_IN\_DATE\_FIELDS\_DETAILS;H\_FORMATTING\_DATES\_AS\_QUARTERS\_THIRDS\_AND\_SO\_ON\_STEPS;H\_INSERTING\_DATES\_OR\_TIMES\_STEPS';,0)} [See related topics](#)



## Creating custom formats for dates

To create a custom format for a date, modify an existing format. To restore the original format, you must change the custom format back to the original. So take note of the original format.



### Are you in Design?

1. Double-click a date field.
2. Click the Format tab in the InfoBox.



3. Make sure that Date is selected in the "Format type" box.
4. Select the format you want to modify in the "Current format" box.
5. Click Edit Format.

The Edit Format dialog box appears.

6. In the "Format code" box, edit the code for the new date format.
7. Click OK to close the Edit Format dialog box.
8. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_CREATING\_CUSTOM\_FORMATS\_FOR\_DATES\_DETAILS',1)} [See details](#)

## Details: Creating custom formats for numbers

### Decoding number formats

Approach specifies number formats with the following characters. Use them to create your own formats:

0	Required digit.
#	Optional digit. Does not display zero.
. (period)	Decimal point position. Your operating system may be set to use a different decimal indicator.
, (comma)	Thousands separator, if used between digits. Your operating system may be set to use a different thousands separator.
\$ - + : ( )	Literal characters displayed as they appear. Other literal characters like spaces must be enclosed in double quotation marks (") in the format.
%	Percent operator. Displays the field value as a percent.
; (semicolon)	Separates positive and negative values. The part to the right is for negative numbers.
= < >	Field values are formatted according to the number of digits in the value. See details below.
(vertical bar)	Separates alternative formats for the same value
e+	Field values are formatted in scientific notation.

Use equal (=), greater than (>), or less than (<) signs to control the format according to the number of digits entered. For example, suppose a field has this format:

=7 000-0000|<7 "x"0000

- If you enter 1234567, the data appears as 123-4567.
- If you enter 1234, the data appears as x1234.

The vertical bar (|) separates the two conditional formats.

### Verifying entered numbers

Number formats make it easier to enter correct and consistent data into a record. They do not guarantee correct information, however. See [Verifying the accuracy of entered data](#).

### Entering numbers in Browse

Select "Show data entry format" on the Format tab of the [InfoBox](#) to make the format visible when the field is selected in Browse.

### Storing numbers in the database

Data in numeric fields are stored in the database without any formatting and in the order specified by your operating system.

**Note** When you format a text field for numbers, "Show data entry format" stores the text in the database with the numeric formatting.

---

{button ,AL('H\_CREATING\_CUSTOM\_FORMATS\_FOR\_NUMBERS\_STEPS',1)} [Go to procedure](#)

## Creating custom formats for numbers

To create a custom format for a number, modify an existing format. To restore the original format, you must change the custom format back to the original. So take note of the original format.



Are you in Design?

1. Double-click a numeric field.
2. Click the Format tab in the InfoBox.



3. Make sure that Numeric is selected in the "Format type" box.
4. Select the format you want to modify in the "Current format" box.
5. Click Edit Format.  
The Edit Format dialog box appears.
6. In the "Format code" box, enter the code for the new numeric format.
7. Click OK to close the Edit Format dialog box.
8. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H\_CREATING\_CUSTOM\_FORMATS\_FOR\_NUMBERS\_DETAILS`,1)} [See details](#)

## Details: Creating custom formats for times

### Clock

You can set the clock for 12- or 24-hour time intervals.

- 12-hour time divides the hours of a day by AM and PM.
- 24-hour time displays the consecutive hours of a day from 0 (midnight) to 23:59:59.

### Delimiter

Set the separator of hours from minutes. The default is a colon (:).

### Suffixes

- For 12-hour time, set the suffixes for the first half and the second half of a day. The defaults are AM and PM.
- For 24-hour time, set the suffix for the hours. The default is h.

---

{button ,AL(`H\_CREATING\_CUSTOM\_FORMATS\_FOR\_TIMES\_STEPS';1)} [Go to procedure](#)

{button ,AL(`H\_ENTERING\_VALUES\_IN\_NUMERIC\_FIELDS\_STEPS;H\_FORMATTING\_TIMES\_STEPS';0)} [See related topics](#)

## Creating custom formats for times

To create a custom format for a time, modify an existing format. To restore the original format, you must change the custom format back to the original. So take note of the original format.



### Are you in Design?

1. Double-click a time field.
2. Click the Format tab in the InfoBox .



3. Select Time in the "Format type" box.
4. Select the format you want to modify in the "Current format" box.
5. Click Edit Format.  
The Edit Format dialog box appears.
6. Select a 24-hour or 12-hour format.
7. (Optional) Enter a delimiter for separating hours, minutes, and seconds.
8. (Optional) Enter a suffix.  
A sample of the selected format appears in the "Sample" box.
9. Click OK to close the Edit Format dialog box.
10. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H\_FORMATTING\_TIMES\_STEPS;',0)} See related topics

## Creating custom mailing label types

Approach accommodates dozens of standard label types, but you can also create your own mailing label type.



### Are you in Design?

1. Create the mailing label.
  - Don't select a label type.
  - Don't click Done before completing the rest of these steps.
2. Click the Options tab.



3. Name the custom labels in the "Custom label" box.
4. Enter values for margin, label size, and gap dimensions.
5. Under Number of labels, enter the number of labels to appear across and down on the page.
6. Select a printing order in the "Arrange labels" box.
7. If you're using continuous feed labels, select "Tractor feed."  
Choose Printer Setup to adjust printer settings for the correct paper size.
8. Click Add to save the custom label type.
9. Click Done.

Next time you create a label, the custom label type appears in the list of available label types.

---

{button ,AL(^H\_ADDING\_TEXT\_TO\_MAILING\_LABELS\_STEPS;H\_CHANGING\_OR\_DELETING\_CUSTOM\_MAILING\_LABEL\_TYPES\_STEPS;H\_CREATING\_MAILING\_LABELS\_STEPS;H\_MOVING\_OR\_RESIZING\_MAILING\_LABEL\_FIELDS\_STEPS;H\_SETTING\_OBJECTS\_AND\_FIELDS\_TO\_SLIDE\_WHEN\_PRINTING\_STEPS;','0)} See related topics

**Details: Creating dialog boxes from forms**

You can create customized dialog boxes by designing and building a form containing fields, buttons, and objects.

When you switch to this form with a macro or script, Approach displays the form as a dialog box. It crops the form to the right and bottom of all objects, and creates a title bar and close box for the dialog box. Approach does not create OK or Cancel buttons, so create macro buttons on the form to perform these functions, or use the Esc key to close the dialog box.

When you create a macro to display the dialog box, use the [View macro command](#) and select the form.

When you are in [Browse](#), Approach removes the form name from the list of available forms. However, you can still see it as a view in [Design](#). You can also run a macro in Browse, from the Edit - Run Macros list, that switches to the form as a dialog box.

**Tabbed dialog boxes**

To create a dialog box with tabs, like an assistant, create forms containing multiple pages. When you display the form as a dialog box, Approach converts each page into a tab of the dialog box. Tabs names correspond to the Page Name shown on the Basics tab for the form.

**Example**

Create a dialog box that contains more detailed information about the current form. Instead of displaying all the fields on the main form, such as a customer record, put the detail fields on the form displayed as a dialog. Add a macro button to the main form, called More Info, that displays the dialog form.

---

{button ,AL('H\_CREATING\_DIALOG\_BOXES\_FROM\_FORMS\_STEPS',1)} [Go to procedure](#)

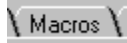


## Creating dialog boxes from forms



### Are you in Design?

1. Double-click the background of the form, away from any object.
2. Click the Macros tab of the [InfoBox](#).



3. Select "Show form as dialog."
4. (Optional) [Move, collapse, or close](#) the InfoBox.

**Note** Create macro buttons on other forms that switch to this form.

---

{button ,AL(`H\_CREATING\_DIALOG\_BOXES\_FROM\_FORMS\_DETAILS',1)} [See details](#)

{button ,AL(`H\_ATTACHING\_MACROS\_STEPS',0)} [See related topics](#)

## Creating partial borders



### Are you in Design?

1. Double-click the text block, object, or the background of a view.
2. Click the Lines & Colors tab in the InfoBox.



3. Under Border, deselect the parts of the border you want to eliminate.
4. (Optional) Move, collapse, or close the InfoBox.

**Note** If you apply a frame style in the Lines & Colors tab, all four borders are turned on automatically.

---

{button ,AL('H\_CHANGING\_THE\_WIDTH\_OF\_LINES\_OR\_BORDERS\_STEPS;H\_LINE\_AND\_COLOR\_PROPERTIES\_CS';,0)} See related topics

## Crosstab options

Set which records crosstabs use to display calculated results.



### Choose a task

[Adding all groups to crosstabs](#)

[Applying found sets to crosstabs](#)

## Define scrolling lists dialog box

### Choose a task

[Adding and deleting items in scrolling lists](#)

[Displaying descriptive values in a scrolling list](#)

[Displaying fewer values in a scrolling list](#)

## Displaying descriptive values in a scrolling list

Entering hard-to-remember codes and identifiers is simplified if users can select from values that are more descriptive.

For example, instead of making users select an ID number to identify a product, you can have users select the product name, while Approach enters the ID number in the database.



### Are you in Design?

1. Double-click the scrolling list field.
2. Click the Basics tab in the InfoBox.



3. Click Define List.  
A dialog box appears.
4. Click Options.
5. Select "Show description field."
6. Select the field that contains the descriptive values for the list.

For example, for the field ProductID, simplify the selection of unfamiliar product codes by displaying the values in the ProductName field as the description field.

7. Click OK.
8. (Optional) Move, collapse, or close the InfoBox.

The field displays the values from the description field, but stores the corresponding value from the original field in the database.

---

```
{button ,AL('H_DISPLAYING_FEWER_VALUES_IN_A_SCROLLING_LIST_STEPS;H_DISPLAYING_THE_CONTENTS_OF_DROPDOWN_BOXES_AUTOMATICALLY_STEPS;H_ADDING_AND_DELETING_ITEMS_IN_SCROLLING_LISTS_STEPS;',0)} See related topics
```

## Displaying fewer values in a scrolling list

Set a condition that preselects or filters values for a field displayed as a drop-down box, field box and list, or a list box.



### Are you in Design?

1. Double-click the field.
2. Click the Basics tab in the InfoBox.



3. Click Define List.  
A dialog box appears.
4. Click Options.
5. Select "Filter the list based on another field."  
The Define Filter dialog box appears.
6. Select the field(s) to control the list.  
For example, to filter a list of city names by state, select the State field as the filter. The City field then lists only the cities that have the same state as the state in the current record.
7. Click OK to close the Define Filter dialog box.
8. Click OK.
9. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_DISPLAYING\_DESCRIPTIVE\_VALUES\_IN\_A\_SCROLLING\_LIST\_STEPS;H\_DISPLAYING\_THE\_C  
ONTENTS\_OF\_DROPDOWN\_BOXES\_AUTOMATICALLY\_STEPS;H\_SELECTING\_FROM\_A\_DROPDOWN\_BO  
X\_STEPS;H\_ADDING\_AND\_DELETING\_ITEMS\_IN\_SCROLLING\_LISTS\_STEPS;');0)} See related topics

### Details: Displaying fields as check boxes

A check box can quickly show the distinction between two data values of a field. Often, one value is the opposite of the other. For example:

On       Yes, I'll attend       Tax included  
 Off       No, I can't attend

In examples such as these, where the field has two values, each check box has a checked and unchecked value. By selecting a check box, you insert the checked value of that check box into the field. By deselecting it, you insert the unchecked value of that check box. In some cases, you don't have to define an unchecked value of a check box.

### Setting an initial value for a check box

If you never select a check box, the field contains neither the checked value nor the unchecked value. It has no value (also called "null value").

- To enter the unchecked value in the database, you must first select the check box (check it) and then deselect it (uncheck it).
- To ensure that the field contains either the checked or unchecked value, define one of them as the default value for the field. See [Entering data automatically](#).

### The label describes the checked and unchecked values

Use the label to clarify what it means to select the check box. In Browse, the label is the only indication of what value is placed in the field.

To show a group name for a field displayed as multiple check boxes, [create a text block](#) that displays a group name for the check boxes.

### More than one check box

You can define a field as more than one check box, such as in the on/off example shown above. When you have more than one check box like this, only one of the check boxes can be selected at a time. When you select a check box, any box already selected in the set is deselected.

You can deselect all of the check boxes. When you do this, the field value becomes the unchecked value of the *last* check box that you deselected. For example, if you deselect On

On  
 Off

and you defined the unchecked value for On as Off, then this happens:

- On displays as unchecked
- Approach automatically selects Off
- The field value becomes Off

On  
 Off

If, however, On has no unchecked value and you deselect it, the field value becomes null, and both check boxes display as unchecked:

On  
 Off

### Multiple-choice check boxes

Sometimes you may want users to be able to check more than one box in a set. (Such a set of choices often appears with the instruction, "Check all that apply.")

For example, to find out what experience employees have with different operating systems, you could create the following set of check boxes:

Windows95       Macintosh       OS/2  
 UNIX       Windows NT       NeXT

To do this, you must define a field for each choice. Then define each field as a check box. To make them easier to

move, group them together first.

### **Radio buttons instead**

Multiple check boxes allow you to have none of the choices in the set selected. Radio buttons require you to have one choice always selected. Use radio buttons if you want one, but no more than one, of the choices in the set selected at all times.

---

```
{button ,AL('H_DISPLAYING_FIELDS_AS_CHECK_BOXES_STEPS',1)} Go to procedure
```

```
{button ,AL('H_Displaying_fields_as_radio_buttons_STEPS;H_ENTERING_DATA_AUTOMATICALLY_STEPS;H_FINISHING_RADIO_BUTTON_AND_CHECK_BOX_SETTINGS_STEPS;H_REARRANGING_A_SET_OF_RADIO_BUTTONS_OR_CHECK_BOXES_STEPS;',0)} See related topics
```



## Displaying fields as check boxes

A check box is most effective when you want a field to give users a choice between two mutually exclusive values. For example:



You can, however, use check boxes to display as many selections as you like. In either case, the user can select just one value.



### Are you in Design?

1. Double-click the field.
2. Click the Basics tab in the [InfoBox](#).



3. Select Check boxes in the "Data entry type" box.

The Define Check Box dialog box appears.

4. Define one or more check boxes for the field.

Each row in the Define Check Box dialog box represents a check box.

- To create a single check box, enter a checked value, an unchecked value, and a label that explains what it means to select the check box.
- To create two or more check boxes, enter a checked value and a label for each check box. Entering an unchecked value is not necessary.
- If the field you're using already has data in it, and you want that data to appear as the possible selections, click "Create Check Boxes from Field Data."

5. Click OK to close the Define Check Box dialog box.
6. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL('H\_DISPLAYING\_FIELDS\_AS\_CHECK\_BOXES\_DETAILS',1)} [See details](#)

{button ,AL('H\_DISPLAYING\_FIELDS\_AS\_RADIO\_BUTTONS\_STEPS;H\_DISPLAYING\_FIELDS\_AS\_SCROLLING\_LISTS\_STEPS;H\_FINDING\_RADIO\_BUTTON\_AND\_CHECK\_BOX\_SETTINGS\_STEPS;H\_REARRANGING\_A\_SET\_OF\_RADIO\_BUTTONS\_OR\_CHECK\_BOXES\_STEPS;',0)} [See related topics](#)

### Details: Displaying fields as radio buttons

Radio buttons make choices clear among a small, predefined set of possible answers. For example:

<u>Payment:</u>	<u>Level:</u>
<input type="radio"/> Credit	<input type="radio"/> Freshman
<input type="radio"/> Check	<input type="radio"/> Sophomore
<input type="radio"/> Cash	<input type="radio"/> Junior
	<input type="radio"/> Senior

### Setting an initial value for radio buttons

If you never select a radio button, the field has no value (also called "null value").

To ensure that the field contains a clicked value, define one of them as the default value for the field. See [Entering data automatically](#).

### Labeling the radio buttons

To show a group name for a field displayed as radio buttons, [create a text block](#) that displays a group name for the radio buttons.

### Entering a value with a radio button

A radio button has only one value, so you should normally use a set of two or more radio buttons for a single field, to allow for choices. Click a radio button to enter that value in the field.

In a set of radio buttons, only one button can be selected at a time. When you select a radio button, any button that is currently selected in the set is deselected.

### Turning off radio buttons

If you want to be able to deselect all values in the set, use check boxes instead of radio buttons. You can also create a radio button for the "off" choice. For example, the last clicked value and label could be "None."

---

{button ,AL('H\_DISPLAYING\_FIELDS\_AS\_RADIO\_BUTTONS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_ADDING\_A\_TEXT\_BLOCK\_STEPS;H\_ENTERING\_DATA\_AUTOMATICALLY\_STEPS;H\_FINDING\_RADIO\_BUTTON\_AND\_CHECK\_BOX\_SETTINGS\_STEPS;',0)} [See related topics](#)

## Displaying fields as radio buttons

Use radio buttons when the field has a limited number of acceptable responses, and you want no more than one response at a time.



### Are you in Design?

1. Double-click the field.
2. Click the Basics tab in the InfoBox.



3. Select Radio buttons in the "Data entry type" box.  
The Define Radio Buttons dialog box appears.
4. Set the values that the radio buttons represent.
  - To use new values, enter clicked values and labels.
  - To use values from the field, click Create Radio Buttons from Field Data.
5. Click OK to close the Define Radio Buttons dialog box.
6. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H\_DISPLAYING\_FIELDS\_AS\_RADIO\_BUTTONS\_DETAILS',1)} [See details](#)

{button ,AL(`H\_FINDING\_RADIO\_BUTTON\_AND\_CHECK\_BOX\_SETTINGS\_steps;H\_REARRANGING\_A\_SET\_OF\_RADIO\_BUTTONS\_OR\_CHECK\_BOXES\_steps;H\_displaying\_fields\_as\_check\_boxes\_steps;H\_displaying\_fields\_as\_scrolling\_lists\_steps;',0)} [See related topics](#)

## Displaying fields as scrolling lists

A field in a view can show a predefined list of choices.

**Note** Users can select only one value from a scrolling list. If you want users to be able to make more than one selection from a group of related choices (for example, a group headed "Check all that apply"), [create a check box](#) for each choice.



### Are you in Design?

1. Double-click the field.
2. Click the Basics tab of the [InfoBox](#).



3. In the "Data entry type" box, select one of the following:
  - [Drop-down list](#)
  - [Field box & list](#)
  - [List box](#)
4. If necessary, click Define List to define values for the field.
5. Select the values to display in the list.
  - To use new values, click the list and enter the values.
  - To use existing values from this or another field, select "Create list automatically from field data."
6. (Optional) To include an arrow on drop-down boxes and fields boxes and lists, select "Show drop-down arrow."
7. Click OK to close the dialog box.
8. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL('H\_DISPLAYING\_DESCRIPTIVE\_VALUES\_IN\_A\_SCROLLING\_LIST\_STEPS;H\_DISPLAYING\_FEWER\_VALUES\_IN\_A\_SCROLLING\_LIST\_STEPS;H\_displaying\_fields\_as\_check\_boxes\_steps;H\_displaying\_fields\_as\_radio\_buttons\_steps;H\_ADDING\_AND\_DELETING\_ITEMS\_IN\_SCROLLING\_LISTS\_STEPS;','0)} [See related topics](#)

### Details: Editing crosstab summaries

#### Calculating from crosstab or record values

For each crosstab summary, you can control which values are used in calculating the crosstab summary values. This distinction matters when your summary calculations involve averages, standard deviations, counts, minimum values, maximum values or variances.

For example, suppose you have the following records for how many of one product were sold by two sales representatives:

<u>Sales rep</u>	<u>Product</u>	<u>Quantity</u>
AG	product1	100
AG	product1	200
JF	product1	300

If you create a crosstab showing the average number of each product sold, you get different values for the average summary, depending on whether you consider each record separately (Summarize record values -  $(100+200+300)/3=200$ ) or the groupings that appear on the crosstab (Summarize crosstab values -  $(300+300)/2=300$ ):

	product1
	Quantity
AG	300
JF	300
<i>Crosstab Average</i>	300
<i>Record Average</i>	200

Both of the calculations are correct; you need to determine which calculation is appropriate for what you are showing in your crosstab.

---

{button ,AL('H\_EDITING\_CROSSTAB\_SUMMARIES\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_crosstabs\_over;',0)} [See related topics](#)

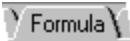
## Editing crosstab summaries

Control calculations for the following:

- Each summary row
  - Each summary column
  - Crosstab values
1. Click a row or column summary header.  
To change the summary for the crosstab values, select any of the column headers closest to the body cells.
  2. Choose Crosstab - Crosstab Properties.



3. Click the Formula tab in the InfoBox.



4. Select sum from the "Formula" box.
5. Select whether the formula should use the values visible in the crosstab or record values.
6. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(^H\_EDITING\_CROSSTAB\_SUMMARIES\_DETAILS',1)} [See details](#)

{button ,AL(^H\_adding\_summaries\_to\_crosstabs\_steps;H\_crosstabs\_over;',0)} [See related topics](#)

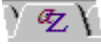
## Editing labels

These steps change only the label in the view. A change to a label does not affect the field name in the database.



### Are you in Design?

1. Double-click the field.
2. Click the Font tab in the InfoBox.



3. Select "Label."
4. Enter the new label in the "Label text" box.
5. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H\_CHANGING\_TEXT\_ATTRIBUTES\_OF\_LABELS\_OR\_DATA\_STEPS;H\_CHANGING\_THE\_POSITIO  
N\_OF\_LABELS\_STEPS;H\_HIDING\_LABELS\_STEPS;';0)} [See related topics](#)

## Formats for fields



### Choose a task

[Formatting data in text fields](#)

[Formatting numbers](#)

[Formatting dates](#)

[Formatting times](#)

[Formatting currency](#)

[Formatting dates as quarters, thirds, and so on](#)

[Changing the date format on form letters](#)

### For custom formats

[Creating custom formats for numbers](#)

[Creating custom formats for dates](#)

[Creating custom formats for times](#)

[Creating custom formats for currency](#)

---

{button ,AL('H\_CREATING\_CUSTOM\_FORMATS\_FOR\_CURRENCY\_DETAILS;H\_CREATING\_CUSTOM\_FORMATS\_FOR\_DATES\_DETAILS;H\_CREATING\_CUSTOM\_FORMATS\_FOR\_TIMES\_DETAILS';,0)} [See related topics](#)



## Formatting currency

Currency formats are available for numeric and text fields.



### Are you in Design?

1. Double-click the field.
2. Click the Format tab in the [InfoBox](#).



3. Select Currency in the "Format type" box.
4. Select a country from the "Current format" box.

A sample of the currency format appears in the lower right of the InfoBox.

5. (Optional) Click Edit Format to further modify the format.
6. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL('H\_CREATING\_CUSTOM\_FORMATS\_FOR\_CURRENCY\_DETAILS','0)} [See related topics](#)

## Formatting dates as quarters, thirds, and so on



### Are you in Design?

1. Double-click the field.
2. Click the Format tab in the InfoBox.



3. Select Date in the "Format type" box.
4. Select one of the formats, such as 1st Quarter 58.
5. (Optional) Click Edit Format to change the format in the "Format code" box.
6. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H\_ENTERING\_DATES\_IN\_DATE\_FIELDS\_STEPS;H\_CREATING\_CUSTOM\_FORMATS\_FOR\_DATES\_STEPS;H\_INSERTING\_DATES\_OR\_TIMES\_STEPS;`,`0)} [See related topics](#)

## Details: Formatting dates

### Entering dates in Browse

The format you select affects the way the date is displayed; it does not affect how you must enter the date. This is determined by the regional setting for dates of your computer's operating system.

So regardless of the date format you select for the field, enter a date in the order given by your regional setting, for example month first, then day, then year.

If you select "Show data entry format" in the [InfoBox](#), the entry format of the regional setting appears in the field when it's selected in Browse. You do not need to enter any separators (for example, slashes). For example, you can enter 050497, and Approach will interpret it correctly.

If you do not select "Show data entry format" and you enter 050497 or 5497, an error message appears warning you that this is not a correct date.

Approach replaces spaces left in dates as the current day, month, or year, depending on the position where the space occurs.

To enter dates in another order:

- Create separate fields for each date element and combine them in a [calculated field](#).
- Change your operating system setting to the date order you prefer.

### Overriding the Year 2000 setting

If you do not select "Show data entry format" in the InfoBox, you can enter the year in a four-digit format to override the millenium settings.

For example, if you enter 5/14/02, Approach interprets it as May 14, 2002. To enter May 14, 1902, you must enter it as 5/14/1902.

### Storing dates

Dates are stored in the database in the order specified by your operating system without any formatting.

### International and system dates

Date formats marked [ISO] are international date formats. Date formats marked with a computer icon are system dates.



Approach reads these formats from the operating system. If you change system settings, they are automatically updated in the current Approach session.

International and system date and time formats are not saved with the Approach document, as are other date and time formats.

System dates change according to the operating system you are using. If you do not want your date formats to change when you change operating systems, select a date format in the "Format type" box that is not marked with a computer icon.

**Note** When you format a text field for dates or times, and you select "Show data entry format," Approach stores the text in the database with the date or time formatting.

---

{button ,AL('H\_FORMATTING\_DATES\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_ENTERING\_DATES\_IN\_DATE\_FIELDS\_DETAILS;H\_CREATING\_CUSTOM\_FORMATS\_FOR\_DATE\_S\_DETAILS;H\_FORMATTING\_DATES\_AS\_QUARTERS\_THIRDS\_AND\_SO\_ON\_STEPS;H\_INSERTING\_DATE\_S\_OR\_TIMES\_STEPS;',0)} [See related topics](#)

## Formatting dates

Dates entered as numbers can appear on a view in one of many formats. For example, format a field to display 03/04/82 as Thursday, March 4, 1982.



### Are you in Design?

1. Double-click a field.
2. Click the Format tab in the [InfoBox](#).



3. Select Date in the "Format type" box.
4. Select a date format in the "Current format" box.  
A sample of the selected format appears in the lower right of the InfoBox.
5. (Optional) Click Edit Format to change which parts of the date appear or the separators that the date uses.
6. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL(`H\_FORMATTING\_DATES\_DETAILS`,1)} [See details](#)

{button ,AL(`H\_ENTERING\_DATES\_IN\_DATE\_FIELDS\_STEPS;H\_CREATING\_CUSTOM\_FORMATS\_FOR\_DATES\_STEPS;H\_FORMATTING\_DATES\_AS\_QUARTERS\_THIRDS\_AND\_SO\_ON\_STEPS;H\_INSERTING\_DATES\_OR\_TIMES\_STEPS`;,0)} [See related topics](#)

## Formatting numbers

Number formats are available for numeric and text fields.



### Are you in Design?

1. Double-click the field.
2. Click the Format tab in the [InfoBox](#).



3. Select Numeric in the "Format type" box.
4. Select a format from the "Current format" box.  
A sample of the format appears in the lower right of the InfoBox.
5. (Optional) Click Edit Format to further modify the format.
6. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL('H\_ENTERING\_VALUES\_IN\_NUMERIC\_FIELDS\_STEPS;H\_CREATING\_CUSTOM\_FORMATS\_FOR\_NUMBERS\_DETAILS';,0)} [See related topics](#)

## Formatting times

Time formats are available for time and text fields.



### Are you in Design?

1. Double-click the field.
2. Click the Format tab in the [InfoBox](#).



3. Select Time in the "Format type" box.
4. Select a time format in the "Current format" box.  
A sample of the format appears in the lower right of the InfoBox.
5. (Optional) Click Edit Format to change the delimiter and whether the "AM" and "PM" suffixes appear.
6. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL('H\_ENTERING\_TIMES\_IN\_TIME\_FIELDS\_STEPS;H\_CREATING\_CUSTOM\_FORMATS\_FOR\_TIMES\_DETAILS;H\_INSERTING\_DATES\_OR\_TIMES\_STEPS','0)} [See related topics](#)

## Formatting worksheets or crosstabs for printing

Add a title that appears on each page, and the date and page number, which appear in the footer of each page.



### Are you in Design?

1. Choose Properties from the context menu.



2. Click the Printing tab.
3. To add a title, select "Print title" and enter a title.
4. To add a date, select "Print date."
5. To add a page number, select "Print page" number.
6. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_DOWNLOADING\_DATA\_BEFORE\_PREVIEWING\_STEPS;H\_SPECIFYING\_THE\_PAPER\_ORIENTA  
TION\_AND\_MARGINS\_STEPS','0)} See related topics

## Hiding labels in repeating panels



### Are you in Design?

1. Double-click the repeating panel.
2. Click the Basics tab in the InfoBox.



3. To hide labels in the panel, deselect "Show panel labels."
4. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(^H\_CHANGING\_TEXT\_ATTRIBUTES\_OF\_LABELS\_OR\_DATA\_STEPS;H\_EDITING\_LABELS\_STEPS;',  
0)} See related topics



## Hiding labels

When you hide a label, the data in the field remains visible.



### Are you in Design?

1. Double-click the field.
2. Click the Font tab in the InfoBox.



3. Select "Label."
4. Select No label in the "Label position" box.
5. (Optional) Move, collapse, or close the InfoBox.

## Hiding views

Hidden views do not appear in the view tabs or in the status bar when you are in Browse. Use hidden views when you do not want the user to see the data in those views.

In Design, hidden views appear in the status bar and can be displayed by users.



### Are you in Design?

1. Double-click the background of the view, away from any object.  
For worksheets or crosstabs, choose Worksheet Properties or Crosstab Properties on the context menu.
2. Click the Basics tab of the InfoBox.



3. Under In Browse, select "Hide view."
4. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H\_NAMING\_VIEWS\_AND\_OBJECTS\_STEPS;H\_SELECTING\_A\_MAIN\_DATABASE\_FOR\_A\_VIEW\_STEPS;H\_SHOWING\_MORE\_OF\_THE\_VIEW\_BY\_HIDING\_ITS\_MARGINS\_STEPS;','0)} See related topics

## Overview: InfoBox

Every object has a set of properties, such as size, text attributes, lines and fill colors, and attached macros. These object properties are available in the [InfoBox](#).

### Opening the InfoBox in Design

- Click the InfoBox icon.



- Choose the Properties command of the object you want to work with from the [context menu](#).
- Double-click an object or [view](#).

**Note** If you click twice in a text block, Approach puts the insertion point in the object, it does not open the InfoBox.

### InfoBox tabs

The InfoBox contains tabs that display the properties for the selected object. If no object is selected, the InfoBox tabs display the properties for the view.

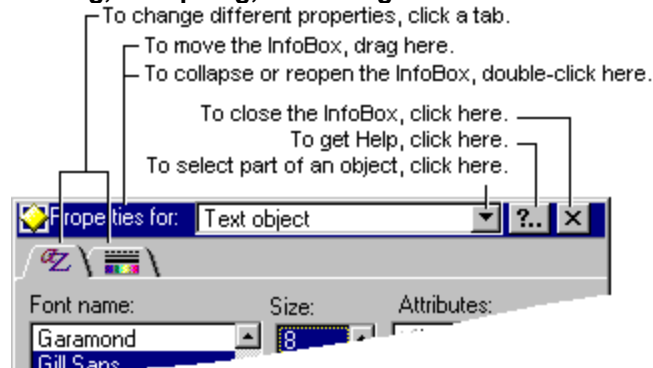
To see the properties for the object or view, click each tab in the InfoBox.

### Working with the InfoBox

When you are working in [Design](#), you can keep the InfoBox open as you work. Switch from working in the InfoBox to working in the view simply by clicking the view or an object. To switch back, click the word Properties in the InfoBox title bar.

Approach displays the name of the selected object in the InfoBox title bar, so you can see which object is updated when you make a change. Most changes take effect as you make them, so you see the results immediately.

### Moving, collapsing, or closing the InfoBox



### Named styles

You can save a set of InfoBox properties as a [named style](#) and then apply the style to objects or to a view. You can apply these saved properties consistently, and all at once, without repeatedly applying them individually from the InfoBox.

---

```
{button ,AL(^H_BASIC_PROPERTIES_OF_OBJECTS_AND_FIELDS_CS;H_BASIC_PROPERTIES_OF_VIEWS_CS;H_FORMATS_FOR_FIELDS_CS;H_LINE_AND_COLOR_PROPERTIES_CS;H_SIZE_OF_OBJECTS_CS;H_TEXT_ATTRIBUTES_FOR_LABELS_AND_DATA_CS;';0)} See related topics
```

## Line and color properties



### Choose a task

- [Making objects and views transparent](#)
- [Changing the color of objects and views](#)
- [Creating partial borders](#)
- [Changing the width of lines or borders](#)
- [Creating a shadow](#)

### For fields

- [Displaying baselines in fields](#)
- [Displaying field labels inside field boxes](#)

### For PicturePlus fields

- [Changing pen properties for drawing in fields](#)

### For repeating panels

- [Alternating the color of records in a repeating panel](#)

---

{button ,AL('H\_APPLYING\_PROPERTIES\_FROM\_ANOTHER\_OBJECT\_STEPS;',0)} [See related topics](#)

## Macros tab



### Choose a task

[Attaching macros](#)

[Creating dialog boxes from forms](#)

## Making objects and views transparent

Whatever is beneath a transparent object shows through. This is useful, for example, for placing text inside a circle instead of a rectangle.

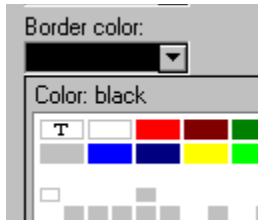


### Are you in Design?

1. Double-click the text block, object, or the background of a view.
2. Click the Lines & Colors tab in the InfoBox.



3. Under "Fill color," select T (Transparent).



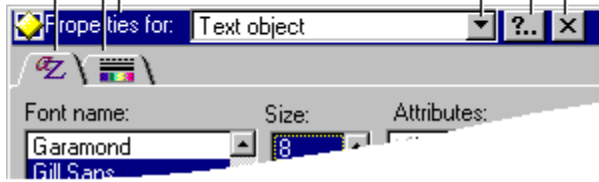
4. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_LINE\_AND\_COLOR\_PROPERTIES\_CS;H\_PUTTING\_OBJECTS\_AND\_FIELDS\_IN\_THE\_TAB\_ORDER\_STEPS;',0)} See related topics

### Moving, collapsing, or closing the InfoBox

- To change different properties, click a tab.
- To move the InfoBox, drag here.
- To collapse or reopen the InfoBox, double-click here.
- To close the InfoBox, click here.
- To get Help, click here.
- To select part of an object, click here.



## Moving objects

The unit of measurement used in this procedure (grid units: inches or centimeters) is selected in the [Display tab](#) of the Approach Preferences dialog box.



Are you in [Design](#)?

### Moving an object using exact measurements

1. Double-click the object.
2. Click the Size tab in the [InfoBox](#).

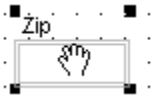


3. Enter Top and Left measurements.
4. (Optional) [Move, collapse, or close](#) the InfoBox.

### Moving an object using the mouse

Select the object and drag it.

The mouse pointer changes to a hand when the object can be moved.



### Nudging an object

Select the object and move it with the keyboard keys: `,` `↓`, `→`, or `←`.

Nudging an object moves the object off the grid alignment.

---

{button ,AL('H\_SETTING\_PREFERENCES\_FOR\_THE\_DESIGN\_ENVIRONMENT\_REF;H\_RESIZING\_OBJECTS\_STEPS;H\_SELECTING\_OBJECTS\_STEPS;','0)} [See related topics](#)



## Moving summaries

Summary panels appear on reports only.

**Tip** Do the following to make the report design clearer:

- Deselect View - Show Data.
- Select View - Show Panel Labels



### Are you in Design?

1. Double-click the summary panel.

The title bar of the InfoBox should say "Properties for: Summary Panel."

2. Click the Display tab in the InfoBox.



3. Select an alignment.
4. Select whether the summary should go above (leading) or below (trailing) the records it summarizes.
5. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_reports\_over;',0)} See related topics

## Naming views and objects

- When you rename a view using the InfoBox, its name on the view tab and in the status bar also changes.
- Use the name of a drawn object to refer to it in a LotusScript script.



### Are you in Design?

1. Double-click the object, or background of the view away from any object.  
For worksheets or crosstabs, choose Worksheet Properties or Crosstab Properties on the context menu.
2. For views, click the Basics tab in the InfoBox.



For objects, click the Macros tab in the InfoBox.



3. Enter a name for the view or object.
4. (Optional) Move, collapse, or close the InfoBox.
  - You can also rename a view by double-clicking the view tab and entering the name in the tab.
  - To change the name in the text block at the top of a form, double-click it and enter the new name. This does not change the name of the view.

---

{button ,AL(^H\_CHANGING\_THE\_MENU\_FOR\_A\_VIEW\_STEPS;H\_EXTENDING\_THE\_BACKGROUND\_TO\_THE\_EDGE\_OFTHE\_WINDOW\_STEPS;H\_HIDING\_VIEWS\_STEPS;H\_PREVENTING\_OBJECTS\_AND\_FIELDS\_FROM\_PRINTING\_STEPS;H\_PUTTING\_OBJECTS\_AND\_FIELDS\_IN\_THE\_TAB\_ORDER\_STEPS;H\_SELECTING\_A\_MAIN\_DATABASE\_FOR\_A\_VIEW\_STEPS;','0)} See related topics

## Paginating reports



Are you in [Design](#)?

### Breaking pages before summaries

Prevents a page break within summaries so summary values appear with related records.

1. Double-click the summary [panel](#).  
The title bar of the [InfoBox](#) shows the type of panel.
2. Click the Basics tab in the InfoBox.



3. Under When printing, select "Insert page break."
4. (Optional) [Move, collapse, or close](#) the InfoBox.

### Breaking pages at record boundaries

Keeps a record's fields on the same page when there is more than one line of fields in the record.

1. Choose Report Properties on the [context menu](#).
2. Click the Basics tab in the InfoBox.



3. Select "Keep records together."
4. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL('H\_report\_panels\_over;H\_reports\_over;',0)} [See related topics](#)

## Preventing objects and fields from printing



### Are you in Design?

1. Double-click the object.
2. Click the Basics tab in the [InfoBox](#).



3. Under Display, select "Nonprinting."
4. (Optional) To see a nonprinting object in Print Preview and in Design when View - Show Data is on, select "Show in Print Preview."
5. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL(^H\_NAMING\_VIEWS\_AND\_OBJECTS\_STEPS;H\_PUTTING\_OBJECTS\_AND\_FIELDS\_IN\_THE\_TAB\_ORDER\_STEPS;',0)} [See related topics](#)

## Reducing or expanding sections of reports when printing

Control report printing for each type of panel in the report.



### Are you in Design?

1. Double-click the panel.

The title bar of the InfoBox shows the type of panel you selected.

2. Click the Basics tab in the InfoBox.



3. Under "When printing," select one or more of the following:

- To decrease the panel size to fit smaller contents, select "Reduce boundaries."
- To increase the panel size to fit larger contents, select "Expand boundaries."
- To start a summary group on a new page, select "Insert page break."

4. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(^H\_SELECT\_PRINT\_PREVIEW\_TO\_SEE\_REPORT\_SUMMARIES\_REF;H\_SPECIFYING\_THE\_PRINT  
ER\_PAPER\_AND\_ORIENTATION\_STEPS;H\_printing\_approach\_views\_over;H\_report\_panels\_over;','0)} See  
related topics

## Putting objects and fields in the tab order

You can put all objects and fields, except calculated fields, in the tab order so users can press TAB to navigate to them.



### Are you in Design?

1. Double-click the object.
2. Click the Basics tab in the InfoBox.



3. Select "In tab order."
4. (Optional) Move, collapse, or close the InfoBox.

**Note** If you attach a macro to a drawn object, put the object in the tab order. Otherwise, you cannot use TAB to move into or out of that object, to activate the macro. You can click the object the macro is attached to if the macro was attached to the object using the "On selected" option in the InfoBox.

---

{button ,AL('H\_FIELDS\_OVER;H\_REMOVING\_OBJECTS\_AND\_FIELDS\_FROM\_THE\_TAB\_ORDER\_STEPS;H\_AT TACHING\_MACROS\_STEPS;H\_CHANGING\_THE\_TAB\_ORDER\_ON\_VIEWS\_STEPS';,0)} [See related topics](#)

## Redisplaying hidden views

When you redisplay hidden views, their names appear in the status bar in Browse and in the [view tabs](#).



### Are you in Design?

1. Click the View button in the status bar.
2. Select the name of the hidden view.
3. Click the [InfoBox](#) icon.



4. Click the Basics tab of the InfoBox.



5. Under In Browse, deselect "Hide view."
6. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL(`H\_HIDING\_VIEWS\_STEPS;`,0)} [See related topics](#)

## Removing objects and fields from the tab order



### Are you in Design?

1. Double-click the object.
2. Click the Basics tab in the InfoBox.



3. Deselect "In tab order."
4. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_FIELDS\_OVER;H\_PUTTING\_OBJECTS\_AND\_FIELDS\_IN\_THE\_TAB\_ORDER\_STEPS',0)} See  
related topics



## Resizing objects

The unit of measurement used in this procedure (grid units) is selected in the Display tab of the Approach Preferences dialog box.



**Are you in Design?**

### Resizing an object to exact measurements

1. Double-click the object.
2. Click the Size tab in the InfoBox.



3. Enter Width and Height measurements.
4. (Optional) Move, collapse, or close the InfoBox.

### Resizing an object using the mouse

Select the object and drag one of its handles.



---

{button ,AL('H\_DRAWING\_GEOMETRIC\_OBJECTS\_STEPS;H\_MOVING\_OBJECTS\_STEPS;H\_SETTING\_PREFERENCES\_FOR\_THE\_DESIGN\_ENVIRONMENT\_REF;H\_SELECTING\_OBJECTS\_STEPS;',0)} See related topics

## Modifying repeating panels

You can increase both the height and width of a line in a [repeating panel](#). Increasing the height lets you stack fields in that line and makes the repeating panel look like a number of small forms.

If you're trying to add more lines to the panel, use the Basics tab of the [InfoBox](#).



### Are you in [Design](#)?

1. Turn off View - Show Data.  
Just the outline of the panel remains, and in its first line, the field names.
2. [Select the repeating panel](#).  
The repeating panel is selected when the first-record line has a double-line border around it.
3. When the mouse pointer changes to a two-headed arrow, drag the border of the first line.
4. Drag fields to new locations.  
Make sure the fields remain within the panel.

---

{button ,AL(`H\_RESIZING\_OBJECTS\_STEPS;',0)} [See related topics](#)

## Selecting a main database for a view

If you have joined databases in the Approach file, one of the databases must be the main database for the view. A view displays each record from its main database.



### Are you in Design?

1. Double-click the background of the view, away from any object.  
For worksheets or crosstabs, choose Worksheet Properties or Crosstab Properties on the context menu.
2. Click the Basics tab of the InfoBox.



3. Select a database in the "Main database" box.
4. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(^H\_CHANGING\_THE\_MENU\_FOR\_A\_VIEW\_STEPS;H\_HIDING\_VIEWS\_STEPS;H\_JOINING\_DATABASE\_FILES\_STEPS;H\_NAMING\_VIEWS\_AND\_OBJECTS\_STEPS;H\_SHOWING\_MORE\_OF\_THE\_VIEW\_BY\_HIDING\_ITS\_MARGINS\_STEPS;,"0)} See related topics

## Formatting data in text fields

Choose capitalization options for text.



### Are you in Design?

1. Double-click a field.
2. Click the Format tab in the InfoBox.



3. Select Text in the "Format type" box.
4. Select a format in the "Current format" box.
5. (Optional) Move, collapse, or close the InfoBox.

**Note** "Show data entry format" stores the text in the database with the formatting.

---

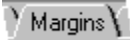
{button ,AL(`H\_FORMATTING\_DATES\_STEPS;H\_FORMATTING\_NUMBERS\_STEPS;H\_FORMATTING\_TIMES\_S  
TEPS;',0)} See related topics

## Setting margins for views



### Are you in Design?

1. Double-click the background of the view, away from any object.
2. Click the Margins tab in the [InfoBox](#).



3. Under Margins, enter measurements for the Left, Right, Top, and Bottom margins.  
The unit of measurement is the same as that for the [grid](#), specified in the Display tab of [Approach Preferences](#).
4. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL('H\_SHOWING\_MORE\_OF\_THE\_VIEW\_BY\_HIDING\_ITS\_MARGINS\_STEPS;H\_SETTING\_PREFEREN  
CES\_FOR\_THE\_DESIGN\_ENVIRONMENT\_REF;H\_SNAPPING\_OBJECTS\_TO\_THE\_GRID\_STEPS;',0)} [See  
related topics](#)

## Showing records from other databases in a report

When you create a report with groups and totals using data from more than one database, the report shows all of the records from the main database, even if there are no corresponding records in the detail database. However, this report may show only one record from the detail database for each main database entry.

**If you're trying to** change your report to display all records from the main database, even if there are no related records in the detail database, either base the report on a different database (see [Selecting a main database for a view](#)), or create an outer join for the report. Choose the method that makes sense for your data.

## Creating an outer join report

An outer join shows

- All detail database records appear for each main database record.
- Main database records without any detail entries also appear on the report.



### Are you in Design?

1. Choose Report Properties on the context menu.
2. Click the Options tab in the InfoBox.



3. To create an outer join, select "Enable outer join."
4. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_MAIN\_AND\_DETAIL\_DATABASES\_IN\_A\_VIEW\_OVER;H\_ONE\_TO\_MANY\_MANY\_TO\_ONE\_AND\_ONE\_TO\_ONE\_RELATIONSHIPS\_OVER;H\_REPORTS\_OVER;H\_SELECTING\_A\_MAIN\_DATABASE\_FOR\_A\_VIEW\_STEPS;',0)} [See related topics](#)

## Showing more of the view by hiding its margins

You can hide the margins of forms and form letters only.



### Are you in Design?

1. Double-click the background of the view, away from any object.
2. Click the Basics tab of the [InfoBox](#).



3. Under In Browse, select "Hide page margins."
4. (Optional) [Move, collapse, or close](#) the InfoBox.

---

{button ,AL('H\_SETTING\_MARGINS\_STEPS;H\_CHANGING\_THE\_MENU\_FOR\_A\_VIEW\_STEPS;H\_HIDING\_VIEWS\_STEPS;H\_RENAMING\_VIEWS\_STEPS;H\_SELECTING\_A\_MAIN\_DATABASE\_FOR\_A\_VIEW\_STEPS;',0)}  
[See related topics](#)

## Size of objects



You can change the size and shape of an object, including fields, by using the mouse in Design or by clicking the Size tab in the [InfoBox](#).

The Size tab also lets you move an object.

### Choose a task

[Resizing objects](#)

[Moving objects](#)

[Closing up extra space between objects](#)

---

{button ,AL('H\_BASIC\_PROPERTIES\_OF\_OBJECTS\_AND\_FIELDS\_CS;H\_LINE\_AND\_COLOR\_PROPERTIES\_CS;H\_SELECTING\_OBJECTS\_STEPS;H\_APP\_HOW\_DO\_I\_GET\_RID\_OF\_THE\_SPACE\_BETWEEN\_OBJECTS\_OVER;');0)} [See related topics](#)



## Setting a default sort order for a repeating panel



### Are you in Design?

1. Select the repeating panel.
2. From the Panel menu, choose Panel Properties.
3. Click the Basics tab in the InfoBox.



4. Click Define Sort.  
The Sort dialog box appears.
5. Be sure the database containing the field you want is showing in the "Database" box.
6. Select a field in the "Fields" box.
7. Click Add.
8. Specify the sort order for that field by choosing either Ascending or Descending from the "Sort order" box.
9. To add additional fields, repeat steps 4 - 7.
10. Click OK to close the Sort dialog box.
11. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(^H\_SPECIFYING\_A\_SORT\_ORDER\_STEPS;';0)} [See related topics](#)

## Text attributes for labels, data, and text blocks



- Labels identify fields and are part of the design of the view.
- Data is the information stored in a database.
- Text blocks are drawn objects containing text. They are part of the design of a view.

### Choose a task

[Changing text attributes of labels or data](#)

[Changing properties of text in text blocks](#)

[Editing labels](#)

[Changing the position of labels](#)

[Hiding labels](#)

## Details: Adding an icon to a set of SmartIcons

### Available icons (drag to add)

The icons in this list are grouped according to the Approach menu organization; File, Edit, View, Create, Window, and Help, followed by Browse, Design, Form, Report, Crosstab, Worksheet, etc.

### Dragging an icon into a set

When you drag and drop icons, Approach moves the other icons in the set either forward or backward one position to accommodate the change. The SmartIcons then appear in the new order in the dialog box.

You can use the left and right arrows to see icons that scroll out of sight.

### Saving a SmartIcons set

<u>If you click...</u>	<u>This is what happens...</u>
Save Set	<p>Takes you to the Save As SmartIcons File dialog box where you can give the new icon set a name and save it in its own file. The new set name becomes part of the SmartIcons list.</p> <p>Click Browse to rename the .SMI file.</p> <p>Click OK to return to the SmartIcons Setup dialog box.</p> <p>Click OK again.</p>
Delete Set	<p>Takes you to the Delete Set dialog box where you can delete sets of SmartIcons you do not use.</p> <p>Click OK to return to the SmartIcons Setup dialog box.</p> <p>Click OK again.</p>
OK	<p>Displays the new SmartIcons set.</p> <p>Approach displays the new arrangement every time you select this set.</p>

---

{button ,AL('H\_ADDING\_AN\_ICON\_TO\_A\_SET\_OF\_SMARTICONS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_CREATING\_A\_NEW\_SMARTICONS\_SET\_STEPS;H\_DELETING\_A\_SMARTICONS\_SET\_STEPS;H\_MOVING\_AN\_ICON\_USING\_THE\_MOUSE\_STEPS;H\_REMOVING\_AN\_ICON\_FROM\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_SMARTICONS\_SETUP\_DIALOG\_BOX\_CS;H\_SPACING\_BETWEEN\_SMARTICONS\_IN\_A\_SET\_STEPS',0)} [See related topics](#)

### **Adding an icon to a set of SmartIcons**

1. From the File menu, choose User Setup, and then choose SmartIcons Setup.
2. Under Bar to setup, select the name of the bar to which you want to add the icon.
3. To review all SmartIcons available in Approach, scroll the "Available icons (drag to add)" box.
4. Drag an icon from the list to the bar at the top of the dialog box.
5. Do one of the following:
  - To save your changes to the existing set, click OK.
  - To save the bar with a different name, click Save Set.

---

{button ,AL(`H\_ADDING\_AN\_ICON\_TO\_A\_SET\_OF\_SMARTICONS\_DETAILS',1)} [See details](#)

{button ,AL(`H\_CREATING\_A\_NEW\_SMARTICONS\_SET\_STEPS;H\_DELETING\_A\_SMARTICONS\_SET\_STEPS;H\_MOVING\_AN\_ICON\_USING\_THE\_MOUSE\_STEPS;H\_REMOVING\_AN\_ICON\_FROM\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_SMARTICONS\_SETUP\_DIALOG\_BOX\_CS;H\_SPACING\_BETWEEN\_SMARTICONS\_IN\_A\_SET\_STEPS',0)} [See related topics](#)

## **Details: Creating a new SmartIcons set**

### **Working with SmartIcons**

- Add icons by dragging icons from the "Available icons (drag to add)" box up into the new set.
- Move and rearrange icons by dragging them (including spacers) within the new set.
- Remove icons from the set by dragging them away from the displayed set.

### **Save Set**

Clicking Save Set opens the Save As SmartIcons File dialog box. There you can indicate you are changing the existing SmartIcons bar or creating a new one. If you click Save As New, name the new SmartIcons bar and its file name.

Approach saves the new icon bar in an .SMI file, which is stored in the mainbar directory. The new name appears in the "Bar name" box.

### **Bar can be displayed when context is**

This option lets you define the context in which you want the set of SmartIcons to be available: Always, Browse, Chart, Crosstab, Design, Find, and so on.

### **Bar is enabled to display during its context**

This option acts as an on/off display switch. If selected, Approach displays the named SmartIcons bar in its defined context. If deselected, Approach does not display the bar.

---

{button ,AL(`H\_CREATING\_A\_NEW\_SMARTICONS\_SET\_STEPS',1)} [Go to procedure](#)

{button ,AL(`H\_ADDING\_AN\_ICON\_TO\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_DELETING\_A\_SMARTICONS\_SET\_STEPS;H\_REMOVING\_AN\_ICON\_FROM\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_PLACING\_SMARTICONS\_ON\_THE\_WORKSPACE\_OVER;H\_SMARTICONS\_SETUP\_DIALOG\_BOX\_CS;H\_SPACING\_BETWEEN\_SMARTICONS\_IN\_A\_SET\_STEPS',0)} [See related topics](#)

## Creating a new SmartIcons set

1. From the File menu, choose User Setup, and then choose SmartIcons Setup.



2. Select a SmartIcons set to use as a base for the new set in the "Bar name" box.
3. Use drag and drop to add, move, group, and remove icons until the set is the way you want.
4. Click Save Set.
5. Click Save As New.
6. Enter a name for the new set.
7. If the file name is to be different from the bar name, enter a new file name for the set.
8. Click OK to return to the SmartIcons Setup dialog box.
9. To make the new bar available when you work in a specific part of the Approach file, select the context in "Bar can be displayed when context is."
10. To display the new bar when the chosen context is active, select "Bar is enabled to display during its context."
11. Click OK.

---

{button ,AL(`H\_CREATING\_A\_NEW\_SMARTICONS\_SET\_DETAILS',1)} [See details](#)

{button ,AL(`H\_ADDING\_AN\_ICON\_TO\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_DELETING\_A\_SMARTICONS\_SET\_STEPS;H\_REMOVING\_AN\_ICON\_FROM\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_PLACING\_SMARTICONS\_ON\_THE\_WORKSPACE\_OVER;H\_SMARTICONS\_SETUP\_DIALOG\_BOX\_CS;H\_SPACING\_BETWEEN\_SMARTICONS\_IN\_A\_SET\_STEPS',0)} [See related topics](#)

## Deleting a SmartIcons set

1. Choose File - User Setup - SmartIcons Setup.



2. Click Delete Set.

3. Select the set you want to delete.

4. Click OK.

5. Approach asks you to confirm your selection.

Clicking Yes deletes the .SMI file and returns you to the SmartIcons Setup dialog box.

6. Click OK.

---

{button ,AL(`H\_ADDING\_AN\_ICON\_TO\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_MOVING\_AN\_ICON\_USING\_THE\_MOUSE\_STEPS;H\_REMOVING\_AN\_ICON\_FROM\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_SMARTICONS\_SETUP\_DIALOG\_BOX\_CS;H\_SPACING\_BETWEEN\_SMARTICONS\_IN\_A\_SET\_STEPS',0)} [See related topics](#)

## Displaying or hiding SmartIcons bubble help

1. Choose File - User Setup - SmartIcons Setup.



2. Select "Show icon descriptions (bubble help)."
3. Click OK.

Place the mouse pointer on an icon and pause for a second.

Approach displays a bubble describing what the icon does.

## Hiding bubble help

Remove bubble help by deselecting "Show icon descriptions (bubble help)."

---

```
{button ,AL('H_DISPLAYING_OR_HIDING_SMARTICONS_STEPS;H_PLACING_SMARTICONS_ON_THE_WORK  
SPACE_OVER;H_USING_SMARTICONS_OVER;H_SELECTING_A_SMARTICONS_SET_USING_THE_BAR_B  
UTTON_STEPS;H_SELECTING_AND_DISPLAYING_A_SPECIFIC_ICON_SET_STEPS;H_SIZING_ICONS_IN_  
A_SMARTICONS_SET_STEPS;H_USING_AN_ICON_STEPS',0)} See related topics
```



## Displaying or hiding SmartIcons

- Choose View - Show SmartIcons.

A checkmark appears by the command when the SmartIcons are displayed. You can hide the SmartIcons by repeating these steps.

---

```
{button ,AL(`H_DISPLAYING_OR_HIDING_SMARTICONS_BUBBLE_HELP_STEPS;H_HIDING_SMARTICONS_US  
ING_THE_BAR_BUTTON_STEPS;H_PLACING_SMARTICONS_ON_THE_WORKSPACE_OVER;H_USING_SM  
ARTICONS_OVER;H_SELECTING_A_SMARTICONS_SET_USING_THE_BAR_BUTTON_STEPS;H_SELECTIN  
G_AND_DISPLAYING_A_SPECIFIC_ICON_SET_STEPS';0)} See related topics
```

### **Hiding SmartIcons using the bar button**

1. Click the control box in the upper left corner of the icon bar.
2. Choose Hide all SmartIcons or Hide this bar of SmartIcons.

---

```
{button ,AL('H_DISPLAYING_OR_HIDING_SMARTICONS_BUBBLE_HELP_STEPS;H_DISPLAYING_OR_HIDING_SMARTICONS_STEPS;H_PLACING_SMARTICONS_ON_THE_WORKSPACE_OVER;H_SMARTICONS_OVER;H_USING_SMARTICONS_OVER;H_SELECTING_AND_DISPLAYING_A_SPECIFIC_ICON_SET_STEPS;H_SIZING_ICONS_IN_A_SMARTICONS_SET_STEPS',0)} See related topics
```

## Moving an icon using the mouse

1. Press CTRL.
2. Drag an icon to a new location.  
Dragging the icon off the SmartIcons bar places it at the end of the set.

---

{button ,AL(`H\_ADDING\_AN\_ICON\_TO\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_CREATING\_A\_NEW\_SMARTICONS\_SET\_STEPS;H\_DELETING\_A\_SMARTICONS\_SET\_STEPS;H\_REMOVING\_AN\_ICON\_FROM\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_SMARTICONS\_SETUP\_DIALOG\_BOX\_CS;H\_SPACING\_BETWEEN\_SMARTICONS\_IN\_A\_SET\_STEPS',0)} [See related topics](#)

## Placing a set of SmartIcons using the mouse

1. Place the mouse pointer over the area next to the bar button.



2. Click and drag the bar to the new location in the Approach workspace.

As you drag it, the hand closes around an outline of the bar.



---

```
{button ,AL(^H_DISPLAYING_OR_HIDING_SMARTICONS_BUBBLE_HELP_STEPS;H_DISPLAYING_OR_HIDING_SMARTICONS_STEPS;H_HIDING_SMARTICONS_USING_THE_BAR_BUTTON_STEPS;H_PLACING_SMARTICONS_ON_THE_WORKSPACE_OVER;H_USING_SMARTICONS_OVER',0)} See related topics
```

## Overview: Placing SmartIcons on the work area

You can display a set of SmartIcons at the sides of the Approach work area in a fixed position (left or right). If you drag a SmartIcons bar to an edge, it snaps to and stays with that edge, even when you move the work area window.

You can also display SmartIcons in a floating position. Dragging SmartIcons to a place other than an edge creates a floating palette.



## Context SmartIcons sets

You can display more than one set of SmartIcons for any context. Right-click anywhere in a SmartIcons bar to display the shortcut menu of the SmartIcons options and the names of the available sets of SmartIcons. You can select a name to display or hide a set of SmartIcons.

## Sharing the same location

You can define a group of SmartIcons sets that show up in the same location.

1. From the SmartIcons shortcut menu, choose SmartIcons Setup.
2. In the "Bars that will appear in same location" box, select all of the SmartIcons sets you want to appear in the same location.
3. Click OK.

When you move one of those sets to a different location, Approach remembers that location for all sets of SmartIcons defined in this group.

For example, you include both the default Worksheet set of SmartIcons and the default Report set of SmartIcons in the group of context SmartIcons sets.

While viewing a report, you drag the Default Report set of SmartIcons to the left side.

When you switch to a worksheet, the Default Worksheet set of SmartIcons appears on the left side.

---

```
{button ,AL('H_DISPLAYING_OR_HIDING_SMARTICONS_STEPS;H_HIDING_SMARTICONS_USING_THE_BAR_BUTTON_STEPS;H_MOVING_AN_ICON_USING_THE_MOUSE_STEPS;H_USING_SMARTICONS_OVER;H_PLACING_A_SET_OF_SMARTICONS_USING_THE_MOUSE_STEPS;H_SELECTING_AND_DISPLAYING_A_SPECIFIC_ICON_SET_STEPS;H_SIZING_ICONS_IN_A_SMARTICONS_SET_STEPS',0)} See related topics
```

## Removing an icon from a set of SmartIcons

1. Choose File - User Setup - SmartIcons Setup.



2. Select the set you want to modify under "Bar name."
3. Drag the icon you want to remove away from the displayed set.
4. (Optional) To remove the icon for all sessions, click Save Set.
5. Click OK.  
Approach displays the new arrangement every time you select this set.

---

{button ,AL('H\_ADDING\_AN\_ICON\_TO\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_CREATING\_A\_NEW\_SMARTICON  
S\_SET\_STEPS;H\_DELETING\_A\_SMARTICONS\_SET\_STEPS;H\_MOVING\_AN\_ICON\_USING\_THE\_MOUSE\_S  
TEPS;H\_SMARTICONS\_SETUP\_DIALOG\_BOX\_CS;H\_SPACING\_BETWEEN\_SMARTICONS\_IN\_A\_SET\_STE  
PS',0)} [See related topics](#)

## Details: Selecting and displaying a specific icon set

### Bar name

The name of the set of SmartIcons that you are defining.

### Bar can be displayed when context is

You can display a set of SmartIcons to correspond to various contexts: Always, Browse, Design, Crosstab, Find, etc.

For example, you have defined a custom set of SmartIcons you want to display when you are working with report columns.

- First, select the custom set of SmartIcons under "Bar name."
- Then select Report Column under "Bar can be displayed when context is."

Now the custom set of SmartIcons has the context of report columns and can display when you are working with report columns.

### Bar is enabled to display during its context

More than one set of SmartIcons can have the same context. You can display more than one set of SmartIcons at the same time.

This option acts as an on/off display switch. If selected, the named set of SmartIcons displays when you're working in the specified context. Deselect this option to turn off the display.

For example, to display the custom set of SmartIcons defined for report columns in the earlier example, you need to select "Bar is enabled to display during its context."

### SmartIcons preferences

Options under SmartIcons preferences apply to all sets of SmartIcons. See the following topics:

- [Sizing sets of SmartIcons](#)
- [Placing SmartIcons on the work area](#)
- [Displaying or hiding SmartIcons bubble help](#)

---

{button ,AL('H\_SELECTING\_AND\_DISPLAYING\_A\_SPECIFIC\_ICON\_SET\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_DISPLAYING\_OR\_HIDING\_SMARTICONS\_STEPS;H\_PLACING\_SMARTICONS\_ON\_THE\_WORK\_SPACE\_OVER;H\_SMARTICONS\_OVER;H\_USING\_SMARTICONS\_OVER;H\_SELECTING\_A\_SMARTICONS\_SET\_USING\_THE\_BAR\_BUTTON\_STEPS;H\_SIZING\_ICONS\_IN\_A\_SMARTICONS\_SET\_STEPS',0)} [See related topics](#)

## Selecting and displaying a specific icon set

1. Choose File - User Setup - SmartIcons Setup.



2. Select the set under "Bar name."

3. Select an option under "Bar can be displayed when context is."

4. If you want to display the set at specific times (depending on your selections in steps 3 and 4), select "Bar is enabled to display during its context."

**Note** Typically, this setting should always be selected.

5. Click OK.

**Tip** You can use a shortcut to display available sets of SmartIcons by clicking the bar button on the icon bar and making your selection.

---

{button ,AL(`H\_SELECTING\_AND\_DISPLAYING\_A\_SPECIFIC\_ICON\_SET\_DETAILS',1)} [See details](#)

{button ,AL(`H\_DISPLAYING\_OR\_HIDING\_SMARTICONS\_STEPS;H\_PLACING\_SMARTICONS\_ON\_THE\_WORKSPACE\_OVER;H\_SMARTICONS\_OVER;H\_USING\_SMARTICONS\_OVER;H\_SELECTING\_A\_SMARTICONS\_SET\_USING\_THE\_BAR\_BUTTON\_STEPS;H\_SIZING\_ICONS\_IN\_A\_SMARTICONS\_SET\_STEPS',0)} [See related topics](#)



## Selecting a Smarticons set using the bar button

1. Click the bar button on the icon bar.



2. Make your selection from the menu.

The menu contents depend on the available selection when you click the bar button.

---

```
{button ,AL('H_DISPLAYING_OR_HIDING_SMARTICONS_BUBBLE_HELP_STEPS;H_DISPLAYING_OR_HIDING_SMARTICONS_STEPS;H_SMARTICONS_OVER;H_USING_SMARTICONS_OVER;H_SELECTING_AND_DISPLAYING_A_SPECIFIC_ICON_SET_STEPS;H_SIZING_ICONS_IN_A_SMARTICONS_SET_STEPS;H_USING_A_N_ICON_STEPS',0)} See related topics
```

### Sizing icons in a SmartIcons set

1. Choose File - User Setup - SmartIcons Setup.



2. In the "Icon size" box, select Regular or Large.
3. Click OK.

---

```
{button ,AL('H_PLACING_SMARTICONS_ON_THE_WORKSPACE_OVER;H_USING_SMARTICONS_OVER;H_PLACING_A_SET_OF_SMARTICONS_USING_THE_MOUSE_STEPS;H_SELECTING_A_SMARTICONS_SET_USING_THE_BAR_BUTTON_STEPS;H_SELECTING_AND_DISPLAYING_A_SPECIFIC_ICON_SET_STEPS',0)}
```

[See related topics](#)

## Overview: SmartIcons

SmartIcons are icons that represent mouse shortcuts for Approach actions and commands. At least two SmartIcons sets appear at the top of the page when you first start Approach.

You can modify SmartIcons for use as a custom set.

When you use SmartIcons, you can:

- Check to see what each icon represents.
- Place sets of SmartIcons at the side of or floating on the Approach workspace.
- Specify their size.
- Display different SmartIcons sets while you're working in specific parts of an Approach file.
- Customize one or more specific sets.
- Add, move, group, and remove icons from a set.
- Delete them, either individually or as a set.
- Specify the location for a bar or several bars.

---

```
{button ,AL(^H_DISPLAYING_OR_HIDING_SMARTICONS_STEPS;H_PLACING_SMARTICONS_ON_THE_WORKSPACE_OVER;H_USING_SMARTICONS_OVER;H_PLACING_A_SET_OF_SMARTICONS_USING_THE_MOUSE_STEPS;H_SELECTING_A_SMARTICONS_SET_USING_THE_BAR_BUTTON_STEPS;H_SELECTING_AND_DISPLAYING_A_SPECIFIC_ICON_SET_STEPS;','0)} See related topics
```

## SmartIcons Setup dialog box

You can review all sets of SmartIcons in this dialog box by selecting an icon set from the SmartIcons Bar name list. When you do this, the specific icon set appears at the top of the box.

Using a SmartIcons set in this dialog box, you can add, move, group, and remove the icons in a set.

**Tip** You can also open the SmartIcons Setup dialog box by clicking the bar button on the SmartIcons bar and choosing SmartIcons setup.

### Choose a task

[Selecting and displaying a specific icon set](#)

[Sizing icons in a SmartIcons set](#)

[Spacing between SmartIcons in a set](#)

[Adding an icon to a set of SmartIcons](#)

[Removing an icon from a set of SmartIcons](#)

[Creating a new SmartIcons set](#)

[Deleting a SmartIcons set](#)

---

{button ,AL('H\_DISPLAYING\_OR\_HIDING\_SMARTICONS\_STEPS;H\_SMARTICONS\_OVER;H\_USING\_SMARTICONS\_OVER;H\_PLACING\_SMARTICONS\_ON\_THE\_WORKSPACE\_OVER;H\_SELECTING\_AND\_DISPLAYING\_A\_SPECIFIC\_ICON\_SET\_STEPS;H\_SIZING\_ICONS\_IN\_A\_SMARTICONS\_SET\_STEPS;H\_DISPLAYING\_OR\_HIDING\_SMARTICONS\_BUBBLE\_HELP\_STEPS',0)} [See related topics](#)

**Details: Spacing between SmartIcons in a set**

When you drag and drop icons, Approach moves the other icons in the set forward or backward one position to accommodate the change. The SmartIcons then appear in the new order in the dialog box.

You can use the left and right arrows to see icons that scroll out of sight.

Save the .SMI file for the change to take effect across all sessions.

---

{button ,AL('H\_SPACING\_BETWEEN\_SMARTICONS\_IN\_A\_SET\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_ADDING\_AN\_ICON\_TO\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_CREATING\_A\_NEW\_SMARTICONS\_SET\_STEPS;H\_DELETING\_A\_SMARTICONS\_SET\_STEPS;H\_MOVING\_AN\_ICON\_USING\_THE\_MOUSE\_STEPS;H\_SMARTICONS\_OVER;H\_REMOVING\_AN\_ICON\_FROM\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_SMARTICONS\_SETUP\_DIALOG\_BOX\_CS',0)} [See related topics](#)

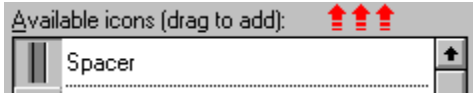
## Spacing between Smarticons in a set



1. Choose File - User Setup - SmartIcons Setup.



2. Under "Bar name," select the SmartIcon set you want to work with.
3. Drag a spacer to separate the icons within the displayed set.



4. Click OK.

---

{button ,AL(^H\_SPACING\_BETWEEN\_SMARTICONS\_IN\_A\_SET\_DETAILS',1)} [See details](#)

{button ,AL(^H\_ADDING\_AN\_ICON\_TO\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_CREATING\_A\_NEW\_SMARTICONS\_SET\_STEPS;H\_DELETING\_A\_SMARTICONS\_SET\_STEPS;H\_MOVING\_AN\_ICON\_USING\_THE\_MOUSE\_STEPS;H\_REMOVING\_AN\_ICON\_FROM\_A\_SET\_OF\_SMARTICONS\_STEPS;H\_SMARTICONS\_SETUP\_DIALOG\_BOX\_CS',0)} [See related topics](#)

## Using an icon

Place the mouse pointer over the desired icon and click.

Certain icons depress after you use them.

You can click a depressed icon to undo its state. For example, Show/Hide rulers, Show/Hide tools palette, Show/Hide panel labels.

---

```
{button ,AL('H_DISPLAYING_OR_HIDING_SMARTICONS_BUBBLE_HELP_STEPS;H_DISPLAYING_OR_HIDING_SMARTICONS_STEPS;H_SMARTICONS_OVER;H_PLACING_A_SET_OF_SMARTICONS_USING_THE_MOUSE_STEPS;H_SELECTING_A_SMARTICONS_SET_USING_THE_BAR_BUTTON_STEPS;H_SELECTING_AND_DISPLAYING_A_SPECIFIC_ICON_SET_STEPS;H_SIZING_ICONS_IN_A_SMARTICONS_SET_STEPS',0)}  
See related topics
```

## Overview: Using SmartIcons

When you first start Approach, at least two default sets of SmartIcons display. You can easily display one or more different sets.

Certain SmartIcons depress after you use them. For example, if you click the SmartIcons Browse, Design, or Preview, they appear depressed on the icon bar.

If you place SmartIcons at the sides of or floating in the Approach window, their position is used by other SmartIcons sets that subsequently display. For example, if you place worksheet SmartIcons in a floating position in the Approach window and then view a report, the report SmartIcons appear in the same floating location.

Sets of SmartIcons save as .SMI files.

---

```
{button ,AL('H_DISPLAYING_OR_HIDING_SMARTICONS_BUBBLE_HELP_STEPS;H_DISPLAYING_OR_HIDING_SMARTICONS_STEPS;H_PLACING_SMARTICONS_ON_THE_WORKSPACE_OVER;H_SMARTICONS_OVER;H_SELECTING_A_SMARTICONS_SET_USING_THE_BAR_BUTTON_STEPS;H_SELECTING_AND_DISPLAYING_A_SPECIFIC_ICON_SET_STEPS;H_USING_AN_ICON_STEPS',0)} See related topics
```



## Adding a repeating panel to existing forms

You can add a [repeating panel](#) to a form if you have [joined databases](#) associated with the Approach file.

Want the big picture? See [Overview: Repeating Panels](#).



[Show me a QuickDemo](#)



### Are you in Design?

1. Click where you want to place the top left corner of the repeating panel.
2. From the Create menu, choose Repeating Panel.
3. Be sure the database containing the fields you want is showing in the "Database" box.  
The database cannot be the [main database](#) of the form.
4. Select a field in the "Fields" box.
5. Click Add.
6. To add additional fields, repeat steps 4 and 5.
7. (Optional) To alternate the color of the records, select "Alternate color with" and select a color.
8. (Optional) Enter the number of records to display in the panel at once in the "Number of lines" box.  
Maximum: 30. The repeating panel must fit on one page of the form. If the number of records exceeds the limit you set, a scroll bar appears on the panel.
9. (Optional) To set a [sort](#) order for the records in the panel, click Define Sort.  
The Sort dialog box appears.
10. (Optional) Specify the sort order and click OK.
11. Click OK.

---

{button ,AL('H\_ADDING\_A\_REPEATING\_PANEL\_TO\_NEW\_FORMS\_STEPS;H\_BASIC\_PROPERTIES\_OF\_OBJECTS\_AND\_FIELDS\_CS;H\_FORMS\_OVER;H\_ONE\_TO\_MANY\_MANY\_TO\_ONE\_AND\_ONE\_TO\_ONE\_RELATIONSHIPS\_OVER;H\_REPEATING\_PANELS\_OVER;H\_REPORT\_PANELS\_OVER;H\_MAIN\_AND\_DETAIL\_DATA BASES\_IN\_A\_VIEW\_OVER;',0)} [See related topics](#)

## Creating new forms that include a repeating panel

Add a [repeating panel](#) to show data from joined databases. The form on which the repeating panel appears represents the "one" side of the [one-to-many](#) relationship between the two databases, while the repeating panel represents the "many" side.

Want the big picture? See [Overview: Repeating Panels](#).

**Command:** Create - Form



1. On the Layout tab of the Form Assistant, select Standard with Repeating Panel.
2. On the Fields tab, be sure the database containing the fields you want is showing in the "Database" box. This will become the [main database](#) of the form.
3. Select fields in the "Fields" box and click Add.
4. On the Panel tab, select the database that contains the fields for the repeating panel. This will become the [detail database](#) of your form.  
The database cannot be the same one you selected on the Fields tab because that is the main database of the form.
5. Select fields in the "Fields" box and click Add.
6. Click Done.

---

{button ,AL(^H\_ADDING\_A\_REPEATING\_PANEL\_TO\_EXISTING\_FORMS\_STEPS;H\_BASIC\_PROPERTIES\_OF\_OBJECTS\_AND\_FIELDS\_CS;H\_JOINING\_A\_DATABASE\_TO\_ITSELF\_STEPS;H\_ONE\_TO\_MANY\_MANY\_TO\_ONE\_AND\_ONE\_TO\_ONE\_RELATIONSHIPS\_OVER;H\_REPEATING\_PANELS\_OVER;H\_DECIDING\_WHAT\_NEW\_FORMS\_LOOK\_LIKE\_REF;H\_REARRANGING\_FIELDS\_IN\_REPEATING\_PANELS\_STEPS;';0)} [See related topics](#)

## Adding fields to new forms

Command: Create - Form



**Tab:** Fields

1. Be sure the database containing the fields you want is showing in the "Database" box.  
If you are creating a form with a repeating panel, the database you select in this step is the main database of the form. You are creating the "one" side of the one-to-many relationship between the two databases.
2. Select a field in the "Fields" box.
3. Click Add.
4. To add additional fields, repeat steps 1 - 3.
5. Click Next or Done.

---

{button ,AL('H\_CREATING\_NEW\_FORMS\_THAT\_INCLUDE\_A\_REPEATING\_PANEL\_STEPS;H\_DECIDING\_WHAT\_NEW\_FORMS\_LOOK\_LIKE\_REF;H\_FORMS\_OVER;H\_REMOVING\_OR\_REORDERING\_FIELDS\_WHILE\_CREATING\_NEW\_VIEWS\_STEPS;H\_MAIN\_AND\_DETAIL\_DATABASES\_IN\_A\_VIEW\_OVER;H\_ONE\_TO\_MANY\_MANY\_TO\_ONE\_AND\_ONE\_TO\_ONE\_RELATIONSHIPS\_OVER;',0)} [See related topics](#)

## Adding fields to repeating panels



### Are you in Design?

1. [Select the repeating panel](#) .
2. Choose Panel - Add Field.
3. Be sure the database containing the fields you want is showing.
4. Drag a field from the Add Field dialog box to the top line of the repeating panel.
5. If necessary, move and resize the new field or repeating panel.

---

{button ,AL(`H\_ADDING\_FIELDS\_TO\_A\_DATABASE\_STEPS;H\_ADDING\_REPEATING\_FIELDS\_TO\_NEW\_REPEATING\_PANEL\_REPORTS\_STEPS;H\_DELETING\_FIELDS\_FROM\_A\_DATABASE\_STEPS;H\_EDITING\_A\_FIELD\_STEPS;H\_EDITING\_FIELDS\_OF\_A\_DATABASE\_STEPS;H\_REARRANGING\_FIELDS\_IN\_REPEATING\_PANELS\_STEPS;H\_REPEATING\_PANELS\_OVER;H\_RESIZING\_REPEATING\_PANELS\_STEPS;`,`0)} [See related topics](#)

## Adding pages to forms

A form can use more than one page (up to five per form) to show all the fields associated with a record. Regardless of the number of pages in a form, however, the form still displays data from only one record at a time.



### Are you in Design?

Choose Form - Add Page.

Approach adds the page and displays it onscreen.

### Naming pages

Use the Basics tab of the InfoBox to name a page. Then, if you create a tabbed dialog box based on the multi-page form, the page name becomes the name of a tab.

---

```
{button ,AL(`H_CREATING_TITLE_PAGES_FOR_REPORTS_STEPS;H_MOVING_FROM_PAGE_TO_PAGE_IN_F  
ORMS_STEPS;H_MOVING_OBJECTS_TO_ANOTHER_PAGE_IN_FORMS_STEPS;H_OVERVIEW_FORMS_O  
VER;H_PAGINATING_REPORTS_STEPS;H_ADDING_DATES_TIMES_OR_PAGE_NUMBERS_TO_REPORTS_  
STEPS;H_CREATING_DIALOG_BOXES_FROM_FORMS_STEPS;','0)} See related topics
```

## Go hog wild! Creative and fun designs for repeating panels

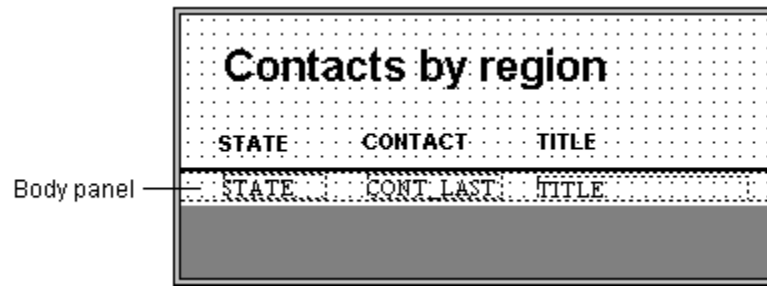
### Default design

Much of the default design for a [repeating panel](#) is based on the [default style](#) Approach uses to create views. So if you change the default style for views, you also change the default style for repeating panels. You can change some default settings when you create a repeating panel, such as the number of display rows. You can also make other changes in the [InfoBox](#) after you have created the repeating panel, such as line thickness and color.

### Border and color designs

You can change the borders and colors to make the display more attractive and easy-to-read. To make changes to the border and fill colors, double-click the repeating panel to display the InfoBox.

For example, in the InfoBox, turn off the left and right borders, change the line width to hairline and the color to dark blue.



For another design, turn on the alternate fill color and changed it to a pale blue. Also, set the style to None.

Contacts by region		
STATE	CONTACT	TITLE
AZ	Jones	Store Manager
AZ	Alfred	VP Operations
AZ	Anderson	Director of Operations
CA	Sanitelli	Manager
CA	Williams	Purchasing Manager
CA	Lee	Store Manager
CA	Staven	District Manager
CA	Myers	Store Manager

### Field data and label styles

You can also change the appearance of field data and labels to make the panel more readable. Select the field whose attributes you want to change, then in the Font tab of the InfoBox choose whether you want to update the field data or field label. Once you have made the change to a field, you can then create a style using the updated field as a base.

To select a single field, click on the field in the first row of the panel. If you click outside the first row, you select the panel instead of the field. To select multiple fields, hold the CTRL key then click on each field in the first row of the panel. It is easier to select the fields if you zoom to 200%.

## Deciding what new forms look like

Approach provides a number of layouts and styles; select one of each to determine the basic appearance of the [form](#). The sample form previews each combination.

**Command:** Create - Form



**Tab:** Layout

### View name & title

The name you enter appears in the title bar on the form and in the [view tab](#). Each view in your application must have a unique name.

### Layout

Layouts arrange the fields on the form.

- For Approach files with [joined databases](#), you can create a form with a [repeating panel](#).
- If you select Blank, go to Design and choose Form - Add Field to add fields to the form.

### Style

Styles set properties such as background color for the form and text attributes for data and field labels.

**Note** You can change any element of the layout or style after you create the form.

---

```
{button ,AL('H_CREATING_NEW_FORMS_THAT_INCLUDE_A_REPEATING_PANEL_STEPS;H_ADDING_FIELDS_TO_NEW_FORMS_STEPS;H_FORMS_OVER;H_JOINED_DATABASES_OVER;H_REMOVING_OR_REORDERING_FIELDS_WHILE_CREATING_NEW_VIEWS_STEPS;H_REPEATING_PANELS_OVER;H_ADDING_PAGES_TO_FORMS_STEPS;',0)} See related topics
```

## Overview: Forms

**Command:** Create - Form

### What is a form?

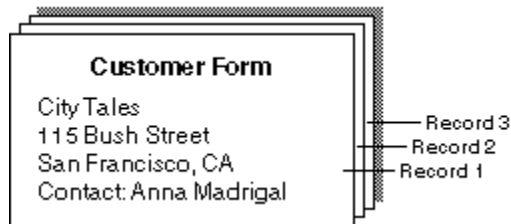
A form is a type of view that focuses on a single record. You can use the same form to see every record in a database, but the form shows you only one record at a time.

Forms are useful for entering and editing data for a record.

When you create a file, Approach creates one form and a worksheet for you. You can change that form; you can also create additional forms.

### Example: Why use forms?

You might use a form to maintain data about customers. In the following illustration, the Customer form is currently displaying data from the first customer record. When you press PG DN, the form shows you the same kind of data from the second customer record, and so on, through a found set of records or all records in the database.



### Forms and records aren't the same

Like any other view in an Approach file, the form is a way to look at data from records in a database. A record, on the other hand, is a storage unit in a database.

This split between forms and records is useful. When you create a form, you can select only the fields from the database that store the data you want to show on the form.

For example, you can have one form to show customer billing information and another to show the orders placed. Both forms, however, use information stored in the same record.

So in the preceding example, the customer records in the database have a field for an alternate contact, but the creator of the form chose not to include that field on this form.

### Multi-page forms

A form can have up to five pages. To add a page, go to Design and choose Form - Add Page.

Regardless of the number of pages a form has, however, it still shows data from only one record at a time.

### The main database for a form

If you have joined databases in an Approach file, Approach identifies a main database for each form in the file. The number of records you can see using the form depends on the number of records in the main database.

The other joined databases become the detail databases of the form. You can add fields from the detail databases to the form.

To show data from a joined database in a form, add one or more of its fields to the form using the Add Field dialog box.

If the records of the main database are in a one-to-many relationship with records from a detail database, you can add a repeating panel to the form. The repeating panel shows the many records from the detail database that are related to each record in the main database of the form.

### Example: Choosing a main database

As mentioned above, the number of records you can see using the form depends on the number of records in the main database.

In the preceding example, the Approach file that contains the Customer form has two joined databases: one for customers, containing 40 records; the other for customer purchases, containing 200 records. The main database for the Customer form is the customer database, and so 40 main records are visible through that form.

The file contains another form, however, that shows all the purchases. When the user created this form, she chose



the Purchases database as the main database so she could see all 200 records. If she had chosen the Customer database as the main database for the Purchases form, she would have been able to see only 40 records. These 40 records would show one purchase for each customer.

---

{button ,AL(`H\_ADDING\_FIELDS\_TO\_A\_VIEW\_STEPS;H\_ADDING\_FIELDS\_TO\_NEW\_FORMS\_STEPS;H\_ADDING\_PAGES\_TO\_FORMS\_STEPS;H\_JOINED\_DATABASES\_OVER;H\_JOINING\_DATABASE\_FILES\_STEPS;H\_ONE\_TO\_MANY\_MANY\_TO\_ONE\_AND\_ONE\_TO\_ONE\_RELATIONSHIPS\_OVER;H\_REPEATING\_PANELS\_OVER;H\_APP\_DO\_YOU\_REALLY\_NEED\_THAT\_APR\_OVER;',0)} [See related topics](#)

### **Moving from page to page in forms**

1. Click the Page selector button in the status bar.
2. Select the page you want to go to.

---

{button ,AL('H\_ADDING\_PAGES\_TO\_FORMS\_STEPS;H\_FORMS\_OVER;H\_MOVING\_OBJECTS\_TO\_ANOTHER\_PAGE\_IN\_FORMS\_STEPS;H\_MOVING\_ONE\_RECORD\_AT\_A\_TIME\_STEPS;H\_MOVING\_BETWEEN\_FIELDS\_REF;',0)} See related topics

## Moving objects to another page in forms



### Are you in Design?

1. Select the object.
2. Choose Edit - Cut or Copy.
3. Go to the page you want to add the object to.
4. Click where you want the object to appear on the page.
5. Choose Edit Paste.

---

{button ,AL(`H\_ADDING\_PAGES\_TO\_FORMS\_STEPS;H\_FORMS\_OVER;H\_MOVING\_OBJECTS\_STEPS;H\_ADDING\_MULTIPLE\_OBJECTS\_TO\_A\_VIEW\_STEPS;H\_GROUPING\_AND\_UNGROUPING\_OBJECTS\_STEPS;HNAMING\_VIEWS\_AND\_OBJECTS\_STEPS;');0)} [See related topics](#)

## Removing or reordering fields while creating new views

The steps for removing or reordering fields are generally the same when you create any type of [view](#).

### Removing fields

1. In the dialog box for creating the view, select the field in the "Fields to place on view" box.

CTRL+click to select multiple fields.

2. Click Remove.

### Reordering fields

To move a field from one location on the list to another, you must remove the fields that separate it from its new location.

For example, if you want to move a field that is fifth on the list to first place, you must remove the first four fields. Then use Add to add the four removed fields.

---

```
{button ,AL(`H_DELETING_ELEMENTS_OF_A_VIEW_STEPS;H_ADDING_OR_MOVING_FIELDS_IN_CROSSTABS_STEPS;H_MOVING_OR_DELETING_FORM_LETTER_FIELDS_STEPS;H_REMOVING_FIELDS_FROM_WORKSHEETS_OR_CROSSTABS_STEPS;',0)} See related topics
```

## Overview: Repeating panels

A repeating panel lets you display information from another joined database in your form or report. It is useful in a one-to-many relationship between joined databases. The repeating panel shows the many records from a detail database that are related to the one record displayed on the form.

### Example

A department and employees have a one-to-many relationship: One department can have many employees. To list the employees for each department, join a department database to an employee database on a department ID field.

Then set up a form that has the department database as its main database. Give the form a repeating panel for the employees. The panel lists all the employees that have the same department ID as the current department.

The employees in this repeating panel each have 332 in their department ID field, the same ID the department has.

Department Form	
Dept Accounting	Dept ID 332
Employee	Position
Willis	Comptroller
Wu	Accountant
Renault	Associate

### Main and detail databases

Like a form with joined data, a repeating panel must have a main database that provides the framework of records. The main database of the repeating panel must be one of the detail databases of the form.

Each line in a repeating panel displays a record from its main database. The panel in the preceding example uses the employee database as its main database.

A repeating panel can also have fields from other joined databases for additional, related information.

---

```
{button ,AL(^H_ADDING_A_REPEATING_PANEL_TO_EXISTING_FORMS_STEPS;H_ADDING_A_REPEATING_PANEL_TO_NEW_FORMS_STEPS;H_BASIC_PROPERTIES_OF_OBJECTS_AND_FIELDS_CS;H_FORMS_OVER;H_ONE_TO_MANY_MANY_TO_ONE_AND_ONE_TO_ONE_RELATIONSHIPS_OVER;H_JOINED_DATABASES_OVER;';0)} See related topics
```

## Selecting repeating panels



Are you in Design?

<u>If you</u>	<u>You select</u>
Click below the first-record line	The entire repeating panel
Click the first-record line	Only the column that you click
Double-click below the first record line	The entire repeating panel and simultaneously display the <u>InfoBox</u>
CTRL+click the first-record line	The entire repeating panel
CTRL+click below the first-record line	The entire repeating panel and simultaneously move it down to where you click

The panel is selected when the first-record line has a double-line border around it.

If you want to drag the panel to another location on the form, the mouse pointer must look like a hand.

If you want to resize the panel, the mouse pointer must look like a two-headed arrow.

---

```
{button ,AL(`H_CHANGING_THE_WIDTH_OF_LINES_OR_BORDERS_STEPS;H_CREATING_A_SHADOW_STEP  
S;H_CREATING_PARTIAL_BORDERS_STEPS;H_LINE_AND_COLOR_PROPERTIES_CS;H_REARRANGING_  
FIELDS_IN_REPEATING_PANELS_STEPS;H_RESIZING_REPEATING_PANELS_STEPS;H_SELECTING_OBJ  
ECTS_STEPS;H_REPEATING_PANELS_OVER;','0)} See related topics
```

## Summarizing data of records in repeating panels

You can add a calculated field to a form that summarizes data in a repeating panel on the form.

1. Choose Create - Field Definition.
2. Scroll to the blank line at the bottom of the list and click it.
3. Name the field and select Calculated as its data type.  
The dialog box expands to show the Define Formula and Define Summary tabs.
4. On the Define formula tab, write a formula using a summary function that refers to a field in the repeating panel.  
To see just a list of summary functions, select Summary in the "Functions" box.
5. Click the Define Summary tab, and then select "Summary of all records in *database*" in the "Summarize on" box, where *database* is the name of the database for the repeating panel.
6. Click OK.  
Approach switches to Design and the Add Field dialog box appears.
7. From the Add Field dialog box, drag the calculated field to the form and place it outside the panel.
8. Switch to Browse to see the calculation results.

---

{button ,AL(`H\_GROUPING\_RECORDS\_IN\_REPORTS\_STEPS;H\_ADDING\_SUMMARIES\_TO\_CROSSTABS\_STEPS;0)} See related topics

## Adding blank columns to worksheets

Add blank columns to enhance the layout of the worksheet.

The blank column only displays in the worksheet and does not create a new field.

1. Select a cell in the column to the left of where you want to add the column.
2. Choose Worksheet - Add Column.  
A blank column and the Formula dialog box appear.
3. Click Cancel in the Formula dialog box.
4. To enter a title for the new column, triple-click in the column header and enter the text.

**Note** To save the new column as part of the worksheet, choose File - Save Approach File.

---

{button ,AL(`H\_ADDING\_FORMULA\_COLUMNS\_TO\_WORKSHEETS\_STEPS;H\_MOVING\_COLUMNS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;','0)} [See related topics](#)



### **Adding formula columns to worksheets**

To display the results of a formula without making it a part of the database file, add a formula column to the worksheet.

The formula column only displays in the worksheet and does not create a new field.

**If you are trying to** create a calculated field available for other views, define the field , and then add the field to the worksheet.

1. Select a cell in the column to the left of where you want to add the column.
2. Choose Worksheet - Add Column.

A blank column and the Formula dialog box appear.

3. Write the formula.
4. Click OK.

The formula appears in every row of the selected column in the worksheet.

5. To enter a title for the new column, triple-click the column header and enter the text.

**Note** To save the formula column, choose File - Save Approach File.

---

{button ,AL(^H\_ADDING\_BLANK\_COLUMNS\_TO\_WORKSHEETS\_STEPS;H\_MOVING\_COLUMNS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_USING\_FUNCTIONS\_AND\_FORMULAS\_OVER;^,0)} See related topics

### **Editing formula columns in worksheets**

1. Double-click a cell in the column whose formula you want to modify.  
The Formula dialog box appears.
2. Edit the formula.
3. Click OK.
4. To edit the column title, triple-click the column header and enter the text.

**Note** To save the changes, choose File - Save Approach File.

---

{button ,AL(`H\_FUNCTIONS\_OVER;H\_FORMULAS\_OVER;','0)} [See related topics](#)

**Details: Copying selections to the Clipboard**

When you copy an entire worksheet or crosstab, you can paste it from the Clipboard in any of the following forms:

- An object that you can embed (which can be reports, forms, graphics, charts, sounds, or text)
- A Windows Metafile (.WMF) picture that you can paste as a graphic
- Tab-delimited text (for example, to paste into a spreadsheet)

When you copy a range of cells in a worksheet or crosstab, you can paste it from the Clipboard in any of the following forms:

- A Windows Metafile (.WMF) picture
- Tab-delimited text

---

{button ,AL('H\_COPYING\_SELECTIONS\_TO\_THE\_CLIPBOARD\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_CUTTING\_OR\_COPYING\_OBJECTS\_OR\_TEXT\_STEPS;',0)} [See related topics](#)

## Copying selections to the Clipboard

After you select all or part of a worksheet or crosstab, you can copy the selection to the Clipboard for pasting, linking, or embedding in a document created by another application.

1. Select the portion of the worksheet or crosstab you want to copy.
2. Choose Edit - Copy.



---

{button ,AL('H\_COPYING\_SELECTIONS\_TO\_THE\_CLIPBOARD\_DETAILS',1)} [See details](#)

{button ,AL('H\_CUTTING\_OR\_COPYING\_OBJECTS\_OR\_TEXT\_STEPS;H\_SELECTING\_IN\_WORKSHEETS\_OR\_CROSSTABS\_REF;',0)} [See related topics](#)

## Creating new worksheets

1. Choose Create - Worksheet.



2. Be sure the database containing the field you want is showing in the "Database" box.
3. Select a field in the "Fields" box.
4. Click Add.
5. To add additional fields, repeat steps 2 - 4.
6. Click Done.

---

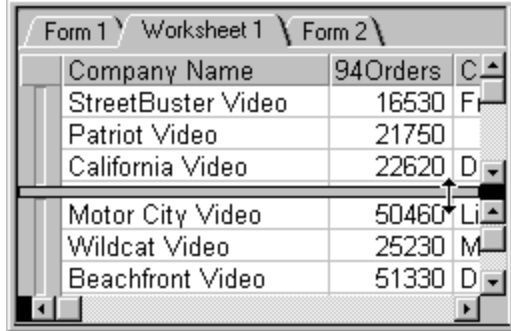
{button ,AL(^H\_ADDING\_BLANK\_COLUMNS\_TO\_WORKSHEETS\_STEPS;H\_ADDING\_FIELDS\_TO\_A\_VIEW\_STEPS;H\_ADDING\_FORMULA\_COLUMNS\_TO\_WORKSHEETS\_STEPS;H\_DELETING\_FIELDS\_FROM\_A\_DATABASE\_STEPS;H\_EDITING\_FIELDS\_OF\_A\_DATABASE\_DETAILS;H\_REMOVING\_OR\_REORDERING\_FIELDS\_WHILE\_CREATING\_NEW\_VIEWS\_STEPS;H\_SELECTING\_IN\_WORKSHEETS\_OR\_CROSSTABS\_REF',0)}  
[See related topics](#)

### Dividing worksheets and crosstabs into panes

If a worksheet or crosstab doesn't fit on the screen, you can divide it horizontally or vertically into independently scrolling panes. Then you can view data from different areas of the worksheet or crosstab at the same time.

### Dividing worksheets or crosstabs into panes

Drag the divider boxes (thick black lines in the top right and lower left corners) to the location you want.



Company Name	94Orders	C
StreetBuster Video	16530	F
Patriot Video	21750	
California Video	22620	D
Motor City Video	50460	Li
Wildcat Video	25230	M
Beachfront Video	51330	D

### Adjusting the position of the pane divider bars

Drag the divider bars to a new position.

To adjust both divider bars at the same time, position the mouse pointer on the intersection of the dividers. When the mouse pointer changes to a hand, drag the divider bars to another location.

### Removing panes

Drag the divider bar back to its original position or off the screen.

---

{button ,AL(^H\_RESIZING\_COLUMNS\_AND\_ROWS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_MOVING\_COLUMNS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_REMOVING\_FIELDS\_FROM\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_RESIZING\_COLUMNS\_AND\_ROWS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS',0)} [See related topics](#)

### **Editing column header text**

Approach uses field names as column headers in worksheets and crosstabs by default.

You can change the column header text to be anything you want. This does not change the field name.

1. Select the column.
2. Choose Edit Column Label from the context menu.
3. Edit the text.
4. Press ENTER.

---

{button ,AL('H\_SELECTING\_ROWS\_AND\_COLUMNS\_IN\_CROSSTABS\_STEPS;',0)} [See related topics](#)

## Moving columns in worksheets or crosstabs

Moving one or more columns to another location doesn't affect the data.

1. Select one or more columns.
2. Drag the columns to the position you want.

A vertical guide and bubble help saying, "Move field here," show where the column will be placed when you release it.

---

{button ,AL('H\_RESIZING\_COLUMNS\_AND\_ROWS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_SELECTING\_IN\_WORKSHEETS\_OR\_CROSSTABS\_REF;',0)} [See related topics](#)



### Removing fields from worksheets or crosstabs

1. Click the column header to select the column.
2. When the hand appears, drag the header toward the slider controls until the trash symbol appears.



**Note** This procedure only removes the column from the worksheet; it does not delete the data.

---

{button ,AL('H\_ADDING\_FIELDS\_TO\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_ADDING\_FORMULA\_COLUMNS\_TO\_WORKSHEETS\_STEPS',0)} [See related topics](#)

## Resizing columns and rows in worksheets or crosstabs

If you select more than one column or row, Approach makes all the selected columns and rows the same size.

### Resizing columns

1. Select one or more columns.
2. Place the pointer between column headers to the right of the column(s) you want to resize.

The mouse pointer changes shape:



3. Drag the column to the size you want.

### Resizing rows

1. Select one or more rows.
2. Place the pointer in the row gutter at the bottom border of the row(s) you want to resize.

The mouse pointer becomes a row sizer:





3. Drag the row to the size you want.

---

{button ,AL('H\_ADDING\_FORMULA\_COLUMNS\_TO\_WORKSHEETS\_STEPS;H\_MOVING\_COLUMNS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_SELECTING\_IN\_WORKSHEETS\_OR\_CROSSTABS\_REF';,0)} [See related topics](#)

## Selecting in worksheets or crosstabs

<u>To select</u>	<u>Do this</u>
A single cell	Click the cell.
A single cell for editing	Double-click the cell.
A range of cells	Click a cell and drag in any direction.
A column	Click the column header. Drag to select multiple columns.
Just the column header	Select the column and click the Column Header icon. 
The column header text for editing	Triple-click the column header.
Just the column cells (and not the column header)	Click the column header to select the column and click the Column Data icon. 
A worksheet row	Click to the left of the row.
A crosstab row	Click the row header.
The entire worksheet or crosstab	Click the top left corner of the worksheet or crosstab.
All of the worksheet column headers and all rows (but not the data)	Click the top left corner of the worksheet to select the worksheet; then click the corner again.

---

{button ,AL('H\_CREATING\_NEW\_WORKSHEETS\_STEPS;H\_EDITING\_COLUMN\_HEADER\_TEXT\_STEPS;H\_MOVING\_COLUMNS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_SELECTING\_FIELDS\_STEPS;','0)} [See related topics](#)

## Overview: Worksheets

A worksheet presents database records in a grid of columns and rows. The columns in a worksheet are database fields, and the rows are individual records:



Worksheets are often the most efficient and flexible type of [view](#) for displaying data.

In worksheets, you can move columns from one position to another, add or remove fields, or add columns that perform calculations. You can also change the worksheet's appearance by resizing columns or rows, editing the column header text, or adding color to text or background.

You can perform all of the same data functions in a worksheet that you can in other Approach views, including finding and sorting records, duplicating them, and editing database field values.

You can also create [crosstabs](#) from worksheets. Crosstabs expand on the worksheet model, by categorizing and summarizing database records.

---

{button ,AL(^H\_ADDING\_FORMULA\_COLUMNS\_TO\_WORKSHEETS\_STEPS;H\_CREATING\_NEW\_WORKSHEETS\_STEPS;H\_MOVING\_COLUMNS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_RESIZING\_COLUMNS\_AND\_ROWS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_SELECTING\_IN\_WORKSHEETS\_OR\_CROSSTABS\_REF',0)} [See related topics](#)

## Details: Adding columns to new crosstabs

### Field order

Column fields are nested in the order you select them in the Crosstab Assistant. The first field is used as the broadest or topmost level. For example, if you list Country first and then City, Approach groups the cities inside the countries.

If you don't like the placement you chose, move the headers after creating the crosstab. See [Adding or moving fields in crosstabs](#).

### How Approach groups values by default

Approach groups matching values from the field and creates a new column for each distinct value from the selected field. For example, in a crosstab with Order Date in a column header, each unique date would head a column in the crosstab.

### Grouping options

If you want to group the values, choose a grouping option. These groups are bins that collect values into ranges. The grouping options depend on the [field type](#) of the selected field.

In the Crosstab Assistant, the Order Date field can be set to group field data into months, quarters, or years. If you select Order Date as a crosstab column and group Order Date by quarter, the crosstab column headers show four columns for each year, ordered from first quarter to fourth quarter.

You can group times, numbers, and text. See [Grouping records in new reports and crosstabs](#).

### Totals fields

Approach adds a summary column to the side of the crosstab. You can

- Delete this column if it doesn't make sense for your data.
- Change the summary calculation.

---

{button ,AL('H\_ADDING\_COLUMNS\_TO\_NEW\_CROSSTABS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_ADDING\_ALL\_GROUPS\_TO\_CROSSTABS\_STEPS;H\_ADDING\_OR\_MOVING\_FIELDS\_IN\_CROSSTABS\_STEPS;H\_ADDING\_ROWS\_TO\_NEW\_CROSSTABS\_STEPS;H\_ADDING\_SUMMARIES\_TO\_CROSSTABS\_STEPS;H\_ADDING\_VALUES\_TO\_NEW\_CROSSTABS\_STEPS',0)} [See related topics](#)

## Adding columns to new crosstabs

Approach groups matching values from the field and then creates columns from the grouped values.

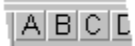
**Command:** Create - Crosstab



**Tab:** Columns

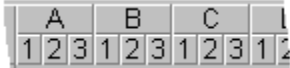
1. Be sure the database containing the field you want is showing in the "Database" box.
2. Select a field from the "Fields" box.

The values in this field are the column headers.



3. Click Add.  
A group icon appears next to the field.
4. (Optional) To select a grouping option for the values, click the group icon and select a grouping method.
5. (Optional) Select other fields from the "Fields" box.

These values appear as subheaders in each column.



A	B	C	D
1 2 3	1 2 3	1 2 3	1 2 3

---

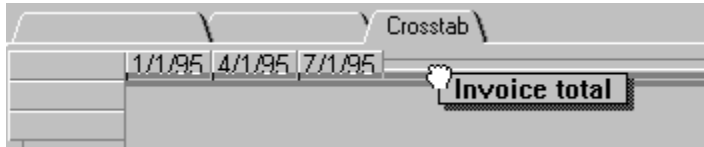
{button ,AL('H\_ADDING\_COLUMNS\_TO\_NEW\_CROSSTABS\_DETAILS',1)} [See details](#)

{button ,AL('H\_ADDING\_ALL\_GROUPS\_TO\_CROSSTABS\_STEPS;H\_ADDING\_ROWS\_TO\_NEW\_CROSSTABS\_STEPS;H\_ADDING\_OR\_MOVING\_FIELDS\_IN\_CROSSTABS\_STEPS;H\_ADDING\_SUMMARIES\_TO\_CROSSTABS\_STEPS;H\_ADDING\_VALUES\_TO\_NEW\_CROSSTABS\_STEPS',0)} [See related topics](#)

### Adding or moving fields in crosstabs

Convert a worksheet into a crosstab, or a simple crosstab into a multiple-level one. Do this with fields already on the view or with fields you add to the view.

1. Click a row or column header, or select a field in the Add Field dialog box.
2. Drag the field to a position in the row gutter, column gutter, or crosstab body.  
Approach highlights the possible positions as you drag the field over them.



### Removing a row or column

1. Click a row or column header.
2. Drag the header off of the crosstab until the trash symbol appears.



---

{button ,AL('H\_ADDING\_SUMMARIES\_TO\_CROSSTABS\_STEPS;H\_EDITING\_CROSSTAB\_SUMMARIES\_STEPS ;H\_MOVING\_COLUMNS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_SELECTING\_IN\_WORKSHEETS\_OR\_CROSSTABS\_REF;H\_ADDING\_FIELDS\_TO\_A\_VIEW\_STEPS;H\_CROSSTABS\_OVER',0)} [See related topics](#)

## Details: Adding rows to new crosstabs

### Field order

Row fields are nested in the order you select them in the Crosstab Assistant. The first field is used as the broadest or outermost level. For example, if you list Country first and then City, Approach groups the cities inside the countries.

If you don't like the placement you chose, rearrange the headers after creating the crosstab. See [Adding or moving fields in crosstabs](#).

### How Approach groups values by default

Approach groups matching values from the field and creates a new row for each distinct value from the selected field. For example, in a crosstab with Order Date in a row header, each unique date would head a row in the crosstab.

### Grouping options

If you want to group the values, choose a grouping option. These groups are bins that collect values into ranges. The grouping options depend on the [field type](#) of the selected field.

In the Crosstab Assistant, the Order Date field can be set to group field data into months, quarters, or years. If you select Order Date as a crosstab row and group Order Date by quarter, the crosstab row headers show four rows for each year, ordered from first quarter to fourth quarter.

You can group times, numbers, and text. See [Grouping records in new reports and crosstabs](#).

### Totals fields

Approach adds a summary row to the bottom of the crosstab. You can

- Delete this row if it doesn't make sense for your data.
- Change the summary calculation.

---

{button ,AL('H\_ADDING\_ROWS\_TO\_NEW\_CROSSTABS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_ADDING\_ALL\_GROUPS\_TO\_CROSSTABS\_STEPS;H\_ADDING\_COLUMNS\_TO\_NEW\_CROSSTABS\_STEPS;H\_ADDING\_OR\_MOVING\_FIELDS\_IN\_CROSSTABS\_STEPS;H\_ADDING\_SUMMARIES\_TO\_CROSSTABS\_STEPS;H\_ADDING\_VALUES\_TO\_NEW\_CROSSTABS\_STEPS',0)} [See related topics](#)



## Adding rows to new crosstabs

Approach groups matching values from the field and then creates rows from the grouped values.

**Command:** Create - Crosstab



**Tab:** Rows

1. Be sure the database containing the field you want is showing in the "Database" box.
2. Select a field from the "Fields" box.  
Use SHIFT+click or CTRL+click to select more than one field.  
The values in this field are the row headers.



3. Click Add.  
A group icon appears next to the field.
4. (Optional) To select a grouping option for the values, click the group icon and select a grouping method.
5. (Optional) Select other fields from the "Fields" box.  
These field values appear as subheaders in each row.

A	1
A	2
A	3
B	1
B	2
B	3
C	1
C	2
C	3

---

{button ,AL(`H\_ADDING\_ROWS\_TO\_NEW\_CROSSTABS\_DETAILS',1)} [See details](#)

{button ,AL(`H\_ADDING\_ALL\_GROUPS\_TO\_CROSSTABS\_STEPS;H\_ADDING\_COLUMNS\_TO\_NEW\_CROSSTABS\_STEPS;H\_ADDING\_OR\_MOVING\_FIELDS\_IN\_CROSSTABS\_STEPS;H\_ADDING\_SUMMARIES\_TO\_CROSSTABS\_STEPS;H\_ADDING\_VALUES\_TO\_NEW\_CROSSTABS\_STEPS',0)} [See related topics](#)

### Details: Adding totals to crosstabs

You can also use the mouse to add totals to crosstabs.

#### Adding a total row or column using the mouse

1. Position the mouse pointer at the right edge of the column headers or the bottom edge of the row headers.
2. Click when the cursor turns into a wedge:



You can add a total column or row only to crosstabs with existing sub-groupings.

#### Deleting total rows or columns

1. Click a row or column header.
2. Drag the header off of the crosstab until the trash symbol appears.

PRODUCT	
product2	Total
Quantity	Quant

---

{button ,AL('H\_ADDING\_SUMMARIES\_TO\_CROSSTABS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_crosstabs\_over;H\_editing\_crosstab\_summaries\_steps;H\_summary\_calculations\_ref;',0)} [See related topics](#)

### Adding totals to crosstabs

These actions create columns and rows titled Total.

#### Adding a Total row that summarizes data in each column

Choose Crosstab - Summarize Columns.



#### Adding a Total column that summarizes data in each row

Choose Crosstab - Summarize Rows.



---

{button ,AL(`H\_ADDING\_SUMMARIES\_TO\_CROSSTABS\_DETAILS`,1)} [See details](#)

{button ,AL(`H\_crosstabs\_over;H\_editing\_crosstab\_summaries\_steps;H\_summary\_calculations\_ref`,`0`)} [See related topics](#)

### **Adding values to new crosstabs**

Crosstabs use summary calculations. Select field(s) not already selected for the rows and columns of the crosstab.

**Command:** Create - Crosstab



**Tab:** Values

1. Be sure the database containing the field you want is showing in the "Database" box.
2. Select the field containing the values to be used in the calculation.
3. Select a calculation from the "Calculate the" box.  
Approach performs this calculation on the values in the field. If the field data type is not numeric, select Count.
4. To add additional fields, repeat steps 1 - 3.
5. Click Done.

The results of the calculation(s) form the body of the crosstab.

---

{button ,AL(`H\_editing\_crosstab\_summaries\_steps;H\_summary\_calculations\_ref;',0)} [See related topics](#)

## Overview: Crosstabs

A cross-tabulation worksheet, or crosstab, categorizes and summarizes database records. Where a worksheet has rows containing individual records, a crosstab shows cells that summarize underlying records grouped by any fields you select.

A crosstab is a good tool for analyzing data with three or more variables. For example, use a crosstab to present products by type, by quantity sold, and by sales representative.

In a worksheet the information appears as follows:



A crosstab provides another look at the same data:



### Creating a crosstab

The Crosstab Assistant makes it easy for you to create a crosstab:

1. Choose Create - Crosstab.
2. Select the row headers.
3. Select the column headers.
4. Select a field and calculation to create crosstab body values.

You can also create a crosstab from a worksheet by dragging column headers into position on the left side of the worksheet. See [Adding or moving fields in crosstabs](#).

### Grouping record values in crosstab headers

When you create a crosstab using the Crosstab Assistant, you can choose grouping options to categorize records. For example, if you are showing product sales by date, you can group the date field values by month, quarter, or year. There are also grouping options for time, numbers, and text. These options are only available through the Crosstab Assistant.

---

{button ,AL(`H\_MOVING\_COLUMNS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_adding\_columns\_to\_new\_crosstabs\_steps;H\_adding\_or\_moving\_fields\_in\_crosstabs\_steps;H\_adding\_rows\_to\_new\_crosstabs\_steps;H\_adding\_summaries\_to\_crosstabs\_steps;H\_adding\_values\_to\_new\_crosstabs\_steps;H\_editing\_crosstab\_summaries\_steps;H\_grouping\_records\_in\_new\_reports\_and\_crosstabs\_ref,0)} [See related topics](#)

### Overview: Drill down to data

A drill down quickly reveals the records summarized in crosstab and chart entries. When you perform a drill down, the records that contribute to the selected part of the crosstab or chart appear on a worksheet or other view that you specify.

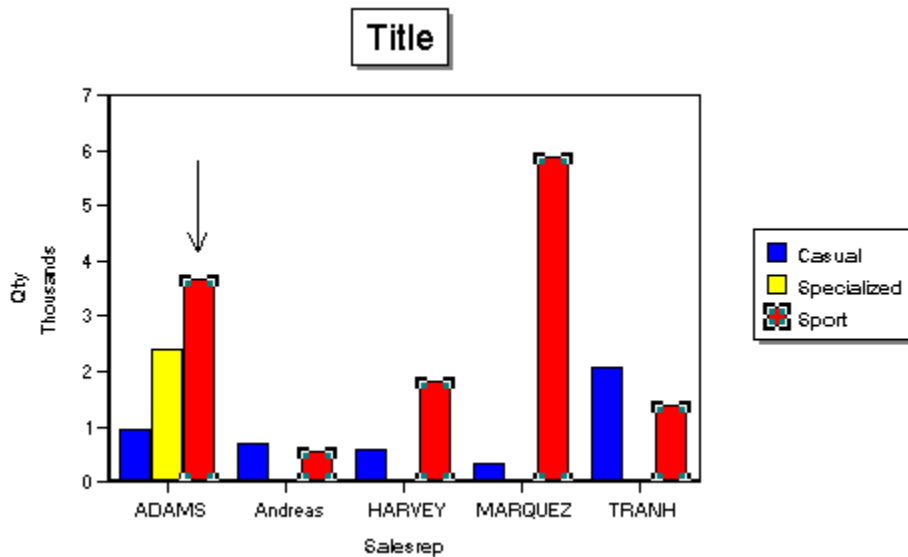
For example, in this crosstab, a drill down for the Sport column finds all records with the product category Sport.

	Casual	Specialized	Sport	Total
	QTY	QTY	QTY	QTY
ADAMS	960	2400	3680	7040
Andreas	700		550	1250
HARVEY	600		1840	2440
MARQUEZ	360		5880	6240
TRANH	2080		1400	3480
Total	4700	2400	13350	20450

A drill down on the cell containing 1840 finds all records from the sales representative Harvey in the Sport product category.

	Casual	Specialized	Sport	Total
	QTY	QTY	QTY	QTY
ADAMS	960	2400	3680	7040
Andreas	700		550	1250
HARVEY	600		1840	2440
MARQUEZ	360		5880	6240
TRANH	2080		1400	3480
Total	4700	2400	13350	20450

In this chart, a drill down for the first red bar finds the records with the sales representative Adams and the Product category Sport.



### Returning from a drill-down view

In a drill-down view, press ESC to return to the original crosstab or chart. You can also move to other views from the drill-down view. Which view you move to affects which found set of records you see, however.

### Using drill-down to data with a found set

If you are looking at a crosstab with a found set and then drill-down from that crosstab, your drill-down view shows a new found set.

For example, if the found set on the crosstab is for Product Type = Sport and then you drill down using the sales representative Harvey, the drill-down view shows only those records for Product Type = Sport and Sales Rep = Harvey.

If you then go back to the crosstab, the found set returns to the original set from the crosstab: Product Type = Sport with all sales representatives.

However, if you go to another view, the found set for all views retains the drill-down set Product Type = Sport and Sales Rep = Harvey.

---

{button ,AL('H\_APPLYING\_FOUND\_SETS\_TO\_CROSSTABS\_STEPS;H\_CHOOSING\_DRILLDOWN\_VIEWS\_STEP  
S;H\_CROSSTABS\_ASSISTANT\_OVER;H\_CROSSTABS\_OVER;H\_FINDING\_RECORDS\_that\_make\_up\_CROS  
STABS\_STEPS;H\_SELECTING\_ROWS\_AND\_COLUMNS\_IN\_CROSSTABS\_STEPS;',0)} [See related topics](#)

### **Finding records that make up crosstabs (drill down to data)**

In a crosstab, find all records that contribute to a summary calculation.

If a crosstab displays the results of a find, the drill down uses the data in the found set only.

1. Click a row header, column header, or cell.

Don't select summary headers: the drill down would show all records in the found set.

2. Choose Crosstab - Drill Down to Data.



A new view appears, showing the records that contribute to the row, column, or cell selected. Only the fields appear that were used on the original crosstab.

Press ESC to return to the original crosstab.

---

{button ,AL(`H\_APPLYING\_FOUND\_SETS\_TO\_CROSSTABS\_STEPS;H\_Choosing\_drilldown\_views\_steps;H\_SELECTING\_ROWS\_AND\_COLUMNS\_IN\_CROSSTABS\_STEPS;H\_drill\_down\_to\_data\_over;',0)} [See related topics](#)



## Selecting rows and columns in crosstabs

### Selecting a row or column

Click the row or column header.

### Selecting a row or column header only

Do one of the following:

- Double-click the row or column header.
- Click the header and choose Crosstab - Select - Header Only.

---

{button ,AL(`H\_MOVING\_COLUMNS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_RESIZING\_COLUMNS\_AND\_ROWS\_IN\_WORKSHEETS\_OR\_CROSSTABS\_STEPS;H\_crosstabs\_over;',0)} [See related topics](#)

### **Adding Custom controls to the Tools palette**

Only registered custom controls can be added to the [Tools palette](#).

1. Choose File - User Setup - Approach Preferences.
2. Click the Display tab.
3. Click Custom Controls.
4. Select the custom controls you want to add to the Tools palette.
5. Click OK to close the Custom Controls dialog box.
6. Click OK.

**Note** If you do not see the custom control you want, you may have to register it first. See [Registering Custom Controls](#).

---

```
{button ,AL('H_CHANGING_PROPERTIES_OF_CUSTOM_CONTROLS_STEPS;H_INSERTING_CUSTOM_CONTR  
OLS_IN_VIEWS_STEPS;H_OLE_CUSTOM_CONTROLS_OVER;',0)} See related topics
```

## Changing properties of custom controls



### Are you in Design?

1. Double-click the custom control on the view.

The Properties dialog box appears. Each custom control has its own Properties dialog box, which is supplied by the third-party custom control developer.

2. Modify size, fonts, color and/or other appropriate properties for this custom control by setting the options in the Properties dialog box.
3. Close the Properties dialog box.

---

```
{button ,AL('H_ADDING_CUSTOM_CONTROLS_TO_THE_TOOLS_PALETTE_STEPS;H_INSERTING_CUSTOM_CONTROLS_IN_VIEWS_STEPS;H_OLE_CUSTOM_CONTROLS_OVER;H_REGISTERING_CUSTOM_CONTROLS_STEPS;',0)} See related topics
```

### **Details: Creating Approach views in Lotus 1-2-3**

Lotus 1-2-3 works with Approach to help you manage and analyze data contained in a 1-2-3 database table or an external database table. 1-2-3 and Approach are installed together when you install 1-2-3.

You can create an Approach view by choosing Create - Database - Query Table, Form, Report, Dynamic Crosstab, Mailing Label, or Form Letter from the 1-2-3 menu. 1-2-3 starts the appropriate Assistant to create the view you want.

Approach views appear as embedded objects in the 1-2-3 sheet. When you activate the view, 1-2-3 loads a portion of Approach into memory to give you access to Approach commands. For example, you can use the Browse commands to find and sort records. When the view appears in a full Approach window, you can join database tables, create computed columns, and use Design to change the way the view looks.

**Note** When you activate a query table, form, or crosstab, 1-2-3 gives you partial access to Approach commands by showing Approach commands in the 1-2-3 window. To have full access to Approach features in an Approach window, choose Edit - Open Into Full Window.

### **Using Approach views to change 1-2-3 data**

When you modify data in your Approach view, 1-2-3 automatically makes the changes to the source data in the 1-2-3 range. However, you can't modify formulas or field definitions while working with data in the view, nor can you create a chart from an Approach crosstab. If you wish to chart data that appears in a crosstab, copy the data to cells in the 1-2-3 sheet.

### **Refreshing an Approach view**

To refresh an Approach view so that it reflects any changes that have been made to the source data in the 1-2-3 range, choose Browse - Refresh data.

### **Working with query tables**

When you create a query table in 1-2-3, you create an Approach worksheet view of the selected data. You work with a 1-2-3 query table in the same way that you work with an Approach worksheet.

### **Working with external database tables**

You can create a query table from an external database table, but you cannot use 1-2-3 to create forms, reports, crosstabs, mailing labels, or form letters from external database tables.

### **Getting Help**

This topic is part of Approach Help.

- If you choose Help - Help Topics, click a Help button, or press F1 while you are creating a form letter or when the form letter is activated, Approach Help topics appear. Approach Help contains more information about working with Approach views.
- If you want to get Help about 1-2-3, click the 1-2-3 sheet, switch to the 1-2-3 window or choose File - Exit & Return to 1-2-3, and then choose Help - Help Topics or press F1.

---

{button ,AL('H\_CREATING\_APPROACH\_VIEWS\_IN\_LOTUS\_123\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_CREATING\_DATABASES\_FROM\_SPREADSHEETS\_STEPS;H\_OPENING\_NAMED\_RANGES\_FROM\_LOTUS\_123\_SPREADSHEETS\_STEPS';0)} [See related topics](#)

### Creating Approach views in Lotus 1-2-3

Lotus 1-2-3 lets you create Form, Report, Crosstab, Mailing Label, and Form Letter views in 1-2-3 to display selected workbook data. You can also create Query Tables, which are similar to Approach worksheets. You can modify the workbook data in your Approach view and any changes will appear in the Lotus 1-2-3 range.

1. In 1-2-3, select the range of sheet cells you want to use in an Approach view.  
The range of cells must use column headers for field names and cannot exceed 100 columns or 65,536 rows.
2. From the 1-2-3 Create menu, choose Database, and then choose Query Table, Form, Report, Dynamic Crosstab, Mailing Labels, or Form Letter.  
1-2-3 starts the appropriate Approach assistant.
3. Use the Approach assistant to create the view.  
1-2-3 embeds the Approach view as an embedded object in the sheet and activates the view. The view contains data from all the records in the 1-2-3 range.
  - Activated query tables, forms, and crosstabs appear in the 1-2-3 window with Approach commands and buttons on the main menu and status bar, giving you access to Approach and the Approach Help system from within 1-2-3.
  - Activated reports, form letters, and mailing labels appear in an Approach window.
4. To set criteria (conditions) for finding and displaying specific records in the view, choose Browse, and then choose Find Assistant.
5. To return to 1-2-3, do one of the following:
  - From an activated query table, form, or crosstab, click the sheet area. 1-2-3 displays the deactivated view and its data as an embedded object in the 1-2-3 sheet.
  - From an activated report, form letter, or mailing label view, choose File - Exit & Return to Lotus 1-2-3. These views appear as icons in the 1-2-3 sheet.

**Note** To connect to Approach and open the form again, double-click the embedded view object or icon. If you changed data in the corresponding 1-2-3 range, Approach updates the view.

---

{button ,AL('H\_CREATING\_APPROACH\_VIEWS\_IN\_LOTUS\_123\_DETAILS',1)} [See details](#)

{button ,AL('H\_CREATING\_DATABASES\_FROM\_SPREADSHEETS\_STEPS;H\_OPENING\_NAMED\_RANGES\_FROM\_LOTUS\_123\_SPREADSHEETS\_STEPS';0)} [See related topics](#)

## Details: Customizing Lotus Notes (PowerKey)

### User Server List

A list of remote servers displays under User Server List. You can control which remote servers display in the Open dialog box with this option.

Add a server by entering it in the edit box and clicking Add. Remove a server by selecting it in the list of servers and clicking Remove.

### Preferences

<u>Preference</u>	<u>Definition</u>
Show Hidden Views	Displays Notes Hidden views (in parentheses). Leaving this option unchecked hides the Notes Hidden views.
Never create views (indices) in .NSF	Approach does not create indices when joining databases of Notes data to other databases. Leaving this option unchecked means Approach creates indices to enhance performance.

---

{button ,AL('H\_CUSTOMIZING\_LOTUS\_NOTES\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_OPENING\_LOTUS\_NOTES\_VIEWS\_OR\_FORMS\_FROM\_A\_LOCAL\_NOTES\_DATABASE\_STEPS;H\_OPENING\_LOTUS\_NOTES\_VIEWS\_OR\_FORMS\_FROM\_A\_NOTES\_WORKSPACE\_ON\_A\_SERVER\_STEPS;H\_REPLICATING\_A\_NOTES\_DATABASE\_STEPS;H\_REPLICATING\_NOTES\_DATABASES\_WITH\_A\_SERVER\_STEPS;',0)} [See related topics](#)

## Customizing Lotus Notes (PowerKey)

The Notes PowerKey driver gives you direct access to Lotus Notes data from Approach. Customize how you access Lotus Notes data by setting options in the Notes PowerKey Setup dialog box.

**Tip** Before you begin using Notes PowerKey, make sure Notes is in your path.

1. From the Approach File menu, choose Open.



2. Select Lotus Notes - Local, Server, or Workspace in the "Files of type" box to indicate the location of the Notes database you use.

**Tip** If you have any problem with this step, specify a directory that contains an .NSF file. For example, your Notes directory on your hard drive contains .NSF files.

3. Click Setup.

The Notes PowerKey Setup dialog box appears.

4. Under User Server List, enter the name of a Notes server you want to add in the edit box and click Add.

To remove a server from the list of servers, select it and click Remove.

5. Under Preferences, select or deselect "Show Hidden Views" and "Never create views (indices) in .NSF."
6. Click OK.

---

{button ,AL('H\_CUSTOMIZING\_LOTUS\_NOTES\_DETAILS',1)} [See details](#)

{button ,AL('H\_OPENING\_LOTUS\_NOTES\_VIEWS\_OR\_FORMS\_FROM\_A\_LOCAL\_NOTES\_DATABASE\_STEPS;  
H\_OPENING\_LOTUS\_NOTES\_VIEWS\_OR\_FORMS\_FROM\_A\_NOTES\_WORKSPACE\_ON\_A\_SERVER\_STEP  
S;H\_REPLICATING\_A\_NOTES\_DATABASE\_STEPS;H\_REPLICATING\_NOTES\_DATABASES\_WITH\_A\_SERVE  
R\_STEPS;',0)} [See related topics](#)

## Custom Controls dialog box

Insert OLE custom controls (.OCX) in a form, report, mailing label, or form letter.

### Choose a task

[Adding custom controls to the Tools palette](#)

[Registering custom controls](#)

[Overview: OLE Custom Controls](#)

[Inserting custom controls in views](#)

[Changing properties of custom controls](#)

---

{button ,AL(`H\_CHANGING\_PROPERTIES\_OF\_CUSTOM\_CONTROLS\_STEPS;H\_INSERTING\_CUSTOM\_CONTR  
OLS\_IN\_VIEWS\_STEPS;H\_OLE\_CUSTOM\_CONTROLS\_OVER;','0)} [See related topics](#)



## Enabling variable fields for Notes/FX

When an Approach variable field is enabled, Notes can write to the field and can read its contents without having to open an Approach view.

1. From the Approach File menu, choose Approach File Properties.



A list of variable field names appears in the "Variable Fields" box.

2. Select a variable field to enable it for Notes/FX.
3. Click OK.

**Note** Deselect the variable field if you do not want it to be enabled. The default for variable fields is deselected.

---

```
{button ,AL('H_APPROACH_FILE_PROPERTIES_REF;H_OPENING_LOTUS_NOTES_VIEWS_OR_FORMS_FRO  
M_A_LOCAL_NOTES_DATABASE_STEPS;H_OPENING_LOTUS_NOTES_VIEWS_OR_FORMS_FROM_A_NO  
TES_DATABASE_ON_A_SERVER_STEPS;',0)} See related topics
```

## Inserting custom controls in views

Only registered custom controls can be inserted in [views](#).



### Are you in Design?

1. Choose Create - Control - Custom Control.  
The Insert Custom Control dialog box appears.
2. Select the custom control you want to insert in the view.
3. Click Insert.  
You can also insert custom controls by clicking them in the Tools palette.

---

```
{button ,AL('H_ADDING_CUSTOM_CONTROLS_TO_THE_TOOLS_PALETTE_STEPS;H_CHANGING_PROPERTIES_OF_CUSTOM_CONTROLS_STEPS;H_OLE_CUSTOM_CONTROLS_OVER;H_REGISTERING_CUSTOM_CONTROLS_STEPS;',0)} See related topics
```

## Overview: OLE Custom controls

OLE custom controls, also called custom controls, are objects that you can add to the background of a form, report, mailing label, or form letter.

Custom controls are applications designed with a specific purpose in mind. They accomplish a specific task or range of tasks, from tasks as simple as drawing a special type of rectangle on the view, to tasks as complex as reporting stock prices or updating a calendar.

Custom controls usually have the file extension .OCX.

An example of a custom control is the Tool Palette component. When you install it in Approach, you can take advantage of additional diagramming and freehand drawing tools, so you have more flexibility in creating and editing graphics.

## Installing custom controls

Approach is an OLE custom control container, so you can use custom controls created by third-party vendors in Approach. In order for Approach to use third-party custom controls, you must install and register them on your hard disk. They can go into any directory recommended by the install program of the ActiveX control. The install program for the control should register it on your hard disk.

If you copy a group of custom controls from a diskette or network drive to your hard disk, you cannot use the custom control's install program. In these two instances, you must manually [register the custom controls](#) or else you will not be able to use them in Approach. Register custom controls using the Preferences dialog box.

Any .OCX files registered on your hard disk under another application will also be visible to Approach.

## Adding custom controls to a view

In Design, the Insert Custom Control dialog box displays all the OLE custom controls registered on your hard disk. When you insert a custom control, it appears in the top left corner of the view. Like other objects in Approach, you can resize a custom control object and drag it to another location on the view.

## Adding custom controls to the Approach Tools palette

Add any custom control to the Approach Tools palette by selecting it in the Custom Controls dialog box (available from File - User Setup - Approach Preferences, on the Display tab). An ActiveX control's icon functions like any other icon on the [Tools palette](#).

## Changing ActiveX control properties

In Design, change the properties of an OLE custom control as you would any design object. Select it, then double-click the custom control to display the Properties dialog box for that ActiveX control. Each ActiveX control has its own Properties dialog box, in which you set its size, fonts, colors and so on.

## LotusScript

You can use ActiveX controls to start LotusScript programs. ActiveX controls, just like objects native to Approach, may have methods, properties, and events. When an event executes, LotusScript code may also be executed.

---

{button .AL(^H\_ADDING\_CUSTOM\_CONTROLS\_TO\_THE\_TOOLS\_PALETTE\_STEPS;H\_CHANGING\_PROPERTIES\_OF\_CUSTOM\_CONTROLS\_STEPS;H\_INSERTING\_CUSTOM\_CONTROLS\_IN\_VIEWS\_STEPS;H\_REGISTERING\_CUSTOM\_CONTROLS\_STEPS;';0)} [See related topics](#)

## Opening Lotus Notes views or forms from a local Notes database

You can open a Lotus Notes view or form from a Notes database stored on your local drive.

1. From the Approach File menu, choose Open.



2. Select Lotus Notes - Local in the "Files of type" box.
3. Specify a Notes database.  
Notes databases have the file extension .NSF. If no Notes databases are listed, specify a directory that contains the .NSF file with the view or form you want to open.
4. Select the view or form you want to open.
5. Click "Open as read-only" if you want to display the Notes view or form as read-only.
6. Click OK.

<u>If you...</u>	<u>Then...</u>
Chose to display the view or form as read-only	A message box appears. Click OK to remove the message box.
Opened a view	The data appears in a worksheet. Double-click on a row to go to the appropriate form, which is generated from the corresponding Notes form.
Opened a form	The data appears laid out as fields on a standard Approach form.

---

{button ,AL(^H\_APPROACH\_FILE\_PROPERTIES\_REF;H\_CUSTOMIZING\_LOTUS\_NOTES\_STEPS;H\_OPENING\_LOTUS\_NOTES\_VIEWS\_OR\_FORMS\_FROM\_A\_NOTES\_DATABASE\_ON\_A\_SERVER\_STEPS;H\_OPENING\_LOTUS\_NOTES\_VIEWS\_OR\_FORMS\_FROM\_A\_NOTES\_WORKSPACE\_ON\_A\_SERVER\_STEPS;H\_REPLICATING\_A\_NOTES\_DATABASE\_STEPS;H\_REPLICATING\_NOTES\_DATABASES\_WITH\_A\_SERVER\_STEPS;','0)}  
[See related topics](#)

## Opening Lotus Notes views or forms from a Notes database on a server

You can open a Lotus Notes view or form from a database stored on a Notes file server.

1. From the Approach File menu, choose Open.



2. Select Lotus Notes - Server in the "Files of type" box.
3. Specify a server.
4. Click Open.  
The Lotus Notes password dialog box appears.
5. Enter your Notes password in the "Enter a password" box.
6. Click OK.
7. Specify a Notes database.

Notes databases have the file extension .NSF. If no Notes databases are listed, specify the directory that contains the .NSF file with the view or form you want to open.

8. Select the view or form you want to open.
9. Click "Open as read-only" if you want to display the Notes view or form as read-only.
10. Click Open.

<u>If you...</u>	<u>Then...</u>
Chose to display the view or form as read-only	A message box appears. Click OK to remove the message box.
Opened a view	The data appears in a worksheet. Double-click on a row to go to the appropriate form, which is generated from the corresponding Notes form.
Opened a form	The data appears laid out as fields on a standard Approach form.

---

{button ,AL(^H\_APPROACH\_FILE\_PROPERTIES\_REF;H\_CUSTOMIZING\_LOTUS\_NOTES\_STEPS;H\_OPENING\_LOTUS\_NOTES\_VIEWS\_OR\_FORMS\_FROM\_A\_LOCAL\_NOTES\_DATABASE\_STEPS;H\_OPENING\_LOTUS\_NOTES\_VIEWS\_OR\_FORMS\_FROM\_A\_NOTES\_WORKSPACE\_ON\_A\_SERVER\_STEPS;H\_REPLICATING\_A\_NOTES\_DATABASE\_STEPS;H\_REPLICATING\_NOTES\_DATABASES\_WITH\_A\_SERVER\_STEPS;','0)} See related topics

## Opening Lotus Notes views or forms from a Notes workspace on a server

You can open a Lotus Notes view or form from any Notes database that appears in your Notes workspace.

1. From the Approach File menu, choose open.



2. Select Lotus Notes - Workspace in the "Files of type" box.
3. Specify a Notes database in the Directories list.

Notes databases have the file extension. NSF. If no Notes databases are listed, specify a directory that contains the .NSF file with the view or form you want to open.

If the database is stored on a Notes server, you automatically connect to the appropriate server.

4. Select the view or form you want to open.
5. Click "Open as read-only" if you want to display the Notes view or form as read-only.
6. Click OK.

<u>If you...</u>	<u>Then...</u>
Chose to display the view or form as read-only	A message box appears. Click OK to remove the message box.
Opened a view	The data appears in a worksheet. Double-click on a row to go to the appropriate form, generated from the corresponding Notes form.
Opened a form	The data appears laid out as fields on a standard Approach form

---

{button ,AL('H\_APPROACH\_FILE\_PROPERTIES\_REF;H\_CUSTOMIZING\_LOTUS\_NOTES\_STEPS;H\_OPENING\_LOTUS\_NOTES\_VIEWS\_OR\_FORMS\_FROM\_A\_LOCAL\_NOTES\_DATABASE\_STEPS;H\_REPLICATING\_A\_NOTES\_DATABASE\_STEPS;H\_REPLICATING\_NOTES\_DATABASES\_WITH\_A\_SERVER\_STEPS';,0)} [See related topics](#)

### Opening 1-2-3 named ranges in Approach

Open a named range of a 1-2-3 worksheet to view or edit the range in an Approach form.

- 1-2-3 must be running, and the worksheet containing the range must be open.
- The first row of the named range must contain data formatted as text. Approach uses this data for field names.

1. From the Approach File menu, choose Open.



2. Select 1-2-3 Ranges in the "Files of type" box.
3. Specify the worksheet containing the range you want to open.
4. Specify the named range.
5. Click Open.

**Note** Opening the named range does not convert it to a database file. Any changes you make in Approach to data in the range are saved in the worksheet.

---

{button ,AL('H\_CREATING\_APPROACH\_VIEWS\_IN\_LOTUS\_123\_STEPS;H\_CREATING\_DATABASES\_FROM\_SP  
READSHEETS\_STEPS;',0)} [See related topics](#)

## Registering custom controls

Only registered custom controls appear in the Insert Custom Control dialog box and on the Tools palette.

1. Choose File - User Setup - Approach Preferences.
2. Click the Display tab.
3. Click Custom Controls.
4. Click Register Control.

The Register Custom Control dialog box appears.

5. Specify the custom control file (which usually has an .OCX file extension) you want to register in the File name box.
6. Click Open.
7. Click OK.

---

{button ,AL(`H\_ADDING\_CUSTOM\_CONTROLS\_TO\_THE\_TOOLS\_PALETTE\_STEPS;H\_CHANGING\_PROPERTIES\_OF\_CUSTOM\_CONTROLS\_STEPS;H\_INSERTING\_CUSTOM\_CONTROLS\_IN\_VIEWS\_STEPS;H\_OLE\_CUSTOM\_CONTROLS\_OVER;',0)} [See related topics](#)



## Replicating Notes databases

Creates a copy on your local hard disk of a Notes database on a server.

**If you're trying to** replicate a Notes database with a server to update your local replica and the replica on the server with changes made to either one, see [Replicating Notes databases with a server](#).



### Are you in Design?

1. [Create a custom menu](#) containing the command Notes - New Notes Replica.  
**Note** The item action for the menu is "Create a New Notes Replica."
2. [Attach the menu to a view](#).
3. Switch to [Browse](#).
4. Choose Notes - New Notes Replica from the custom menu.  
The New Notes Replica dialog box appears.
5. Select the server in the "Server" box.
6. Select the database to be copied from the list of database files.
7. Under New Local Replica, enter a name for the new replica in the "Filename" box.
8. (Optional) To replicate only those documents saved during a specific period of time, select "Only replicate documents saved in the last nn days," and enter the number of days.
9. Click New.  
The Notes database replicated on your hard disk is a Notes database file (.NSF).

---

{button ,AL('H\_CUSTOM\_MENU\_DIALOG\_BOX\_CS;H\_REPLICATING\_NOTES\_DATABASES\_WITH\_A\_SERVER\_STEPS';0)} [See related topics](#)

## Details: Replicating Notes databases with a server

<u>Select this option</u>	<u>To</u>
Exchange document read marks	Update both the local replica and the server replica with read marks on documents. (Read marks tell whether a document has been read.)
Receive documents from server	Update the local replica with documents from the server replica.
Send documents to server	Update the server replica with documents from the local replica.
Replicate database templates	Replicate database templates associated with the database.

---

{button ,AL('H\_REPLICATING\_NOTES\_DATABASES\_WITH\_A\_SERVER\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_CREATING\_A\_CUSTOM\_MENU\_BAR\_STEPS;H\_CUSTOM\_MENU\_DIALOG\_BOX\_CS;H\_REPLICATING\_A\_NOTES\_DATABASE\_STEPS;',0)} [See related topics](#)

## Replicating Notes databases with a server

Replicating a Notes database with a server updates both your local replica and the replica on the server with changes made to either one.

If you're trying to create a local replica of a database on a server, see [Replicating Notes databases](#).



### Are you in Design?

1. [Create a custom menu](#) containing the command Notes - Notes Replicate with Server.

**Note** The item action for the menu is "Replicate with Notes Server."

2. [Attach the menu to a view](#).
3. Switch to [Browse](#).
4. Choose Notes - Notes Replicate with Server from the custom menu.  
The Replicate with Notes Server dialog box appears.
5. Enter the name of the local database replica in the "Filename" box.
6. Select the server that has the database to be replicated in the "Server" box.
7. Select the replication options you want.
8. Click OK.

### Example

By replicating a Notes database to your hard drive, you can add new information and make any necessary changes to the database without being connected to a network. This is useful if you need to update a database while you are working at a remote field site, without access to a network. After returning from the field site, you can replicate the changes you made to your local replica to the Notes database on the server, and replicate the changes made to the server to your local replica.

---

{button ,AL(`H\_REPLICATING\_NOTES\_DATABASES\_WITH\_A\_SERVER\_DETAILS',1)} [See details](#)

{button ,AL(`H\_CUSTOM\_MENU\_DIALOG\_BOX\_CS;H\_REPLICATING\_A\_NOTES\_DATABASE\_STEPS',0)} [See related topics](#)

## Adding dates, times, or page numbers to reports

Add these values to report headers or footers.



### Are you in Design?

1. Select the panel.
2. Choose Panel - Insert - Date, Time, or Page#.
3. Drag the new text block into position.

---

{button ,AL('H\_FORMATTING\_DATES\_AS\_QUARTERS\_THIRDS\_AND\_SO\_ON\_STEPS;H\_FORMATTING\_DATES\_STEPS;H\_FORMATTING\_TIMES\_STEPS;H\_adding\_text\_blocks\_steps;H\_report\_panels\_over;',0)} See related topics

## Adding fields to new reports

**Command:** Create - Report



**Tab:** Fields

1. Be sure the database containing the field you want is showing in the Database box.
2. Select a field in the Fields box.  
Use SHIFT+click or CTRL+click to select more than one field.
3. Click Add.
4. To add additional fields, repeat steps 1 - 3.
5. Click Next or Done.

The fields appear from left to right on the report in the order you select them here.

---

{button ,AL(^H\_ADDING\_FIELDS\_TO\_REPORTS\_STEPS;H\_ADDING\_REPEATING\_FIELDS\_TO\_NEW\_REPEATIN  
G\_PANEL\_REPORTS\_STEPS;H\_ADDING\_SUMMARIES\_TO\_REPORTS\_STEPS;H\_DECIDING\_WHAT\_NEW\_  
REPORTS\_LOOK\_LIKE\_REF;H\_removing\_or\_reordering\_fields\_while\_creating\_new\_views\_steps;H\_reports\_ov  
er',0)} [See related topics](#)

## Adding fields to reports



### Are you in Design?

1. Choose Add Field on the context menu.
2. Drag the field from the Add Field dialog box into the appropriate panel.

Approach highlights the places on the report where you can place a new column. Be sure to position the field completely within the boundaries of the panel.

**Tip** To see labels on each type of panel, choose View - Panel Labels.



---

{button ,AL('H\_ADDING\_DATES\_TIMES\_OR\_PAGE\_NUMBERS\_TO\_REPORTS\_steps;H\_adding\_summaries\_to\_reports\_steps;H\_report\_panels\_over;H\_reports\_over;h\_grouping\_records\_in\_reports\_steps;',0)} [See related topics](#)

## Adding repeating fields to new repeating panel reports

The fields you select on this tab should be from a different database than the Group fields you selected on the Groups tab.

**Command:** Create - Report



**Tab:** Repeating fields

1. Be sure the database containing the field you want is showing in the "Database" box.
2. Select a field in the "Fields" box.  
Use SHIFT+click or CTRL+click to select more than one field.
3. Click Add.
4. To add additional fields, repeat steps 1 - 3.  
The fields appear from left to right on the report in the order you select them here.
5. Click Next.

---

{button ,AL(^H\_ADDING\_FIELDS\_TO\_REPEATING\_PANELS\_STEPS;H\_BASIC\_PROPERTIES\_OF\_REPEATING\_PANELS\_CS;H\_MAIN\_AND\_DETAIL\_DATABASES\_IN\_A\_VIEW\_OVER;H\_ONE\_TO\_MANY\_MANY\_TO\_ONE\_AND\_ONE\_TO\_ONE\_RELATIONSHIPS\_OVER;H\_REMOVING\_EMPTY\_GROUPS\_FROM\_REPEATING\_PANEL\_REPORTS\_STEPS;H\_REPEATING\_PANELS\_OVER;H\_removing\_or\_reordering\_fields\_while\_creating\_new\_views\_steps',0)} [See related topics](#)

## Adding summaries to new reports

Command: Create - Report



**Tab:** Totals

1. Be sure the database containing the field you want is showing in the "Database" box.
2. Select a field in the "Fields" box.  
Use SHIFT+click or CTRL+click to select more than one field.
3. Click Add.
4. Click the icon to the left of the summary field, and then select the summary calculation.
5. To add additional summaries, repeat steps 1 - 4.
6. Click Done.

---

{button ,AL(^H\_ADDING\_SUMMARIES\_TO\_REPORTS\_STEPS;H\_GROUPING\_RECORDS\_IN\_REPORTS\_STEPS  
;H\_POWERCLICK\_REPORTING\_DEF;H\_removing\_or\_reordering\_fields\_while\_creating\_new\_views\_steps;H\_su  
mmary\_calculations\_ref,0)} [See related topics](#)



## Adding summaries to reports

Follow these steps to add summary calculations to summary panels in an existing report using [PowerClick reporting](#).



### Are you in Design?

1. From the View menu, choose Show Data.



2. If necessary, to create summary panels, [group the records in the report](#).
3. Select the column you want to summarize.
4. From the Column menu, choose Groups & Totals, and then choose a calculation; or click an icon:



Sum



Average



Count



Maximum



Minimum



Standard Deviation



Variance

Approach adds the summary calculation to the summary panels in the report.

---

{button ,AL(`H\_POWERCLICK\_REPORTING\_DEF;H\_choosing\_report\_layouts\_and\_looks\_steps;H\_grouping\_records\_in\_reports\_steps;H\_reports\_over;H\_select\_print\_preview\_to\_see\_report\_summaries\_ref,0)} [See related topics](#)

## Summarizing data of records in reports

You can add a calculated field to a report to summarize data in the records.

1. If necessary, from the Create menu, choose Summary, and then define a summary panel for the calculated field.
2. From the Create menu, choose Field Definition.
3. Scroll to the blank line at the bottom of the list of fields, and click it.
4. Name the field and select Calculated as its data type.

The dialog box expands to show the Define Formula and Define Summary tabs.

5. On the Define formula tab, to see just a list of summary functions, select Summary in the "Functions" box.
6. Double-click a summary function to select it.  
The function appears in the "Formula" box. Until the formula definition is completed as required, a red "X" appears over the flag. The "Function description" box describes the field requirements of the function.
7. To insert the required fields in the formula, double-click the field(s) required by the function.
8. Click the Define Summary tab, and then select "Summary panels where this field is placed" in the "Summarize on" box.
9. Click OK.

Approach switches to Design and the Add Field dialog box appears.

10. From the Add Field dialog box, drag the calculated field to the summary panel.

It may be easier to do this with View - Show Data deselected.

11. To see the calculated fields on the report, choose View - Show Data, or choose File - Print Preview.



**Details: Creating title pages for reports**

The title page of a report may contain data just like all other report pages, but allows you to use a different header and footer.

If your report is one page, it may consist of the title page alone.

When you have a title page for your report, be sure you make changes to the header and footer on the correct report page. The title page header and footer do not show up on the rest of the report pages. If your header and footer does not print, check to see that "Show Title Page" is unchecked and that there is text in the header and footer.

**Viewing the title page**

Choose Report - Show Title Page. A check mark appears next to this menu option.

**Returning to the report page**

Choose Report - Show Title Page to remove the check mark.

**Removing a title page**

Choose Report - Add Title Page. The menu item should no longer have a check mark next to it.

---

{button ,AL('H\_CREATING\_TITLE\_PAGES\_FOR\_REPORTS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_PAGINATING\_REPORTS\_STEPS;H\_adding\_dates\_times\_or\_page\_numbers\_to\_reports\_steps;H\_adding\_text\_blocks\_steps;H\_drawing\_geometric\_objects\_steps;H\_pasting\_pictures\_in\_views\_steps;',0)} [See related topics](#)

## Creating title pages for reports

The first page of a report - the title page - can have a different header and footer than the rest of the report.



### Are you in Design?

1. Choose Report - Add Title Page.
2. (Optional) Resize the header or footer panels.
3. Add objects such as text boxes or pictures to the panel.

---

{button ,AL('H\_CREATING\_TITLE\_PAGES\_FOR\_REPORTS\_DETAILS',1)} [See details](#)

{button ,AL('H\_PAGINATING\_REPORTS\_STEPS;H\_adding\_dates\_times\_or\_page\_numbers\_to\_reports\_steps;H\_adding\_text\_blocks\_steps;H\_drawing\_geometric\_objects\_steps;H\_pasting\_pictures\_in\_views\_steps;',0)} [See related topics](#)

## Deciding what new reports look like

Approach provides a number of layouts and styles. Select one of each to determine the basic appearance of the report. The Sample Report previews each combination.

**Command:** Create - Report



**Tab:** Layout

### View name & title

The name you enter appears in the header on the report and in the view tab. For example:



### Layout

Layouts arrange the fields on the report. Choose from one of these layouts:

#### Blank

Build your own report by adding fields to a blank view.

#### Columnar

Columns of field data, one record per line, make it easy to read down a column and compare field data from record to record.

Product	Sales Rep	Amount
90 Merlot	Wu	2,000
90 Zinfandel	Renault	1,200
90 Merlot	Garcia	1,500
90 Zinfandel	Maclane	2,200
90 Zinfandel	Watanabe	1,000

To quickly add totals or to group records after you create the report, use PowerClick reporting options.

#### Columnar with grand total

Shows columns of field data, one record per line, and grand totals for the columns you select.

For example, you can list all accounts receivable transactions issued for the month, and compute a grand total on the Amount Due field. You can also calculate averages, counts, and so on.

#### Columnar with groups & totals

Shows columns of field data, one record per line; groups these records according to the fields you select; and adds totals for each group and the whole report.

For example, you have records of individual sales, but for this meeting, you want those sales grouped by salesperson. This report displays all Jane Smith's records in a single group and then subtotals her sales. You can also choose calculate averages, counts, and so on.

Product	Sales Rep	Amount
90 Merlot	Garcia	1,500
	Wu	2,000
	Subtotal	3,500
90 Zinfandel	Watanabe	1,000
	Renault	1,200
	Maclane	2,200
	Subtotal	3,400
	Grand Total	6,900

## Repeating Panel Report

Shows all the records from one database and pulls details from joined databases.

For example, use this report to list all the orders for each of your customers. Like a repeating panel on a form, this report lists each customer with details of their order information.

**Note** This report option is only available when you have joined databases.



## Standard

Shows field data, but doesn't limit a record to one line. Fields that don't fit on the first line are wrapped to the next line.

Use this report when you want to see multiple records with more detail than can display in a single row. Think of this report as showing "mini forms" for data entry or detailed comparisons between records.

## Summary Only

Shows an easy-to-read executive summary with totals by groups and a grand total.

Product	Amount
90 Merlot	3,500
90 Zinfandel	2,200
Grand Total	10,900

## Style

Styles set properties such as background color and text attributes for the report.

To change the default style so that Approach automatically creates forms according to your preferences, go to Design and choose Create - Named Style. Select the default style and click Edit.

---

```
{button ,AL('H_ADDING_FIELDS_TO_REPEATING_PANELS_STEPS;H_Creating_custom_smartmasters_steps;H_MAIN_AND_DETAIL_DATABASES_IN_A_VIEW_OVER;H_ONE_TO_MANY_MANY_TO_ONE_AND_ONE_TO_ONE_RELATIONSHIPS_OVER;H_adding_fields_to_reports;H_reports_over;H_working_with_named_styles_over',0)} See related topics
```

## Grouping records in new repeating panel reports

Select the Group field for a repeating panel report from your main database. All of the records from this database appear on the report.

For example, suppose you have a database for customers and a second database for orders. A repeating panel report grouped by customer shows all customers and their orders, including customers with no orders.

**Command:** Create - Report



**Tab:** Groups

1. Be sure the database containing the field you want is showing in the "Database" box.
2. Select a field in the "Fields" box.
3. Click Next.

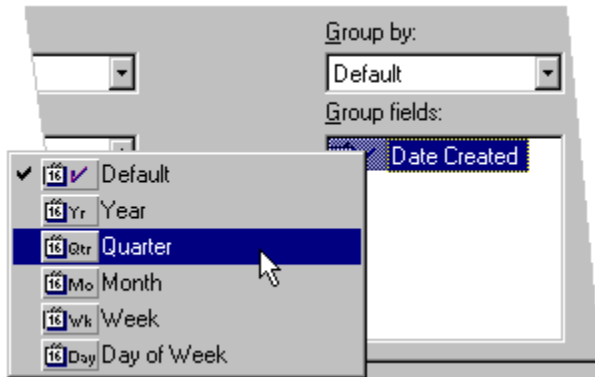
---

{button ,AL('H\_GROUPING\_RECORDS\_IN\_NEW\_REPORTS\_STEPS;',0)} [See related topics](#)

### Grouping records in new reports and crosstabs

The Report and Crosstab Assistants let you use field values to group records in the view.

These controls are available on the assistant's Group tab from a pop-up menu next to the field name.



They are available from the "Group by" box above the fields list. The grouping option shown in the "Group by" box applies to the field selected in the list below.

Different grouping options are available according to the field type of the selected Group field. For example, if you select a date field to group by, you can select grouping options such as Year, Quarter, or Month. Time fields have grouping options such as Hour and Minute.

**Note** Dates, times, or numbers must be in date, time, or numeric fields in order to use these grouping options.

### Grouping text

In addition to alphabetical order, you can group text in sets according to the first few letters in the text field. For example, group part numbers:

<b>Group by: 1st character</b>	<b>Group by: 2nd character</b>
Group 1: A { AAC-8800 { ACCA-8001	Group 1: AA { AAC-8800
Group 2: C { CXXZ-8901 { CXZZ-9802	Group 2: AC { ACCA-8001
Group 3: X { XCCC-0001	Group 3: CX { CXXZ-8901 { CXZZ-9802
	Group 4: XC { XCCC-0001

### Grouping numbers

For numeric fields, select a grouping option according to the predominant values in the Group field. For example, if you are grouping the quantity of product's sold and all values are greater than 1000, choose a grouping option of 1000's so that the records appear in meaningful groups.

A grouping option much smaller than the costs displays records in groups of one on the report. A grouping option much larger than the costs displays all records in a single group on the report.

<b>Correct grouping number: 25</b>	<b>Incorrect grouping number: 100</b>
Group 1: <25 { 8.75 { 12.25	Group 1: <100 { 8.75 { 12.25 { 26.50 { 34.25 { 44.15 { 56.25
Group 2: =>25 { 26.50 { 34.25 { 44.15	
Group 3: =>50 { 56.25	



---

{button ,AL('H\_BASIC\_PROPERTIES\_OF\_REPORTS\_CS;H\_grouping\_records\_in\_reports\_STEPS;H\_removing\_or\_reordering\_fields\_while\_creating\_new\_views\_steps;',0)} [See related topics](#)

## Grouping records in new reports

Command: Create - Report



### Tab: Groups

1. Be sure the database containing the field you want is showing in the "Database" box.

2. Select a field in the "Fields" box.

Use SHIFT+click or CTRL+click to select more than one field.

Records appear on the report grouped by the values in these fields.

3. Click Add.

4. (Optional) To select grouping ranges instead of single values, select a grouping range option in the "Group by" box.

These options create groups for ranges of field values instead of groups for unique values.

**Note** If you make grouping selections in the Report Assistant; you cannot add or modify these groupings after the report is created.

5. To add additional fields, repeat steps 1- 4.

6. Click Next.

---

{button ,AL(^H\_grouping\_records\_in\_new\_reports\_and\_crosstabs\_ref;H\_grouping\_records\_in\_reports\_STEPS;H\_removing\_or\_reordering\_fields\_while\_creating\_new\_views\_steps;',0)} [See related topics](#)

### Details: Grouping records in reports

Approach lets you use field values to group records on a report. Reports read one record at a time. When the value of the group field changes, Approach displays summary panels. A report can have two kinds of summary panels.



Leading Summary

Adds a summary panel at the beginning of each group. Typically used to show the value of the group field.



Trailing Summary

Adds a summary panel at the end of each group. Typically associated with summary calculations.

After you create summary panels, you probably want to move the group field into the summary panel. This makes the report easier to read.

You can also add summary calculations. See [Adding summaries to reports](#).

### Example

A database includes employee information including employee department and the product line the employee works on.

To analyze employees by product line, you group the report by product line by selecting the Product Line field and clicking the Trailing Summary icon. To display a count of employees supporting each product line, you select the name field and click the Count icon.

Because you created a trailing summary, the summary information follows each group of data.

To analyze employees by department, you group by department. Start with the original columnar report, select the Department field, and click the Leading Summary icon. To display a count of employees in each department, you select the name field and click the Count icon.

Because you created a leading summary, the summary information precedes each group of data.

---

{button ,AL('H\_GROUPING\_RECORDS\_IN\_REPORTS\_STEPS',1)} [Go to procedure](#)

## Grouping records in reports

Follow these steps to modify an existing report using [PowerClick reporting](#).



### Are you in Design?

1. If necessary, from the View menu, select Show Data.



2. Select the field you want to use for grouping records.
3. For the desired grouping option, click a PowerClick icon:



Leading Summary



Trailing Summary

4. If the data is not sorted on the group field, a dialog box appears asking whether to sort on that field. If that is what you want, click Yes.  
Approach adds a leading or trailing summary panel to the report.
5. If you want to add both summary panels, repeat step 3 for the other panel.

### Moving the group field to the summary panel

You probably want to move the group field to a summary panel so it prints only once per group.

1. From the View menu, deselect Show Data.
2. Select the field you chose to group by.
3. Drag this field to where you want it to appear in the summary panel.  
**Tip** To position the group field on the first line of data, you can use the InfoBox for the leading summary panel. On the Display tab, select left alignment.
4. From the View menu, select Show Data.  
Instead of listing the group field in every row of the report, the report shows one entry in the summary panel for each group.

---

{button ,AL('H\_GROUPING\_RECORDS\_IN\_REPORTS\_DETAILS',1)} [See details](#)

{button ,AL('H\_adding\_summaries\_to\_reports\_steps;H\_choosing\_report\_layouts\_and\_looks\_steps;H\_grouping\_records\_in\_new\_reports\_and\_crosstabs\_ref;H\_report\_panels\_over;H\_reports\_over;H\_select\_print\_preview\_to\_see\_report\_summaries\_ref',0)} [See related topics](#)

### Details: Moving and resizing report columns

You can view your formatted report as you work by selecting View - Show Data.

From the Report or Column menus, when you select Turn on Columns, you determine how Approach works with columns as you design your reports. The Turn on Columns toggle command is only available when View - Show Data is selected.

When Turn on Columns is **ON**, Approach lets you manage column headings and column fields together.

<u>Action</u>	<u>Result</u>
Select a column field or heading	The entire column is selected and appears in reverse highlighting.
Resize or move the column	The columns to the right adjust their positions accordingly.

When Turn on Columns is **OFF**, Approach lets you size and move the column headings and fields independently.

<u>Action</u>	<u>Result</u>
Select a column field	Only the field is selected.
Select a column heading	Only the heading is selected
Resize or move a column field or heading	The columns to the right do not change their positions The link between the field and the heading is broken. From now on, even when Turn on Columns is ON, you must work with the objects in this column independently.

---

{button ,AL('H\_MOVING\_AND\_RESIZING\_REPORT\_COLUMNS\_STEPS',1)} [Go to procedure](#)

## Moving and resizing report columns



Are you in Design?

**Tip** Choose View - Show Data to size the column and its data together.



1. Select the column to be sized or moved.
2. From the Column menu, be sure Turn on Columns is checked.
3. Drag the column to a new position.
4. Resize it by dragging the right edge of the column.

### Moving or resizing only the column head or the column data

1. To select the report, click in the left margin of the report.
2. From the Report menu, be sure Turn on Columns is not checked.
3. Select the field or heading object you want to move or resize.

**Tip** To select the column data, click a field value in the column.

4. Drag or resize the column head or column data.

---

{button ,AL(`H\_MOVING\_AND\_RESIZING\_REPORT\_COLUMNS\_DETAILS`,1)} [See details](#)

{button ,AL(`H\_CHANGING\_THE\_NUMBER\_OF\_COLUMNS\_IN\_REPORTS\_STEPS;H\_EDITING\_COLUMN\_HEAD  
ER\_TEXT\_STEPS;H\_REPEATING\_PANELS\_OVER;H\_resizing\_objects\_steps`,`0)} [See related topics](#)

## Overview: Reports

Reports let you organize and present data from multiple records. You can choose what field data to present, group the records by field values, and calculate summary information for them.

Approach provides a number of predesigned report layouts and styles. Pick one of each to determine the basic appearance of the report. Approach provides professional styles for reports which you can customize for a polished presentation.

Reports can show field data, summary information calculated from field data, or a combination of the two.

## Viewing reports

If you're in a report and can't see aspects of the report like

- Totals and subtotals
- Group names

It's probably because you're in Browse. You need to be in Print Preview. From the File menu, choose Print Preview.



You can also see report totals and group names in Design when View - Show Data is selected.



You can set Approach to display report summaries when you go to a report [view](#). From the File menu, choose User Setup, then choose Approach Preferences. In the Display tab, select "Report summaries". From now on, even when you are in a view in Browse and switch to a report view, Approach displays the report in Design so you can see the summaries.

## Creating reports

The Report Assistant helps you follow this process to create a report:

1. Choose Create - Report.
2. Select a report layout and style.
3. Choose the fields for the body of the report.
4. Set groupings for the contents of the report.
5. Select fields to summarize.

## PowerClick reporting

Through [PowerClick reporting](#), Approach provides a powerful way to modify reports. PowerClick reporting lets you use simple menu options or icons in the set of SmartIcons to add groups and add summary calculations to a report. These options are described in [Grouping records in reports](#) and [Adding Summaries to reports](#).

## Selecting reports

To select a report in Design so that you can change report properties, click the background of the report, outside of any headings or fields. The Report menu appears in the menu bar when you are successful.

---

{button ,AL('H\_ADDING\_FIELDS\_TO\_REPORTS\_STEPS;H\_ADDING\_SUMMARIES\_TO\_NEW\_REPORTS\_STEPS;H\_ADDING\_SUMMARIES\_TO\_REPORTS\_STEPS;H\_BASIC\_PROPERTIES\_OF\_REPORTS\_CS;H\_CREATING\_TITLE\_PAGES\_FOR\_REPORTS\_STEPS;H\_LINES\_AND\_COLORS\_FOR\_VIEW\_CS;H\_deciding\_what\_new\_reports\_look\_like\_ref;H\_report\_panels\_over',0)} [See related topics](#)

## Overview: Report panels

Reports are made up of panels that you can see in Design when View - Show Data is turned off. Choose View - Panel Labels to show labels for each panel.

**Grand summary**

The way field data appears in a report is determined by the kind of panel it is in. For example, if a field is in the body panel, the field data from every record appears in the report.

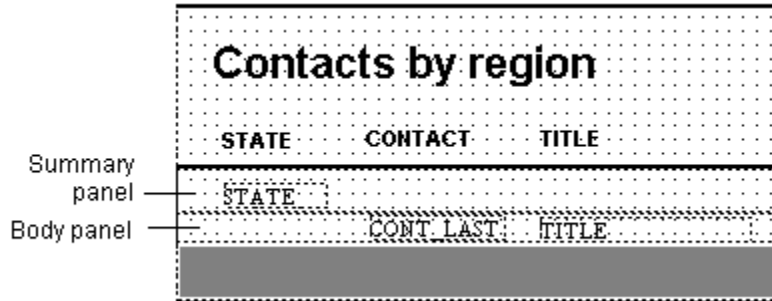
Below, you see fields in the body panel:



The corresponding report looks like this:



If the field is in a summary panel, the field data appears once for each unique field value. Below, you see fields in the body panel; they are grouped by the field in the summary panel:



The report, showing records in groups, looks like this:

<b>Contacts by region</b>		
<b>STATE</b>	<b>CONTACT</b>	<b>TITLE</b>
AZ	Jones	Store Manager
	Alfred	VP Operations
	Anderson	Director of Operations
CA	Sanitelli	Manager
	Williams	Purchasing Manager
	Lee	Store Manager
	Staven	District Manager
	Myers	Store Manager

The results from calculated fields in summary panels appear once for each group the summary applies to.

---

{button ,AL(^H\_BASIC\_PROPERTIES\_OF\_REPORT\_PANELS\_CS;H\_MAIN\_AND\_DETAIL\_DATABASES\_IN\_A\_VIE  
W\_OVER;H\_ONE\_TO\_MANY\_MANY\_TO\_ONE\_AND\_ONE\_TO\_ONE\_RELATIONSHIPS\_OVER;H\_Selecting\_m  
oving\_and\_deleting\_report\_panels\_steps;H\_adding\_fields\_to\_repeating\_panels\_steps;H\_adding\_summaries\_to\_r



eports\_steps;H\_grouping\_records\_in\_reports\_steps',0)} [See related topics](#)

## Selecting, moving, and deleting report panels



Are you in Design?

**Tip** To more easily work with panels and fields, deselect View - Show Data.

### Selecting panels

To select a panel, do one of the following:

- Click the edge of the panel
- CTRL+click the panel area
- Click the panel label

**Grand summary**

### Moving panels

The header, footer, and body panels cannot be moved. To move a summary panel, select the panel and drag it into position.

### Resizing panels

**If you are trying to** increase the size of a field on the panel, increase the size of the panel first, then resize the field.

1. Select the panel.
2. When the mouse pointer is a two-headed arrow, drag the border of the panel.

### Deleting panels

To delete a panel, select the panel and press DEL. You cannot delete the body panel.

---

{button ,AL(^H\_report\_panels\_over;H\_resizing\_objects\_steps;',0)} [See related topics](#)

## Summary calculations

You can create summary calculations for numeric, date, and time fields, and text fields whose values are numbers.

You can create a summary count of fields without numbers; if a field has a non-numeric value, but is not empty, it counts as one.

- [Average](#)
- [Count](#)
- [Maximum](#)
- [Minimum](#)
- [Variance](#)
- [Standard deviation](#)
- [Sum](#)

---

{button ,AL('H\_ADDING\_SUMMARIES\_TO\_REPORTS\_STEPS;H\_GROUPING\_RECORDS\_IN\_REPORTS\_STEPS;H\_POWERCLICK\_REPORTING\_DEF;H\_removing\_or\_reordering\_fields\_while\_creating\_new\_views\_steps;H\_summary\_calculations\_ref,0)} [See related topics](#)

**Summary dialog box**

Use this dialog box to add a summary panel to an existing report. You can then add summary calculations to the report.

**Command: Create - Summary**

Approach adds a summary panel for each group or all records.

**Alignment**

Left Alignment places the summary panel on the left of the first line printed for each group.

Center Alignment places the summary panel on a new line, leading or trailing each group.

Right Alignment places the summary panel on the right of the first line printed for each group.

---

{button ,AL('H\_REPORTS\_OVER;H\_PANELS\_OVER;',0)} See related topics

## Adding envelopes to form letters

**Command:** Create - Form Letter



### **Tab:** Envelope

The Envelope tab is only available if you select Block, Letterhead, or Modified Block in the Layout tab.

1. Select "Create envelopes to match the inside address" if it is not already selected.

**Note** If you do not want to create an envelope, select "Do not create an envelope."

2. Select "Print return address" if it is not already selected.
3. Select a standard size envelope under Envelope size.

If your envelope does not match the standard sizes, select Custom and enter the envelope's height and width under Dimensions.

4. Select either Portrait or Landscape in the Orientation area.
5. Click Done.

---

{button ,AL(`H\_ADDING\_THE\_CLOSE\_TO\_FORM\_LETTERS\_STEPS;H\_ADDING\_THE\_RECIPIENT\_ADDRESS\_TO\_FORM\_LETTERS\_STEPS;H\_ADDING\_THE\_RETURN\_ADDRESS\_TO\_FORM\_LETTERS\_STEPS;H\_ADDING\_THE\_SALUTATION\_TO\_FORM\_LETTERS\_STEPS;H\_DECIDING\_WHAT\_NEW\_FORM\_LETTERS\_LOOK\_LIKE\_REF',0)} [See related topics](#)

## Adding fields to form letters



### Are you in Design?

1. Click to enter the text block.  
The insertion point appears at the top left corner of the text block.
2. Click where you want the field to appear.
3. From the Text menu, choose Insert, then choose Field Value.
4. Select a field in the list.
5. Click OK to add it to the form letter.

### Entering field names manually

Enter the field name in the text block in this format: <<DATABASE.FIELD>>.

If there are spaces in the names, you must put quotes around them: <<"DATA BASE"."FIELD ONE">>.

---

{button ,AL(`H\_ADDING\_FIELDS\_TO\_FORM\_LETTERS\_STEPS;H\_ADDING\_THE\_SALUTATION\_TO\_FORM\_LETTERS\_STEPS;H\_CHANGING\_THE\_DATE\_FORMAT\_ON\_FORM\_LETTERS\_STEPS;H\_ENTERING\_TEXT\_IN\_FORM\_LETTERS\_STEPS;H\_MOVING\_OR\_DELETING\_FORM\_LETTER\_FIELDS\_STEPS',0)} [See related topics](#)

## Adding text to mailing labels

- Add text, such as a comma between address fields or a general message, to each label.
- The text block you create appears on all labels in the view.



### Are you in Design?

1. Choose View - Show Data to turn off Show Data.



2. Choose Create - Drawing - Text.



3. Create a text block on a label.
4. Enter text in the text block.

---

{button ,AL(`H\_ADDING\_TEXT\_BLOCKS\_STEPS;H\_CHANGING\_OR\_DELETING\_CUSTOM\_MAILING\_LABEL\_TY  
PES\_STEPS;H\_CREATING\_CUSTOM\_MAILING\_LABEL\_TYPES\_STEPS;H\_CREATING\_MAILING\_LABELS\_S  
TEPS;H\_MOVING\_OR\_RESIZING\_MAILING\_LABEL\_FIELDS\_STEPS;H\_SETTING\_FIELDS\_TO\_SLIDE\_STEP  
S',0)} [See related topics](#)

## Adding the close to form letters

**Command:** Create - Form Letter



**Tab:** End

The closing for the letter can be longer than a single line.

1. Click inside the edit box and enter your closing text.

**Note** If you do not want to enter a close, click None.

2. Click Next or Done.

---

```
{button ,AL(^H_ADDING_ENVELOPES_TO_FORM_LETTERS_STEPS;H_ADDING_FIELDS_TO_FORM_LETTERS_STEPS;H_ADDING_THE_RECIPIENT_ADDRESS_TO_FORM_LETTERS_STEPS;H_ADDING_THE_RETURN_ADDRESS_TO_FORM_LETTERS_STEPS;H_ADDING_THE_SALUTATION_TO_FORM_LETTERS_STEPS;H_DECIDING_WHAT_NEW_FORM_LETTERS_LOOK_LIKE_REF',0)} See related topics
```



## Adding the recipient address to envelopes

**Command:** Create - Envelope



**Tab:** To

1. Select the number of lines you want in the recipient address in the "Address Layout" box.
2. Be sure the database containing the field you want is showing in the "Database" box.
3. Select a field in the "Fields" box.  
Use SHIFT+click or CTRL+click to select more than one field.
4. Click Add.
5. To add additional fields, repeat steps 2 - 4.
6. Click Next or Done.

The Define Main Database box appears if the envelope uses fields from more than one database. Select the database you want to be the main database for the envelope.

**Note** To place a field in a specific location under Fields for the address, select the destination box before you select a field and click Add.

---

{button ,AL(`H\_ADDING\_ENVELOPES\_TO\_FORM\_LETTERS\_STEPS;H\_ADDING\_THE\_RETURN\_ADDRESS\_TO\_ENVELOPES\_STEPS;H\_DECIDING\_WHAT\_NEW\_ENVELOPES\_LOOK\_LIKE\_REF;H\_ENVELOPES\_OVER;H\_SELECTING\_PRINT\_SETTINGS\_FOR\_ENVELOPES\_STEPS;','0)} [See related topics](#)

## Adding the recipient address to form letters

**Command:** Create - Form Letter



### **Tab:** To

The To tab is only available if you select Block, Letterhead, or Modified Block in the Layout tab.

1. Select the number of lines you want in the recipient address in the "Address layout" box.
2. Be sure the database containing the field you want is showing in the "Database" box.
3. Select a field in the "Fields" box.  
Use SHIFT+click or CTRL+click to select more than one field.
4. Click Add.
5. To add additional fields, repeat steps 2 - 4.
6. Click Next or Done.

The Define Main Database box appears if the form letter uses fields from more than one database. Select the database you want to be the main database for the form letter.

**Note** To place a field in a specific location under Fields for the address, select the destination box before you select a field and click Add.

---

```
{button ,AL(^H_ADDING_ENVELOPES_TO_FORM_LETTERS_STEPS;H_ADDING_FIELDS_TO_FORM_LETTERS_STEPS;H_ADDING_THE_CLOSE_TO_FORM_LETTERS_STEPS;H_ADDING_THE_RETURN_ADDRESS_TO_FORM_LETTERS_STEPS;H_ADDING_THE_SALUTATION_TO_FORM_LETTERS_STEPS;H_DECIDING_WHAT_NEW_FORM_LETTERS_LOOK_LIKE_REF',0)} See related topics
```

## Adding the return address to envelopes

**Command:** Create - Envelope



**Tab:** From

The From tab is only available if you select Standard as your layout.

1. Click inside the edit box and enter the return address.
2. Click Next or Done.

---

```
{button ,AL(^H_ADDING_ENVELOPES_TO_FORM_LETTERS_STEPS;H_ADDING_THE_RECIPIENT_ADDRESS_TO_ENVELOPES_STEPS;H_DECIDING_WHAT_NEW_ENVELOPES_LOOK_LIKE_REF;H_ENVELOPES_OVER;H_SELECTING_PRINT_SETTINGS_FOR_ENVELOPES_STEPS;';0)} See related topics
```

## Adding the return address to form letters

**Command:** Create - Form Letter



**Tab:** From

The From tab is only available if you select Block or Modified Block in the Layout tab.

1. Click inside the edit box and enter the return address.

**Note** If you do not want to enter a return address, click None.

2. Click Next or Done.

---

{button ,AL(^H\_ADDING\_ENVELOPES\_TO\_FORM\_LETTERS\_STEPS;H\_ADDING\_FIELDS\_TO\_FORM\_LETTERS\_STEPS;H\_ADDING\_THE\_CLOSE\_TO\_FORM\_LETTERS\_STEPS;H\_ADDING\_THE\_RECIPIENT\_ADDRESS\_TO\_FORM\_LETTERS\_STEPS;H\_ADDING\_THE\_SALUTATION\_TO\_FORM\_LETTERS\_STEPS;H\_DECIDING\_WHAT\_NEW\_FORM\_LETTERS\_LOOK\_LIKE\_REF',0)} [See related topics](#)

## Adding the salutation to form letters

**Command:** Create - Form Letter



**Tab:** Start

1. Enter text into the text box to use in your salutation.  
The default text for this box is "Dear."
2. Select a field from the current database to use as the first word in the salutation.
3. Select a field from the current database to use as the second word in the salutation.  
**Note** If you don't want to include a salutation, select None.
4. Enter punctuation into the text box  
The default for this box is a colon (:).
5. Click Next or Done.

---

```
{button ,AL(^H_ADDING_ENVELOPES_TO_FORM_LETTERS_STEPS;H_ADDING_FIELDS_TO_FORM_LETTERS_STEPS;H_ADDING_THE_CLOSE_TO_FORM_LETTERS_STEPS;H_ADDING_THE_RECIPIENT_ADDRESS_TO_FORM_LETTERS_STEPS;H_ADDING_THE_RETURN_ADDRESS_TO_FORM_LETTERS_STEPS;H_DECIDING_WHAT_NEW_FORM_LETTERS_LOOK_LIKE_REF',0)} See related topics
```

### **Overview: ZIP code database**

The Approach CD-ROM includes an Approach file and database file that contains the city, county, state and ZIP code information for all areas across the US. You can copy the files from the CD-ROM to your hard drive, then use them to automatically enter address information and generate reports based on ZIP codes. The files are stored in the directory EXTRA\APPROACH\DATABASES with the names ZIP.APR and ZIP.DBF.

### **Using the ZIPcode database**

Once you have joined the ZIP code database to your database, you can enter a city, county, or state, and Approach will automatically supply the ZIP code. You can also enter the ZIP code and Approach automatically enters the city, county, and state.

The .APR file contains two reports, one organized by city, the other organized by ZIP code. If you join the database to a customer, contact, or order database you have a powerful tool for tracking product sales by ZIP code.

## Creating mailing labels

A mailing label is a collection of field data combined to create a mailing address.

1. Choose Create - Mailing Label.



2. Name the view that displays the mailing labels in the "Mailing label name" box.
3. Select a layout in the "Select an address layout" box.
4. Be sure the database containing the field you want is showing in the "Database" box.
5. Select a field in the "Fields" box.  
Use SHIFT+click or CTRL+click to select more than one field.
6. Click Add.
7. Repeat steps 4 - 6 for each element of the address.
8. Select a label type in the "Label type" box.
9. Click OK.

---

{button ,AL(^H\_ADDING\_TEXT\_TO\_MAILING\_LABELS\_STEPS;H\_CHANGING\_OR\_DELETING\_CUSTOM\_MAILING\_LABEL\_TYPES\_STEPS;H\_CREATING\_CUSTOM\_MAILING\_LABEL\_TYPES\_STEPS;H\_MOVING\_OR\_RESIZING\_MAILING\_LABEL\_FIELDS\_STEPS;H\_SETTING\_OBJECTS\_AND\_FIELDS\_TO\_SLIDE\_WHEN\_PRINTING\_STEPS',0)} [See related topics](#)

## Deciding what new envelopes look like

Approach provides a number of layouts and styles. Select one of each to determine the basic appearance of the envelope. The Sample Envelope previews each combination.

**Command:** Create - Envelope



**Tab:** Layout

### View name & title

The name you enter appears in the [view tab](#).

### Layout

Layouts arrange the fields on the envelope.

- Standard creates a standard business envelope with return address and recipient address.
- Preprinted omits the return address.

### Style

Styles set properties such as text attributes for the envelope.

To change the default style so that Approach automatically creates forms according to your preferences, go to Design and choose Create - Named Style. Select the default style and click Edit.

---

```
{button ,AL(^H_ADDING_ENVELOPES_TO_FORM_LETTERS_STEPS;H_ADDING_THE_RECIPIENT_ADDRESS_TO_ENVELOPES_STEPS;H_ADDING_THE_RETURN_ADDRESS_TO_ENVELOPES_STEPS;H_ENVELOPES_OVER;H_SELECTING_PRINT_SETTINGS_FOR_ENVELOPES_STEPS;:,0)} See related topics
```



## Deciding what new form letters look like

Approach provides a number of layouts and styles. Select one of each to determine the basic appearance of the form letter. The Sample Letter previews each combination.

**Command:** Create - Form Letter



**Tab:** Layout

### View name & title

The name you enter appears in the [view tab](#).

### Layout

Approach lets you choose from four predefined layouts.

<u>This Layout</u>	<u>Displays</u>
Block	The return address, date, recipient address, salutation, closing, and body of the letter all in left-aligned blocks
Letterhead	The recipient address, salutation, and body of the letter in left-aligned blocks; the date, and closing appear on the right; return address is omitted
Modified Block	The recipient address, salutation, and body of the letter in left-aligned blocks; the return address, date, and closing appear on the right
Personal	The salutation and body of the letter in left-aligned blocks; the date and closing appear on the right; inside address and return address are omitted

### Style

Styles set properties such as background color and text attributes for the form letter.

To change the default style so that Approach automatically creates forms according to your preferences, go to Design and choose Create - Named Style. Select the default and click Edit.

---

```
{button ,AL('H_ADDING_ENVELOPES_TO_FORM_LETTERS_STEPS;H_ADDING_FIELDS_TO_FORM_LETTERS_STEPS;H_ADDING_THE_CLOSE_TO_FORM_LETTERS_STEPS;H_ADDING_THE_RECIPIENT_ADDRESS_TO_FORM_LETTERS_STEPS;H_ADDING_THE_RETURN_ADDRESS_TO_FORM_LETTERS_STEPS;H_ADDING_THE_SALUTATION_TO_FORM_LETTERS_STEPS',0)} See related topics
```

## Entering text in form letters

When you finish selecting the database fields and entering the text necessary to create the form letter, click Done. Regardless of what environment you started from, Approach switches you to Design. Now you can enter the body text of the form letter.

A form letter is a single large text block.

- Enter and edit text in the form letter just as you would with any other text block.
- From the View menu, choose Show Rulers to display and optionally change margins and tab stops.
- Approach automatically wraps text from one line to the next and creates additional pages as you enter text, just like a word processor.
- There's no need to press ENTER unless you want to start a new line.

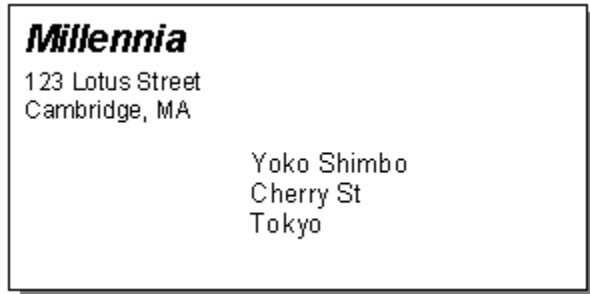
---

{button ,AL('H\_ADDING\_TEXT\_BLOCKS\_DETAILS;H\_ADDING\_FIELDS\_TO\_FORM\_LETTERS\_STEPS;H\_ADDING\_THE\_SALUTATION\_TO\_FORM\_LETTERS\_STEPS;H\_CHANGING\_THE\_DATE\_FORMAT\_ON\_FORM\_LETTERS\_STEPS;H\_MOVING\_OR\_DELETING\_FORM\_LETTER\_FIELDS\_STEPS;',0)} [See related topics](#)

## Overview: Envelopes

An envelope displays a combination of field data for the mailing address and text for the return address. Approach creates a copy of the envelope for each record, using the name and address information from the records.

You can also select layout, style, and print settings for the envelope.



## Finding distinct records

If you have a database with multiple instances of records containing the same names, you'll want to exclude the extra records from your found set. Otherwise you'll create more than one copy of the same envelope for the same person. To exclude multiple instances of the same names, use the [Find Assistant](#) and select Find distinct records. The found set will consist of one record for each name.

## Spacing around fields

Because database fields contain information of varying lengths, Approach automatically positions the database fields to match the envelope format and adjusts the spacing around fields. You see the adjusted spacing in Print Preview, and in Design if View - Show Data is on.

---

{button ,AL(^H\_ADDING\_THE\_RECIPIENT\_ADDRESS\_TO\_ENVELOPES\_STEPS;H\_ADDING\_THE\_RETURN\_ADDRESS\_TO\_ENVELOPES\_STEPS;H\_DECIDING\_WHAT\_NEW\_ENVELOPES\_LOOK\_LIKE\_REF;H\_SELECTING\_PRINT\_SETTINGS\_FOR\_ENVELOPES\_STEPS;:,0)} [See related topics](#)

## Overview: Form letters

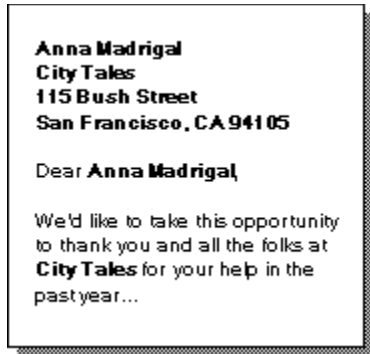
A form letter is a view that displays a combination of database fields and text you enter in a letter format. Approach creates a copy of the letter for each record in the current found set, adding the name and address information from the records to the text you provide.

A typical form letter consists of database fields for the recipient's name and address, as well as a salutation, closing, and a return address. You can use all of these elements, or just select the ones that are appropriate to your mailing.

The Form Letter Assistant lets you create envelopes to match the inside address information on your letter.

## Example

To send a year-end letter to each customer you've done business with in the past year, use the assistant to combine names, addresses, and other pertinent field data to create a personalized letter for each customer.



## Finding distinct records

If you have a database with multiple instances of records containing the same names, you'll want to exclude the extra records from your found set. Otherwise you'll create more than one copy of the same form letter for the same person. To exclude multiple instances of the same names, use the Find Assistant and select Find distinct records. The found set will consist of one record for each name.

## Spacing around fields

Because database fields contain information of varying lengths, Approach automatically adjusts the spacing around fields to create a smooth flow between typed text and database fields. You see the adjusted spacing when you go to Browse, Print Preview, and in Design if View - Show Data is on.

---

```
{button ,AL('H_ADDING_ENVELOPES_TO_FORM_LETTERS_STEPS;H_ADDING_THE_CLOSE_TO_FORM_LETTERS_STEPS;H_ADDING_THE_RECIPIENT_ADDRESS_TO_FORM_LETTERS_STEPS;H_ADDING_THE_RETURN_ADDRESS_TO_FORM_LETTERS_STEPS;H_ADDING_THE_SALUTATION_TO_FORM_LETTERS_STEPS;H_DECIDING_WHAT_NEW_FORM_LETTERS_LOOK_LIKE_REF',0)} See related topics
```

## Overview: Mailing labels

A Mailing Label [view](#) displays field data and text in a mailing address format. The field data for each mailing address comes from one record.

You can have many mailing labels on a page. The number of mailing labels you see on a page depends on the label size and page layout you select when you create the labels. Choose from more than 50 standard Avery mailing label formats or create other formats of your own.

## Example

Use a customer database to prepare a mailing label for each customer who will receive a year-end letter. Each label contains the data from one record:



## Finding distinct records

If you have a database with multiple instances of records containing the same names, you'll want to exclude the extra records from your found set. Otherwise you'll create more than one copy of the same mailing label for the same person. To exclude multiple instances of the same names, use the [Find Assistant](#) and select Find distinct records. The found set will consist of one record for each name.

## Spacing around fields

Because database fields contain information of varying lengths, Approach automatically positions the database fields to match the mailing label format and adjusts the spacing around fields. You see the adjusted spacing in Print Preview, and in Design if View - Show Data is on.

---

{button ,AL('H\_ADDING\_TEXT\_TO\_MAILING\_LABELS\_STEPS;H\_CHANGING\_OR\_DELETING\_CUSTOM\_MAILING\_LABEL\_TYPES\_STEPS;H\_CREATING\_CUSTOM\_MAILING\_LABEL\_TYPES\_STEPS;H\_CREATING\_MAILING\_LABELS\_STEPS;H\_ENVELOPES\_OVER;H\_MOVING\_OR\_RESIZING\_MAILING\_LABEL\_FIELDS\_STEPS;H\_SETTING\_OBJECTS\_AND\_FIELDS\_TO\_SLIDE\_WHEN\_PRINTING\_STEPS',0)} [See related topics](#)

## Moving or deleting form letter fields

You cannot move fields in a form letter by dragging.



Are you in Design?

### Moving fields in form letters

1. Select the field you want to move.  
You must select the entire field name, including the angle brackets.
2. Choose Edit - Cut.



3. Click where you want to place the field.
4. Choose Edit - Paste.



### Deleting fields in form letters

1. Select the field.
2. Choose Edit - Cut.

---

{button ,AL('H\_ADDING\_FIELDS\_TO\_FORM\_LETTERS\_STEPS;H\_ADDING\_THE\_SALUTATION\_TO\_FORM\_LETTERS\_STEPS;H\_CHANGING\_THE\_DATE\_FORMAT\_ON\_FORM\_LETTERS\_STEPS;H\_ENTERING\_TEXT\_IN\_FORM\_LETTERS\_STEPS;',0)} [See related topics](#)

### **Moving or resizing mailing label fields**

- Approach automatically slides fields over or up to eliminate any empty space between them.
- You can also adjust the space between fields yourself.



**Are you in Design?**

### **Moving mailing label fields**

Turn off the View - Show Data option. Drag the field to the location you want. Make sure the whole field fits inside the field boundaries so that all of its contents are printed.

If you make a field too small, Approach shows only as much data fits in the field object.

When moving fields in a mailing label, it is best to use the arrow keys instead of the mouse.

### **Resizing mailing label fields**

Drag a field handle to the size you want.

---

```
{button ,AL(^H_MOVING_OBJECTS_STEPS;H_RESIZING_OBJECTS_STEPS;H_ADDING_TEXT_TO_MAILING_LABELS_STEPS;H_CHANGING_OR_DELETING_CUSTOM_MAILING_LABEL_TYPES_STEPS;H_CREATING_CUSTOM_MAILING_LABEL_TYPES_STEPS;H_CREATING_MAILING_LABELS_STEPS;H_SETTING_FIELDS_TO_SLIDE_STEPS;';0)} See related topics
```

## Selecting print settings for envelopes

**Command:** Create - Envelope



**Tab:** Printer

1. Select a standard size envelope in the Envelope size box.

If your envelope does not match the standard sizes, select Custom and enter the envelope's height and width under Dimensions.

2. Select either "Portrait" or "Landscape" in the Orientation area.
3. Click Done.

---

{button ,AL(^H\_ADDING\_ENVELOPES\_TO\_FORM\_LETTERS\_STEPS;H\_ADDING\_THE\_RECIPIENT\_ADDRESS\_TO\_ENVELOPES\_STEPS;H\_ADDING\_THE\_RETURN\_ADDRESS\_TO\_ENVELOPES\_STEPS;H\_DECIDING\_WHAT\_NEW\_ENVELOPES\_LOOK\_LIKE\_REF;H\_ENVELOPES\_OVER;','0)} [See related topics](#)



## Details: Defining fields

### Naming fields

When you define a field, give the field a name that you can easily recognize later. The name should also comply with the restrictions of the length of field names and use of special characters as dictated by the database format.

Follow these guidelines when you name a field:

- Begin the name with a character
- Use only letters, numbers and underscores
- Use no more than 10 characters

If you use these guidelines, your field names will work in any database format. If you create a field name that does not comply with the field name restrictions for the database format, Approach produces compatible field names and maps these names to the names you enter in the Field Definition dialog box.

Here are some other tips on naming fields that will help to avoid problems.

- Do not include spaces within field names. If you want a field name containing more than one word, join it with an underline. For example, `social_security_number`.
- Avoid using special characters, such as \$, &, @, etc. They are not acceptable by most database formats, and may cause confusion about what you want users to enter in the field.

If you want to use a field in a formula, and the field contains anything other than letters, numbers, or underscores, you must enclose the name in double quotes.

### Length of field names

Field names are limited in length according to the database format. The maximum length for field names in the default database format, dBASE, is 32 characters.

### Data types

See [Types of fields](#) for descriptions of each [field type](#).

### Field size

Enter a maximum length for text fields in all types of databases and for numeric fields in some types of databases.

A text field is limited in length according to the database format. The maximum length for text fields in the default database format, dBASE, is 254 characters.

### Numeric fields

The default length of numeric fields appears in the Field Definition dialog box as 10.2, ten digits left of the decimal and two digits right of the decimal. You can have up to 19 digits on the left and up to 15 on the right, but the total number of digits cannot exceed 19.

dBASE and FoxPro databases require a length for numeric fields.

### Field order

Fields are stored in a database and the Approach file in the order they were created. You can change that order for the Approach file. You cannot change the order in the database file.

The "View fields by" box displays orders you can use to display the fields.

<u>Order</u>	<u>Description</u>
Default Order	Displays fields in the order they appear in the database
Field Name	Displays fields alphabetically by field name
Data Type	Groups fields by their data type
Custom Order	Displays fields in an order you create

You can reorder the fields by dragging them to a new position. That order is saved as the Custom order. Select the field you want to move by clicking the arrow to the left of its name. When the hand appears, drag the field to the new location.



Calculated and variable fields always appear at the end of the list. They are part of the Approach file, not part of the database.

### **Key fields for a Paradox database**

When you define fields for a new Paradox database, you must define a key field for the database. See [Specifying a key field](#).

### **Displaying fields in a view**

After you define fields, they become available to add to a [view](#). See [Adding fields to a view](#).

### **Formatting fields**

After you define a field and add it to a view, you can change the format of the field in the [InfoBox](#).

For example, you can format a numeric field to automatically insert the parentheses and hyphen in the correct positions for a phone number: (408) 345-1234.

---

{button ,AL(`H\_ADDING\_FIELDS\_TO\_A\_DATABASE\_STEPS',1)} [Go to procedure](#)

{button ,AL(`H\_Microsoft\_access\_tables\_in\_approach\_ref;H\_Query\_files\_in\_approach\_ref;H\_basic\_properties\_of\_fields\_cs;H\_dbase\_files\_in\_approach\_ref;H\_deleting\_fields\_from\_a\_database\_steps;H\_foxpro\_files\_in\_approach\_ref;H\_ibm\_db2\_tables\_in\_approach\_ref;H\_mapping\_fields\_in\_approach\_files\_steps;H\_odbc\_data\_sources\_in\_approach\_ref;H\_oracle\_sql\_tables\_in\_approach\_ref;H\_paradox\_files\_in\_approach\_ref;H\_sql\_server\_tables\_in\_approach\_ref;',0)} [See related topics](#)

## Defining fields

If you're trying to add an existing field to a view, see [Adding fields to a view](#).

1. From the Create menu, choose Field Definition.
  2. Scroll to the empty line at the bottom of the field list.
  3. Enter a name for the field.
  4. Double-click the cell under Data Type and select a data type.
  5. If you define a text field, enter the maximum number of characters you want the field to store.
  6. (Optional) Click Options to define a default value, valid entries, or a formula to calculate the field contents.
  7. Click OK.  
Approach switches to Design, and the Add Field dialog box appears.
  8. (Optional) Add the field to the view.
- 

{button ,AL(`H\_ADDING\_FIELDS\_TO\_A\_DATABASE\_DETAILS',1)} [See details](#)

{button ,AL(`H\_BASIC\_PROPERTIES\_OF\_FIELDS\_CS;H\_DELETING\_FIELDS\_FROM\_A\_DATABASE\_STEPS;H\_DISPLAYING\_FIELDS\_AS\_CHECK\_BOXES\_STEPS;H\_DISPLAYING\_FIELDS\_AS\_SCROLLING\_LISTS\_STEPS;H\_DISPLAYING\_FIELDS\_AS\_RADIO\_BUTTONS\_STEPS;H\_ADDING\_TEXT\_BLOCKS\_STEPS;H\_TYPES\_OF\_FIELDS\_OVER;',0)} [See related topics](#)

## Selecting records for summary in calculated fields

<u>To apply the formula to</u>	<u>Select</u>
A set of records in a group as defined by the report summary panel that the calculated field is in	Summary panel where this field is placed
Every record in the selected database (or found set if one is in effect)	Summary of all records in <i>database</i> This option is repeated for each joined database in the current Approach file.
Every record in all databases joined in the Approach file (or found set if one is in effect)	Summary of all records in all databases

### **Details: Specifying a key field**

When exporting data from Approach or saving a database file to a different file format, you must specify a key field or set of fields that can identify each record as unique. If you do not specify a key field that is unique, an error message displays indicating that you can't export or save the file because a duplicate key exists.

### **Exporting to a Paradox database**

In the Select Key Field dialog box, click Add Key Field to insert a numeric field named Approach\_key\_name at the beginning of each record. The key field value is a serial number starting at 1 in the first record, and incremented by 1 through all records. Most often, this is the best solution for creating the key field.

The other option is to select an existing field from the list in the Select Key Field dialog box. This list shows all the text, numeric, date, and time fields defined for the database. If one or a set of these existing fields meets the requirements for a key field (in other words, that it is a unique identifier), you can select that field as the key field.

### **Modifying an existing key in a Paradox database**

To change the key field in an existing Paradox database, do one of the following:

- In Browse, export the database into a new Paradox database using File - Export Data .
- Save the database as dBASE and then save it again as Paradox.

### **Exporting to other database formats**

In the Select Key Field dialog box, select one or more key fields that can identify each record as unique.

---

{button ,AL('H\_APP\_SPECIFYING\_A\_KEY\_FIELD\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_CREATING\_A\_NEW\_DATABASE\_FROM\_SCRATCH\_STEPS;H\_PARADOX\_FILES\_IN\_APPROACH\_REF;H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_AND\_A\_DATABASE\_FILE\_STEPS;',0)} [See related topics](#)

## Specifying a key field

When you save a database or export data to another database file format, specify a key field or a set of fields that can uniquely identify each record as unique.

1. Export the data or save the file to the database format.
2. Do one of the following:
  - For Paradox files: Click Add Key Field to have Approach add a key field named Approach\_key\_name at the beginning of each record.  
If a suitable field already exists in the database, you can select that field from the list in the Select Key field dialog box instead of adding a new key field.
  - For other file formats: Select a field or set of fields from the list in the Select Key Field dialog box. The field or set of fields must be able to identify each record as unique.
3. Click OK.

---

{button ,AL('H\_APP\_SPECIFYING\_A\_KEY\_FIELD\_DETAILS',1)} [See details](#)

{button ,AL('H\_CREATING\_A\_NEW\_DATABASE\_FROM\_SCRATCH\_STEPS;H\_PARADOX\_FILES\_IN\_APPROACH\_REF;H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_AND\_A\_DATABASE\_FILE\_STEPS;H\_EXPORTING\_DATA\_FROM\_APPROACH\_STEPS;',0)} [See related topics](#)

**Details: Deleting fields from a database**

Before deleting a field, make sure you no longer need the data it contains and that you no longer need the field in another Approach file. You cannot retrieve data from a deleted field.

**Deleting fields used in a join**

A field used in a [join](#) cannot be deleted until the databases are unjoined. If the Approach file contains views based on the joined database, these views are deleted.

**Deleting fields included in formulas or macros**

If you delete a field used in a formula or macro, Approach replaces the field reference with NO\_FIELD\_REFERENCE on the view or in the formula. In a formula, Approach interprets the reference as blank; the formula may still return a result.

---

{button ,AL('H\_DELETING\_FIELDS\_FROM\_A\_DATABASE\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_EDITING\_FIELDS\_OF\_A\_DATABASE\_STEPS;H\_UNJOINING\_DATABASE\_FILES\_STEPS;',0)} [See related topics](#)

## Deleting fields from a database

**Caution** You cannot retrieve the data from a deleted field.

1. If the field you want to delete is used in a [join](#), unjoin the field.
2. Choose Create - Field Definition.
3. Be sure you're in the database that contains the field you want to delete.
4. Click the name of the field.
5. Click Delete.
6. Click OK in the Delete Field message box.
7. Click OK.

---

{button ,AL('H\_DELETING\_FIELDS\_FROM\_A\_DATABASE\_DETAILS',1)} [See details](#)

{button ,AL('H\_EDITING\_FIELDS\_OF\_A\_DATABASE\_STEPS;H\_UNJOINING\_DATABASE\_FILES\_STEPS;H\_DELETING\_ALL\_RECORDS\_STEPS;H\_DELETING\_FILES\_STEPS;H\_DELETING\_SPECIFIC\_RECORDS\_STEPS;',0)} [See related topics](#)



## **Details: Editing fields of a database**

### **Changing the field names**

If you change the name of a field, the new name appears wherever the old name was used. This includes field references in formulas and macros. Labels on fields in views, however, do not change.

### **Changing the data type**

If you change the type of a field that contains data, Approach tries to convert the data to the new type. If it cannot convert the data in a particular field, Approach warns you that the data will be deleted and asks if it's OK to delete the data.

**Tip** You can preserve the contents of a field before changing its type by exporting the data from that field. This is especially helpful for saving the results from calculated fields.

- You can change a field type from numeric to text or from text to numeric (if the field does not contain any text) without losing data.
- If you change a calculated field to another type of field, you lose the calculated result.
- If you change any other type of field, Approach warns you that data will be deleted and asks if it's OK to delete the data.

### **Changing the field size**

If you decrease the length of a field that already contains data, the data is truncated to the new length.

### **Changing a formula**

If you change a formula, Approach recalculates the formula in all the records. If the result is used in formulas in other fields, those formulas are also recalculated.

---

{button ,AL('H\_EDITING\_FIELDS\_OF\_A\_DATABASE\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_BASIC\_PROPERTIES\_OF\_FIELDS\_CS;H\_Exporting\_data\_from\_approach\_steps;H\_Types\_of\_fields\_over;',0)} [See related topics](#)

## Editing fields of a database

**Caution** If you reduce the length of a field or change the field type, you may lose information in the database.

1. Choose Create - Field Definition.
  2. Be sure you're in the database that contains the field you want to edit.
  3. Edit the field definition.
  4. If a message box appears, click OK to confirm the changes.
  5. Click OK.
  6. Choose File - Save Approach File.
- 

{button ,AL('H\_EDITING\_FIELDS\_OF\_A\_DATABASE\_DETAILS',1)} [See details](#)

{button ,AL('H\_DELETING\_FIELDS\_FROM\_A\_DATABASE\_STEPS;H\_EDITING\_LABELS\_STEPS;',0)} [See related topics](#)

**Details: Entering data automatically**

To remove a previously set option in the Default Values tab, click Nothing.

<u>To enter</u>	<u>Click</u>
Data from the same field in the last record added during the current session	Previous record.
Date or time the record was created	Creation date or Creation time.
Date or time the record was last modified	Modification date or Modification time.
Data in the field in every new record	Data. Then enter the data in the text box.
A unique number in the field in each new record	Serial number. Then enter a value for the first record in "starting at" and an increment value in "incremented by." A positive increment increases the number, a negative one decreases the number.
Result of a formula when you create the record	Creation formula. Then click Formula and write the formula.
Result of a formula when you create the record and also update the result whenever you modify the record	Modification formula. Then click Formula and write the formula.

---

{button ,AL('H\_ENTERING\_DATA\_AUTOMATICALLY\_STEPS',1)} [Go to procedure](#)

### **Entering data automatically**

1. Choose Create - Field Definition.
  2. Add or edit a text, numeric, date, time, or Boolean field.
  3. Click Options.
  4. On the Default Value tab, set the option for the value you want entered automatically in the field.  
See [details](#)
  5. Click OK.
- 

{button ,AL('H\_ENTERING\_DATA\_AUTOMATICALLY\_DETAILS',1)} [See details](#)

{button ,AL('H\_ENTERING\_THE\_SAME\_DATA\_INTO\_MANY\_RECORDS\_STEPS',0)} [See related topics](#)

### **Printing a list of database fields**

1. Choose Create - Field Definition.
2. Be sure you're in the database for which you want a field list.
3. Click Print.

The Print dialog box appears.

4. Click OK to close the Print dialog box.
5. Click OK.

---

{button ,AL(^H\_PRINTING\_VIEWS\_STEPS;H\_PRINTING\_A\_DIAGRAM\_OF\_JOIN\_RELATIONSHIPS\_STEPS;H\_PRINTING\_APPROACH\_VIEWS\_OVER;H\_PRINTING\_MACRO\_COMMANDS\_STEPS;','0)} [See related topics](#)

### **Setting data options for a variable field**

Set the data type for a variable field depending on how you use the field in calculations.

1. Choose Create - Field Definition.
2. Add or edit a variable field.
3. Click Options.
4. Select a data type in the "Select the field type" box.
5. (Optional) To give the field an initial value, set a default value.
6. Click OK.

---

{button ,AL(`H\_ENABLING\_VARIABLE\_FIELDS\_FOR\_NOTES\_FX\_STEPS;H\_types\_of\_fields\_over;','0)} [See related topics](#)

## **Details: Setting OLE options for PicturePlus fields**

### **Linking and embedding**

When you link an OLE object, the object is not stored in the field, but a copy of the object appears there. The original object remains in its source file; the copy in the PicturePlus field is updated automatically to match changes in the original.

When you embed an OLE object, the object is stored in the field.

### **Default OLE object type**

If you have a default OLE object type, the corresponding application starts when you double-click an empty PicturePlus field or when you press SPACEBAR with an empty PicturePlus field selected. You can then create an object, and it will be embedded in the field.

If an object that doesn't correspond to the default object type is already in a field, double-clicking the field opens a dialog box from which you can specify an application to edit the object.

---

{button ,AL('H\_SETTING\_OLE\_OPTIONS\_FOR\_PICTUREPLUS\_FIELDS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_BASIC\_PROPERTIES\_OF\_PICTUREPLUS\_FIELDS\_CS;H\_MODIFYING\_LINKS\_BETWEEN\_OBJECTS\_STEPS;',0)} [See related topics](#)

### Setting OLE options for PicturePlus fields

1. Choose Create - Field Definition.
2. Add or edit a PicturePlus field.
3. Click Options.
4. Select an object type.
5. Click OK.

---

{button ,AL('H\_SETTING\_OLE\_OPTIONS\_FOR\_PICTUREPLUS\_FIELDS\_DETAILS',1)} [See details](#)

{button ,AL('H\_MODIFYING\_LINKS\_BETWEEN\_OBJECTS\_STEPS;H\_CHANGING\_DISPLAY\_OPTIONS\_FOR\_A\_PICTUREPLUS\_FIELD\_STEPS;H\_EDITING\_LINKED\_OBJECTS\_STEPS;H\_OLE\_LINKS\_OVER;',0)} [See related topics](#)



## Overview: Types of fields

When you define a field, you give it a name and a type. The field type determines what kind of data you can store in the field. The type also affects how you can use the field for finding and sorting records or for data validation.

For example, if you store a date in a text field, you can only use the date format of MM/DD/YYYY as an input in a date calculation. Also, only text grouping options are available for the field: you cannot use the field to group by month, quarter, or year on reports and crosstabs.

You can use all field types except PicturePlus in calculations.

### Boolean field

Stores a value of Yes, Y, or 1; or No, N, or 0. Define a Boolean field for information that requires a simple yes or no, such as whether a payment has been received.

### Calculated field

Stores the result of a formula. Create the formula when you define the field; Approach displays the result in the field. The result can be text, a number, a date, a time, or a Boolean value. You can find, sort, or group using a calculated field; the calculated field behaves like the type of the result. You cannot edit values in calculated fields. Calculated fields are part of an Approach file (.APR) rather than a database file.

If you select Calculated field type, you must define a formula to calculate the field values. See [Writing formulas for calculated fields](#). The results of a calculation are shown in the field in Browse or Print Preview, and are read-only. Calculated fields that use information from multiple records are summary calculations whose results are shown only in Print Preview. The results of all calculated fields are not stored in the database, they exist only in memory and the .APR file.

### Date field

Stores a single date. Find and sort records using a date field, and use a date in some calculations. A sort on a date field is in either ascending order (earliest to latest) or descending order (latest to earliest).

### Memo fields

Stores any characters. Memo fields are useful for large amounts of data in a single field. You cannot define data entry options for memo fields. You can search for characters in a memo field and use a memo field in a formula, but cannot use a memo field in a sort.

### Numeric field

Stores data that you need to use in calculations or find or sort arithmetically. You can define the number of digits on both sides of the decimal place. Sort records by a numeric field in either ascending order (smallest to largest) or descending order (largest to smallest).

### PicturePlus field

Stores a graphic or an object that comes from an application that supports [OLE](#). Some common OLE objects are graphics, charts, sound files, and data ranges. Paste or import the graphic or object into a PicturePlus field.

You can also draw in a PicturePlus field. Marks made with the pen cursor are saved separately from the objects in the field.

### Text field

Stores any characters, including letters, numbers, and symbols. Search on a text field using any character in the field. A sort on a text field is alphabetical in either ascending order (0 to 9, then A to Z) or descending order (Z to A, then 9 to 0).

### Time field

Stores a single time. Find and sort records on a time field, and use a time in some calculations. A sort on a time field is in either ascending order (earliest to latest) or descending order (latest to earliest).

### Variable field

Stores data in memory while the Approach file is open. The value is the same for all records. Set the data type for the variable field and its initial value. Use variable fields to store intermediate values for macros. Variable fields are part of an Approach file (.APR) rather than a database file.

## Storing field data and definitions

The following table shows where data and field definitions are stored for each field type.

<u>Data/field definition</u>	<u>Is stored in</u>
Text, numeric, date, time, and Boolean field data	Database file
Text, Numeric, Date, Time, and Boolean field definitions	Database file
Memo field data	Memo file
PicturePlus field data	Memo file
Variable and calculated field definitions	Approach file (.APR)

---

{button ,AL('H\_ADDING\_FIELDS\_TO\_A\_DATABASE\_STEPS;H\_APPROACH\_SAVES\_DATA\_AUTOMATICALLY\_REF;H\_DELETING\_FIELDS\_FROM\_A\_DATABASE\_STEPS;H\_EDITING\_FIELDS\_OF\_A\_DATABASE\_STEPS;H\_ENTERING\_DATA\_AUTOMATICALLY\_STEPS;H\_FILE\_EXTENSIONS\_IN\_APPROACH\_REF;H\_SETTING\_DATA\_OPTIONS\_FOR\_A\_VARIABLE\_STEPS;H\_SETTING\_OLE\_OPTIONS\_FOR\_PICTUREPLUS\_FIELDS\_STEPS;H\_VERIFYING\_THE\_ACCURACY\_OF\_ENTERED\_DATA\_STEPS;',0)} [See related topics](#)

## Details: Verifying the accuracy of entered data

<u>To verify that</u>	<u>Select</u>
Value added in a new record does not already exist in another record	Unique.
Value is within an alphabetical, numerical, or chronological range	From/to. Then enter values for the beginning and end of the range (inclusive).
Some value must be specified in this field before a new record is complete	Filled in.
The value matches one of the values in a set	One of. Enter each acceptable value in the text box and click Add. To remove a value from the set, select it and click Remove.
Formula evaluates to Yes when this value is used	Formula is true. Then click Formula and write the formula. For example, the formula "Number of Guests" >100 accepts only values greater than 100 in the Number of Guests field.
Value matches a value in another field in this database or in a database joined to it	In field. Then select the other field in the list. If the other field is in a different database, select the database in the drop-down box.

---

{button ,AL('H\_VERIFYING\_THE\_ACCURACY\_OF\_ENTERED\_DATA\_STEPS',1)} [Go to procedure](#)

## Verifying the accuracy of entered data

Prompts when invalid values are entered in this field in a new record.

To set up an ID field on which to join databases, use this procedure to ensure that the field is filled in and contains unique values. For more information on verifying data in ID fields, see Creating ID fields.

1. Choose Create - Field Definition.
2. Add or select a text, numeric, date, time, or Boolean field.
3. Click Options.
4. Click the Validation tab.
5. Set the options for verifying data in the field.

See details

6. Click OK.

---

{button ,AL('H\_VERIFYING\_THE\_ACCURACY\_OF\_ENTERED\_DATA\_DETAILS',1)} See details

{button ,AL('H\_ENTERING\_DATA\_AUTOMATICALLY\_STEPS;',0)} See related topics

### Details: Writing formulas for calculated fields

When you write a formula, you specify the operation to perform and the values to operate on. Your formula can consist of operators, operands (constants and field references), functions, and expressions.

### Formula results

It is important to use appropriate field types and values when you create a formula, because Approach performs the calculation and produces a result depending on the field type. For example, if you create a formula that uses date fields, the result is a date. If the formula uses a time field and a numeric value, the result is a time.

### Time calculations

You can add or subtract times in calculations. The results of time calculations are in hundredths of a second (milliseconds). For example, suppose you create the following formula: END\_TIME - START\_TIME. You want to calculate the number of hours worked by your employees. In one record, START\_TIME is 8:10 AM and END\_TIME is 4:10 PM. The result in milliseconds is 2,880,000. You can then convert the result to more useful formats:

<u>To convert the result to</u>	<u>Divide by</u>
seconds	100
minutes	6000
hours	360000
days	8640000

So a more useful formula for calculating the number of hours worked is (END\_TIME - START\_TIME)/360000. The answer in hours for this example is 8 hours.

You can also use the TextToTime function to convert text to a time value in calculations involving time. Use the following formula to calculate elapsed time:

TextToTime(END\_TIME - START\_TIME).

The formula, however, returns a time: 08:00:00 AM. Change the format so that it displays as 8, use the InfoBox to format the calculated field.

### Other sample formulas

<u>To do this</u>	<u>Enter this formula</u>
Concatenate two fields containing a person's first name (First_Name, a text field) and last name (Last_Name, a text field)	Combine ("First_Name", ' ', "Last_Name")
Calculate a person's age from their date of birth (Date_of_Birth, a date field) or if no date is present, enter "NO DOB" in the field.	If(IsBlank("Date_of_Birth"), 'NO DOB', Trunc(((Today() - "Date_of_Birth") / 365.25), 0))
Calculate from the invoice date (Invoice_Date, a date field) if an invoice (net 30 days) is overdue	If("Invoice_Date" >= Today() - 30, 'No', 'Yes')
Round a number (in NUM_FIELD, a numeric field) up or down to the nearest 10	ROUND(NUM_FIELD/10) * 10
Round a number down to the nearest 10	TRUNC(NUM_FIELD/10) * 10

---

{button ,AL(^H\_FORMULAS\_OVER;H\_FUNCTIONS\_OVER;H\_OPERATORS\_OVER;H\_FUNCTIONS\_ALPHA\_REF;' ,0)} [See related topics](#)

**Details: Adding fields to a view**

Normally, the Add Field dialog box shows all the fields defined for databases associated with the current Approach file. The Add Field dialog box appears immediately after you create new fields in the Field Definition dialog; however, it shows only the newly created fields.

To see all the fields of the database, click "Show All Fields" at the bottom of the Add Field dialog box.

You can set your Approach preferences so that the dialog box does not appear automatically. With this option set, choose Add Field on the context menu or click the Add Field icon on the Tools palette to show the dialog box.

**Adding join fields**

If you want to be able to enter values into a join field, you must add the join field from the main database for the view.

If you try to enter data into a join field from a detail database for the view, Approach displays the error message, "This field is used in a join. Modifying this field is not revertible.".

To prevent this error message from displaying, whenever you add a join field from a detail database for the view, make the join field read-only with the Basics tab of the InfoBox.

---

{button ,AL('H\_ADDING\_FIELDS\_TO\_A\_VIEW\_STEPS',1)} Go to procedure

{button ,AL('H\_SHOWING\_THE\_ADD\_FIELD\_DIALOG\_BOX\_AFTER\_CREATING\_NEW\_FIELDS\_STEPS;H\_adding\_fields\_to\_a\_database\_steps;',0)} See related topics

## Adding fields to a view

A new database field does not appear in a view until you add it. Add the field to each view where you want this data to appear.

If you're trying to define fields for a database, see [Defining fields for a database](#).



### Are you in Design?

1. Choose Add Field in the [context menu](#).



2. Be sure the database containing the field you want is showing.
3. Drag the field from the dialog box to the view.



Use SHIFT+click or CTRL+click to select more than one field.

4. (Optional) [Update the tab order](#) so the new field is in the correct position.

Approach adds the field as a [field box](#). Use the [InfoBox](#) to change the data-entry type of the field.

---

{button ,AL('H\_ADDING\_FIELDS\_TO\_A\_VIEW\_DETAILS',1)} [See details](#)

{button ,AL('H\_ADDING\_FIELDS\_TO\_A\_DATABASE\_STEPS;H\_ADDING\_FIELDS\_TO\_NEW\_FORMS\_STEPS;H\_ADDING\_FIELDS\_TO\_NEW\_REPORTS\_STEPS;H\_ADDING\_FIELDS\_TO\_REPEATING\_PANELS\_STEPS;H\_ADDING\_FIELDS\_TO\_REPORTS\_STEPS;H\_ADDING\_OR\_MOVING\_FIELDS\_IN\_CROSSTABS\_STEPS;H\_FIELDS\_OVER;H\_TYPES\_OF\_FIELDS\_OVER;H\_adding\_pictureplus\_fields\_to\_a\_view\_steps;H\_ADDING\_FIELDS\_TO\_FORM\_LETTERS\_STEPS;',0)} [See related topics](#)

## Adding PicturePlus fields to a view



### Are you in Design?

1. Be sure that the PicturePlus field has been added to the database.
2. Choose Add Field on the context menu.



The Add Field dialog box appears.

3. Be sure the database containing the field is showing.
4. Drag the field from the dialog box to the view.



5. If necessary, resize the PicturePlus field by dragging one of its handles.



---

{button ,AL(^H\_ADDING\_FIELDS\_TO\_A\_DATABASE\_STEPS;H\_PASTING\_PICTURES\_IN\_FIELDS\_STEPS;H\_TYP  
ES\_OF\_FIELDS\_OVER;';0)} [See related topics](#)



## Changing the tab order in views



Are you in Design?

### Changing the tab order of a few objects

1. Choose View - Show Tab Order.  
Squares with tab order numbers appear.
2. Select a number and type a new number.
3. Repeat step 2 to change other numbers.
4. Click OK in the action bar.

### Changing the tab order of all objects

1. Choose View - Show Tab Order.
2. Click Clear Tabs in the action bar.
3. Click the squares in the order you want to enter field data.  
Numbers appear in the squares as you click.
4. Click OK in the action bar.

**Note** Click Revert in the action bar to return the tab order to its original sequence.

---

{button ,AL('H\_PUTTING\_OBJECTS\_AND\_FIELDS\_IN\_THE\_TAB\_ORDER\_STEPS;H\_removing\_objects\_and\_fields\_from\_the\_tab\_order\_steps;',0)} See related topics

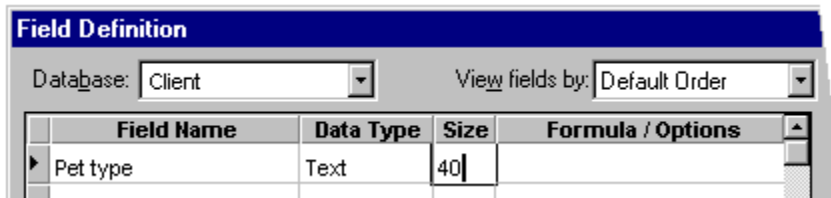
## Overview: Fields

A field is a category of information in a database. For example, an address database would likely have fields for name, street, city, state, and Zip code.

To work with a field, you must add it to a view in an Approach file.

### Fields in a database

When you create a database from scratch or open a new database from a SmartMaster, each piece of information in the database is stored in a field. You define new database fields, modify existing ones, or delete fields in the Field Definition dialog box in Approach. In this dialog box you specify the name, type, and size of the field.



This dialog box also contains controls for setting default field values and for verifying that the values entered into the field are valid.

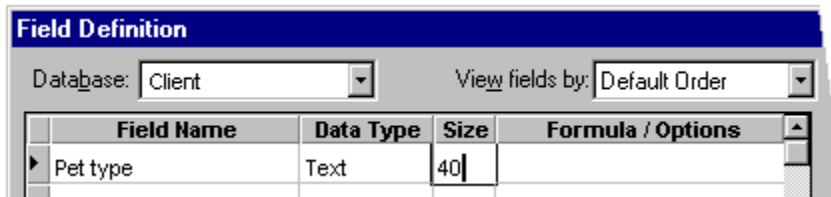
When you enter data into a field on a view, the data goes directly into the database.

### Fields in an Approach file

When you add a field to an Approach view, you make a connection from the view to the database field. Changes you make to the contents of the field are made to the database itself.

You can make more than one connection between Approach views and a database field. For example, you can add a field to a form for data entry, and you can also add the same field to a report and to a worksheet. Each representation of the field in a view is a connection to the same field in the database.

The Approach field has different characteristics from the database field:



In Design, change Approach field properties using the InfoBox.



These field properties are saved in the Approach file and are not part of the database. Changes you make to the Approach field properties do not affect the database field; changes to the database field properties made in the Field Definition dialog box do not change the Approach field properties.

---

{button ,AL('H\_ADDING\_FIELDS\_TO\_A\_VIEW\_STEPS;H\_BASIC\_PROPERTIES\_OF\_FIELDS\_CS;H\_CREATING\_A\_NEW\_DATABASE\_FROM\_SCRATCH\_STEPS;H\_CREATING\_A\_NEW\_DATABASE\_WITH\_A\_SET\_OF\_READ\_YTOUSE\_FIELDS\_STEPS;H\_TYPES\_OF\_FIELDS\_OVER',0)} [See related topics](#)

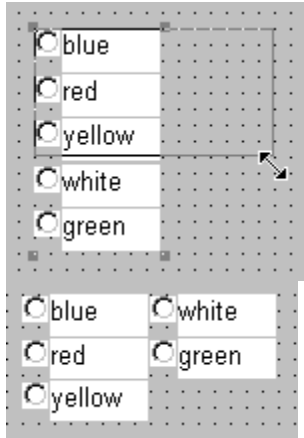
## Rearranging a set of radio buttons or check boxes



### Are you in Design?

1. Select the field displayed as radio buttons or check boxes.
2. Drag a handle to define a new area.

The radio buttons or check boxes arrange themselves as necessary to fit within the area.



---

{button ,AL('H\_RESIZING\_OBJECTS\_STEPS;',0)} [See related topics](#)

### **Adding macros to the Run Macro menu**

You can display macros you've created in the Run macro menu and then run those macros from the menu.

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Select the macro to be added to the menu.
3. Select "Show in Menu."
4. To add additional macros to the menu, repeat steps 2 and 3.
5. Click Done.

### **Removing macros from the menu**

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Select the macro you want to remove from the menu.
3. Deselect "Show in Menu."
4. To remove additional macros from the menu, repeat steps 2 and 3.
5. Click Done.

---

```
{button ,AL(`H_CREATING_MACROS_BASED_ON_EXISTING_MACROS_STEPS;H_CREATING_NEW_MACROS_STEPS;H_DEFINE_MACRO_DIALOG_BOX_REF;H_DELETING_MACROS_STEPS;H_MACRO_COMMANDS_ALPHA_REF;H_MACROS_OVER;H_PRINTING_MACROS_STEPS;H_SAMPLE_MACRO_PROCEDURES_CS;',0  
)} See related topics
```

## **Browse, macro command**

Go to [Browse](#).

**Close, macro command**

Close the current Approach file. You can set Approach to automatically disconnect from the server while the macro runs.

### **Converting macros to scripts**

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Select a macro in the Macros dialog box.
3. Click Convert to Script.

The Convert Macro to Script dialog box appears.

4. Enter a name for the script in the "Enter a name for your script" box.
5. Click OK.

The IDE Script Editor displays your script.

6. Edit and debug your script using the tools in the IDE Script Editor.
7. Choose File - Save Scripts.

---

{button ,AL(`H\_RUNNING\_SCRIPT\_FUNCTIONS\_WITH\_A\_MACRO\_STEPS;H\_MACROS\_OVER;','0)} [See related topics](#)

## Creating keystroke sequences in macros

The Send Key macro lets you enter keystroke sequences in your macro. Keystroke sequences perform operations that are not available through the Approach macro commands. These operations include using the backspace, directional arrow, and function keys.

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Click Edit, New, or Copy.

The Define Macro dialog box appears.

3. Select Send Key in the "Command" box.
4. Click inside the "Keystroke sequence" box.
5. Enter a keystroke sequence for the operation you want to perform in the "Keystroke sequence" box.

When you advance to the next line of the Define Macro dialog box, the keystroke sequence you created appears in the "Options" line.

6. Enter any additional instructions needed to complete the macro.
7. Click OK to close the Define Macro dialog box.
8. Click Done.

---

{button ,AL('H\_SEND\_KEY\_KEYSTROKES\_REF;H\_SEND\_KEY\_MACRO\_COMMAND\_REF;H\_DEFINE\_MACRO\_DIALOG\_BOX\_REF;H\_CREATING\_NEW\_MACROS\_STEPS;','0)} [See related topics](#)



## Creating looping macros

These macros repeat a set of instructions for each record in a found set. The first one ends after it finishes working on the last record. The second one continues running.

### Creating a looping macro that ends when it reaches the last record

1. From the Edit menu, choose Script & Macros, and then choose Macros.

2. Click New.

The Define Macro dialog box appears.

3. Enter a name for the macro in the Macro name box.

4. (Optional) To run the macro using a function key, select a key in the Function key box.

5. Add the instructions to be performed within the loop.

6. Add the Records command to the list and select Next record.

This is the second to last instruction in the macro.

7. Add the Run command to the list and select the current macro.

This is the last instruction in the macro. The macro stops when the last record has gone through the loop.

8. Click OK to close the Define Macro dialog box.

9. Click Done.

### Creating a looping macro that runs another macro after it reaches the last record:

1. From the Edit menu, choose Script & Macros, and then choose Macros.

2. Click New.

The Define Macro dialog box appears.

3. Enter a name for the macro in the Macro name box.

4. (Optional) To run the macro using a function key, select a key in the Function key box.

5. Add the instructions to be performed within the loop.

6. Add the Run command to the list and type **IsLastRecord()** in the If formula box.

7. Select "run macro" in the "Is True" box, and in the box on the right, select the macro to run after the last record has gone through the loop.

8. Select "continue this macro" in the "else" box.

9. Add the Records command to the list and select Next record.

10. Add another Run command to the list and select the current macro.

11. Click OK to close the Define Macro dialog box.

12. Click Done.

---

```
{button ,AL(^H_DEFINE_MACRO_DIALOG_BOX_REF;H_DEFINING_A_CONDITIONAL_MACRO_STEPS;H_FINDI
NG_A_SET_OF_RECORDS_WITH_A_MACRO_STEPS;H_RUNNING_MACROS_FROM_BUTTONS_IN_A_MES
SAGE_BOX_STEPS;H_RUNNING_SCRIPT_FUNCTIONS_WITH_A_MACRO_STEPS;H_SAVING_A_FIND_REQ
UEST_AS_PART_OF_A_MACRO_STEPS;H_SETTING_A_VALUE_IN_A_FIELD_WITH_A_MACRO_STEPS;H_S
WITCHING_TO_ANOTHER_VIEW_WITH_A_MACRO_STEPS;H_USING_AN_IF_CALCULATION_IN_A_MACRO
_STEPS;';0)} See related topics
```

### Creating macros based on existing macros

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Select the macro you want to copy.
3. Click Copy.  
The Define Macro dialog box appears.
4. Enter a name for the macro in the "Macro name" box.
  - To run the macro when you open the Approach file, type **Open** as the macro name.
  - To run the macro when you close the Approach file, type **Close** as the macro name.
5. (Optional) To run the macro by pressing a function key, select a key in the "Function key" box.
6. Change the instructions in the macro as appropriate .  
Be sure the instructions are in the order you want them carried out.
7. Click OK to close the Define Macro dialog box.
8. To display the macro in the Run Macro menu, select the macro and select "Show in menu."
9. Click Done.

---

{button ,AL(`H\_ADDING\_MACROS\_TO\_THE\_RUN\_MACRO\_MENU\_STEPS;H\_CREATING\_NEW\_MACROS\_STEPS;H\_DEFINE\_MACRO\_DIALOG\_BOX\_REF;H\_DELETING\_MACROS\_STEPS;H\_EDITING\_MACROS\_STEPS;H\_MACRO\_COMMANDS\_ALPHA\_REF;H\_MACROS\_OVER;H\_PRINTING\_MACRO\_COMMANDS\_STEPS;H\_SIMPLE\_MACRO\_PROCEDURES\_CS';0)} [See related topics](#)

## Creating new macros

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Click New.  
The Define Macro dialog box appears.
3. Enter a name for the macro in the "Macro name" box.
  - To run the macro when you open the Approach file, type **Open** as the macro name.
  - To run the macro when you close the Approach file, type **Close** as the macro name.
4. (Optional) To run the macro by pressing a function key, select a key in the "Function" key box.
5. To add an instruction to the macro, select a command from the "Command" box.
6. Specify the appropriate options for the command.
7. To add additional instructions, repeat steps 5 and 6.  
Enter each instruction in its own row.  
Be sure the instructions are in the order you want them carried out.
8. Click OK to close the Define Macro dialog box.
9. (Optional) To remove the macro from the Run Macro menu, select the macro and deselect "Show in menu."
10. Click Done.

---

```
{button ,AL('H_ADDING_MACROS_TO_THE_RUN_MACRO_MENU_STEPS;H_CREATING_MACROS_BASED_ON_EXISTING_MACROS_STEPS;H_DEFINE_MACRO_DIALOG_BOX_REF;H_DELETING_MACROS_STEPS;H_EDITING_MACROS_STEPS;H_MACRO_COMMANDS_ALPHA_REF;H_MACROS_OVER;H_PRINTING_MACRO_COMMANDS_STEPS;H_SAMPLE_MACRO_PROCEDURES_CS;',0)} See related topics
```

## Define Macro dialog box

Want the big picture? See [Overview: Macros](#), and see [Macro commands](#) for descriptions of each command.

### Selecting macro commands

A macro consists of one or more macro commands. To select a macro command: In the Command column on the left, click



to see the list of available commands. Then select the command you want. If necessary, record further instructions by completing the options that appear at the bottom of the dialog box.

Put each macro command on its own line.

### Options

Many macro commands have options for setting specific conditions for the execution of the command. These options appear at the bottom of the Define Macro dialog box after you select a command.

For example, you can specify to set your print options here, such as the range of records to print, so that when you run the print macro, it does not open the Print dialog box.

When you specify an option for a macro command, your specification appears in the Options column on the right.

### Function key

You can assign one of the function keys to a macro, so that the macro runs immediately when you press that function key.

For example, you may have a macro that prints the current record. Assign the function key F12 to this macro. Then you can print the current record simply by pressing F12.

### Inserting commands

Click Insert to add a blank row in an existing sequence. Then complete an instruction in that row.

For example, you created a macro that automates printing. Then you decide that you want to sort records before you print them, so you need to add the sort instruction before the print instruction.

Insert a sort command in front of the print command in your print macro, specify the sort options, and save your changes.

To insert a blank row, click anywhere in the row you want to follow the blank row. Then click Insert.

### Deleting commands

- Delete removes commands that you no longer want in your macro.
- Clear All removes all of the commands from the macro.

### Moving commands

Rearrange commands by dragging them into new locations. Select a row by clicking the arrow in the left margin next to the command name. The entire row is highlighted, and the mouse pointer changes to a hand. Drag the row to the new position.

## Details: Defining a conditional macro

### Conditional options

The "is true" box specifies the action Approach takes when the conditional statement is true. The "else" box specifies the action Approach takes when the conditional statement is false. The macro can perform the following instructions when either condition is met.

<u>To</u>	<u>Select</u>
Run a different macro	Run macro and select the macro in the box that appears to the right
Run a different macro and return to the current macro	Run & return from macro and select the macro to branch to in the box that appears to the right
Continue running the current macro	Continue this macro
End the macro	End this macro

---

{button ,AL('H\_DEFINING\_A\_CONDITIONAL\_MACRO\_STEPS',1)} [Go to procedure](#)

## Defining a conditional macro

You can create a conditional macro to verify that a certain condition exists in the current record before either continuing the current macro or running a second macro.

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Click New.  
The Define Macro dialog box appears.
3. Enter a name for the macro in the "Macro name" box.
4. (Optional) To run the macro by pressing a function key, select a key in the "Function key" box.
5. Add the Run command as the first instruction in the list.
6. Select If and do one of the following:
  - Write a formula in the box to the right of the If button.
  - Click Formula, and write a formula in the [Formula](#) dialog box.
7. To have the macro perform an action when the condition is true, select an instruction from the "is true" box.
8. (Optional) To have the macro perform an action if the condition is false, select "else" and select an action from the "else" box.
9. If necessary, add additional instructions to this macro.
10. Click OK to close the Define Macro dialog box.
11. Click Done.

---

{button ,AL('H\_DEFINING\_A\_CONDITIONAL\_MACRO\_DETAILS',1)} [See details](#)

{button ,AL('H\_CREATING\_LOOPING\_MACROS\_STEPS;H\_DEFINE\_MACRO\_DIALOG\_BOX\_REF;H\_FINDING\_A\_SET\_OF\_RECORDS\_WITH\_A\_MACRO\_STEPS;H\_RUNNING\_MACROS\_FROM\_BUTTONS\_IN\_A\_MESSAGE\_BOX\_STEPS;H\_RUNNING\_SCRIPT\_FUNCTIONS\_WITH\_A\_MACRO\_STEPS;H\_SAVING\_A\_FIND\_REQUEST\_AS\_PART\_OF\_A\_MACRO\_STEPS;H\_SETTING\_A\_VALUE\_IN\_A\_FIELD\_WITH\_A\_MACRO\_STEPS;H\_SWITCHING\_TO\_ANOTHER\_VIEW\_WITH\_A\_MACRO\_STEPS;H\_USING\_AN\_IF\_CALCULATION\_IN\_A\_MACRO\_STEPS;',0)} [See related topics](#)

**Delete, macro command**

Delete the current record, found set, or Approach file.

Select "Don't show warning dialog before deleting" to keep confirmation dialog boxes from interrupting the execution of the macro. Be sure the macro won't be deleting anything you might want before selecting this option.

### **Deleting macros**

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Select the macro(s) you want to delete.
3. Click Delete.
4. Click Yes to confirm deleting the macro(s).
5. Click Done.

---

{button ,AL('H\_CREATING\_NEW\_MACROS\_STEPS;H\_DEFINE\_MACRO\_DIALOG\_BOX\_REF;H\_EDITING\_MACROS\_STEPS;H\_MACROS\_OVER;H\_PRINTING\_MACROS\_STEPS;',0)} [See related topics](#)



**Dial, macro command**

Dial the telephone number in the field you select. Approach uses the modem settings you specify in the Dialer tab of the Approach Preferences dialog box.

## Editing macros

New commands can be added anywhere in the sequence of an already existing macro.

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Select the macro you want to edit.
3. Click Edit.  
The Define Macro dialog box appears.
4. Change the instructions in the macro as appropriate.  
Be sure the instructions are in the order you want them carried out.
5. Click OK to close the Define Macro dialog box.
6. Click Done.

---

```
{button ,AL(^H_ADDING_MACROS_TO_THE_RUN_MACRO_MENU_STEPS;H_CREATING_MACROS_BASED_ON_EXISTING_MACROS_STEPS;H_CREATING_NEW_MACROS_STEPS;H_DEFINE_MACRO_DIALOG_BOX_REF;H_DELETING_MACROS_STEPS;H_MACRO_COMMANDS_ALPHA_REF;H_MACROS_OVER;H_PRINTING_MACRO_COMMANDS_STEPS;H_SAMPLE_MACRO_PROCEDURES_CS;',0)} See related topics
```

**Edit, macro command**

Use these commands from the Edit menu: Cut, Copy, Paste, or Select All. You can also have the macro open the Paste Special dialog box and wait for input while the macro runs.

The Edit macro command is used mostly for putting data on the Clipboard or pasting it.

### **Enter, macro command**

Enter the current record in the database. This command is equivalent to pressing ENTER or clicking the Enter icon.



## **Exit, macro command**

Exit Approach.

## **Export, macro command**

Do one of the following:

- Set Approach to open the Export Data dialog box during the macro and wait for the user to complete the dialog box.
- Set export options now. Click Edit Export to select the records and fields to be exported, as well as the file to export to.

## Find, macro command

Do one of the following:

- Do a named find.  
Select a named find from the "Named find/sort" box.  
To create a named find or edit an existing named find for your macro, click New Find or Edit Find.
- Go to Find during the macro.  
Users of your macro can then create a find request and execute it.
- Open the Find Assistant during the macro.  
Users of your macro can then create a find and execute it.

**Note** If your macro includes any of the three instructions above, consider what you want to happen if the find fails to find any records. For example, you may want to display a message telling users to try again. Create a macro that Approach can run in the event that no records are found, and select that macro in the box under "When no records are found, run macro."

- Choose Find Again during the macro.  
Users of your macro can modify the previous find conditions to further narrow the results.
- Refresh the found set to include the latest data from a network database.
- Find all records so that the next macro instruction affects all records in the database.

## **Import, macro command**

Do one of the following:

- Set Approach to open the Import Data dialog box during the macro and wait for the user to complete the dialog box.
- Set or edit import options now.
  - Click Define Import File to set up a new import.
  - Click Edit Import Setup to modify existing import options.



## Overview: Macros

### What is a macro?

A macro is a series of instructions, written by you and executed by Approach, that can simplify tasks, speed up their accomplishment, and thus make you more productive.

You name the macro and write the instructions, using one or more macro commands supplied by Approach. Then you assign the macro to an event that runs the macro. Common events include clicking a [button](#) that you add to a view or pressing a function key that you define when you create the macro.

### What's the benefit of creating a macro?

Macros simplify your work by automating repetitive tasks. You can link macros to each other to automate a series of tasks. For example, you can create macros to do the following:

- Automate procedures you normally perform from the keyboard or with the mouse, such as changing the color of text.
- Perform complex tasks and programming procedures, such as [loops](#) and [if-then-else](#) statements.
- Guide users who are unfamiliar with Approach through tasks and applications that you create and control.

### Examples

You can use a macro to perform a simple task, such as switching from a form to a report, or multiple tasks, such as finding all unpaid invoices, sorting them by date in ascending order, switching to a past-due notice form letter, and printing individual past-due notices.

### What's the first step in creating a macro?

Plan ahead. Thoroughly understand the task you want to accomplish with the macro. List the instructions you want to give Approach, step by step.

If the task is complex, here's how to have Approach write most of the macro for you:

From the Edit menu, choose Script & Macros, and then choose [Record Transcript](#). Then do the task. As you do the task, Approach records your actions using the macro language.

When you finish the task, turn off Record Transcript: From the Edit menu, choose Script & Macros, and then choose Stop Recording. Go to the Define Macro dialog box, and edit the macro.

### What macro commands are available in Approach?

See [Macro commands](#) for descriptions of each command.

### Combining macros with LotusScript

Approach's macro language doesn't allow you to automate everything you can do in the application. You can control more of Approach by writing programs using LotusScript. You may then want to incorporate a LotusScript program into a macro, or conversely, incorporate a macro into a script.

See [Running Script functions with a macro](#).

### Running macros

<u>To run a macro from</u>	<u>Do this</u>
The Run Macro menu	From the Edit menu, choose Script & Macros, and then choose Run Macro.  See <a href="#">Adding macros to the Run Macro menu</a> .
An assigned function key	Press the function key.
A button	Tab to or away from the button, or click the button.
An object	Tab to or away from the object, or select the object.
A field	Tab to or away from the field, or change the data in the field.

A view	Switch to or from the view.
Opening an Approach file	Name the macro <b>Open</b> .
Closing an Approach file	Name the macro <b>Close</b> .
A list of all macros	From the Edit menu, choose Script & Macros, and then choose Macros. Select the macro to run, and click Run.

---

{button ,AL(`H\_CREATING\_MACROS\_BASED\_ON\_EXISTING\_MACROS\_STEPS;H\_CREATING\_NEW\_MACROS\_STEPS;H\_DELETING\_MACROS\_STEPS;H\_EDITING\_MACROS\_STEPS;H\_PRINTING\_MACRO\_COMMANDS\_STEPS;H\_SAMPLE\_MACRO\_PROCEDURES\_CS;H\_ATTACHING\_MACROS\_STEPS',0)} [See related topics](#)

## Macro commands

Browse

Close

Delete

Dial

Edit

Enter

Exit

Export

Find

Import

Mail

Menu Switch

Message

Open

Page To

Print

Print Preview

Records

Replicate

Run

Save

Send Key

Set

Sort

Spell Check

Tab

View

Zoom

**Mail, macro command**

Do one of the following:

- Set Approach to open the TeamMail dialog box during the macro and wait for the user to complete the dialog box.
- Set mailing options now. Click Edit - TeamMail to send an e-mail during the macro.

## **Menu Switch, macro command**

Switch to the menu bar you specify. To create a custom menu now, go to Design and click [Customize Menus](#).

## Message, macro command

Display a message box that contains the title and text you enter.

You can define one of two buttons to appear in the message box.

You must give the button a name and attach an instruction to it. The instruction can be

- A macro
- **\*\*CONTINUE\*\***, which executes the next instruction in the current macro
- **\*\*STOP\*\***, which ends the macro

---

{button ,AL(`H\_RUNNING\_MACROS\_FROM\_BUTTONS\_IN\_A\_MESSAGE\_BOX\_STEPS;'0)} [See related topics](#)

## **Open, macro command**

Do one of the following:

- Set Approach to open the Open dialog box during the macro and wait for the user to complete the dialog box.
- Name the file that you want to open at this point in the macro.

The file can be another Approach file, a different database file, or another application, such as Lotus 1-2-3. You could even open a communication application that uses a script to upload your data to another computer.

**Page To, macro command**

Go to a page of a multi-page form.

**Note** Page To works within a single record. To go to a different record, use the Records macro command.



## Printing macros

Prints the instructions that make up a macro.

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Select the macro you wish to print.
3. Click Edit.  
The Define Macro dialog box appears.
4. Click Print.
5. Click OK to close the Define Macro dialog box.
6. Click Done.

---

{button ,AL(^H\_DEFINE\_MACRO\_DIALOG\_BOX\_REF;H\_EDITING\_MACROS\_STEPS;H\_MACRO\_COMMANDS\_ALPHA\_REF;H\_MACROS\_OVER;H\_SAMPLE\_MACRO\_PROCEDURES\_CS;H\_APPROACH\_FILE\_PROPERTIES\_REF',0)} [See related topics](#)

## **Print, macro command**

Do one of the following:

- Set Approach to open the Print dialog box during the macro and wait for the user to complete the dialog box.
- Set printing options now and print automatically during the macro. Click Edit Print.

## **Print Preview, macro command**

Go to [Print Preview](#).

## Recording macros and scripts

Record a transcript of actions you do in Approach, and then create a macro or LotusScript procedure based on the transcript.

1. From the Edit menu, choose Script & Macros, and then choose Record Transcript.
2. Under Record, select whether you want the transcript recorded as a macro, a script, or a script to be inserted in the IDE at the current location of the insertion point.
3. Do one of the following:
  - Select the name of an existing macro from the "As macro" drop-down box, or enter a new name.
  - Select the name of an existing script from the "As script" drop-down box, or enter a new name.
4. Click Record.
5. Execute the operations in Approach you want to record.
6. From the Edit menu, choose Script & Macros, and then choose Stop Recording.  
The Define Macro dialog box or the IDE appears, depending on how you record the transcript.
7. When you are finished editing the macro or script, do one of the following:
  - To save the macro, click OK.
  - To save the script, choose File - Save Scripts.

**Note** You can overwrite existing macros and scripts if you choose to by entering their names in the "As macro" or "As script" drop-down boxes.

---

{button ,AL('H\_CREATING\_NEW\_MACROS\_STEPS;H\_DEFINE\_MACRO\_DIALOG\_BOX\_REF;H\_CONVERTING\_MACROS\_TO\_SCRIPTS\_STEPS;',0)} [See related topics](#)

## Records, macro command

Go to a record, hide a record, duplicate a record, or create a new record.

---

```
{button ,AL(`H_CREATING_LOOPING_MACROS_STEPS;H_SETTING_A_VALUE_IN_A_FIELD_WITH_A_MACRO_STEPS;',0)} See related topics
```

## **Replicate, macro command**

Do one of the following:

- Set Approach to open the Replicate Notes Database dialog box during the macro and wait for the user to complete the dialog box.
- Set replication options now and replicate automatically during the macro. Click [Edit Replicate](#).

## Running macros from buttons in a message box

By default, the message box displays an OK button which continues the current macro when pressed.

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Click New.  
The Define Macro dialog box appears.
3. Enter a name for the macro in the "Macro name" box.
4. (Optional) To run the macro by pressing a function key, select a key in the "Function key" box.
5. Select the Message command from the "Command" box.
6. Enter the title and text of the message box.
7. Enter the name of the button.
8. Select the macro that runs when users click the button.
9. Click OK to close the Define Macro dialog box.
10. Click Done.

---

{button ,AL('H\_CREATING\_LOOPING\_MACROS\_STEPS;H\_DEFINE\_MACRO\_DIALOG\_BOX\_REF;H\_DEFINING\_A\_CONDITIONAL\_MACRO\_STEPS;H\_FINDING\_A\_SET\_OF\_RECORDS\_WITH\_A\_MACRO\_STEPS;H\_RUNNING\_SCRIPT\_FUNCTIONS\_WITH\_A\_MACRO\_STEPS;H\_SAVING\_A\_FIND\_REQUEST\_AS\_PART\_OF\_A\_MACRO\_STEPS;H\_SETTING\_A\_VALUE\_IN\_A\_FIELD\_WITH\_A\_MACRO\_STEPS;H\_SWITCHING\_TO\_ANOTHER\_VIEW\_WITH\_A\_MACRO\_STEPS;H\_USING\_AN\_IF\_CALCULATION\_IN\_A\_MACRO\_STEPS;';0)} [See related topics](#)

## Running script functions with a macro

Use a macro to call a global LotusScript function or procedure.

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Click New.  
The Define Macro dialog box appears.
3. Enter a name for the macro in the "Macro name" box.
4. (Optional) To run the macro by pressing a function key, select a key in the "Function key" box.
5. Select Run from the "Command" box.
6. Select the script function or procedure you want to run from the "Run macro" box.
7. If you want to return to the next line in this macro after the script is executed, select "Return to the next line in this macro."
8. Click OK to close the Define Macro dialog box.
9. Click Done.

---

{button ,AL(`H\_CREATING\_LOOPING\_MACROS\_STEPS;H\_DEFINE\_MACRO\_DIALOG\_BOX\_REF;H\_DEFINING\_A\_CONDITIONAL\_MACRO\_STEPS;H\_FINDING\_A\_SET\_OF\_RECORDS\_WITH\_A\_MACRO\_STEPS;H\_RUNNING\_MACROS\_FROM\_BUTTONS\_IN\_A\_MESSAGE\_BOX\_STEPS;H\_SAVING\_A\_FIND\_REQUEST\_AS\_PART\_OF\_A\_MACRO\_STEPS;H\_SETTING\_A\_VALUE\_IN\_A\_FIELD\_WITH\_A\_MACRO\_STEPS;H\_SWITCHING\_TO\_A\_NOTHER\_VIEW\_WITH\_A\_MACRO\_STEPS;H\_USING\_AN\_IF\_CALCULATION\_IN\_A\_MACRO\_STEPS;';0)} [See related topics](#)



## Run, macro command

Do one of the following:

- Run another macro or a global script.  
Branch to the macro or global script you select. This transfers control to the selected macro or global script.
- Run a macro and then return to the next line of the originating macro.  
The macro you select becomes a subroutine of the macro you're working on. After the selected macro finishes running, control returns to the originating macro.
- Write a formula whose result determines the next instruction on the macro. The formula must evaluate to either Yes or No.
  - Click Formula to open the Formula dialog box. Write the formula. When Approach recognizes the formula as valid, the checkered flag is no longer crossed out:



- Select an instruction for Approach to follow if the formula evaluates to Yes ("is true").
- (Optional) Select an instruction for Approach to follow if the formula evaluates to No ("else").

---

```
{button ,AL(`H_CREATING_LOOPING_MACROS_STEPS;H_DEFINING_A_CONDITIONAL_MACRO_STEPS;';0)}
```

[See related topics](#)

## Sample macro procedures

### Choose a procedure

[Creating looping macros](#)

[Defining a conditional macro](#)

[Running macros from buttons in a message box](#)

[Setting a value in a field with a macro](#)

[Switching to another view with a macro](#)

---

{button ,AL(`H\_WORKING\_WITH\_MACROS\_CS;H\_MACROS\_OVER;H\_MACRO\_COMMANDS\_ALPHA\_REF;H\_RECORDING\_MACROS\_AND\_SCRIPTS\_STEPS',0)} [See related topics](#)

## **Save, macro command**

Do one of the following:

- Set Approach to open the Save As dialog box during the macro and wait for the user to complete the dialog box.
- Automatically save the Approach file (.APR) at this point in the macro.

**Note** Approach saves all changes to data automatically, so if your macro users are only entering or editing data, you don't need to use this macro command.

## Send Key keystrokes

### Keyboard keys

To enter nonprinting keyboard keys (such as Tab or Backspace), or keys that perform actions in the active window (such as Page Up), in the Keystroke sequence box of the Send Key command use the key codes from the following table. Type the key code surrounded by braces in the Keystroke sequence box. The key code can be either uppercase or lowercase.

<b>Key</b>	<b>Code</b>
Backspace	{BS} or {BKSP} or {BACKSPACE}
Break	{BREAK}
Caps Lock	{CAPSLOCK}
Clear	{CLEAR}
Del	{DEL} or {DELETE}
Down arrow	{DOWN}
End	{END}
Enter	~ or {ENTER}
Esc	{ESC} or {ESCAPE}
Function keys	{F1} to {F16}
Help	{HELP}
Home	{HOME}
Ins	{INSERT}
Left arrow	{LEFT}
Num Lock	{NUMLOCK}
Pg Dn	{PGDN}
Pg Up	{PGUP}
Right arrow	{RIGHT}
Scroll lock	{SCROLLLOCK}
Tab	{TAB}
Up arrow	{UP}

To enter a character from the following table, enclose it in braces as shown.

<b>Character</b>	<b>Code</b>
Brace	{{ } or {}
Bracket	{[ ] or []}
Caret	{^}
Parenthesis	{( ) or {}}
Percent sign	{%}
Plus sign	{+}
Tilde	{~}

### Combination keys

The following table shows how to designate keys pressed in combination with ALT, CTRL, or SHIFT.

<b>Combination key</b>	<b>Code</b>	<b>Example</b>
ALT	%	%{F4} represents

		ALT+F4
CTRL	^	^{F4} represents CTRL+F4
SHIFT	+	+{F4} represents SHIFT+F4

To apply a combination key to a sequence of keys, enclose the sequence in parentheses. For example, +(xy) holds down the SHIFT key for both x and y. It is equivalent to +x+y.

### Errors

Send Key does not work if the keystroke sequence contains any of the following:

- An unmatched brace
- An incorrectly entered key code
- More than 30,000 characters

---

{button ,AL('H\_SEND\_KEY\_MACRO\_COMMAND\_REF;H\_CREATING\_KEYSTROKE\_SEQUENCES\_IN\_MACROS\_STEPS;H\_DEFINE\_MACRO\_DIALOG\_BOX\_REF;H\_CREATING\_NEW\_MACROS\_STEPS;',0)} [See related topics](#)

## Send Key, macro command

Include keystrokes in a macro so that your macro can perform operations that are not available through the Approach macro commands. You can include keystrokes in a macro by entering them in the Keystroke sequence box.

### What are keystrokes?

The name of every command and every dialog box option in Approach has one underlined character. That character is the keystroke you use to execute the command or select the option. For example, to add a page to a form, you switch to the Design environment and choose Form - Add Page. The keystrokes for that command are **r** and **d**.

Use the keys ALT and CTRL in combination with other keys to execute some commands. Press ALT to go to the menu bar. For example, press **ALT** and **v** to open the View menu. Then, to display the rulers, press **r**. The whole sequence is **ALT v r**.

Sometimes there is more than one key combination that you can use to execute a command. For example, pressing CTRL and **j** also displays the rulers.

For information about entering nonprinting keys, see [Send Key keystrokes](#).

---

{button ,AL(`H\_SEND\_KEY\_KEYSTROKES\_REF;H\_CREATING\_KEYSTROKE\_SEQUENCES\_IN\_MACROS\_STEP  
S;H\_DEFINE\_MACRO\_DIALOG\_BOX\_REF;H\_CREATING\_NEW\_MACROS\_STEPS;');0)} [See related topics](#)

### Setting a value in a field with a macro

Create a macro that changes the value in a field for all records in a database, automatically going from one record to the next and setting values until all records are updated.

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Click New.  
The Define Macro dialog box appears.
3. Enter a name for the macro in the "Macro name" box.
4. (Optional) To run the macro by pressing a function key, select a key in the "Function key" box.
5. Add the Set command to the list and select a field.
6. Enter a value or write a formula for the selected field in the "To this value" box.
7. Add the Records command to the list and select Next Record.
8. Add the Run command to the list and select the current macro.  
The macro stops after it reaches the value in the last record.
9. Click OK to close the Define Macro dialog box.
10. Click Done.

---

{button ,AL(`H\_CREATING\_LOOPING\_MACROS\_STEPS;H\_DEFINE\_MACRO\_DIALOG\_BOX\_REF;H\_DEFINING\_A\_CONDITIONAL\_MACRO\_STEPS;H\_FINDING\_A\_SET\_OF\_RECORDS\_WITH\_A\_MACRO\_STEPS;H\_RUNNING\_MACROS\_FROM\_BUTTONS\_IN\_A\_MESSAGE\_BOX\_STEPS;H\_RUNNING\_SCRIPT\_FUNCTIONS\_WITH\_A\_MACRO\_STEPS;H\_SAVING\_A\_FIND\_REQUEST\_AS\_PART\_OF\_A\_MACRO\_STEPS;H\_SWITCHING\_TO\_A\_NOTHER\_VIEW\_WITH\_A\_MACRO\_STEPS;H\_USING\_AN\_IF\_CALCULATION\_IN\_A\_MACRO\_STEPS;H\_FOR\_MULAS\_OVER;','0)} [See related topics](#)

## **Set, macro command**

Set the field you specify to the value you enter or the formula you define (click the Formula button).

Use Set for any field, except a calculated field.

---

{button ,AL(`H\_SETTING\_A\_VALUE\_IN\_A\_FIELD\_WITH\_A\_MACRO\_STEPS;`,`0)} [See related topics](#)



## **Sort, macro command**

Do one of the following:

- Set Approach to open the Sort dialog box during the macro and wait for the user to complete the dialog box.
- Set sort options now to sort records automatically at this point in the macro.

Set sort options for summary fields. Click [Summaries](#).

**Spell Check, macro command**

Open the Spell Check dialog box during the macro to check the spelling of data on records, including text in memo fields.

## Switching to another view with a macro

Use a macro like this anytime you need to switch from one view to another.



### Show me a QuickDemo

1. From the Edit menu, choose Script & Macros, and then choose Macros.
2. Click New.  
The Define Macro dialog box appears.
3. Enter a name for the macro in the Macro name box.
4. (Optional) To run the macro by pressing a function key, select a key in the Function key box.
5. Under Switch, show, or hide views, click Switch the current view to, and select a view in the View list.
6. Click OK to close the Define Macro dialog box.
7. Click Done.

---

```
{button ,AL(`H_CREATING_LOOPING_MACROS_STEPS;H_DEFINE_MACRO_DIALOG_BOX_REF;H_DEFINING_A_CONDITIONAL_MACRO_STEPS;H_FINDING_A_SET_OF_RECORDS_WITH_A_MACRO_STEPS;H_RUNNING_MACROS_FROM_BUTTONS_IN_A_MESSAGE_BOX_STEPS;H_RUNNING_SCRIPT_FUNCTIONS_WITH_A_MACRO_STEPS;H_SAVING_A_FIND_REQUEST_AS_PART_OF_A_MACRO_STEPS;H_SETTING_A_VALUE_IN_A_FIELD_WITH_A_MACRO_STEPS;H_USING_AN_IF_CALCULATION_IN_A_MACRO_STEPS;`,`0)} See related topics
```

**Tab, macro command**

Tab to an object. To find out where an object is in the tab order, in Design, choose View - Show Tab Order.

**View, macro command**

Go to another view in the Approach file, show a view, or hide a view.

## Working with macros

### Choose a task

[Adding macros to the Run Macro menu](#)

[Converting macros to scripts](#)

[Creating new macros](#)

[Creating macros based on existing macros](#)

[Deleting macros](#)

[Editing macros](#)

[Printing macros](#)

[Running script functions with a macro](#)

---

{button ,AL('H\_SAMPLE\_MACRO\_PROCEDURES\_CS;H\_MACROS\_OVER;H\_RECORDING\_MACROS\_AND\_SC  
RIPTS\_STEPS;H\_MACRO\_COMMANDS\_ALPHA\_REF',0)} [See related topics](#)

**Zoom, macro command**

Scale the current window by zooming in or out, or zooming to a specific percent.

## Adding buttons to run macros

Add a button to a view and attach a macro to the button. You can run the macro in Browse or Print Preview.



### Are you in Design?

1. From the Create menu, choose Control, and then choose Button.



2. Drag to draw the button.  
The InfoBox appears.
3. In the Macros tab of the InfoBox, select the user action that starts the macro.  
If you need to create a macro, see Creating new macros.
4. Select the macro to run.
5. Click the Basics tab.
6. Enter a label for the button in the "Button text" box.
7. Select display options and a shadow color for the button.
8. Click the Font tab.



9. Select properties for the button label.
10. (Optional) Move, collapse, or close the InfoBox.

---

```
{button ,AL(^H_EDITING_MACROS_STEPS;H_SWITCHING_TO_ANOTHER_VIEW_WITH_A_MACRO_STEPS;H_RUNNING_MACROS_FROM_BUTTONS_IN_A_MESSAGE_BOX_STEPS;H_SAMPLE_MACRO_PROCEDURE S_CS;',0)} See related topics
```



## Adding multiple objects to a view

Use the Tools palette to add fields and graphic objects to a view.



### Are you in Design?

1. Press CTRL+L.

The Tools palette appears.

2. Double-click a tool in the Tools palette.



The mouse pointer changes to the selected tool.

3. Drag across the view to create the object.
4. Repeat step 3 until you're finished adding that type of object.
5. Click the selection tool.



---

{button ,AL('H\_ALIGNING\_AND\_DISTRIBUTING\_OBJECTS\_STEPS;H\_BASIC\_PROPERTIES\_OF\_OBJECTS\_AND\_FIELDS\_CS;H\_DRAWING\_GEOMETRIC\_OBJECTS\_STEPS;H\_GROUPING\_AND\_UNGROUPING\_OBJECTS\_STEPS;H\_NAMING\_VIEWS\_AND\_OBJECTS\_STEPS;','0)} [See related topics](#)

## Details: Adding text blocks

### Text blocks and text fields

- A text block is an object that holds text you type directly into a view, such as a name for the view or instructions for entering data. It is part of the design of the view, not part of a record or database.
- A text field is a field type that you define in a database. Text fields can only contain as many characters as you specify in Field Definition and are used to store text-based information such as names or addresses.

### Margins and tabs in text blocks

When you work in a text block, the top ruler shows margins and tab stops.

<u>To</u>	<u>Do this</u>
Change margins	Drag the margin arrow to a new position
Change a tab position on the ruler	Drag the tab arrow
Create a tab stop	Click the ruler
Delete a tab stop	Drag the arrow off the ruler

---

{button ,AL('H\_ADDING\_TEXT\_BLOCKS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_TYPES\_OF\_FIELDS\_OVER;H\_SHOWING\_RULERS\_STEPS',0)} [See related topics](#)

## Adding text blocks

Text you enter using this procedure becomes part of the design of the view, not part of a database.

**Troubleshooting** If you want to make a block of text part of a record, create a field and define it as text or memo.



### Are you in Design?

1. Choose Create - Drawing - Text.
2. Drag to draw the text block.
3. Enter the text.
4. Click outside the text block when you're done to deselect the text block.

### Adding text blocks with the Tools Palette

1. Choose View - Show Tools Palette.



2. Click the Text SmartIcon.



The SmartIcon stays selected until you select a different one.

3. Drag to draw the text block.
4. Enter the text.
5. Click outside the text block when you're done to deselect the text block.

**Note** You can always change the formatting for, move, and resize the text block.

---

{button ,AL(`H\_ADDING\_TEXT\_BLOCKS\_DETAILS`,1)} [See details](#)

{button ,AL(`H\_ENTERING\_TEXT\_IN\_FORM\_LETTERS\_STEPS;H\_SELECTING\_TEXT\_IN\_A\_TEXT\_BLOCK\_STEPS;H\_CHANGING\_PROPERTIES\_OF\_TEXT\_IN\_TEXT\_BLOCKS\_AND\_OBJECTS\_STEPS;H\_ADDING\_TEXT\_TO\_MAILING\_LABELS\_STEPS;H\_ADDING\_DATES\_TIMES\_OR\_PAGE\_NUMBERS\_TO\_REPORTS\_STEPS`,`0`)} [See related topics](#)

## Applying named styles

A named style applies a set of defined properties to the selected object.



### Are you in Design?

1. Select one or more objects.
2. Choose Named Style from the context menu.



- If the InfoBox is visible, focus changes to the Style tab.
- If the InfoBox is not visible, it is opened to the Style tab.



3. Select a style from the "Style name" box.
4. (Optional) Move, collapse, or close the InfoBox.

---

```
{button ,AL(`H_DELETING_NAMED_STYLES_STEPS;H_COPYING_NAMED_STYLES_STEPS;H_DEFINING_NEW_NAMED_STYLES_STEPS;H_EDITING_NAMED_STYLES_STEPS;H_MANAGING_NAMED_STYLES_STEPS;H_REDEFINING_NAMED_STYLES_STEPS;H_WORKING_WITH_NAMED_STYLES_OVER;`,`0)} See related topics
```

## Applying properties from another object (Fast Format)

Fast Format can apply properties only to objects in the same view.



### Are you in Design?

1. Select the object with the properties you want to copy.
2. Choose Fast Format on the context menu.



The mouse pointer changes shape:



3. Click the objects you want to apply the properties to.  
Each object you click inherits the line, color, and text properties of the selected object.
4. Choose Fast Format again to turn it off.

---

```
{button ,AL(^H_CHANGING_PROPERTIES_OF_TEXT_IN_TEXT_BLOCKS_AND_OBJECTS_STEPS;H_CHANGING_TEXT_ATTRIBUTES_OF_LABELS_OR_DATA_STEPS;H_DEFINING_NEW_NAMED_STYLES_STEPS;,'0)}
```

See related topics

## Creating an unbound field

An unbound field is not attached to a database field, so you cannot use it to enter into a database.

You can use it to start a macro or script. For example, you could create an unbound check box with the label "I need to start over." When the user selects this check box, the attached macro would delete any data the user entered and then create a new record.



### Are you in Design?

1. Select the field box, check box, or radio button tool from the Tools Palette.
2. Add the field where you want it to appear in the view.
  - If you create a field box, go to step 3.
  - If you create a check box or radio button, define values and enter a label.
3. Click the Basics tab of the InfoBox.



4. Select <unbound field> in the "Field" box.

---

{button ,AL(^H\_ADDING\_FIELDS\_TO\_A\_DATABASE\_STEPS;H\_ADDING\_FIELDS\_TO\_A\_VIEW\_STEPS;H\_ATTAC  
HING\_MACROS\_STEPS;';0)} [See related topics](#)

## Moving views



### Are you in Design?

1. Click the tab of the view you want to move.
2. Click the tab again.  
The mouse pointer changes shape.
3. Drag the view to its new position.

---

{button ,AL(^H\_HIDING\_VIEWS\_STEPS;H\_NAMING\_VIEWS\_AND\_OBJECTS\_STEPS;';,0)} [See related topics](#)





## Changing the order of overlapping objects

Overlapping objects can be moved closer to the front or farther to the back to create an image and then grouped into a single object.



### Are you in Design?

1. Select the object.
2. Choose one of the following actions:

<u>To place object</u>	<u>Choose</u>
First in stack (on top)	Object - Arrange - Bring to Front 
Last in stack (on bottom)	Object - Arrange - Send to Back 
One level up from current position	Object - Arrange - Bring Forward 
One level back from current position	Object - Arrange - Send Backward 

---

{button ,AL(`H\_GROUPING\_AND\_UNGROUPING\_OBJECTS\_STEPS;H\_ALIGNING\_AND\_DISTRIBUTING\_OBJEC  
TS\_STEPS';,0)} [See related topics](#)



## Copying named styles



### Are you in Design?

1. From the context menu, choose Named Style.



The InfoBox appears and displays the Style tab.



2. Click Manage Styles.  
The Named Styles dialog box appears.
3. Select the named style you want to copy.
4. Click Copy.  
The Define Style dialog box appears.
5. Enter the name of the new named style in the "Style name" box.
6. (Optional) To copy an existing style to the new named style, in the "Based on" box, select a style.  
This causes future changes to the existing named style to also show up in the new style you create.
7. To define the properties of the new named style, click the Font, Lines & Colors, Label, Picture, and Background tabs and set the options.
8. Click OK to close the Define Style dialog box.  
The new named style appears in the list.
9. Click Done to close the Named Styles dialog box.
10. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H\_APPLYING\_NAMED\_STYLES\_STEPS;H\_DEFINING\_NEW\_NAMED\_STYLES\_STEPS;H\_DELETIN  
G\_NAMED\_STYLES\_STEPS;H\_EDITING\_NAMED\_STYLES\_STEPS;H\_WORKING\_WITH\_NAMED\_STYLES\_O  
VER;';0)} See related topics

## **Details: Cutting or copying objects or text**

### **Cut and Copy commands**

- Cut removes the selection from the view and puts it on the Clipboard.
- Copy leaves the selection in place and puts a copy of it on the Clipboard.
- The Clipboard stores only one item at a time. When you cut or copy, you erase the current contents of the Clipboard.

### **Location of pasted objects**

If you don't specify a location, the object is pasted on top of the original object. You can then move the pasted object.

If you paste into another view, the object is pasted at the same location as in the original view.

### **Formatted text**

When you cut or copy formatted text and then paste it into a text block or form letter, the text retains all its original formatting, such as bold and italics.

---

{button ,AL('H\_CUTTING\_OR\_COPYING\_OBJECTS\_OR\_TEXT\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_TEXT\_ATTRIBUTES\_FOR\_LABELS\_AND\_DATA\_CS','0')} [See related topics](#)

## Cutting or copying objects or text



### Are you in Design?

1. Select the object or text in a text block.
2. Choose Edit - Cut or Copy.



3. Click where you want to paste the selection.  
When you paste text, you must click in a text object. Text is pasted at the insertion point.
4. Choose Edit - Paste.



**Note** To cut or copy all the objects in a view, choose Edit - Select All before using Edit - Cut or Edit - Copy.

---

{button ,AL('H\_CUTTING\_OR\_COPYING\_OBJECTS\_OR\_TEXT\_DETAILS',1)} [See details](#)

{button ,AL('H\_SELECTING\_OBJECTS\_STEPS;H\_SELECTING\_TEXT\_IN\_A\_TEXT\_BLOCK\_STEPS;H\_COPYING\_SELECTIONS\_TO\_THE\_CLIPBOARD\_STEPS;H\_INSERTING\_LINKED\_OBJECTS\_FROM\_THE\_CLIPBOARD\_STEPS;H\_MOVING\_OBJECTS\_TO\_ANOTHER\_PAGE\_IN\_FORMS\_STEPS;',0)} [See related topics](#)

## Defining a named style based on an existing object's properties

If you already have an object with properties you want to apply to other objects, use this procedure to save the properties as a named style.



### Are you in Design?

1. Double-click the object.



- If the InfoBox is visible, focus changes to the Style tab.
- If the InfoBox is not visible, it is opened to the Style tab.



2. Click Create Style.

The Create Named Style dialog box appears.

3. Enter the name of the named style in the "Style name" box.
4. (Optional) Enter a description for the style in the "Description" box.
5. Click OK to close the Create Named Style dialog box.

The new named style appears in the list. The new style has all the properties set in the InfoBox for the selected object.

6. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H APPLYING\_NAMED\_STYLES\_STEPS;H\_REDEFINING\_NAMED\_STYLES\_STEPS;H\_MANAGING\_NAMED\_STYLES\_STEPS;H\_WORKING\_WITH\_NAMED\_STYLES\_OVER;H\_DEFINING\_NEW\_NAMED\_STYLES\_STEPS;',0)} [See related topics](#)

## Defining new named styles



### Are you in Design?

1. From the context menu, choose Named Style.



The InfoBox appears and displays the Style tab.



2. Click Manage Styles.  
The Named Styles dialog box appears.
3. Click New.  
The Define Style dialog box appears.
4. Enter the name of the new named style in the "Style name" box.
5. (Optional) To base the new named style on an existing one in the "Based on" box, select a style.  
This causes future changes to the existing named style to also show up in the new style you create.
6. To define attributes and properties of the named style, click the Font, Lines & Colors, Label, Picture, and Background tabs and set the options.
7. Click OK to close the Define Style dialog box.  
The new named style appears in the list.
8. Click Done to close the Named Styles dialog box.
9. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_APPLYING\_NAMED\_STYLES\_STEPS;H\_COPYING\_NAMED\_STYLES\_STEPS;H\_DELETING\_NAMED\_STYLES\_STEPS;H\_EDITING\_NAMED\_STYLES\_STEPS;H\_WORKING\_WITH\_NAMED\_STYLES\_OVER;H\_DEFINING\_A\_NAMED\_STYLE\_BASED\_ON\_AN\_OBJECTS\_PROPERTIES\_STEPS;H\_LINE\_AND\_COLOR\_PROPERTIES\_CS;H\_TEXT\_ATTRIBUTES\_FOR\_LABELS\_AND\_DATA\_CS;H\_DRAWING\_IN\_PICTUREPLUS\_FIELDS\_STEPS;');0)} See related topics

## Deleting elements of a view

Approach lets you permanently delete anything from a view. If you delete a field, the field is deleted only from the current view, not from the database or from other views.



### Are you in Design?

1. Select the element.
2. Choose Edit - Clear.

**Note** You can undo the deletion of any element you delete.

---

{button ,AL(^H\_DELETING\_VIEWS\_STEPS;H\_DUPLICATING\_VIEWS\_STEPS;H\_DELETING\_FIELDS\_FROM\_A\_D  
ATABASE\_STEPS;H\_MOVING\_OR\_DELETING\_FORM\_LETTER\_FIELDS\_STEPS;H\_SELECTING\_REMOVING  
\_AND\_DELETING\_REPORT\_PANELS\_STEPS;','0)} [See related topics](#)

## Deleting named styles



### Are you in Design?

1. Choose Named Style from the context menu.



- If the InfoBox is visible, focus changes to the Style tab.
- If the InfoBox is not visible, it is opened to the Style tab.



2. Click Manage Styles.  
The Named Styles dialog box appears.
3. Select the named style you want to delete.  
You can delete only styles that you created.
4. Click Delete.
5. Click OK in the message box.  
Deleting a named style does not affect the properties of existing objects that use the style.
6. Click Done to close the Named Styles dialog box.
7. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(^H\_APPLYING\_NAMED\_STYLES\_STEPS;H\_COPYING\_NAMED\_STYLES\_STEPS;H\_DEFINING\_NEW\_NAMED\_STYLES\_STEPS;H\_EDITING\_NAMED\_STYLES\_STEPS;H\_WORKING\_WITH\_NAMED\_STYLES\_OVER;0)} [See related topics](#)

## Deleting views



### Are you in Design?

1. Change to the view you want to delete.
2. Choose Delete from the context menu.

The name of the command changes depending on the current view. If, for example, you are in a worksheet, the command is Worksheet - Delete Worksheet.

3. Click Yes in the message box to delete the view.

---

{button ,AL(^H\_DUPLICATING\_VIEWS\_STEPS;H\_HIDING\_VIEWS\_STEPS;','0)} [See related topics](#)



## Drawing geometric objects



### Are you in Design?

1. Choose Create - Drawing and then the object: Line, Ellipse, Rectangle, or Rounded Rectangle.  
You can also show the Tools palette and click the icon for any of these geometric objects.

<u>Object</u>	<u>Tools palette icon</u>
Line	
Ellipse	
Rectangle	
Rounded Rectangle	

2. Drag to draw the object.

<u>To draw</u>	<u>Press SHIFT and use</u>
Circle	Ellipse
Square	Rectangle
Rounded square	Rounded rectangle
Straight line at 0, 45, or 90 degrees	Line

---

{button ,AL(`H\_ADDING\_MULTIPLE\_OBJECTS\_TO\_A\_VIEW\_STEPS;H\_BASIC\_PROPERTIES\_OF\_OBJECTS\_AND\_FIELDS\_CS;H\_SHOWING\_THE\_TOOLS\_PALETTE\_STEPS;H\_ALIGNING\_AND\_DISTRIBUTING\_OBJECTS\_STEPS;H\_DRAWING\_IN\_PICTUREPLUS\_FIELDS\_STEPS;`,`0)} [See related topics](#)

## Duplicating views



### Are you in Design?

1. Change to the view you want to duplicate.
2. Choose Duplicate from the context menu.

The name of the command changes depending on the current view. If, for example, you are in a form, the command is Form - Duplicate Form.

---

{button ,AL('H\_DELETING\_VIEWS\_STEPS;H\_CREATING\_APPROACH\_OLE\_OBJECTS\_IN\_APPROACH\_STEPS;',0)} See related topics

## Editing named styles



### Are you in Design?

1. Choose Named Style from the context menu.



- If the InfoBox is visible, focus changes to the Style tab.
- If the InfoBox is not visible, it is opened to the Style tab.



2. Click Manage Styles.  
The Named Styles dialog box appears.
3. Select the named style you want to edit.  
You can edit the default style as well as styles that you created.
4. Click Edit.  
The Define Style box dialog appears.
5. To define the properties of the new named style, click the Font, Lines & Colors, Label, Picture, and Background tabs and set the options.
6. Click OK to close the Define Style dialog box.
7. Click Done to close the Named Styles dialog box.
8. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(`H APPLYING\_NAMED\_STYLES\_STEPS;H\_COPYING\_NAMED\_STYLES\_STEPS;H\_DEFINING\_NEW\_NAMED\_STYLES\_STEPS;H\_DELETING\_NAMED\_STYLES\_STEPS;H\_WORKING\_WITH\_NAMED\_STYLES\_OVER;`,`0)} See related topics

## Grouping and ungrouping objects

When you group objects, you can treat them as a single object. One set of handles appears around the entire group. You can change any of the properties available in the InfoBox for all the grouped objects, at the same time.



**Are you in Design?**

### Grouping objects

1. Select the objects by dragging a selection rectangle around them, or SHIFT+click each object you want to group.
2. Choose Object - Group.



### Ungrouping objects

1. Select the grouped objects.
2. Choose Object - Ungroup.



---

{button ,AL('H\_CHANGING\_THE\_ORDER\_OF\_OVERLAPPING\_OBJECTS\_STEPS;H\_SELECTING\_OBJECTS\_STEPS;H\_ALIGNING\_AND\_DISTRIBUTING\_OBJECTS\_STEPS';,0)} [See related topics](#)

### Inserting dates or times

- Dates and times you enter using these procedures become part of the design of the view, not part of a database.
- Approach updates the date or time whenever you open, preview, or print the Approach file.

**Troubleshooting** If you want to make a date or time part of a record, create a field and define it as date or time.



Are you in Design?

### Inserting the date

Choose Insert - Today's Date on the context menu.



### Inserting the time

Choose Insert - Current Time on the context menu.



### Moving the date or time

Drag the date or time to move it where you want it to appear on the view.

---

{button ,AL('H\_ADDING\_DATES\_TIMES\_OR\_PAGE\_NUMBERS\_TO\_REPORTS\_STEPS;H\_CHANGING\_THE\_DATE\_FORMAT\_ON\_FORM\_LETTERS\_STEPS;',0)} See related topics

## Managing named styles



### Are you in Design?

1. Choose Named Style from the context menu.



- If the InfoBox is visible, focus changes to the Style tab.
- If the InfoBox is not visible, it is opened to the Style tab.



2. Click Manage Styles.  
The Named Style dialog box appears.
3. Create a new style, or select a style then edit, delete, or copy the style.
4. Click Done to close the Named Style dialog box.
5. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_WORKING\_WITH\_NAMED\_STYLES\_OVER;H\_DEFINING\_NEW\_NAMED\_STYLES\_STEPS;H\_REDEFINING\_NAMED\_STYLES\_STEPS;H\_EDITING\_NAMED\_STYLES\_STEPS;H\_APPLYING\_NAMED\_STYLES\_STEPS;H\_DELETING\_NAMED\_STYLES\_STEPS;H\_COPYING\_NAMED\_STYLES\_STEPS;','0)} See related topics

## Named styles



### Choose a task

[Defining a named style based on an existing object's properties](#)

[Redefining named styles](#)

[Managing named styles](#)

## **Named Styles dialog box**

Define the properties of a named style by either creating a new style or basing it on an existing one. You can edit the definition of a named style, copy it, delete it, or apply it to one or more objects.

### **Choose a task**

[Working with named styles](#)

[Defining new named styles](#)

[Copying named styles](#)

[Editing named styles](#)

[Deleting named styles](#)



## Pasting pictures in views

Pictures you paste using these procedures become part of the design of the view, not part of a database.

**Troubleshooting** To make a picture part of a record, so it shows only when you show that record, define a PicturePlus field and then add it to a view.



**Are you in Design?**

### Pasting pictures from a file

1. Click where you want to position the top left corner of the picture.  
If you don't click anywhere, the picture is pasted in the top left corner of the view.
2. Choose Edit - Picture - Import.
3. Specify the file you want to paste.
4. Click OK.

### Pasting pictures from the Clipboard

1. Select the picture in the picture's source application.
2. Choose Edit - Copy.
3. In Approach, click where you want to position the top left corner of the picture.  
If you don't click anywhere, the picture is pasted in the top left corner of the view.
4. Choose Edit - Paste.



---

{button ,AL('H\_ADDING\_PICTUREPLUS\_FIELDS\_TO\_A\_VIEW\_STEPS;H\_FILE\_EXTENSIONS\_IN\_APPROACH\_REF;H\_INSERTING\_LINKED\_OBJECTS\_FROM\_THE\_CLIPBOARD\_STEPS;H\_PASTING\_PICTURES\_IN\_FIELDS\_STEPS;',0)} [See related topics](#)

## Redefining named styles



### Are you in Design?

1. Double-click an object that has the named style you want to change.



2. Redefine properties and add new ones, using the options in the InfoBox.  
The object changes as you redefine the properties.
3. Click the Named Style tab in the InfoBox.



4. Click Redefine Style.  
The Redefine Style dialog box appears.
5. (Optional) Change the description for the style in the "Description" box.
6. Click OK to close the Redefine Style dialog box.
7. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL('H\_WORKING\_WITH\_NAMED\_STYLES\_OVER;H\_DEFINING\_NEW\_NAMED\_STYLES\_IN\_THE\_INFO\_BOX\_STEPS;H\_MANAGING\_NAMED\_STYLES\_STEPS;',0)} [See related topics](#)

## Selecting objects

A selected object has handles around it.



Are you in Design?

## Selecting an object

Click the object or its border.



## Selecting more than one object

Do one of the following:

- Drag a selection rectangle around the objects.
- SHIFT+click each object.

## Selecting all the objects in a view

Choose Edit - Select All.

## To deselect an object from several selected objects

SHIFT+click the object.

## Canceling a selection

Click another part of the view.

---

{button ,AL('H\_CUTTING\_OR\_COPYING\_OBJECTS\_OR\_TEXT\_STEPS;H\_GROUPING\_AND\_UNGROUPING\_OBJECTS\_STEPS;H\_MOVING\_OBJECTS\_STEPS;H\_SELECTING\_FIELDS\_STEPS;','0)} [See related topics](#)

## Selecting text in text blocks

A range of text is highlighted when it is selected.



Are you in Design?

### Selecting a text block

Click the text block.

If you select the entire text block, any changes you make apply to all text in the block.

### Showing the insertion point in text

1. Select the text block.
2. Click inside the text block.

A blinking insertion point appears where you click.

<u>To select</u>	<u>Do this</u>
A range of text	Drag across the text or SHIFT+click
One word	Double-click it

### Canceling a selection

Click another part of the view.

---

{button ,AL('H\_CHANGING\_TEXT\_ATTRIBUTES\_OF\_LABELS\_OR\_DATA\_STEPS;H\_SELECTING\_WITHIN\_FIEL  
DS\_REF;',0)} [See related topics](#)

## Showing data

In the Design environment, Approach has two ways to display fields. By toggling the View - Show Data command, you can see fields in either of the following ways:

- Displaying data from records
- Displaying field names, or in some cases, displaying only the structure of the view



**Are you in Design?**

## Showing data

Choose View - Show Data.



A check mark appears next to the menu item, to show that you turned on Show Data.

**Note** Be sure to turn on Show Data when you are looking at a crosstab or chart. Otherwise, you cannot see the data in the crosstab or the components of the chart.

## Showing field names

Choose View - Show Data.

The check mark disappears.

**Note** If the Approach file has joined databases, the database names appear along with the field names. For example, EMPLOYEE.Address indicates the Address field in the EMPLOYEE database.

---

{button ,AL('H\_JOINING\_DATABASE\_FILES\_STEPS;H\_ZOOMING\_IN\_AND\_OUT\_STEPS;',0)} [See related topics](#)

**Details: Showing rulers**

Rulers show the position of an object. As you move the pointer in the work area, lines in the rulers identify the pointer's position. If you move or resize an object, the lines show the size of the object.

1 inch or 1 centimeter on a ruler is equal to 1 inch or 1 centimeter on a printed page.

To change the measurement unit for the grid, choose File - User Setup - Approach Preferences and click the Display tab. In the Units box, select Inches or Centimeters.

---

{button ,AL('H\_SHOWING\_RULERS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_SETTING\_PREFERENCES\_FOR\_THE\_DESIGN\_ENVIRONMENT\_REF;H\_SNAPPING\_OBJECTS\_TO\_THE\_GRID\_STEPS;',0)} [See related topics](#)

## Showing rulers

The measurement unit you select for the grid determines the units for the rulers.



Are you in Design?

## Showing rulers

Choose View - Show Rulers.



## Hiding rulers

Choose View - Show Rulers.



---

{button ,AL(`H\_SHOWING\_RULERS\_DETAILS',1)} [See details](#)

{button ,AL(`H\_SETTING\_PREFERENCES\_FOR\_THE\_DESIGN\_ENVIRONMENT\_REF;H\_SNAPPING\_OBJECTS\_TO\_THE\_GRID\_STEPS;',0)} [See related topics](#)

### Showing the grid to help you design views

- The grid works like graph paper. It helps you see the alignment of objects in a view.
- The grid appears onscreen as dotted lines. It does not print.



Are you in Design?

### Showing the grid

Choose View - Show Grid.



**Tip** Show the grid. It's an easy way to tell you're in Design.

### Hiding the grid

Choose View - Show Grid.



---

{button ,AL('H\_SETTING\_PREFERENCES\_FOR\_THE\_DESIGN\_ENVIRONMENT\_REF;H\_SNAPPING\_OBJECTS\_TO\_THE\_GRID\_STEPS;',0)} [See related topics](#)



### **Showing the Internet Tools palette**

Show a floating Tools palette with SmartIcons for opening, saving, and publishing files to the Internet, and for accessing the SmartSuite reference library.

### **Showing the palette**

Choose View - Show Internet Tools.



### **Hiding the palette**

Choose View - Show Internet Tools.



### Showing the Tools palette

Show a floating Tools palette with SmartIcons for drawing objects, creating controls, adding fields, and creating data-entry types for fields.



Are you in Design?

### Showing the palette

Choose View - Show Tools Palette.



### Hiding the palette

Choose View - Show Tools Palette.



---

{button ,AL(^H\_ADDING\_MULTIPLE\_OBJECTS\_TO\_A\_VIEW\_STEPS;H\_DRAWING\_GEOMETRIC\_OBJECTS\_STEPS;0)} [See related topics](#)

### Snapping objects to the grid

- Force objects to line up along the grid when you draw, move, or resize them.
- Snapping works even when you hide the grid.



Are you in Design?

### Snapping objects to the grid

Choose View - Snap to Grid.



### Turning off snapping

Choose View - Snap to Grid.



---

{button ,AL(`H\_SETTING\_PREFERENCES\_FOR\_THE\_DESIGN\_ENVIRONMENT\_REF;H\_SHOWING\_THE\_GRID\_TO\_HELP\_YOU\_DESIGN\_VIEWS\_STEPS;','0)} [See related topics](#)

## Overview: Working with named styles

A named style is a set of object properties that you define and save. It lets you apply consistent formatting to objects in an Approach file, instead of applying one property at a time.

You can apply a named style to any object.

**Note** If you usually use Fast Format, but want to use the style information in many views, create a named style.

A named style can include such properties as

- Text attributes for field data and labels
- Borders, shadows, and fill color
- Line and color settings for all objects
- Picture settings for PicturePlus fields
- Width and color settings for drawn objects

The properties in a named style are the same as they are in the InfoBox, but by saving properties in a style you can easily apply them to more than one object. If you change any properties of a named style, all objects that use the style are updated to match the changes automatically.

If you apply a named style to an object, and then change one or more properties of that object, future changes to the named style do not update the object.

You can create a new style from scratch or base it on an existing style. Copy most of the properties from an existing style, change some of those properties, and create a separate style that has its own properties.

You can also create a new style based on the properties of an object. If you have an object that contains all the properties you want to apply to other objects, select the object then create a new named style.

You can also update an existing style by redefining it. All objects formatted with this style inherit the new properties.

---

{button ,AL(^H APPLYING\_NAMED\_STYLES\_STEPS;H\_COPYING\_NAMED\_STYLES\_STEPS;H\_DEFINING\_NEW\_NAMED\_STYLES\_STEPS;H\_DELETING\_NAMED\_STYLES\_STEPS;H\_EDITING\_NAMED\_STYLES\_STEPS;H\_SETTING\_DISPLAY\_PREFERENCES\_FOR\_THE\_APPROACH\_WINDOW\_REF',0)} [See related topics](#)

## Zooming in and out

Zoom in for a closer look. Zoom out to see the entire view reduced in size.



Are you in Design?

### Changing the zoom setting

1. Choose View - Zoom To.
2. Select a percentage from the available steps: 25, 50, 75, 85, 100, 200.

### Zooming in by steps

Choose View - Zoom In.



### Zooming out by steps

Choose View - Zoom Out.



### Returning to 100%

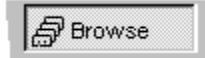
Choose View - Zoom To 100%.

**Note** You can only zoom in Design or Print Preview.

## Adding new records



Show me a QuickDemo



### Are you in Browse?

1. Click New Record in the action bar.



2. Enter data in fields.
3. Press ENTER to save the record.  
CTRL+N saves the current record and displays a new record.

Approach saves the record to the database immediately. Choosing File - Save is not necessary.

### Backing out of an unfinished record

Press ESC to back out of an unsaved record so that Approach does not enter the data in the database.

---

{button ,AL(`H\_DELETING\_SPECIFIC\_RECORDS\_STEPS;H\_MOVING\_BETWEEN\_FIELDS\_USING\_ENTER\_STEPS;H\_ADDING\_FIELDS\_TO\_A\_VIEW\_STEPS;H\_DUPLICATING\_RECORDS\_STEPS',0)} [See related topics](#)

## Changing pen properties for drawing in fields



### Are you in Browse?

1. Select the PicturePlus field.

The mouse pointer changes shape:



2. Choose PicturePlus - PicturePlus Properties.
3. Modify the pen width and pen color.
4. (Optional) Move, collapse, or close the InfoBox.

---

{button ,AL(^H\_DRAWING\_IN\_PICTUREPLUS\_FIELDS\_STEPS;H\_ADDING\_PICTUREPLUS\_FIELDS\_TO\_A\_VIEW\_STEPS;') } [See related topics](#)

## Deleting data from many records at once

**Caution** You cannot undo deleting data from many records.



### Are you in Browse?

1. Create a found set of all the records with data you want to delete.
2. Select the field you want to clear.  
In a worksheet, select the column by clicking its header.
3. Choose Fill Field on the context menu.
4. Under To the following, delete any data so the text box is empty.
5. Click OK.
6. Click Yes in the message box.



## Deleting pictures from records



### Are you in Browse?

1. Select the PicturePlus field.
2. Do one of the following:
  - To delete the picture permanently, choose Edit - Clear.
  - To delete the picture so you can use it in another record, choose Edit - Cut.

## Fill Field dialog box

### Choose a task

Deleting data from many records at once

Entering the same data into many records

## Changing to another language in the main dictionary

1. Choose Edit - Check Spelling.



2. Click Language Options.
3. Select the language you want in the "Language" box.
4. Click OK to return to the Spell Check dialog box.
5. Click OK.

---

{button ,AL(^H\_RUNNING\_THE\_SPELLING\_CHECKER\_STEPS;H\_SETTING\_OPTIONS\_FOR\_CHECKING\_SPELLING\_STEPS;',0)} [See related topics](#)

## **Spell Check dialog box**

### **Choose a task**

[Checking spelling](#)

[Setting options for checking spelling](#)

[Editing the user dictionary](#)

[Changing to another language in the main dictionary](#)

## Deleting all records

**Caution** You cannot undo deleting all records.

Make a backup of your database before deleting all records.



**Are you in Browse?**

### In forms, form letters, and envelopes

1. Press CTRL+F.



2. Type an asterisk (\*) in any field in the find request.
3. Click OK.

Approach finds all records.

4. Choose Delete - Found Set on the context menu.



5. Click Yes in the confirmation message box.

The Approach file and an empty database remain.

### In other views

1. Choose Edit - Select All.
2. Press DELETE.



3. Click Yes in the confirmation message box.

The Approach file and an empty database remain.

---

{button ,AL(^H\_DELETING\_A\_FOUND\_SET\_OF\_RECORDS\_STEPS;H\_DELETING\_SPECIFIC\_RECORDS\_STEPS;H\_EXPORTING\_DATA\_FROM\_APPROACH\_STEPS;H\_APP\_DELETING\_DATA\_FROM\_MANY\_RECORDS\_ATT\_ONCE\_STEPS;H\_DELETING\_FILES\_STEPS;:,0)} [See related topics](#)

## Deleting a found set of records

**Caution** You cannot undo deleting a found set of records.



Are you in Browse?

### In forms, form letters, and envelopes

1. Find the records you want to delete.
2. Choose Browse - Delete Found Set.
3. Click Yes in the confirmation message box.

### In other views

1. Find the records you want to delete.
2. Choose Delete - Found Set on the context menu.
3. Click Yes in the confirmation message box.  
Approach displays the remaining records in the file.

---

{button ,AL('H\_finding\_records\_with\_the\_find\_assistant\_over;H\_CREATING\_FIND\_REQUESTS\_STEPS;H\_DELETING\_ALL\_RECORDS\_STEPS;H\_DELETING\_SPECIFIC\_RECORDS\_STEPS;H\_FINDING\_DUPLICATE\_RECORDS\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_HIDING\_RECORDS\_STEPS;H\_THE\_FOUND\_SET\_OVER;H\_APP\_DELETING\_DATA\_FROM\_MANY\_RECORDS\_AT\_ONCE\_STEPS;',0)} See related topics

## Deleting specific records

**Caution** You cannot undo deleting a record.



Are you in Browse?

### In forms, form letters, and envelopes

1. Show the record.
2. Press CTRL+DELETE.



3. Click Yes in the confirmation message box.

### In other views

1. Select the record or records.
2. Press DELETE.



3. Click Yes in the confirmation message box.

---

{button ,AL('H\_FINDING\_RECORDS\_WITH\_THE\_FIND\_ASSISTANT\_OVER;H\_DELETING\_A\_FOUND\_SET\_OF\_RECORDS\_STEPS;H\_DELETING\_ALL\_RECORDS\_STEPS;H\_FINDING\_DUPLICATE\_RECORDS\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H HIDING\_RECORDS\_STEPS;H\_APP\_DELETING\_DATA\_FROM\_MANY\_RECORDS\_AT\_ONCE\_STEPS',0)} [See related topics](#)

## Drawing in PicturePlus fields

Draw on a picture to highlight or enhance it.

### Allowing drawing

1. In Design, double-click the PicturePlus field.
2. Click the Basics tab in the InfoBox.



3. Select Allow drawing.
4. (Optional) Move, collapse, or close the InfoBox.
5. Switch to Browse to begin drawing in the field.

### Drawing in the field

**Note** You cannot undo what you draw.

1. In Browse, select the PicturePlus field.

The mouse pointer changes shape:



2. Modify the field.

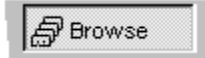
---

```
{button ,AL(^H_PASTING_PICTURES_IN_FIELDS_STEPS;H_PASTING_PICTURES_IN_VIEWS_STEPS;H_APP_C  
HANGING_PEN_PROPERTIES_FOR_DRAWING_IN_FIELDS_STEPS;H_APP_DELETING_PICTURES_FROM_  
RECORDS_STEPS;','0)} See related topics
```



## Duplicating records

Duplicate a record when it contains much of the same data you want to appear in other records. Then just change data in fields that differ.



Are you in [Browse](#)?

### In forms, form letters, and envelopes

1. Show the record.
2. Choose Browse - Duplicate Record.



### In other views

1. Select a record or records.
2. Choose Records - Duplicate on the [context menu](#).



---

{button ,AL(^H\_ADDING\_NEW\_RECORDS\_STEPS;H\_DELETING\_SPECIFIC\_RECORDS\_STEPS;H\_DUPLICATING\_VALUES\_FROM\_THE\_LAST\_RECORD\_MODIFIED\_STEPS;','0)} [See related topics](#)

### Duplicating a value from the last record modified

Duplicating a value is useful when you are entering new records that need the same value in the same field over and over again.

For example, you have 40 customers in France. You can enter their address records, and Approach can automatically add the value of France to the Country field.

The previous record must have been modified in the current Approach session.

#### If you're trying to

- Add the same value to many records that already exist, use [Fill Field](#).
- Duplicate an entire record, use [Duplicate Record](#).



#### Are you in [Browse](#)?

1. If necessary, choose New Record on the action bar.



2. Enter data in all fields except the one that is the same as the last field modified in the last record.
3. Select the same field as the last field modified in the last record.
4. From the [context menu](#), choose Insert, and then choose Previous Value.



Approach inserts the value and then advances to a new blank record.

### **Editing the user dictionary**

1. Choose Edit - Check Spelling.



2. Click Edit Dictionary.

### **Adding a word to the dictionary**

1. Enter the word in the "New word" box.
2. Click Add.
3. Click OK.

### **Deleting a word from the dictionary**

1. Select the word in the "Current words" box.
2. Click Delete.
3. Click OK.

---

{button ,AL(`H\_RUNNING\_THE\_SPELLING\_CHECKER\_STEPS;H\_SETTING\_OPTIONS\_FOR\_CHECKING\_SPELLING\_STEPS;H\_CHANGING\_TO\_ANOTHER\_MAIN\_DICTIONARY\_STEPS',0)} [See related topics](#)

## Details: Entering dates in date fields

### Number of digits in a year

Enter one, two, three, or four digits for the year. If you don't type a year, Approach enters the current year (based on your system settings).

### The year 2000 and beyond

If you enter a one-digit or two-digit year, Approach assumes 00 to 29 indicates the years 2000 to 2029 and assumes 30 to 99 indicates the years 1939 to 1999. You can override these assumptions by entering four-digit years. To enable users to enter four-digit years, you must uncheck "Show date entry format" on the Format tab of the InfoBox.

Approach will correctly perform calculations where dates cross the millenium. For example, if you create a invoice on December 6th, 1999 which is due in 30 days, Approach will calculate the due date as January 5th, 2000.

### Date formats

Regardless of the date format, enter the date in the following way:

MM/DD/YY

For example, for July 12, 1983, enter

07/12/83

The date changes to the format when you move out of the field.

If "Show data entry format" is on, slashes appear in the field as separators and underlines show the maximum number of characters. Press SPACEBAR to enter the current month, day, or year.

Set "Show data entry format" in the InfoBox Format tab.



Use SPACEBAR or slash (/) to advance to the next position in the date field if you only enter one digit. For example, to enter July 9, 1983, type **7** SPACEBAR **9** SPACEBAR **83**.

### International formats

Your system may expect a different order for entering dates (such as "day, month, year" or "month, day, year"). Enter the date numbers in the order specified in the operating system settings for date order.

---

{button ,AL('H\_ENTERING\_DATES\_IN\_DATE\_FIELDS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_FORMATTING\_DATES\_DETAILS;H\_ENTERING\_TIMES\_IN\_TIME\_FIELDS\_DETAILS;H\_INSERTING\_DATES\_OR\_TIMES\_STEPS;H\_TYPES\_OF\_FIELDS\_OVER;',0)} [See related topics](#)

## Entering dates in date fields



Are you in [Browse?](#)

### Entering dates

Enter the month, day, and year as numbers separated by spaces or slashes (/).

For example, type **6 15 96** to enter 06/15/96.

### Entering today's date

Press SPACEBAR.



For example, on June 15, 1996, press SPACEBAR three times to enter 06/15/96.

### Entering a day of the current month and year

Enter a number in the day section.

For example, in June 1996 you can type 15 to enter 06/15/96.

---

{button ,AL('H\_ENTERING\_DATES\_IN\_DATE\_FIELDS\_DETAILS',1)} [See details](#)

{button ,AL('H\_ENTERING\_TIMES\_IN\_TIME\_FIELDS\_STEPS;H\_INSERTING\_DATES\_OR\_TIMES\_STEPS;H\_TYPES\_OF\_FIELDS\_OVER;H\_FORMATTING\_DATES\_STEPS;H\_ADDING\_DATES\_TIMES\_OR\_PAGE\_NUMBERS\_TO\_REPORTS\_STEPS;H\_FORMATTING\_DATES\_AS\_QUARTERS\_THIRDS\_AND\_SO\_ON\_STEPS;',0)} [See related topics](#)

## Details: Entering text in text or memo fields

### Field lengths

Determine the length of a text field when you define the field. The maximum is 256 characters, but it varies slightly depending on the database file type you use.



The amount of text allowed in a memo field is much more than in a text field. The length of a memo field is limited only by the database format.

### Using a PicturePlus field to store large documents

If you have a large document that you created in a word processor, and you want to make that document part of a record, you can embed or link the document in a PicturePlus field, so long as the word processor supports OLE as a server. See [Creating linked objects from files](#).

### Entering dates and times in a text field

You can enter today's date or the current time in a text or memo field.

<u>To insert</u>	<u>Press or click</u>
Today's date	CTRL+SHIFT+D 
Current time	CTRL+SHIFT+T 

To sort a database chronologically, use a date, time, or numeric field type.

---

{button ,AL(`H\_ENTERING\_TEXT\_IN\_TEXT\_OR\_MEMO\_FIELDS\_STEPS',1)} [Go to procedure](#)

{button ,AL(`H\_ADDING\_FIELDS\_TO\_A\_DATABASE\_STEPS;H\_SETTING\_A\_FORMAT\_FOR\_DATA\_IN\_TEXT\_FIELDS\_STEPS;',0)} [See related topics](#)

## Entering text in text or memo fields



### Are you in Browser?

1. Select the field.
2. Type letters, numbers, or symbols in the field.
3. Press TAB to enter the contents.

---

{button ,AL('H\_ENTERING\_TEXT\_IN\_TEXT\_OR\_MEMO\_FIELDS\_DETAILS',1)} [See details](#)

{button ,AL('H\_MOVING\_BETWEEN\_FIELDS\_USING\_ENTER\_STEPS;H\_TYPES\_OF\_FIELDS\_OVER;H\_ENTERING\_DATA\_AUTOMATICALLY\_STEPS;H\_SELECTING\_WITHIN\_FIELDS\_REF;H\_ADDING\_TEXT\_BLOCKS\_STEPS',0)} [See related topics](#)

## Entering the same data into many records

**Caution** You cannot undo entering the same data into many records.



### Are you in Browse?

1. Find the records you want to fill.
2. Select the field you want to fill.  
In a worksheet, select the column.
3. Choose Fill Field on the context menu.
4. If necessary, enter or edit the fill value.  
The fill value can be a formula.
5. Click OK.

All records in the found set now contain this field data.

---

{button ,AL('H\_USING\_FUNCTIONS\_AND\_FORMULAS\_OVER;H\_creating\_find\_requests\_steps;H\_finding\_records\_with\_the\_find\_assistant\_over;H\_ENTERING\_DATA\_AUTOMATICALLY\_STEPS;',0)} [See related topics](#)



## **Details: Entering times in time fields**

### **12-hour or 24-hour clock**

24-hour times are indicated by default with an "h" suffix. For 12-hour times, if you enter an hour less than 12 without a suffix of AM or PM, Approach assumes AM.

### **Time formats**

The time is formatted when you move out of the field.

If "Show data entry format" is on, colons appear in the field as separators, and underlines show the maximum number of characters. Set "Show data entry format" in the InfoBox Format tab.



Use SPACEBAR or colon (:) to advance to the next position in the time field if you only enter one digit. For example, to enter 5:05 PM, type **5** SPACEBAR **5** SPACEBAR **PM**.

### **International formats**

Your system may expect a different time separator than the colon for entering times. Use whatever separator is specified in the operating system settings for time.

---

{button ,AL('H\_ENTERING\_TIMES\_IN\_TIME\_FIELDS\_STEPS',1)} [Go to procedure](#)

## Entering times in time fields



Are you in [Browse?](#)

### Entering a time in a time field

Enter the time as one of the following:

- Hours and minutes separated by a colon (HH:MM)
- Hours, minutes, and seconds separated by colons (HH:MM:SS)
- Hours, minutes, seconds, and hundredths of a second separated by colons and a decimal (HH:MM:SS.00)

### Entering the current time

Press SPACEBAR.



For example, at 8:01 you can press SPACEBAR twice to enter 8:01, if you are using the (HH:MM) format.

### Entering only an hour

Enter a number.

For example, type **8** to enter 8:00.

---

{button ,AL('H\_ENTERING\_TIMES\_IN\_TIME\_FIELDS\_DETAILS',1)} [See details](#)

{button ,AL('H\_ENTERING\_DATES\_IN\_DATE\_FIELDS\_STEPS;H\_INSERTING\_DATES\_OR\_TIMES\_STEPS;H\_TY  
PES\_OF\_FIELDS\_OVER;H\_ADDING\_DATES\_TIMES\_OR\_PAGE\_NUMBERS\_TO\_REPORTS\_STEPS;H\_FOR  
MATTING\_TIMES\_STEPS;',0)} [See related topics](#)

## Entering values in Boolean fields



Are you in Browse?

1. Select the field.
2. Enter one of the following:

<u>If the answer is Yes</u>	<u>If the answer is No</u>
Yes, yes	No, no
Y, y	N, n
1	0

## **Details: Entering values in numeric fields**

### **Numbers only**

Numeric fields won't accept text or symbols.

### **Numeric format**

The data is formatted when you move out of the field. Type a decimal point if the data needs one, but don't type other characters such as currency symbols and commas; the format provides them.

For example, to enter a value in a numeric field formatted for telephone numbers, type:

8003011010

The formatted result appears in the field:

(800) 301-1010

If "Show data entry format" is selected, the fixed characters of the format appear in the field, and underlines show the maximum number of characters.

Set "Show data entry format" in the InfoBox Format tab.



---

{button ,AL(`H\_ENTERING\_VALUES\_IN\_NUMERIC\_FIELDS\_STEPS',1)} [Go to procedure](#)

## Entering values in numeric fields



**Are you in Browse?**

1. Select the field.
2. Enter numbers, including decimal points if necessary.

---

{button ,AL(`H\_ENTERING\_VALUES\_IN\_NUMERIC\_FIELDS\_DETAILS',1)} [See details](#)

{button ,AL(`H\_TYPES\_OF\_FIELDS\_OVER;H\_FORMATTING\_NUMBERS\_STEPS;',0)} [See related topics](#)

## Finding text



### Are you in Browse?

1. Choose Edit - Find & Replace Text.
2. Specify the text you're looking for in the "Find" box.
3. Under Search, select the scope of the search.
4. (Optional) Select search options.
5. Click Find Next.

---

{button ,AL(`H\_REPLACEING\_TEXT\_STEPS;H\_FIND\_AND\_REPLACE\_DIALOG\_BOX\_OPTIONS\_REF;','0)} See related topics

## Find & Replace Text dialog box options

### Search

<u>Select this</u>	<u>To search</u>
Selection	The value in the selected field
Current record	The values in all the fields of the current record
Found set	The <u>found set</u>
Selection across found set	All values in the selected field, in all records of the found set
Entire worksheet	All values in the worksheet

### Case sensitive

Search only for text with exactly the same use of uppercase and lowercase letters that you specify in the "Find" box.

For example, to replace Mr. MCCabe with Mr. McCabe, type **Mr. McCabe** and select "Case sensitive."

If "Case sensitive" is not selected, Approach ignores the case of the text.

### Match whole field

Search only for the whole word of the specified text. This skips words which are made up, in part, by the text you are looking for.

For example, to find the word "fun," select this option. Approach then skips words like "function" and "fundamental."

### Memo fields only

Search only in memo fields.

## Find & Replace Text dialog box

Choose a task

Finding text

Replacing text



## Hiding records

A hidden record is not included in sorts or calculations, and you cannot print it or delete it.



Are you in [Browse](#)?

### Hiding a record in forms, form letters, and envelopes

1. Show the record.
2. Choose Browse - Hide Record.

### Hiding a record in other views

1. Select a record or records.
2. Choose Records - Hide on the [context menu](#).

---

{button ,AL('H\_DELETING\_SPECIFIC\_RECORDS\_STEPS;H\_SHOWING\_HIDDEN\_RECORDS\_STEPS;H\_HIDING\_VIEWS\_STEPS;H\_SHOWING\_ALL\_RECORDS\_STEPS;',0)} [See related topics](#)

## Moving through records one record at a time



Are you in Browse?

## Moving forward in forms, form letters, and envelopes

Press PG DN.



## Moving backward in forms, form letters, and envelopes

Press PG UP.



## Moving in worksheets and crosstabs

Each row in a worksheet is a record.

Press

- or ↓, to move between records
- → or ←, to move between fields

---

{button ,AL('H\_MOVING\_BETWEEN\_FIELDS\_REF;H\_MOVING\_BETWEEN\_FIELDS\_USING\_ENTER\_STEPS;H\_MOVING\_FROM\_PAGE\_TO\_PAGE\_IN\_FORMS\_STEPS;H\_MOVING\_TO\_A\_SPECIFIC\_RECORD\_STEPS;H\_MOVING\_TO\_THE\_FIRST\_OR\_LAST\_RECORD\_STEPS',0)} [See related topics](#)

## Moving to a specific record

You can move to a specific record if you know its position in the current order of records. Remember, the order changes depending on how you sort the records.



### Are you in Browse?

1. Click the Record button in the status bar.



2. Enter the number of the record to move to.
3. Click OK.

**Tip** If you don't know the record number, instead of following this procedure you can create a find request and enter find conditions that are specific to the record.

---

{button ,AL(^H\_MOVING\_BETWEEN\_FIELDS\_REF;H\_MOVING\_BETWEEN\_FIELDS\_USING\_ENTER\_STEPS;H\_MOVING\_FROM\_PAGE\_TO\_PAGE\_IN\_FORMS\_STEPS;H\_MOVING\_ONE\_RECORD\_AT\_A\_TIME\_STEPS;H\_MOVING\_TO\_THE\_FIRST\_OR\_LAST\_RECORD\_STEPS;','0)} See related topics

## Moving to the first or last record



Are you in [Browse?](#)

### Moving to the first record

Press CTRL+HOME.



### Moving to the last record

Press CTRL+END.



---

{button ,AL(^H\_MOVING\_BETWEEN\_FIELDS\_REF;H\_MOVING\_BETWEEN\_FIELDS\_USING\_ENTER\_STEPS;H\_MOVING\_FROM\_PAGE\_TO\_PAGE\_IN\_FORMS\_STEPS;H\_MOVING\_TO\_A\_SPECIFIC\_RECORD\_STEPS;H\_MOVING\_ONE\_RECORD\_AT\_A\_TIME\_STEPS',0)} [See related topics](#)

## Pasting pictures in fields

A picture you paste using these procedures becomes part of the record.

If you're trying to make a picture part of the design of the view, see Pasting pictures in views.



Are you in Browse?

### Pasting a picture from a file

1. Select the PicturePlus field.
2. Choose Edit - Picture - Import
3. If necessary, change the type of file.
4. Select the graphic file.
5. Click Import.

### Pasting a picture from the Clipboard

1. In the picture's source application, select the picture and choose Edit - Copy.
2. In Approach, select the PicturePlus field and choose Edit - Paste.



### Paste Special

If a picture is stored on the Clipboard in more than one format, the Paste Special command is available in the Edit menu. Choose Paste Special rather than Paste to select the format you want for the pasted picture.

---

{button ,AL('H\_SETTING\_OLE\_OPTIONS\_FOR\_PICTUREPLUS\_FIELDS\_STEPS;H\_DRAWING\_IN\_PICTUREPLUS\_FIELDS\_STEPS;H\_PASTING\_PICTURES\_IN\_VIEWS\_STEPS;H\_TYPES\_OF\_FIELDS\_OVER;H\_APP\_DELETING\_PICTURES\_FROM\_RECORDS\_STEPS;H\_CREATING\_OLE\_OBJECTS\_FROM\_FILES\_STEPS;','0)} See related topics

## Replacing text



### Are you in [Browse?](#)

1. Choose Edit - Find & Replace Text
2. Specify the text you want to replace in the "Find" box.
3. Specify the new text in the "Replace with" box.
4. Under Search, specify the scope of the search.
5. (Optional) Select search options.
6. Do one of the following:
  - To replace each instance of found text individually, click Find Next. Click Replace if you want to substitute the new text.
  - To replace all instances of found text at once, click Replace All.

---

{button ,AL(`H\_FINDING\_TEXT\_STEPS;H\_FIND\_AND\_REPLACE\_DIALOG\_BOX\_OPTIONS\_REF;`,`0)} [See related topics](#)

## Details: Checking spelling

### Selecting the scope

In Browse, you can select any text in a record. In Design, you cannot check the spelling of labels; you can check the spelling only of text selected in a text block.

<u>Option</u>	<u>Checks spelling for</u>
Selection	The currently selected text
Current record	All fields of the current record
Current view	Text in all text objects in the current view
Found set	All text in all records in the current found set
Selection across found set	Selected text in a field in all records in the found set

### Responding to a questioned word

- To replace the word, either edit the text in the "Replace with" box or select another word in the "Alternatives" box, and then click Replace All or Replace. Replace All changes the word wherever it occurs in the text you're checking, and Replace changes only this occurrence of it.
- To accept the word, click Skip All or Skip. Skip All accepts the word wherever it occurs in the text you're checking, and Skip accepts only this occurrence of it.
- To accept the word and add it to the user dictionary, click Add to Dictionary. Approach will not question the word in future spell checks.

---

{button ,AL('H\_RUNNING\_THE\_SPELLING\_CHECKER\_STEPS',1)} [Go to procedure](#)

## Checking spelling

1. Select the text you want to check, if not all text.
2. Choose Edit - Check Spelling.



3. Select the scope of the text you want to check.
4. Click OK.
5. If necessary, specify what to do for each questioned word, then click OK in the message box.

---

{button ,AL(`H\_RUNNING\_THE\_SPELLING\_CHECKER\_DETAILS',1)} [See details](#)

{button ,AL(`H\_EDITING\_THE\_USER\_DICTIONARY\_STEPS;H\_SETTING\_OPTIONS\_FOR\_CHECKING\_SPELLING\_STEPS;H\_CHANGING\_TO\_ANOTHER\_MAIN\_DICTIONARY\_STEPS;',0)} [See related topics](#)



**Details: Selecting fields to enter data**

- You cannot select a calculated or read-only field.
- Press SHIFT+TAB to move to the previous field in the tab order.
- Tab out of the last field in the last record to create a new record.

If your preferences are set this way, you can also press ENTER or SHIFT+ENTER to move to the next or previous field. See [Moving between fields using ENTER](#).

---

{button ,AL(`H\_SELECTING\_FIELDS\_STEPS',1)} [Go to procedure](#)

## Selecting fields to enter data



### Are you in Browse?

- Click a field.  
Clicking places the insertion point in the field. Data you enter is added to the data already there.
- Press TAB to go to the next field in the tab order.  
Tabbing selects the entire contents of a field. Data you enter replaces everything that's already there.

---

{button ,AL(`H\_SELECTING\_FIELDS\_DETAILS',1)} [See details](#)

{button ,AL(`H\_CHANGING\_THE\_TAB\_ORDER\_ON\_VIEWS\_STEPS;H\_SELECTING\_WITHIN\_FIELDS\_REF;H\_SELECTING\_OBJECTS\_STEPS;H\_MOVING\_BETWEEN\_FIELDS\_REF;',0)} [See related topics](#)

## **Details: Selecting values in drop-down boxes**

### **Adding entries to a drop-down box**

There are two kinds of drop-down boxes:

- Field box & list allows a user to enter new values or choose from existing ones.
- Drop-down box allows choices only from an existing list.

### **Selecting the list item**

For both kinds of drop-down boxes, when you tab out of the field, the value selected is what goes in the record.

### **Selecting the drop-down box to expand it**

Change the way drop-down boxes work so that they expand to show the list as soon as you select them. See [Displaying the contents of drop-down boxes automatically](#).

---

{button ,AL('H\_SELECTING\_FROM\_A\_DROPDOWN\_BOX\_STEPS',1)} [Go to procedure](#)

## Selecting values in drop-down boxes



### Are you in **Browse**?

1. Select the field.
2. Do one of the following:
  - Click the arrow



and select a value from the list.

- Press ALT+ up arrow to open the list, and then press the up or down arrows until the value you want is selected.

**Note** You can only select one value from the list.

3. To enter the selected value in the database, press ENTER or tab out of the field.

---

{button ,AL(^H\_SELECTING\_FROM\_A\_DROPDOWN\_BOX\_DETAILS',1)} [See details](#)

{button ,AL(^H\_DISPLAYING\_THE\_CONTENTS\_OF\_DROPDOWN\_BOXES\_AUTOMATICALLY\_STEPS;H\_DISPLAYING\_DESCRIPTIVE\_VALUES\_IN\_A\_SCROLLING\_LIST\_STEPS;H\_DISPLAYING\_FIELDS\_AS\_SCROLLING\_LISTS\_STEPS',0)} [See related topics](#)

## **Details: Selecting radio buttons or check boxes**

### **Radio buttons**

Only one radio button in a set can be on at a time. When you select a radio button, another button in the set is automatically deselected. Once you have selected a radio button, the only way to deselect it is by selecting another button in its set.

The field with radio buttons is empty until you click a button.

### **Check boxes**

When you click a check box for the first time, you enter its checked value in the field; if you click the check box a second time, you enter its unchecked value.

The field with a check box is empty until you click the check box.

---

{button ,AL('H\_SELECTING\_RADIO\_BUTTONS\_OR\_CHECK\_BOXES\_STEPS',1)} [Go to procedure](#)

## Selecting radio buttons or check boxes



### Are you in Browser?

Do one of the following:

- Click the radio button or check box.
- Tab to the set of radio buttons or the check box and then press SPACEBAR.

---

{button ,AL(`H\_SELECTING\_RADIO\_BUTTONS\_OR\_CHECK\_BOXES\_DETAILS',1)} [See details](#)

{button ,AL(`H\_DISPLAYING\_FIELDS\_AS\_RADIO\_BUTTONS\_STEPS;H\_DISPLAYING\_FIELDS\_AS\_CHECK\_BOXES\_STEPS',0)} [See related topics](#)

**Details: Setting options for checking spelling**

The options remain in effect until you change them.

<u>To</u>	<u>Turn on</u>
Find words that appear twice in a row, such as "the the"	Check for repeated words
Check the spelling of words with numerals, such as Invoice2	Check words with numbers
Check the spelling of words that begin with a capital letter, such as London	Check words with initial caps
Show words from the user dictionary in the Alternatives list while you check spelling	Include user dictionary alternatives

---

{button ,AL(`H\_SETTING\_OPTIONS\_FOR\_CHECKING\_SPELLING\_STEPS',1)} [Go to procedure](#)

## Setting options for checking spelling

1. Choose Edit - Check Spelling.



2. Click Options.
3. Turn on the options you want.  
See [details](#)
4. Click OK to return to the Spell Check dialog box.
5. Click OK.

---

{button ,AL(^H\_RUNNING\_THE\_SPELLING\_CHECKER\_STEPS;H\_CHANGING\_TO\_ANOTHER\_MAIN\_DICTIONARY\_STEPS;',0)} [See related topics](#)



## Showing hidden records



Are you in [Browse](#)?

### Showing hidden records along with the current found set

1. Choose Find - Find Again on the [context menu](#).
2. Press ENTER.

### Showing all records

Do one of the following:

- Select "All records" from the named find box on the action bar.
- Choose Find - Find All on the context menu.

---

```
{button ,AL(^H_HIDING_VIEWS_STEPS;H_HIDING_RECORDS_STEPS;H_SHOWING_ALL_RECORDS_STEPS;'  
)} See related topics
```

## Details: Adding Notes/FX fields to a Notes form

### Approach File Properties fields

To create a field that exchanges [File Properties](#) data, use a Notes field name and data type listed in the table below.

<u>File Properties field</u>	<u>Notes field name</u>	<u>Data type</u>
Description	Description	Text
Keywords	Keywords	Text
Date Created	DateCreated	Time
Date last revised	LastRevisionDate	Time
Total revisions	NumberOfEdits	Number
Total editing time	EditingTime	Number
(not displayed)	DocumentClass	Text

### DocumentClass

DocumentClass provides the OLE class name of the embedded application object. Use this field if a Notes database contains documents with embedded objects from different applications and you want to display the application name in a form or view.

The table below lists the OLE class names for Lotus desktop applications.

<u>Application</u>	<u>OLE class name</u>
1-2-3	123Worksheet
Word Pro	WordProDocument
Freelance Graphics	FLWPresentation
Approach	ApproachApplication

### Types of fields

Notes supports single-use and shared fields.

- Single-use fields are used only in a single form. Even if you use the same field name and definition in another form, the two fields are unrelated.  
Select "Create field to be used only within this Form" to create a single-use field.
- Shared fields allow you to re-use a field in any number of forms within a particular database. Every time you update one instance of the shared field, Notes automatically updates all other instances, because they use the same field definition.  
Select "Create shared field that can be used in other Forms" to create a shared field.

---

{button ,AL('H\_ADDING\_NOTESFX\_FIELDS\_TO\_A\_NOTES\_FORM\_STEPS',1)} [Go to procedure](#)

### **Adding Notes/FX fields to a Notes form**

Exchange data between Notes and Approach by adding a field to a Notes form that matches the name of an Approach field that is defined for Notes/FX. For more information on the fields, see [details](#).

1. In Notes, choose Design - Forms from the Folders navigator.
2. Select a form to edit, or choose Create - Design - Form to create a new form.
3. Choose Create - Field to create a new field.
4. Enter the Notes field name of an [Approach File Properties](#) field or [variable field](#) in the "Name" box of the InfoBox.
5. Choose File - Close.
6. Click Yes to save the form.

---

{button ,AL('H\_EMBEDDING\_AN\_APPROACH\_OBJECT\_IN\_AN\_EXISTING\_NOTES\_FORM\_STEPS;H\_EMBEDDI  
NG\_AN\_APPROACH\_OBJECT\_IN\_A\_NOTES\_FORM\_DESIGN\_STEPS;H\_ENABLING\_VARIABLE\_FIELDS\_FO  
R\_NOTES\_FX\_STEPS;H\_TYPES\_OF\_FIELDS\_OVER;',0)} [See related topics](#)

## Creating a new Notes document

To use Notes/FX in a new Notes document, create the document from a form that contains an embedded Approach object. Notes embeds a new copy of the object in each new document you compose.

1. In Notes, choose Create.
2. Choose the name of a form that contains an embedded Approach object.
3. If the form does not automatically launch Approach, double-click the Approach object.
4. In Approach, enter new information in the database.

---

```
{button ,AL(`H_UPDATING_FIELDS_IN_A_NOTES_DOCUMENT_FROM_APPROACH_STEPS;H_UPDATING_INFORMATION_IN_APPROACH_FROM_A_NOTES_DOCUMENT_STEPS;H_SETTING_UP_FIELDS_FOR_TWOWAY_EXCHANGE_WITH_NOTES_STEPS;H_ADDING_NOTESFX_FIELDS_TO_A_NOTES_FORM_DETAILS;H_SETTING_UP_NOTES_FIELD_EXCHANGE_OVER;H_EXCHANGING_DATA_BETWEEN_APPROACH_AND_NOTES_OVER;H_NOTESFLOW_OVER;';0)} See related topics
```

## Embedding an Approach object in a Notes document

To exchange data between Approach and Notes, embed an Approach object in any Rich Text field in an existing Notes document. The Approach object must have [Notes/FX-enabled fields](#).

1. In Notes, open a document for editing.
2. Position the insertion point where you want to insert the Approach object.
3. Choose Create - Object.
4. To embed a new Approach object in the Notes document, select "Create a new object" and specify an Approach object as the object type. For information about embedding new objects in Notes forms, refer to Notes Help about creating objects.  
To embed an existing Approach file as an object in the Notes document, select "Create an object from a file" and specify an existing Approach file. For information about creating objects in Notes forms from existing files, refer to Notes Help about creating objects.
5. Click OK.

---

```
{button ,AL(^H_CREATING_A_NEW_NOTES_DOCUMENT_STEPS;H_EMBEDDING_AN_APPROACH_OBJECT_IN_A_NOTES_FORM_DESIGN_STEPS;H_UPDATING_FIELDS_IN_A_NOTES_DOCUMENT_FROM_APPROACH_STEPS;H_SETTING_UP_FIELDS_FOR_TWOWAY_EXCHANGE_WITH_NOTES_STEPS;H_SETTING_UP_NOTES_FIELD_EXCHANGE_OVER;H_EXCHANGING_DATA_BETWEEN_APPROACH_AND_NOTES_OVER;H_NOTESFLOW_OVER;',0)} See related topics
```

## Embedding an Approach object in a Notes form

To exchange data between Approach and Notes, embed an Approach object in the design of a Notes form. New documents composed with this form automatically include the embedded Approach object. The Approach object must have [Notes/FX-enabled fields](#).

1. In Notes, choose Create - Design.
2. Choose Form.
3. Position the insertion point where you want to insert the Approach object.
4. Choose Create Object.
5. To embed a new Approach object in the Notes form, select "Create a new object" and specify an Approach object as the object type. For information about embedding new objects in Notes forms, refer to Notes Help about creating objects.

To embed an existing Approach file as an object in the Notes form, select "Create an object from a file" and specify an existing Approach file. For information about creating objects on Notes forms from existing files, refer to the Notes help about creating objects.

6. Click OK.
7. Close the Notes form
8. Click Yes to save the form.

---

```
{button ,AL(`H_NOTESFLOW_OVER;H_CREATING_A_NEW_NOTES_DOCUMENT_STEPS;H_SETTING_UP_NOTES_FIELD_EXCHANGE_OVER;H_SETTING_UP_FIELDS_FOR_TWOWAY_EXCHANGE_WITH_NOTES_STEPS;H_ADDING_NOTESFX_FIELDS_TO_A_NOTES_FORM_DETAILS;H_EXCHANGING_DATA_BETWEEN_APPROACH_AND_NOTES_OVER;','0)} See related topics
```

## Overview: Exchanging data between Approach and Notes

Notes/FX lets you exchange field data between Approach and Notes. With Notes/FX

- Display data from Approach File Properties fields in a Notes form
- Pass the value of any Approach database variable field back and forth between Notes and Approach
- Run Approach scripts automatically whenever you close or update an Approach application embedded in Notes

## Using Notes/FX

To use Notes/FX with Approach

- Define fields in Approach to exchange
- Embed in the design of a Notes document or form an Approach object that contains those fields
- Create new Notes documents that exchange data with embedded Approach objects
- Create Approach scripts that use the field information passed from Notes to Approach
- Create Approach scripts that set the value of variable fields passed from Approach to Notes

For example, you can create a Notes form for a sales report and embed an Approach application object in the form. When you compose a new report, Notes passes data to the Approach application, which uses this information to create the report.

When you complete the sales report and close Approach, you can update the document object embedded in the Notes form. Information from the sales report, such as the name and address of the company and the total sales for the period, now appears in the Notes document or in the Notes view. The sales report is centrally stored in a Notes database with other sales reports.

---

{button ,AL(^H\_SETTING\_UP\_NOTES\_FIELD\_EXCHANGE\_OVER;H\_APPROACH\_FILE\_PROPERTIES\_REF;H\_ADDING\_NOTESFX\_FIELDS\_TO\_A\_NOTES\_FORM\_STEPS;H\_EMBEDDING\_AN\_APPROACH\_OBJECT\_IN\_A\_N\_EXISTING\_NOTES\_FORM\_STEPS;H\_EMBEDDING\_AN\_APPROACH\_OBJECT\_IN\_A\_NOTES\_FORM\_DESIGN\_STEPS;H\_CREATING\_A\_NEW\_NOTES\_DOCUMENT\_STEPS;';0)} [See related topics](#)

## **Overview: NotesFlow**

### **What is NotesFlow?**

NotesFlow is a collection of tools in Notes (such as Notes/FX and publishing forms) used to build applications that drive a flow of work. These applications not only share information but integrate Notes with other desktop products.

You can use NotesFlow to design applications for automating work that otherwise would require complicated or repetitive tasks. Documents automatically share information or launch files created in other products. NotesFlow also lets you control the flow of work and the actions available to users.

NotesFlow can be built into any type of application to allow transparent interaction between Notes and other applications such as word processing and spreadsheet programs (through the use of OLE objects and Notes/FX technology).

For instance, you can combine NotesFlow features to build a powerful workflow application that can:

- Automatically route a document or notifications to the next specified user or approver
- Send reminders
- Request and process approvals
- Run scheduled batch processes

### **Set up forms to exchange field information with other application documents**

You can create forms in Notes that automatically share information with documents created in other OLE-registered applications. When users modify the contents of a field in a Notes document, the changes are automatically made to the corresponding fields in the other application's document. Data exchange can also occur in both directions. Users can edit fields in either Notes or the other application and the modifications are automatically exchanged.

### **Publish actions that apply across applications**

The ability to create and publish actions that take effect across applications is one of the most powerful aspects of NotesFlow. When you publish an action in a form, Notes makes the action available on the Action menu in any open OLE server application that supports Notes/FX.

If you follow a flow of work that involves switching between Notes and other desktop products, you can create and publish actions that simplify the workflow. Publishing Notes actions lets you limit user access to commands, integrate file creation and storage in other desktop products with the document sharing, storage, security, and management tools of Notes.

Since the actions you create can incorporate functions, @commands, and LotusScript, there is no limit to the way you can apply them. Notes also supplies a number of simple actions (such as Move to Folder) that let you incorporate useful actions in your form design without having to program in LotusScript.

### **Design forms to automatically launch objects**

You can design a form that automatically launches an embedded object or a new object created using any OLE-registered desktop application. The autolaunch can occur when users create, edit, or read a document based on the form. This makes the flow of work involving multiple applications smoother, and it allows users who are familiar with other products to work within that application without ever leaving Notes.

### **Access information in external databases using ODBC**

You can use the Open Database Connectivity (ODBC) standard to access data contained in external databases. Using formulas and scripts from within Notes, you can bring information from a non-Notes database into Notes documents and summarize it in Notes views for reporting and searching.



### Setting up fields for two-way exchange with Notes

Notes can read the value in Approach [variable fields](#). In order for Notes to modify these fields, you must enable the fields in Approach.

1. Choose File - Approach File Properties.
2. Under "Variable Fields", select the fields you want to set up for two-way exchange with Notes.
3. Click OK.

---

```
{button ,AL(^H_ADDING_NOTESFX_FIELDS_TO_A_NOTES_FORM_STEPS;APPROACH_FILE_PROPERTIES_REF;H_EMBEDDING_AN_APPROACH_OBJECT_IN_AN_EXISTING_NOTES_FORM_STEPS;H_EMBEDDING_AN_APPROACH_OBJECT_IN_A_NOTES_FORM_DESIGN_STEPS;',0)} See related topics
```

## Overview: Setting up Notes/FX

To set up Notes/FX, you define fields in Approach to exchange with Notes, and then embed an Approach object with those fields into a Notes document.

### What can you exchange?

You can exchange the following types of data between Approach and Notes:

- Approach File Properties fields
- Approach [variable fields](#)

You can also use Approach scripts to automatically update information in the Notes database when you close the database or change field information.

### File Properties fields supplied by Approach

Approach supplies File Properties fields with predefined names that contain information about a database, such as its description and creation date. You can use any of these fields in an exchange with Notes.

### Variable fields

Notes/FX reads all Approach variable fields into Notes as shared fields, accessible from any form or view. To use variable fields, you create fields with matching names and types in both the Approach object and the Notes forms or views.

### Approach update scripts

You can use the Close and FXupdate scripts with Notes/FX.

- Close executes automatically when an Approach application closes.
- FXupdate events are triggered whenever Notes passes field information to Approach through Notes/FX.

For more information, see the Notes application developers documentation.

---

```
{button ,AL('H_SETTING_UP_FIELDS_FOR_TWOWAY_EXCHANGE_WITH_NOTES_STEPS;H_ADDING_NOTES  
FX_FIELDS_TO_A_NOTES_FORM_STEPS;APPROACH_FILE_PROPERTIES_REF;H_EMBEDDING_AN_APP  
ROACH_OBJECT_IN_AN_EXISTING_NOTES_FORM_STEPS;H_EMBEDDING_AN_APPROACH_OBJECT_IN_  
A_NOTES_FORM_DESIGN_STEPS;',0)} See related topics
```

## Updating fields in a Notes document from Approach

You can update any changes in Approach File Properties or variable fields to a Notes document.

1. In Notes, display the document that contains the fields you want to update.
2. Double-click the embedded Approach object.
3. In Approach, enter any new information into Notes/FX fields defined in Approach File Properties or in variable fields.
4. Do one of the following:
  - Choose File - Exit & Return to Lotus Notes to close Approach and return to Notes.
  - Choose File - Close & Return to Lotus Notes to close the Approach document without closing Approach.

---

{button ,AL(^H\_UPDATING\_INFORMATION\_IN\_APPROACH\_FROM\_A\_NOTES\_DOCUMENT\_STEPS;H\_EMBEDDING\_AN\_APPROACH\_OBJECT\_IN\_AN\_EXISTING\_NOTES\_FORM\_STEPS;APPROACH\_FILE\_PROPERTIES\_REF;';0)} [See related topics](#)

## Updating information in Approach from a Notes document

When an Approach object embedded in a Notes document contains Notes/FX-enabled fields, you can update these fields from the Notes form.

1. In Notes, select the document you want to edit.
2. Choose Actions - Edit Document.
3. Enter new information in the Notes/FX fields.
4. Launch the embedded Approach object to view these changes in Approach.

---

```
{button ,AL(`H_UPDATING_FIELDS_IN_A_NOTES_DOCUMENT_FROM_APPROACH_STEPS;H_EMBEDDING_A  
N_APPROACH_OBJECT_IN_AN_EXISTING_NOTES_FORM_STEPS;H_SETTING_UP_NOTES_FIELD_EXCHA  
NGE_OVER;H_EXCHANGING_DATA_BETWEEN_APPROACH_AND_NOTES_OVER;H_NOTESFLOW_OVER;',  
0)} See related topics
```

## Overview: Alias joins

It's sometimes useful to join a database to itself. You may also want to join the same database two or more times to different databases.

To make either of these kinds of joins, you create an alias version -- a virtual copy -- of the database. An alias is not a physical duplicate of a database; it does not contain the database's data. It acts, however, like a duplicate for the purposes of joining.

### Example

Suppose you want to keep track of which employees in your company are managers and who they are responsible for managing. Managers are also employees, so their records are in the same employee database.

The records in this database are identified as unique by an employee ID field. Each employee record also has a field that identifies the employee's manager. The manager is identified using his or her employee ID.

For example, in the following illustration notice that employee Joann Willis (Empl ID 74) is the manager of Jean-Pierre Renault and Keng Wu, whose records show 74 in the Mgr ID field.

EMPLOYEE			
Empl ID	First Name	Last Name	Mgr ID
25	Indira	Kumar	81
74	Joann	Willis	97
95	Leo	Pavlovich	35
29	Keng	Wu	74
33	Jean-Pierre	Renault	74
49	Barbara	Taylor	43

Alias joins can be an efficient way to use data because you don't need to duplicate the manager records in a separate database. But you do need a second instance of the database -- an alias -- to see the join relationships from one record to another record within that database.

Creating an alias lets you link records that have related information in the database. You can display information (on forms and repeating panels) that would not have been available without the alias join.

### Name of an alias

When you create an alias, Approach adds a 1 to the name of the database, and gives the alias the same name as the database, plus a 2 (or a 3, and so on). EMPLOYEE:1 has an alias named EMPLOYEE:2.

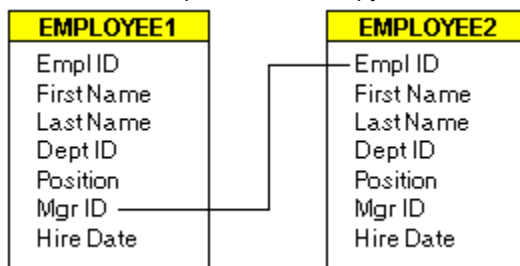
These names appear only in the Approach file containing the [joins](#). The names do not affect the name of the database file itself or the name of the database in any other Approach file.

### Joining to an alias

To join a database to itself, you create a "copy" of the database in the Join dialog box. The copy is not an actual duplicate of the database, but only another listing of it, called an alias. After you create the alias, you can set up a join between the database and its alias.

### Example

You can join the manager ID in an employee database to the employee ID in an alias database called EMPLOYEE:2. EMPLOYEE:1 represents the "copy" of the database that you think of as containing only manager information:



The manager database (represented by EMPLOYEE:1) has a one-to-many relationship with the employee database

(EMPLOYEE:2). You can display the results of this alias join using a repeating panel on a form based on the manager database (EMPLOYEE:1).

The screenshot shows a form titled "Manager Form". It has three input fields: "First Name" with the value "Joann", "Last Name" with the value "Willis", and "ID" with the value "74". Below these fields is a section titled "Employees" which contains a table with two rows of data. The first row shows "Keng" and "Wu", and the second row shows "Jean-Pierre" and "Renault". The table has a vertical scrollbar on the right side.

First Name	Last Name	ID
Joann	Willis	74

Employees	
Keng	Wu
Jean-Pierre	Renault

If you create more than one alias of a database, you can join one alias to another and even join an alias to a different database.

### Joining to a different database

It is also useful to join the alias to a different database.

### Example

Suppose you have a project list database where each project needs both a primary contact and a secondary contact. The contacts are in the employee database. Since the contacts come from the same source and one employee can be a primary contact on one project and a secondary contact on several others, you could join two aliases of the employee database to the project database as Contact 1 and Contact 2.

---

```
{button ,AL('H_JOINED_DATABASES_OVER;H_JOINING_DATABASE_FILES_STEPS;H_MAIN_AND_DETAIL_DATABAS  
ES_IN_A_VIEW_OVER;H_MANY_TO_MANY_RELATIONSHIPS_OVER;H_ONE_TO_MANY_MANY_TO  
ONE_AND_ONE_TO_ONE_RELATIONSHIPS_OVER;H_SETTING_OPTIONS_FOR_A_JOIN_STEPS;','0)} See  
related topics
```

## **Automatically entering unique values into existing records**

This task consists of the following parts:

- 1** Unique values in ID fields
- 2** **Adding a variable field**
- 3** Creating the Increment macro
- 4** Creating the Renumber macro
- 5** Running the Renumber macro

### **Adding a variable field**

Add this variable field, named VarForNUmber, to your Approach (.APR) file. This is a necessary step for automatically filling in unique values for every existing record in your database. After this step, you must create the Increment and Renumber macros.

1. Go to a form view.
2. From the Create menu, choose Field Definition
3. Scroll to the empty line at the bottom of the field list.
4. Enter the name VarForRenumber for the field.
5. Double-click the Data Type drop-down box, and select the Variable data type.  
The Size and Formula/Options fields are automatically filled in.
6. Click OK.
7. Drag the VarForRenumber field from the Add Field dialog box to a form.
8. When a message box appears asking which environment you want to work in, click Browse.

## Creating ID fields

When you join two databases, you must select a join field to link them together. You can create a field specifically for joining that contains numbers that identify every record in the database. This is referred to as an ID field.

1. From the Create menu, choose Field Definition.
2. Scroll to the empty line at the bottom of the field list.
3. Enter a name for the field.
4. Double-click the Data Type drop-down box, and select the Numeric data type.
5. Click Options.
6. On the Default Value tab, select "Serial number starting at."
7. Enter the value you want to use for a starting point in the "Serial number starting at" box.  
**Note** If you have already entered unique ID numbers in your existing records, use the last record's ID number as your starting point.
8. Enter the value by which the ID number is increased for each new record you want to use in the "Incremented by" box.
9. Click the Validation tab.
10. Select "Unique" and "Filled in."
11. Click OK.
12. Drag the ID field from the Add field dialog box to the view.

---

{button ,AL(^H\_APP\_JOINING\_CALCULATED\_FIELDS\_STEPS;H\_JOINING\_DATABASE\_FILES\_STEPS;!,0)} [See related topics](#)



## Automatically entering unique values into existing records

This task consists of the following parts:

- 1** Unique values in ID fields
- 2** Adding a variable field
- 3** **Creating the Increment macro**
- 4** Creating the Renumber macro
- 5** Running the Renumber macro

### Creating the Increment macro

Before you create the Increment macro, you must define an ID field for your database. The ID field must contain a unique value that corresponds to each record in the database. After you define the ID field and set your incremental value to whatever you want, you have completed the second of three steps in automatically filling the existing records in a database with unique records.

1. From the Edit menu, choose Macros.
2. Click New.  
The Define Macro dialog box appears.
3. Enter "Increment" in the Macro name box.
4. (Optional) To run the macro by pressing a function key, select a key in the Function key box.
5. Select the Set command from the Command box.
6. Select your ID field in the "Set this field" box.
7. Enter VarForRenumber in the "To this value" box.
8. Select the Set command from the Command box.
9. Select VarForRenumber in the "Set this field" box.
10. Click Formula and enter VarForRenumber+x in the Formula box.  
X is whatever incremental value you choose.
11. Select the Records command from the Command box.
12. Select Next record in the "Go to" box.
13. Select the Run command from the Command box.
14. Select Increment in the "Run macro" box.
15. Deselect "Return to the next line on this macro."
16. Click OK to close the Define Macro box.
17. Click Done.

## **Automatically entering unique values into existing records**

This task consists of the following parts:

- 1** [Unique values in ID fields](#)
- 2** [Adding a variable field](#)
- 3** [Creating the Increment macro](#)
- 4** **Creating the Renumber macro**
- 5** [Running the Renumber macro](#)

### **Creating the Renumber macro**

The Renumber macro lets you set the initial value of the variable field to whatever you want. This value is your starting point for renumbering your ID fields in each record of the database.

1. From the Edit menu, choose Macros.
2. Click New.  
The Define Macro dialog box appears.
3. Enter "Renumber" in the Macro name box.
4. (Optional) To run the macro by pressing a function key, select a key in the Function key box.
5. Select the Records command from the Command box.
6. Select First record in the "Go to" box.
7. Select the Set command from the Command box.
8. Select VarForRenumber in the "Set this field" box.
9. Enter whatever value you want to use as the starting point for the Renumbering process in the "To this value" box.
10. Select the Run command from the Command box.
11. Select Increment in the "Run macro" box.
12. Deselect "Return to the next line on this macro."
13. Click OK to close the Define Macro dialog box.
14. Click Done.

After you have finished creating the two macros, run Renumber. The Renumber macro calls Increment and automatically enters unique values into whatever ID field you defined in just the existing records.

### **Synchronize existing and new records**

After entering unique values in the ID field for your existing records, you want to make sure that the new records in your database will also contain unique values. Synchronize the values for existing and new records by going to the last record and verifying the value in the ID field. Add this value to whatever you use as an incremental value for a starting serial number for new records. See [Entering data automatically](#).

## Normalization: Improving the efficiency of your database application

When you design your database applications, take a good look at how you have arranged your data. Do you have one large database that is full of repetitive information? Have you clearly defined the relationships between the fields?

You can rearrange your database into several smaller databases containing related information. This simplifies the relationships within the database. It also makes whatever database functions you use (finding, sorting, entering and deleting data) more efficient.

The process of breaking down large, complex databases into related groups of smaller, simpler databases and eliminating repetitive information is known as normalization. After the databases are rearranged, they are joined on fields that contain unique values. Save these related databases in one Approach file (.APR) to create a database application.

### Advantages

The advantages of normalization are:

- The database is stable and does not need to be continually redesigned as you add new information.
- Databases require less physical storage space.
- Database operations are faster.
- You create better reports.
- There is less likelihood of errors when entering, deleting, or updating information.

The first three rules of normalization, referred to as forms, are explained below.

### First normal form

The fields in your database must contain only one value. The fields cannot be collections of items. If the fields in your database contain more than one value, it is not possible for you to search for data or calculate values based on other fields. For example, a Personnel database that contains first name, middle initial, and last name in the Names field will not let you differentiate between employees having the same last name when performing a find.

Names  
Janine T. Adams  
Thomas W. Elliott  
Alicia M. Gordon  
William J. Gordon

To follow good database design, separate the Names field into three new fields: First Name, Initial, and Last Name. The new Personnel database is shown below.

<u>First Name</u>	<u>Initial</u>	<u>Last Name</u>
Janine	T	Adams
Thomas	W	Elliott
Alicia	M	Gordon
William	J	Gordon

For a database to be normalized to the first form, you must also eliminate repeating groups of data. For example, you might enter your company's sales into a large database called Transactions. Transactions contains the following fields:

Transactions  
Sales\_Date  
Sales\_Amount  
Sales\_By Product  
Product\_Price  
Units Sold  
Customer Name  
Customer Address  
Customer Phone

### Date Shipped to Customer

The first five fields contain information that the Sales department needs to know. The last four fields (Customer Name, Customer Address, Customer Phone, and Date Shipped to Customer) contain information that the shipping department needs to know. There are currently two different groups of data in the same database. One group pertains to sales and the other group pertains to shipping.

These two departments need to synchronize their information so that the Shipping department knows what needs to be shipped after a sale, how much, and where it is shipped to. The Sales department needs to know if and when the product associated with a particular sale has been shipped to the customer. You can solve this problem by normalizing the Transactions database and turning it into two separate databases, Sales and Shipping.

<u>Sales</u>	<u>Shipping</u>
Sales ID	Sales ID
Sales Date	Product Name
Product Name	Units to be Shipped
Units Sold	Amount Billed
Unit Price	Customer Name
Customer Name	Customer Address
Sales Rep Name	Customer Phone
Sales Rep ID	Date Shipped
	Name of Carrier

Notice that a unique ID field, Sales ID, has been defined in both Sales and Shipping. Sales ID is a numeric field that automatically assigns a serial number to each sales transaction, making it the link between information about sales and information about shipping. The two databases are joined on this field. Sales and Shipping have now been normalized to the first normal form.

### Second normal form

For a database to be normalized to the second normal form, all redundant data should be eliminated.

### Joining calculated fields

Calculated fields do not display in the Join dialog box unless you select the option to display calculated fields in the Approach Preferences dialog box.

If after you select that option you still cannot see the calculated fields you want, that is because the calculated fields were created in an .APR other than the one in which you are joining databases.

Calculated fields exist only in the .APR in which they are created, so you must re-create the calculated fields in the APR in which you are joining databases. To do that, you must first create a temporary join between the two databases so that you can have access to the fields used in the calculated fields.

### Creating a temporary join between databases

1. In the .APR in which you want to join databases, turn on the option to display calculated fields.
2. From the Create menu, choose Join.
3. Click Open.  
The Open dialog box appears.
4. Select the database that contains the field(s) used in the calculated field.
5. Join two fields that are not calculated fields.
6. Click OK.

### Recreating the calculated field

In the same Approach file that contains the temporary join, recreate the calculated field.

Now that the newly-created calculated field is part of the current Approach file, the calculated field should appear in the Join dialog box field list.

### Removing the temporary join and joining on the calculated field

1. From the Create menu, choose Join.
2. Click the join line between the temporary join fields.
3. Click Unjoin.
4. Join the newly-created calculated field to a calculated field in the other database.
5. Click OK.

The calculated fields in each database are now joined.

### Deleting the unneeded Approach file

You need only one Approach file for the two databases, so delete the Approach file that does not contain the join.

**Note** Be sure not to delete the database file.

---

{button ,AL(^H\_JOINED\_DATABASES\_OVER;H\_JOINING\_DATABASE\_FILES\_STEPS;'0)} [See related topics](#)

## Organizing your databases into an application

When you design a database application in Approach, you bring together data from more than one database by joining the databases in a single Approach file (.APR). Although you can join unrelated databases in a single .APR, your application will be easier to work with if the data in the databases is related. The data should be about the same subject and have a logical connection. This connection is usually a dependency of some kind. Something that happens to the data in one database affects the data in another database.

### Identifying related data

For example, suppose you own a restaurant. You have many aspects of the business to consider: hiring new employees, creating a salary structure, calculating state and federal payroll taxes, and so on. You also print menus, perfect your recipes, check your inventory, and order food from suppliers.

To reduce your headaches, you organize these parts of your business into categories of related data. The two areas of related data that take up most of your time and attention are reordering inventory and personnel issues.

### Defining an inventory database application

To solve the problem of tracking inventory, you decide you need three databases. One database stores the names of foods needed for your recipes; another tracks inventory levels on hand; and the last is for ordering food from suppliers. You create the following databases:

- Recipes
- Inventory
- Suppliers

These databases are related because they deal with the same category of data: food. They are also dependent on one another. You know which foods you need to make your customers' favorite recipes, and you have to keep a certain level of these foods on hand. When the inventory level is below a certain point, you need to order food from your suppliers. If you don't order from the suppliers, you won't be able to make your recipes.

Each food that you order and restock is assigned a unique identifying number in a field called Food\_ID. All three databases contain this field. Because the value in the Food\_ID field for each food is unique, you can use this field for the join field. When you join the three databases, they form a database application. You can save these databases in one Approach file (.APR) called Food.APR.

You now know the recipes that use each food and the supplier to order the food from. By creating calculated fields, you can compare current inventory to the inventory reorder level for each food. Thanks to this application, you should never be out of your most popular dishes.

### Defining a personnel database application

A separate category of related data for your restaurant concerns your personnel. You create a database called Employees to keep track of all the people who work for you. This database only contains general information, such as you might find on a job application. Employees has the following fields:

- First name
- Last name
- Street
- City
- State
- ZIP
- Phone
- Social security number

The social security number field would be good to use for a join field. Unlike the first name and last name fields, you can be sure that an employee's social security number is unique.

In another database named Payroll, you keep track of payroll information. The Payroll database has the following fields:

- Social security number
- Current annual salary
- Biweekly salary
- Bonuses paid

- State payroll taxes
- Federal payroll taxes
- Contribution to 401K plan

The Employees database is joined to the Payroll database using the social security number field as the join field. These two databases are related because they keep track of different but interrelated aspects of your employee's data.

You cannot get any useful information from the Payroll database until you know what the employee's social security number is from the Employees database.

You can also save this database application in one Approach file (.APR) called Personnel.APR.

### **Unrelated databases**

The databases for reordering food and those for personnel are not related to each other because they do not affect each other. There is no dependency. If an employee's annual salary goes up or his address changes, it does not affect the information in Recipes, Inventory, or Suppliers. If the inventory levels for certain foods drop too low, it does not change the information in Employees or Wages.

---

{button ,AL(`H\_JOINED\_DATABASES\_OVER;H\_JOINING\_DATABASE\_FILES\_STEPS;`,`0`)} [See related topics](#)

## **Automatically entering unique values into existing records**

This task consists of the following parts:

- 1** Unique values in ID fields
- 2** Adding a variable field
- 3** Creating the Increment macro
- 4** Creating the Renumber macro
- 5** **Running the Renumber macro**

### **Running the Renumber macro**

1. From the Edit menu, choose Macros.
2. Select Renumber in the Macro name box.
3. Click Run.

The Renumber macro enters unique values in your database's ID field, using the starting point and incremental value you selected when creating the macro.



## Automatically entering unique values into existing records

This task consists of the following parts:

### **1** Unique values in ID fields

### **2** Adding a variable field



Creating the Increment macro



Creating the Renumber macro



Running the Renumber macro

## Unique values in ID fields

Join fields in Approach usually have an ID field. ID fields must contain a unique value that corresponds to each record in the database. You can define your ID field (or any other field you select) to be automatically filled with unique values in the Field Definition dialog box. You also select the starting point and the incremental value.

However, this process only fills in unique values for new records. It does not enter values for the existing records in your database. To automatically enter unique values into existing records, you must go through these steps:

- Add a variable field to the view. The variable field is used to temporarily calculate and store values used in the looping macro, Increment.
- Create a macro named Increment. This is a looping macro that goes through all the records in the database and increments the value in the selected ID field by whatever value you choose for the variable field.
- Create and run a macro named Renumber. This macro goes to the first record in the database, sets the variable field to whatever initial value you enter, calls the Increment macro, and enters values into the existing fields using the incremental value you decide on.

## What if a find returns unexpected data?

When you create a view that displays data from a detail database, you may not see the data you expect after a find.

### If the find does not display any data

Your index files may have been corrupted. Compress each of the joined database files to rebuild its index. If the database files are dBASE or FoxPro files, (.DBF) you can compress the files from within Approach.

### If the find returns ambiguous data

- If the join is made on fields that contain non-unique data, the find will return ambiguous matches. The join field should contain a unique value for each record in the database.

You can define a field that has ID numbers, referred to as an ID field. An ID field has a unique value for each record in the database. Join your databases on this ID field.

If there is no ID field available, join the databases on a field that uniquely identifies records, such as a social security number.

- The way values are entered into the fields may not match. For example, Database1 contains a numeric field named Serial\_Number where numbers are entered as 1234. Database2 also contains a numeric field named Serial Number where numbers are entered as 1-234.

- The databases may be joined on fields that are not logically related.

For example, a company that sells laboratory equipment for several manufacturers wants to join a SALES database to an INVENTORY database. One record is used for each transaction. The amount of the sale is deducted from the inventory until the product's inventory amount reaches a reorder point. The two databases have the following field definitions:

<u>SALES</u>	<u>INVENTORY</u>
Product Name	Product Name
Part Number	Part Number
Manufacturer	Manufacturer
Date of Sale	Total Sale
Unit Price	Inventory before sale
Number Sold	Inventory after sale
Total Sale	Time to reorder?

The logical field to join in these two databases is the Part Number field. The Part Number is unique; it establishes who the manufacturer is, the name of the product, and the unit price. In the INVENTORY database, each Part Number also has inventory amounts before and after the sales transaction. A Boolean field tells you whether to reorder or not.

Creating a join involving the Product Name or Manufacturer fields would not be logical. This company sells many types of beakers, flasks, and cylinders but only the Part Number field gives you the specifics for each of these products.

The company sells products for several different manufacturers so the Manufacturer field does not give us unique information.

---

{button ,AL('H\_APP\_CREATING\_ID\_FIELDS\_STEPS;',0)} [See related topics](#)

## Overview: Joined databases

Even if you don't have a lot of data and complexity to begin with, data has a tendency to grow over time. A database design that is well-organized from the start can help you avoid problems later.

An efficient way to handle data is to logically group it into separate, manageable database files -- for example, one for departments and another for employees.

For more information on planning a database, see [Why build a database?](#)

## Approach works best with joined databases

When you have multiple databases with related information, you can join the databases together in an Approach file. Approach is a relational database application, which means that you can bring together data from separate database files and use it as if all the data were stored in one place.

To do this, you join the databases in the Approach file. Joining creates a relationship between the data in the joined databases. The forms, reports, and other views in the Approach file can use data from any of the databases joined in that file.

## Advantages of joined databases

- A database application comprising of joined databases has much greater efficiency, accuracy, and flexibility than a database application that stores all data in a single database file.
- With joined databases, you need to store only one copy of your data, even if you use certain kinds of data in more than one place.

For example, suppose you maintain a database of your company's retail stores. Each store sells many different products. If you keep the store and product data in a single database, you have to enter a record for each product that each store carries.

But if you use a set of joined databases, you enter the store data once in its own database, regardless of how many products are in a particular store. The product data has its own separate database and can be grouped by each store. Joining these two databases lets you relate certain stores to certain products.

- Joined databases save time and effort in data entry and updating.

They also make it easier to maintain the consistency and accuracy of shared data. If you need to update shared data, just make the changes in one place, and the change automatically appears in all views where the data is used.

- Joined databases give you flexibility in presenting data.

You can see and edit a record from one database and one or more related records from a joined database together in a single view. For example, data showing the name and address of a store and a list of its products can be displayed on a single form, rather than having to repeat the same information across many forms. The relationships between records in joined databases can be shown with a [repeating panel](#) on a form as one-to-many and many-to-many.

## How databases are joined

To design a set of joined databases, divide the fields for the data into logical groups. Each group becomes a separate database file. Data should not be duplicated from one database to another.

To join two databases, establish a relationship between one or more fields the databases have in common by linking them. These are called the join fields. It's usually best to define one field in each database specifically to be a join field and then enter an ID value in that field in each record.

If you do not have a field you can use as a join field, you can join databases on other fields they have in common. Together the fields should uniquely identify records in one of the databases, such as first name, last name, and phone number. Ideally, join fields should be the only duplicate fields in joined databases.

When a record in one database has the same join value as a record in a joined database, the two records are "related."

## Examples

Suppose you want to compile a list of all the employees in each department in your company. Divide the data into two database files, one for departments and one for employees, and give each file a department ID field.

The employee database contains personal data, such as first and last names, address and phone number. The department database contains department information, such as manager, location, and cost center. Join the two databases on the ID field:



The employee database also needs to be joined to another database that stores payroll information. This payroll database lets the company keep track of pay increases, changing tax rates, when the employees are paid, and so on. These two databases should be linked together using a common field.

Since the employee database already has the Empl ID field, this field should be included in the payroll database as well. Empl ID is the common field that links two separate sets of information. The information in each record of the payroll database is determined by the value in the Empl ID field. Join the two databases on the Empl ID field.

### **BMC of employee and payroll being joined**

---

```
{button ,AL(^H_ALIAS_JOINS_OVER;H_JOINING_DATABASE_FILES_STEPS;H_MAIN_AND_DETAIL_DATABASE  
S_IN_A_VIEW_OVER;H_MANY_TO_MANY_RELATIONSHIPS_OVER;H_ONE_TO_MANY_MANY_TO_ONE_A  
ND_ONE_TO_ONE_RELATIONSHIPS_OVER;H_SETTING_OPTIONS_FOR_A_JOIN_STEPS;','0)} See related  
topics
```

### Joining a database to itself (alias join)

Join a database to itself to create an alias join.

1. Choose Create - Join.
2. Select a database you want to join to itself.
3. Click Alias.  
A copy of the current database appears.
4. For each field you want to join on, click the field in one database and then drag and drop to a field in the alias database.
5. (Optional) Click Options to review the [insertion and deletion options](#) for this join.
6. Click OK.

---

{button ,AL('H\_ALIAS\_JOINS\_OVER;H\_JOINING\_DATABASE\_FILES\_STEPS;H\_UNJOINING\_DATABASE\_FILES\_STEPS;',0)} [See related topics](#)

## Details: Joining database files

### What makes good join fields?

To join two databases, you must select a join field in each to link them together. Any field that meets one of the following criteria can be a join field:

- A field that is common to the two databases.

A field that is common does not need to have the same name in the two databases, nor does it have to be of the same type. What the join fields must have in common is the nature of the values in the fields.

For example, a PUBLISHERS database has a Name field, and an AUTHORS database has a Publishers field. Name and Publishers are possible join fields. Why? Because they contain the same type of information: the names of publishing companies.

- A field containing ID numbers, referred to as an ID field.

An ID field contains a unique value for each record in the database. For example, you want to link DEPARTMENT and EMPLOYEE databases. Every department must have an ID number, and each employee must belong to a department. Define a Dept ID field for both databases and join them on this field.

- A set of fields that, taken together, uniquely identify records in the databases, such as first name, middle name, and last name.

If you do not have an ID field you can use for the join field, link the databases on two or more of these fields.

### Why don't I see all my fields?

Fields that are defined with any of the following field types do not appear in the Join dialog box field lists:

- Boolean
- Memo
- PicturePlus
- Variable

### Joins on calculated fields

To join databases on a calculated field, you must first display the calculated fields. See [Making calculated fields available for joins](#).

Calculated fields appear in italics at the bottom of the field list, after the database fields. A field list shows database fields and the calculated fields that refer to fields in the database. Summary fields do not appear in the list.

To make calculated fields appear in a field list for a secondary database, see [Joining calculated fields](#).

### Valid joins

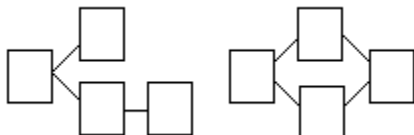
You can join a database to more than one database. Use the same join field in all of its joins or different fields for different joins.

Every database you open in the Join dialog box must be joined to at least one other database in the dialog box.

All the databases must be joined together into one set. If you have three databases open in the Join dialog box, then having database1 joined to database2, and database2 joined to database3 would be considered one set, though it is not the only possible one. Database3 could also be joined to either database1 or database2.

### Circular joins

Relational databases such as Approach do not allow circular join relationships. A circular join occurs when three or more databases are joined and you can follow the path of the join lines from the original database to other databases and back to the original database. For example, suppose database1 is joined to database2 and database2 is joined to database3. Database3 cannot be joined to database1, because that join forms a circular relationship.



Valid

Not Valid

To avoid circular joins, you may want to create an [alias join](#). By joining a database to an alias "copy" of itself, you can link records that have related information in the database.

### Invalid joins

The OK button is dimmed if any joins in the dialog box are invalid. When you correct the errors, you can click OK.

### **Limits on joins in one .APR file**

The greatest number of joins you can create between databases (that will be read-write) in one .APR file is 30. Any joins you create after that will be read-only, up to a limit of 50 joins.

If more than 30 databases are open or you have created more than 30 joins in one .APR file, you cannot save the .APR file with the File - Save As command.

### **Joins on unrelated databases**

You can also join databases that are not logically related. Join the databases on any field from either database. You can then use a single .APR file to access the joined, though unrelated, databases.

This allows you to create views that have the different databases as their main database, so you can easily work with all your data in one place.

---

{button ,AL('H\_JOINING\_DATABASE\_FILES\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_ALIAS\_JOINS\_OVER;H\_JOINED\_DATABASES\_OVER;H\_MAIN\_AND\_DETAIL\_DATABASES\_IN\_A\_VIEW\_OVER;H\_MANY\_TO\_MANY\_RELATIONSHIPS\_OVER;H\_ONE\_TO\_MANY\_MANY\_TO\_ONE\_AND\_ON\_E\_TO\_ONE\_RELATIONSHIPS\_OVER;H\_SETTING\_OPTIONS\_FOR\_A\_JOIN\_STEPS;',0)} [See related topics](#)

## Joining database files

Join two databases by establishing a link on one or more common fields.

**Want the big picture?** See [Overview: Joined databases](#).

1. From the Create menu, choose Join.
2. Click Open to select a database that already exists.  
If you open a database you don't want to join, click its list of fields and then click Close.
3. For each field you want to join on, click the field in one database and then drag to a field in the other database.  
If you don't know what fields you want to join on, [see details](#).
4. (Optional) Click Options to review the [insertion and deletion options](#) for this join.
5. Click OK.
6. Now that you have joined the databases, you can do the following:

[Add fields](#)

[Add a repeating panel to an existing form](#)

[Create new forms using fields from the joined database files](#)

[Create new forms that include a repeating panel](#)

[Do finds on data in the joined database files](#)

[Unjoin the database files](#)

---

{button ,AL(`H\_JOINING\_DATABASE\_FILES\_DETAILS`,1)} [See details](#)

{button ,AL(`H\_ALIAS\_JOINS\_OVER;H\_JOINED\_DATABASES\_OVER;H\_MAIN\_AND\_DETAIL\_DATABASES\_IN\_A\_VIEW\_OVER;H\_MANY\_TO\_MANY\_RELATIONSHIPS\_OVER;H\_ONE\_TO\_MANY\_MANY\_TO\_ONE\_AND\_ON\_E\_TO\_ONE\_RELATIONSHIPS\_OVER;H\_SETTING\_OPTIONS\_FOR\_A\_JOIN\_STEPS;H\_APP\_JOINING\_CALCULATED\_FIELDS\_STEPS`,0)} [See related topics](#)



## Join dialog box

### Choose a task

[Joining database files](#)

[Setting options for a join](#)

[Joining a database to itself \(alias join\)](#)

[Unjoining database files](#)

[Printing a diagram of join relationships](#)

---

{button ,AL('H\_JOINED\_DATABASES\_OVER;H\_MANY\_TO\_MANY\_RELATIONSHIPS\_OVER;H\_ONE\_TO\_MANY\_MANY\_TO\_ONE\_AND\_ONE\_TO\_ONE\_RELATIONSHIPS\_OVER;H\_ALIAS\_JOINS\_OVER;',0)} [See related topics](#)

## Overview: Main and detail databases in a view

Each form, report, or other view in an Approach file that uses joined databases has one main database and can have one or more detail databases.

The main database provides the basic information for that view; each record from the main database appears in it. The other joined databases can act as detail databases, providing additional, related information to display in the view.

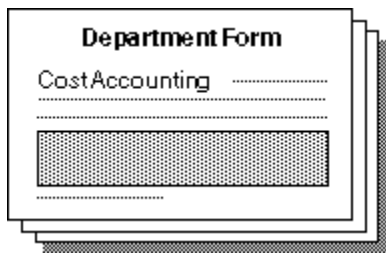
Each view in an Approach file can have a different main database. You specify which database is the main one for a view when you create the view. You can change the main database later by using the InfoBox.

## Forms

In a form, you can view one record at a time from the main database. The maximum number of records you can view is the number of records in the main database.

### Example

The main database of this form is a department database. There are five departments, and so there are five records in the database. Five is the maximum number of records you can see on this form.

The image shows a graphic of a form titled "Department Form". The form has a header section with the title, followed by a field labeled "CostAccounting" with a dotted line underneath. Below this is a large rectangular area with a stippled or shaded background, representing a repeating panel. The form is shown as a stack of three pages, with the top page being the most prominent.

There is another database joined to the department database: the employee database. There are 100 employees, and so there are 100 records in the employee database.

On a form that has the employee database as its main database, the maximum number of records you can see is 100.

### Showing details about records of the main database

Suppose that when you look at the department form, you also want to see a list of all employees assigned to that department. You can do that by creating a repeating panel on the department form.

A repeating panel on a form is always based on one of its detail databases. The panel shows all the records from the detail database that match the values in the main database's join fields.

So in this example, the repeating panel is based on the employee database. The form still can display only the five records of its main database (the department database), but the repeating panel can show employee data related to each of those records. This is possible because the two databases share a field in common: the department ID.

So when Approach finds an employee record that contains the same department ID as the department record displayed on the form, Approach displays that employee's data in the repeating panel.

## Reports

In a report, you see all the records from the main database as line items in the body of the report. One exception is a summary only report, which summarizes all the records in the main database, but does not show each one.

### Example

This report is based on an employee database and lists every employee in the company grouped by department:

<b>Employees (by Department)</b>	
Cost Accounting	
Maria Lopez y Garcia	
James MacLlane	
Jean-Pierre Renault	
Joann Willis	
Keng Wu	
Customer Support	
Leo Pavlovich	
	-1-

### Choosing a main database

When you design a report that uses joined data, it's important to base the report on the database from which you want to display *all* the records. In the employees report shown above, you want to see all the records from the employee database. You make the employee database the main database of the report. Use summary panels for the department groupings. If you were to base the report on the department database rather than the employee database, you would see all the departments, but only *one* employee for each department.

A repeating panel report is always based on the main database and displays all of its records. However, it also includes those records from a detail database that match the values in the main database's join field.

---

```
{button ,AL('H_ADDING_REPEATING_FIELDS_TO_REPORTS_STEPS;H_JOINED_DATABASES_OVER;H_JOINING_DATABASE_FILES_STEPS;H_MAIN_AND_DETAIL_DATABASES_IN_A_VIEW_OVER;H_MANY_TO_MANY_RELATIONSHIPS_OVER;H_ONE_TO_MANY_MANY_TO_ONE_AND_ONE_TO_ONE_RELATIONSHIPS_OVER;H_SETTING_OPTIONS_FOR_A_JOIN_STEPS;',0)} See related topics
```

## Overview: Many-to-many relationships

In a many-to-many relationship, many records in one database can be related to many records in the other database. A set of orders for products is a common application of this. Each order can include many products, and each product can appear on many orders. A many-to-many relationship is a one-to-many in both directions.

### Joining two databases directly

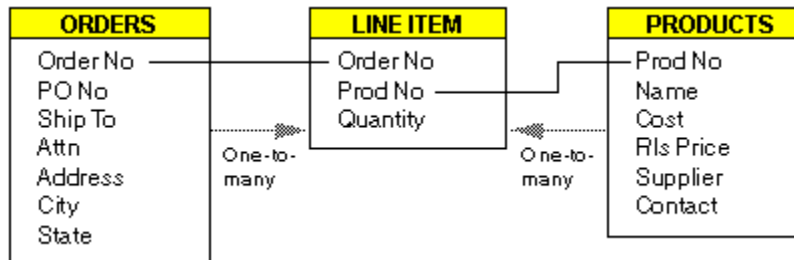
You cannot set up a many-to-many relationship directly between two databases. For example, if you join an orders database and a products database directly on an order number, each product can appear on only one order (because the order number becomes part of the product's record).

Similarly, if you join the two databases on a product number, each order can have only one product (because the product number becomes part of the order's record).

### Joining through a third database

To set up a many-to-many relationship between two databases, you need to add an intermediate database. The other databases each have a one-to-many relationship with this database.

For the orders and products databases, you would use a third database that stores the "many" line item data for the repeating panel on your order form:



The third database keeps the orders data out of the products database and the products data out of the orders database. Now each order can have many products, and each product can be on many orders. You can display one-to-many data both on order views and on product views. You can also see the detail records.

---

```
{button ,AL('H_ALIAS_JOINS_OVER;H_JOINED_DATABASES_OVER;H_JOINING_DATABASE_FILES_STEPS;H_MAIN_AND_DETAIL_DATABASES_IN_A_VIEW_OVER;H_ONE_TO_MANY_MANY_TO_ONE_AND_ONE_TO_ONE_RELATIONSHIPS_OVER;H_SETTING_OPTIONS_FOR_A_JOIN_STEPS;';0)} See related topics
```

## Overview: One-to-many, many-to-one, and one-to-one relationships

The relationship between records in two joined databases is usually one-to-many or many-to-one.

### One-to-many

In a one-to-many relationship, a record in one database can be related to one or more records in the other database. If, for example, a department has several employees, then a record in a department database has the same department ID as several records in an employee database.

To show the result of a one-to-many relationship on a form, you add a repeating panel to a form. The form is based on the "one" database. The repeating panel is based on the "many" database, and each line in the panel is a record in that database.

To show the result of a one-to-many relationship on a report, create a Repeating panel report using the Report Assistant. Base the report on the "one" database by choosing a field from that database in the Groups tab.

The report presents a group heading for each record in the "one" database. Under each group heading are the records from the "many" database that relate to the group. Each line in the body of the report is a record in the "many" database.

For example, this report shows a group for each record in the products database and the invoices that include each product.

Product	Invoice	Date	Amount
90 Cabernet			
	1002	5/16/94	3000
	1003	5/20/94	2200
	Total		5200
90 Merlot			
	1006	8/27/94	2000
	1005	7/23/94	1500
	Total		3500
90 Zinfandel			
	1004	6/1/94	1200
	1001	5/1/94	1000
	Total		2200
	Grand Total		10900

### Many-to-one

A many-to-one relationship is the reverse of one-to-many. If, for example, several employees are in the same department, then several records in an employee database have the same department ID as one record in a department database.

On this employee form, the department data is the same for several employees in the many-to-one relationship:

Employee Form		
Name	Position	Dept ID
Garcia	Associate	332
Department	Location	
Accounting	Hampton Plaza	

Many-to-one relationships are often used as a lookup, to provide a convenient means of displaying data in a view. If you type a department ID on the employee form above, the department name and location for that ID appear automatically.

For a lookup to work properly, the ID field must come from the main database for the view, and the fields with the lookup data must come from a detail database. On the employee form, the department ID field comes from the employee database, and the other department fields come from the department database.

## One-to-one

In a one-to-one relationship, a record in one database is related to only one record in the other database. For example, a vehicle number in one database might be related to a license number for the vehicle in a joined database.

You don't normally need to use one-to-one relationships in Approach. You can store a single set of data (such as everything about one vehicle) together in a single record in one database.

---

```
{button ,AL(`H_ADDING_REPEATING_FIELDS_TO_REPORTS_STEPS;H_JOINED_DATABASES_OVER;H_JOINING_DATABASE_FILES_STEPS;H_MAIN_AND_DETAIL_DATABASES_IN_A_VIEW_OVER;H_MANY_TO_MANY_RELATIONSHIPS_OVER;H_ONE_TO_MANY_MANY_TO_ONE_AND_ONE_TO_ONE_RELATIONSHIPS_OVER;H_SETTING_OPTIONS_FOR_A_JOIN_STEPS;`,`0)} See related topics
```

### **Printing a diagram of join relationships**

1. Choose Create - Join.
2. Click Print.
3. Click OK.

---

{button ,AL('H\_JOINING\_DATABASE\_FILES\_STEPS;H\_SETTING\_OPTIONS\_FOR\_A\_JOIN\_STEPS;','0)} [See related topics](#)

### Details: Setting options for a join

Join options apply to a particular relationship between databases. You can set options for each relationship between databases, but all joins between the same two databases have the same options.

The options at the top and the bottom of the Relational Options dialog box are the same. They just apply to different directions of the selected join.

### Insert options

With an Insert option selected, Approach inserts a new record in this case:

<u>If this condition exists</u>	<u>Approach</u>
You type in a blank field for a detail database on a view and a matching record for the main database's join value does not exist.	Inserts a new record in the detail database.

### Example

Suppose you select "Insert: If no records match the DEPARTMENT record, typing into a blank EMPLOYEE field inserts a new record" in the Relational Options dialog box. In this relationship, DEPARTMENT is the main database and EMPLOYEE is the detail database.

When you enter data in a blank field for the employee database on a department form, Approach inserts the new record in the employee database with the join fields filled in. The new record joins to the current DEPARTMENT record.

If you have a one-to-one relationship between the two databases, you would enter the record on a department form in a field(s) from the employee database. If you have a one-to-many relationship between the two databases, you would enter the record on a repeating panel based on EMPLOYEE.

### Delete options

With a Delete option selected, Approach deletes records in this case:

<u>If you</u>	<u>Approach</u>
Delete a record from the database listed first in the Delete option.	Deletes all records in the database listed second in the Delete option that have a join value matching the record you deleted.

### Example

Suppose you select "Delete: Deleting a record from DEPARTMENT deletes matching records from EMPLOYEE." If you delete a department, Approach deletes all the employees for that department from the employee database.

### Joins on calculated fields

If any of the join fields on the detail side of a joined database relationship is a calculated field, you cannot insert new records, even if you have this option selected. But if a calculated field is defined on the main side of the relationship, records may be added in the repeating panel.

---

{button ,AL(^H\_SETTING\_OPTIONS\_FOR\_A\_JOIN\_STEPS',1)} [Go to procedure](#)

{button ,AL(^H\_ALIAS\_JOINS\_OVER;H\_JOINED\_DATABASES\_OVER;H\_JOINING\_DATABASE\_FILES\_STEPS;H\_MAIN\_AND\_DETAIL\_DATABASES\_IN\_A\_VIEW\_OVER;H\_MANY\_TO\_MANY\_RELATIONSHIPS\_OVER;H\_ONE\_TO\_MANY\_MANY\_TO\_ONE\_AND\_ONE\_TO\_ONE\_RELATIONSHIPS\_OVER;',0)} [See related topics](#)



### Setting options for a join

Approach can automatically insert or delete related records in a database joined in the current Approach file.

1. Choose Create - Join.
2. Join two database files.
3. Click Options.

The Relational Options dialog box appears.

4. To have Approach insert related records automatically for the join, select an Insert option.
5. To have Approach delete related records automatically for the selected join, select a Delete option.
6. Click OK to close the Relational Options dialog box.
7. Click OK.

**Note** To insert related records automatically, you must enter a value into a field on the form or the repeating panel, depending on the type of relationship you created between the databases.

---

{button ,AL('H\_SETTING\_OPTIONS\_FOR\_A\_JOIN\_DETAILS',1)} [See details](#)

{button ,AL('H\_ALIAS\_JOINS\_OVER;H\_JOINED\_DATABASES\_OVER;H\_JOINING\_DATABASE\_FILES\_STEPS;H\_MAIN\_AND\_DETAIL\_DATABASES\_IN\_A\_VIEW\_OVER;H\_MANY\_TO\_MANY\_RELATIONSHIPS\_OVER;H\_ONE\_TO\_MANY\_MANY\_TO\_ONE\_AND\_ONE\_TO\_ONE\_RELATIONSHIPS\_OVER;',0)} [See related topics](#)

## Unjoining database files

If you unjoin and close a database in the Join dialog box, Approach deletes the views and repeating panels that are based on that database.

**Troubleshooting** A common mistake is to unjoin a database and then try to close the Join dialog box by clicking OK. The OK button is grayed until you select any unjoined databases and close them.

1. Choose Create - Join.
2. Click the join line connecting the databases you want to unjoin.
3. Click Unjoin.
4. For each database left without a join, select its list of fields and click Close.
5. If a message box appears, click Yes to unjoin the database.

Approach displays a message box for each database you close that is the main database for any views or repeating panels.

6. Click OK.

---

{button ,AL(^H\_ALIAS\_JOINS\_OVER;H\_JOINED\_DATABASES\_OVER;H\_JOINING\_DATABASE\_FILES\_STEPS;H\_SETTING\_OPTIONS\_FOR\_A\_JOIN\_STEPS;',0)} [See related topics](#)

## Approach file properties

**Command:** File - Approach File Properties



The Approach File Properties dialog box lets you enter a description of an Approach file, along with the name of the author and title. You can also enable a variable field for Notes/FX.

This dialog box displays information about the

- Drive, directory, and name of the Approach file (.APR)
- Drive, directory, and name of the database file(s)
- Date and time the file was created
- Date and time the file was last revised
- Total number of revisions
- Views in the Approach file
- Macros available in the file

### Keywords

Enter keywords that indicate the contents of the Approach file. For example, is it a customer list, a record of transactions, or a demographic analysis?

Keywords are used in conjunction with Notes/FX. When one or more databases are embedded in a Notes/FX document, keywords become a field in the document. You can create a view that shows the fields, then sort by keywords, and search for the keywords that interest you.

### Variable fields

Notes/FX lets Notes and Approach share information. From the Approach end, the sharing is accomplished with variable fields that have been enabled for Notes/FX. When an Approach variable field is enabled, Notes can write to the field and can read its contents without having to open an Approach view.

To enable a variable field in the Approach File Properties dialog box, select the check box to the left of the variable field name in the "FX enable" column.

### Route steps

If you are connected to a network and have access to an e-mail package, you can include Approach views and data in your e-mail messages. Enter the names of those people who you want to be recipients of your e-mail in the Route steps box and create a routing list.

### Print

Click Print for a printout of file properties.

## Delete File dialog box

### Choose a topic

[Deleting Approach files](#)

[Deleting database files](#)

## Do you really need that .APR?

Everytime you create a new database, Approach creates a new Approach file (.APR) to go with it, and gives you a chance to save the Approach file.

But you don't necessarily need to save that Approach file. Before you save it, consider the following points:

- **To save.** . . If this database stands on its own, and you don't plan to join it to other databases, then save the Approach file. It becomes the interface through which you can work with the data in your database.
- **Or not to save.** . . Do you intend to join this database with other databases to create a relational database application? If so, you need only one Approach file to work with. All the data in all the joined databases is available from within the single .APR you keep. It's much more efficient, and better database design, if a single Approach file serves as the interface for your whole database application.

## If I delete the .APR without saving it, will I lose the database and my data?

No. You won't lose your database, your data, or your field definitions.

After you join this database to another, you'll be able to see the field definitions of all your joined databases in the Field Definition dialog box of the .APR you keep.

Just be sure to create all your joins in the .APR you plan to keep.

You can create many views in the .APR, and each view can represent a different database of your application.

## Which .APR should I keep?

It makes sense to keep the .APR that you've worked hardest on and that has the most views that you want to use in your application. But technically it doesn't matter which .APR you keep, so long as you create all your joins in that .APR. (Approach stores information about joins in the .APR.)

Calculated fields exist only in the .APR in which they are created. Once you delete the .APR file, all the formulas you created in the calculated fields are deleted as well. To save the formulas you created, join the calculated fields from the .APR you want to delete to calculated fields in another .APR. Save them in the second .APR file, then delete the first .APR file.

## But I don't want to lose all the design work I did in the other Approach files.

This is not a problem. You can consolidate all the views you designed into one .APR. Follow this process:

- Decide which Approach file you want to keep.
- In that Approach file, join all the databases you plan to use in this application.
- In each of the .APRs that you no longer need, go to Design and delete any views that you won't need in your database application.
- Open the Approach file you want to keep, go to Design, and import the other .APRs.
- Map the fields used in the imported .APRs to the fields of their corresponding joined databases. (For more information on mapping fields, see the next question.)
- Delete the .APRs you don't need.


## What do I do in the Field Mapping dialog box?

Because you join the database before you import the .APR, Approach can easily recognize that the fields referred to in the incoming .APR correspond to the fields in one of the joined databases.

Approach sets up the fields in the Field Mapping dialog box so that all you have to do is confirm that the fields in the left column, from the incoming .APR, correspond to the fields on the right, in the joined database.

For example, suppose you're a chef and you joined a database named INGRDNTS.DBF to a database named RECIPES.DBF. Then you imported the views in INGRDNTS.APR into RECIPES.APR.

When the Field Mapping dialog box appears, Approach sets up the fields for you to map, like this:

<u>Fields in "INGRDNTS.APR"</u>		<u>Fields in "RECIPES.APR"</u>
Field1		INGRDNTS.Field1
Field2		INGRDNTS.Field2
Field3		INGRDNTS.Field3

Just click the middle column between the fields you want to map. The imported views will have INGRDNTS.DBF as their main database, and the data from INGRDNTS.DBF will appear in the fields.

### What's a main database?

One Approach file can have many views, and each view can represent a different database. The database that a view represents is called its main database.

The main database determines how many, and what kind of, records can be visible in a view.

For example, suppose again you're that chef who stores recipes in a database application. This application has a single Approach file as its interface: RECIPES.APR. Two databases are joined in the Approach file: INGRDNTS and RECIPES.

You have two hundred recipes in RECIPES.DBF and 400 ingredients listed in INGRDNTS.DBF.

- In views that have RECIPES as their main database, the largest number of records that the chef can ever see is the number of records in RECIPES.DBF: currently, 200.
- In views that have INGRDNTS as the main database, the largest number of records that the chef can ever see is the number of records in the INGRDNTS.DBF: currently, 400.

That doesn't mean that you can't see information from INGRDNTS, in a view that has RECIPES as its main database.

For example, part of each recipe is a list of ingredients. You display the ingredients by creating a repeating panel in a view whose main database is RECIPES. The ingredients come from INGRDNTS.DBF.

Although the main database of the view is RECIPES, it can display information from INGRDNTS, which is called the detail database. So in this view, you can see 200 records, one per recipe; but each recipe displays a list of ingredients from INGRDNTS.DBF.

### How do I find out what the main database of a view is?

Go to Design and double-click the view, away from any object. The InfoBox appears and displays the properties for the view. The name of its main database appears on the Basics tab.

You can change the main database to any of the other joined databases in your application.

### What if I change my mind and want all my .APRs back?

You can change your mind. Suppose you want to help another chef start a recipe database. You're not going to give away your recipes, of course, but you don't mind getting her started with your list of ingredients.

You can re-create INGRDNTS.APR in two ways:

- Choose File - Open. Instead of specifying an .APR, specify the database, in this case, INGRDNTS.DBF. Approach creates an .APR for the database, and the .APR contains a form and a worksheet that display all the fields of the database. Of course, your data from INGRDNTS.DBF will also be there.
- Choose File - Save As and rename your database application. In the renamed version, unjoin all the databases and close all of them except INGRDNTS.DBF. Approach deletes all the views that have RECIPES.DBF as their main database and leaves the ones that have INGRDNTS.DBF as their main database.

---

{button ,AL(^H\_SAVING\_APPROACH\_FILES\_STEPS;H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_AND\_A\_D  
ATABASE\_FILE\_STEPS;H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_AND\_A\_DATABASE\_FILE\_STEPS;',  
0)} See related topics

### **Installing the Approach Web browser**

You can install the Approach Web browser from the Surf the Net SmartMaster application (SURFNET.MPR), or directly from the Approach CD-ROM. You do not need to have any other browser installed on your computer for the Approach Web browser to work.

After you install the browser, see [Overview: OLE Custom Controls](#) for more information on how to use the ActiveX controls in Approach.

### **Installing the Web browser from the Surf the Net SmartMaster**

1. Start from one of the following:
  - In the Welcome dialog box, click "Create a New File Using a SmartMaster."
  - From the File menu, choose New Database.
2. Select Applications in the "SmartMaster types" box.
3. Select the "Internet World Wide Web Sites" SmartMaster application.
4. Click OK.
5. Click Setup on Surf the Net Main Menu.
6. Click "To install the WebTrek OCX browser."  
A message box appears.
7. Do one of the following:
  - Verify the Approach CD-ROM is in the drive.
  - Copy the Approach CD-ROM to your network.
8. Click OK.  
The WebTrek Install dialog box appears.
9. Specify the correct path.
10. Click OK.
11. Follow the instructions onscreen to install the browser.

### **Installing the Web browser from the CD-ROM**

1. Insert the Approach CD-ROM.
2. Click Start and choose Run.  
The Run dialog box appears.
3. Enter the path of the files on your CD-ROM drive.  
For example, d:\extra\approach\webtrek\webtrek.exe.
4. Follow the instructions onscreen to install the browser.

---

{button ,AL('H\_APP\_INSTALLING\_THE\_APPROACH\_WEB\_BROWSER\_DETAILS',1)} [See details](#)

## Opening files created in previous versions of Approach

### **.APR files**

When you open and save Approach 2.x .VEW files, Approach 3.x .APR files, Approach 96 .APR files, or Approach 97 .APR files with Lotus Approach Release 9, it converts the files to Lotus Approach Release 9 format. Once converted, you cannot open the .APR in a version released prior to Approach 97.

### **Database files**

Approach Release 9 does not convert the database itself, however. You can open the database in the 3.x, Approach 96, or Approach 97 versions without any problems.

To open the databases in the 2.x version, you must delete the .ADX files associated with the database. To ensure that any information in your database and/or .APR or .ADX files is not lost, make backup copies of your data before opening these files in Approach Release 9.

---

{button ,AL(`H\_OPENING\_APPROACH\_FILES\_STEPS;`,0)} [See related topics](#)



## Closing Approach files

Since Approach automatically saves any data changes or new data entries, you do not need to worry about saving your data when you close the Approach file.

1. Choose File - Close.



If you made design, join, or field definition changes you haven't saved, a message box asks if you want to save those changes.

2. Click Yes to save changes to the Approach file.

---

{button ,AL(^H\_SAVING\_APPROACH\_FILES\_AND\_A\_DATABASE\_FILE\_STEPS;H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_AND\_A\_DATABASE\_FILE\_STEPS;H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_ONLY\_STEPS;',0)} [See related topics](#)

### **Confirming passwords**

1. Enter the password exactly as you defined it in the Edit TeamSecurity dialog box.  
The password is case-insensitive.
2. Click OK.

---

{button ,AL('H\_DEFINING\_PASSWORD\_PRIVILEGES\_USING\_COPY\_STEPS;H\_DEFINING\_PASSWORD\_PRIVILEGES\_USING\_NEW\_STEPS;',0)} [See related topics](#)

## Overview: Connecting to an SQL or ODBC data source

To connect to an SQL or ODBC data source, use the SQL Assistant. The SQL Assistant lets you define a SELECT statement before you retrieve any records. By creating a SELECT statement, you save processing time by not opening the entire database and retrieving all of the records. You work only with those records that match the criteria you define.

You can also connect to an SQL or ODBC data source by choosing the File - New Database, Open, Save As, Import Data, or Export Data commands and selecting the appropriate file type. However, these commands do not let you define criteria for a SELECT statement.

## Using the SQL Assistant

Go through the SQL Assistant tabs to define, join, view, sort, and edit the criteria. The SQL statement in the SQL tab is based on your input in the previous tabs. The role each tab has in the process is described here. For more information on the individual tabs, see the related topics.

1. Choose File - Open/Edit SQL.



2. To specify the database file type, connection, database name, and the name of the table, click the Tables tab.

In the Tables tab, do one of the following:

- Create a new SQL statement by selecting "Create a new SQL statement." Click Add to open a table.
- Edit the last SQL statement you created for the current Approach file by selecting "Edit the existing SQL statement."

3. To join the tables, click the Join tab.
4. To create a find condition, click the Condition tab.
5. To select fields to place on the view, click the Fields tab.
6. To select fields for sorting, click the Sort tab.
7. To edit the SQL statement you created based on the previous tabs, click the SQL tab.

## Bypassing the SQL Assistant tabs

You can bypass the other SQL Assistant tabs by clicking the Tables tab, adding the tables you want to work with, and then clicking the SQL tab. The SELECT statement box, which would contain an SQL statement if you had gone through the other tabs first, contains the names of those tables that were opened from the Tables tab. Click the SELECT statement box to create your own SQL SELECT statement.

Once you start manually entering an SQL statement, all the tabs are disabled except for the Tables and SQL tabs. If you click Restore SQL Statement, the SQL statement will be restored and all the tabs become available.

When you finish the SQL statement, click Done. The SQL statement is parsed and sent to the SQL database (or whatever type of database you are using).

## Errors

Approach notifies you of any errors in the SQL statement. The resulting error message box gives you the number and a description of the SQL error. To resolve the problem, make note of the error number and refer to your SQL documentation.

The error messages for some file types do not contain error numbers. However, all SQL error messages have descriptions of the error.

---

{button ,AL(^H\_CREATING\_FIND\_CONDITIONS\_IN\_THE\_CONDITION\_TAB\_STEPS;H\_CREATING\_JOINS\_IN\_TH  
E\_JOIN\_TAB\_STEPS;H\_SELECTING\_FIELDS\_IN\_THE\_FIELDS\_TAB\_STEPS;H\_SELECTING\_TABLES\_IN\_TH  
E\_TABLES\_TAB\_STEPS;H\_SORTING\_FIELDS\_IN\_THE\_SORT\_TAB\_STEPS;0)} [See related topics](#)

### **Connecting to Internet servers**

1. Choose File - Internet - FTP Connection Setup.
2. Click Hosts.  
The FTP Hosts dialog box appears.
3. Click New.
4. Enter the host server description, address, and other connection information.
5. Select a connection type.
6. (Optional) If you select "Use Proxy," select the proxy.
7. Click Save.
8. Click Done to close the FTP Hosts dialog box.
9. Click OK to close the Internet Options dialog box.

---

{button ,AL(`H\_CONNECTING\_TO\_INTERNET\_SERVERS\_DETAILS',1)} [See details](#)

{button ,AL(`H\_WORKING\_WITH\_THE\_INTERNET\_OVER;H\_SETTING\_AUTOMATIC\_CONNECTIONS\_TO\_THE\_I  
INTERNET\_STEPS;H\_DELETING\_CONNECTIONS\_TO\_INTERNET\_SERVERS\_STEPS;H\_EDITING\_CONNEC  
TIONS\_TO\_INTERNET\_SERVERS\_STEPS;H\_MANAGING\_PROXYES\_STEPS',0)} [See related topics](#)

## **Details: Connecting to Internet servers**

### **Internet host information**

The host is the computer connected to the Internet that contains data that can be displayed on the Internet. To connect to the Internet, you need to get information about your host from your system administrator. If you do not have a system administrator, you should contact your local Internet Service Provider (ISP) to get access to the Internet.

The host description can be any descriptive name you choose to distinguish it from other host connections.

The host address is the domain address of the File Transfer Protocol (FTP) server to which you want to connect. It is a unique IP address to identify it on the Internet. It contains sets of numbers separated by periods, for example, 204.155.122.1.

### **User ID and password**

Your user ID identifies you as someone with an account on the host. Your system administrator or ISP supplies you with your user ID and an initial password, which you can later change.

### **Types of connections**

There are three ways to connect to the host:

- If the host supports FTP without requiring a user ID and password, select "Anonymous FTP," and use your e-mail address as the password.
- If you are connected to the Internet via a firewall that supports passive transfers, select "Passive (PASV)." Firewalls prevent unauthorized Internet users to access private networks connected to the Internet.
- If you are connected to the Internet via a firewall that acts as a proxy server, select "Use Proxy," and select the proxy that identifies the network address of the proxy server and its port number. A proxy server intercepts all messages on the network and hides the network's true address.

If you select "Use Proxy," you must set up your proxy information. To do this, click [Edit Proxies](#) and add new information or edit the existing proxy information.

For more information on connecting to the Internet, see your system administrator.

---

{button ,AL('H\_CONNECTING\_TO\_INTERNET\_SERVERS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_WORKING\_WITH\_THE\_INTERNET\_OVER;H\_SETTING\_AUTOMATIC\_CONNECTIONS\_TO\_THE\_INTERNET\_STEPS;',0)} [See related topics](#)

## Creating a new database from scratch

1. Start from one of the following:
  - In the Welcome dialog box, click "Create a New File Using a SmartMaster."
  - From the File menu, choose New Database.



2. Select Blank Database and click OK.  
The New dialog box appears.
3. Enter a name for the database file.
4. Select the default database type offered by Approach (dBASE IV) or another file type.
5. Click Create.  
The Creating New Database dialog box appears.
6. Define the names, data types, and sizes of fields for the database.  
If you decide at this point to use a set of ready-to-use fields, select one from the " Template" box.
7. Click OK.
  - Approach creates the new database file in whatever format you select.
  - The Approach file (.APR) you create contains two views: a form and a worksheet.
  - Both views display the fields you created.
  - You can start to enter data now.

### Do you really need that .APR?

If you're building a database application and plan to join database files, you may not need this Approach file, but only the database file that Approach automatically created along with it. For more information, see [Do you really need that .APR?](#)

---

{button ,AL('H\_CREATING\_A\_NEW\_DATABASE\_THAT\_IS\_A\_READYTOUSE\_APPLICATION\_STEPS;H\_CREATING\_A\_NEW\_DATABASE\_WITH\_A\_SET\_OF\_READYTOUSE\_FIELDS\_STEPS;H\_CREATING\_NEW\_DATABASE\_FILES\_REF;H\_IMPORTING\_DATA\_INTO\_DATABASES\_STEPS;H\_WHY\_BUILD\_A\_DATABASE\_REF',0)} [See related topics](#)

## Creating a new database that is a ready-to-use application

SmartMasters are fully developed database applications that you can copy and modify. For more information, review the description of the applications.

1. Start from one of the following:
  - In the Welcome dialog box, click "Create a New File Using a SmartMaster."
  - From the File menu, choose New Database.



2. Select Applications in the "SmartMaster types" box.
3. Select an application.
4. Click OK.
  - The Approach file (.APR) you create contains forms, worksheets, standard reports, and other features to help you conduct business.
  - You can start to enter data now.
  - You can also modify all aspects of the database and the Approach file.
5. To clear the sample data in the database so you can enter your own data, [delete all records](#).

---

```
{button ,AL('H_CREATING_A_NEW_DATABASE_FROM_SCRATCH_STEPS;H_CREATING_A_NEW_DATABASE_WITH_A_SET_OF_READYTOUSE_FIELDS_STEPS;H_CREATING_NEW_DATABASE_FILES_REF;H_WHY_BUILD_A_DATABASE_REF;H_APP_ZIP_CODE_DATABASE_OVER;H_WORKING_WITH_THE_INTERNET_OVER;',0)} See related topics
```

## Creating a new database with a set of ready-to-use fields

SmartMaster templates provide predefined fields for common kinds of databases. For more information, review the description of the templates.

1. Start from one of the following:
  - In the Welcome dialog box, click "Create a New File Using a SmartMaster."
  - From the File menu, choose New Database.



2. In "SmartMaster Types", select Templates.
3. Select a template.
4. Click OK.  
The New dialog box appears.
5. Enter a name for the database file.
6. Select the default database type offered by Approach (dBASE IV) or another file type.
7. Click Create.
  - Approach creates the new database file in whatever format you select.
  - The Approach file (.APR) you create contains two views: a form and a worksheet.
  - Both views display the fields you created.
  - You can start to enter data now.

### Do you really need that .APR?

If you're building a database application and plan to join database files, you may not need this Approach file, but only the database file that Approach automatically created along with it. For more information, see [Do you really need that .APR?](#)

---

{button ,AL(`H\_CREATING\_A\_NEW\_DATABASE\_WITH\_A\_SET\_OF\_READYTOUSE\_FIELDS\_DETAILS`,1)} [See details](#)

{button ,AL(`H\_CREATING\_A\_NEW\_DATABASE\_FROM\_SCRATCH\_STEPS;H\_CREATING\_A\_NEW\_DATABASE\_THAT\_IS\_A\_READYTOUSE\_APPLICATION\_STEPS`,0)} [See related topics](#)



## Details: Creating a new database with a set of ready-to-use fields

### Joining template files

Each SmartMaster template is a self-contained database file with fields for storing useful data. The template databases are more powerful, however, when you join them to other template databases.

### Example

An art gallery wants to create a database application containing information about their inventory using the Art Collection template. The Art collection template has the following fields:

- Artwork Title
- Artwork ID
- Artist ID
- Purchase Price

The gallery also wants to store personal information about each of the artists represented in their collection. It is far more efficient to keep information about the artists in a separate database, the Artist List template, than to have all the related information in one database. The Artist List template has the following fields:

- First Name
- Last Name
- Artist ID
- Nationality

To create a database application, join the two template databases on a unique ID field: Artist ID. This field links the artist to works of art in the gallery. Save the databases in one Approach file (.APR). Once the databases are joined, the gallery can create views in the Approach file displaying information from both databases. The Approach file could have a view for the artwork, another view for the artists, and as many more as are needed.

---

{button ,AL(`H\_CREATING\_A\_NEW\_DATABASE\_WITH\_A\_SET\_OF\_READYTOUSE\_FIELDS\_STEPS`,1)} [Go to procedure](#)

{button ,AL(`H\_CREATING\_NEW\_DATABASE\_FILES\_REF;H\_WHY\_BUILD\_A\_DATABASE\_REF`,0)} [See related topics](#)

## Creating custom SmartMasters

You can save an Approach file as a custom SmartMaster application (.MPR). You can then use the SmartMaster application as the basis for new Approach files.

1. Choose File - Save As.



2. Specify the SmartMaster directory.

The directory is c:\lotus\smartmasters\approach unless you changed it.

3. Select the SmartMaster file type (.MPR) in the "Save as type" box.

4. (Optional) Enter a new name for the SmartMaster application.

5. Click Save.

Approach saves the Approach file as a SmartMaster application and then displays the Save Database As dialog box.

6. Under Save, select whether to save as an Exact copy or a Blank copy.

7. Click Save.

8. If you have more joined databases in this file, repeat steps 5 - 7 for each database.

The custom SmartMaster application appears in the list of SmartMaster applications when you choose File - New or when you're in the Welcome dialog and click "Create a New File Using a SmartMaster."

---

{button ,AL(^H\_IDENTIFYING\_DEFAULT\_DIRECTORIES\_STEPS;H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_AND\_A\_DATABASE\_FILE\_STEPS;H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_ONLY\_STEPS;';0)} See related topics

## Creating databases from delimited text files

When you open an ASCII text file with delimited text, Approach creates

- An Approach file (.APR)
- A database file with a copy of the text-file data

1. From the File menu, choose Open.



2. Select Text - Delimited in the "Files of type" box.

3. Specify the text file and click Open.

The Text File Options dialog box appears.

4. Select the separator used in the text file.

If the separator does not appear in the list, select Other and enter the character.

5. Select the character set used in the text file.

6. To use the text in the first row of the file as field names, select "First row contains field names."

7. Click OK.

The New dialog box appears.

8. Enter a name for the database file in the "File name" box.

9. Select a database file type in the "Create type" box.

10. Click Create.

### Do you really need that .APR?

If you're building a database application and plan to join database files, you may not need this Approach file, but only the database file that Approach automatically created along with it. For more information, see [Do you really need that .APR?](#)

---

{button ,AL('H\_CREATING\_DATABASES\_FROM\_DELIMITED\_TEXT\_FILES\_DETAILS',1)} [See details](#)

{button ,AL('H\_CREATING\_DATABASES\_FROM\_FIXEDLENGTH\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_SPREADSHEETS\_STEPS;',0)} [See related topics](#)

## **Details: Creating databases from delimited text files**

### **Separators**

A delimited text file uses separators such as commas, spaces, or tabs to break up the text into discrete units. When you create a database from delimited text, these separators mark where one field ends and the next one begins. A paragraph return marks where one record ends and the next one begins.

### **Field names**

If the first row of the text file has text that identifies the rest of the file contents (such as Name, Address, and City), use this row to provide the field names.

If the first row cannot provide field names, be sure to deselect "First row contains field names." The fields are then initially named Field 1, Field 2, Field 3, and so on. Rename them in the Field Definition dialog box.

---

{button ,AL('H\_CREATING\_DATABASES\_FROM\_DELIMITED\_TEXT\_FILES\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_CREATING\_DATABASES\_FROM\_FIXEDLENGTH\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_SPREADSHEETS\_STEPS;',0)} [See related topics](#)

## **Details: Creating databases from fixed-length text files**

### **How text is divided**

You need to know the contents of the text file to define the text blocks correctly. In a fixed-length text file, the text on each line is broken into blocks of text that are a specific length. If the text does not fill the entire length, it has spaces after it until the next block begins.

When you create a database from fixed-length text, tell Approach how long each block of text is. Approach uses fixed-length fields for the text in the database.

A paragraph return in the text file marks where one record ends and the next one begins. If the records do not have paragraph returns, the next record begins at the end of the last block.

### **Field names**

You can name the fields when you create a database from a fixed-length text file. If the first row of the file has text that identifies the rest of the file contents (such as Name, Address, and City), you can use this first row to provide the field names.

If you name the fields yourself, follow the restrictions on characters and the length of field names for the database file type.

---

{button ,AL('H\_CREATING\_DATABASES\_FROM\_FIXEDLENGTH\_TEXT\_FILES\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_CREATING\_DATABASES\_FROM\_DELIMITED\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_SPREADSHEETS\_STEPS;',0)} [See related topics](#)

## Creating databases from fixed-length text files

When you open an ASCII text file with fixed-length text, Approach creates

- An Approach file (.APR)
- A database file with a copy of the text-file data

1. From the File menu, choose Open.



2. Select Text - Fixed-Length in the "Files of type" box.

3. Specify the text file and click Open.

The Fixed Length Text File Setup dialog box appears.

4. Select the character set used in the text file.

5. Define the first field with a name and data type.

6. In Start, enter the position of the first character to include in the database.

7. In Width, enter the number of characters contained in the fixed-length block.

8. Repeat steps 5 and 7 for each fixed-length block.

Approach provides the starting position after the first.

9. Click OK.

The New dialog box appears.

10. Enter a name for the database file in the "File name" box.

11. Select a database file type in the "Create type" box.

12. Click Create.

## Do you really need that .APR?

If you're building a database application and plan to join database files, you may not need this Approach file, but only the database file that Approach automatically created along with it. For more information, see [Do you really need that .APR?](#)

---

{button ,AL(^H\_CREATING\_DATABASES\_FROM\_FIXEDLENGTH\_TEXT\_FILES\_DETAILS';1)} [See details](#)

{button ,AL(^H\_CREATING\_DATABASES\_FROM\_DELIMITED\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_SPREADSHEETS\_STEPS';0)} [See related topics](#)

## Creating databases from spreadsheets

When you open a Lotus 1-2-3 or Microsoft Excel file, Approach creates

- An Approach file (.APR)
- A database file with a copy of the spreadsheet data

1. From the File menu, choose Open.



2. Select a file type from the "Files of type" box.

3. Specify the spreadsheet file.

4. Click Open.

To create a database from a Lotus 1-2-3 spreadsheet, select the sheet or named range with the data you want in the Select Range dialog box.

5. To use the text in the first row of the spreadsheet as field names, select "First row contains field names" in the Select Range dialog box (for Lotus 1-2-3) or the Field Names dialog box (for Excel).

6. Click OK.

The New dialog box appears.

7. Enter a name for the database file in the "File name" box.

8. Select a database file type in the "Create type" box.

9. Click Create.

## Do you really need that .APR?

If you're building a database application and plan to [join](#) database files, you may not need this Approach file, but only the database file that Approach automatically created along with it. For more information, see [Do you really need that .APR?](#)

---

{button ,AL('H\_CREATING\_DATABASES\_FROM\_SPREADSHEETS\_DETAILS',1)} [See details](#)

{button ,AL('H\_CREATING\_A\_NEW\_DATABASE\_FROM\_SCRATCH\_STEPS;H\_CREATING\_DATABASES\_FROM\_DELIMITED\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_FIXEDLENGTH\_TEXT\_FILES\_STEPS;H\_OPENING\_DATABASES\_CREATED\_IN\_OTHER\_APPLICATIONS\_STEPS';0)} [See related topics](#)

## **Details: Creating databases from spreadsheets**

### **Fields and records**

When you create a database from a spreadsheet, the rows in the spreadsheet become records in the database and the columns become fields.

### **Field names**

If the first row of the spreadsheet has text that identifies the rest of the contents (such as 1st Qtr, 2nd Qtr, and so on), use this row to provide the field names.

If the first row cannot provide field names, be sure to deselect "First row contains field names." The fields are then initially named A, B, C, and so on. Rename them in the Field Definition dialog box.

### **Data from 1-2-3 and Excel**

When you create a database from a spreadsheet, all of the data from the spreadsheet is copied into the database. Any new records you enter and all changes to the data become part of the newly created database file, not the spreadsheet.

---

{button ,AL('H\_CREATING\_DATABASES\_FROM\_SPREADSHEETS\_STEPS',1)} [Go to procedure](#)  
{button ,AL('H\_CREATING\_A\_NEW\_DATABASE\_FROM\_SCRATCH\_STEPS;H\_CREATING\_DATABASES\_FROM\_DELIMITED\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_FIXEDLENGTH\_TEXT\_FILES\_STEPS;H\_OPENING\_DATABASES\_CREATED\_IN\_OTHER\_APPLICATIONS\_STEPS;',0)} [See related topics](#)



## Creating find conditions for an SQL SELECT statement

Command: File - Open/Edit SQL



### Tab: Condition

1. Select the database to be used in the find condition.
2. Select a field in the Fields box.
3. Select an operator in the Operator box.
4. Enter data used for the find condition in the Values box.  
To create an OR statement, enter data on each line of the Values box.
5. To create additional criteria for the find, click "Find on Another Field."
6. In the second Condition tab that appears, click either "Find more records" or "Find fewer records." The first option adds an OR between the two Conditions. The second option adds an AND between the two Conditions.
7. Repeat steps 2 - 7 for each additional condition.
8. To delete a condition, click the Condition's tab and then click Delete Condition.  
The Delete Condition button appears on all the Condition tabs after you click "Find on Another Field."
9. Click Next.

**Note** The Description box displays the find condition you create in an English language format.

---

```
{button ,AL('H_CONNECTING_TO_AN_SQL_OR_ODBC_DATA_SOURCE_OVER;H_SQL_TABLES_IN_APPROAC  
H_REF;H_CREATING_JOINS_IN_THE_JOIN_TAB_STEPS;H_EDITING_SQL_STATEMENTS_IN_THE_SQL_TA  
B_STEPS;H_SELECTING_FIELDS_IN_THE_FIELDS_TAB_STEPS;H_SELECTING_TABLES_IN_THE_TABLES  
_TAB_STEPS;H_SORTING_FIELDS_IN_THE_SORT_TAB_STEPS;H_DBASE_FILES_IN_APPROACH_REF;',0)}
```

[See related topics](#)

## Creating joins for an SQL SELECT statement

Command: File - Open/Edit SQL



### Tab: Join

1. Click two fields in different tables that you want to join.
2. Click Join.
3. To create additional joins, select more fields in different tables and click Join again.
4. Click Options.  
The Relational Options dialog box appears.
5. To create an inner join between the fields, select Only Matching Records - Only Matching Records.
6. To create a left outer join between the fields, select All Records - Only Matching Records.
7. To create a right outer join between the fields, select Only Matching Records - All Records.
8. Click OK to close the Relational Options dialog box.
9. Click Next.

### Creating an alias file

Click Alias to create a copy of the selected database in the Join tab. You can join a field to an alias copy of itself just like any other database.

This lets you set up join relationships between fields in the same database without having to duplicate the records in another database.

### Example

An employee database has unique employee IDs and manager IDs to identify each employee's manager. By creating an alias copy of the employee database, you can join the manager ID in the first database to the employee ID in the second database. The alias database has a one-to-many relationship with the employee database. It displays which employees belong under which managers.

### Removing joins

To remove the join between the two tables, click the connecting line between two fields and then click Unjoin.

---

```
{button ,AL('H_CONNECTING_TO_AN_SQL_OR_ODBC_DATA_SOURCE_OVER;H_CREATING_FIND_CONDI  
NS_IN_THE_CONDITION_TAB_STEPS;H_CREATING_JOINS_IN_THE_JOIN_TAB_STEPS;H_EDITING_SQL_S  
TATEMENTS_IN_THE_SQL_TAB_STEPS;H_SELECTING_FIELDS_IN_THE_FIELDS_TAB_STEPS;H_SORTING  
_FIELDS_IN_THE_SORT_TAB_STEPS;H_SQL_TABLES_IN_APPROACH_REF;',0)} See related topics
```

## Creating new database files

You do not need to have any other database product besides Approach to create a database file.

### Default database file type

Approach creates a dBASE IV (.DBF) database file by default.

### Other standard file types

The "Create type" box shows the file types available for a new database. Besides dBASE IV, the standard file types are dBASE III+, FoxPro, and Paradox.

### Saving the Approach file

Approach automatically creates an Approach file (.APR) for a new database so that you can begin to work with your data immediately.

Although Approach automatically saves any data you enter in the database file, it does not automatically save the .APR file.

You can decide whether you need to save this .APR. You may not need it. For more information, see [Do you really need that .APR?](#)

---

{button ,AL('H\_CREATING\_A\_NEW\_DATABASE\_FROM\_SCRATCH\_STEPS;H\_CREATING\_A\_NEW\_DATABASE\_THAT\_IS\_A\_READYTOUSE\_APPLICATION\_STEPS;H\_CREATING\_A\_NEW\_DATABASE\_WITH\_A\_SET\_OF\_READYTOUSE\_FIELDS\_STEPS;H\_WHY\_BUILD\_A\_DATABASE\_REF;H\_APPROACH\_FILES\_APR\_AND\_DATABASE\_FILES\_OVERVIEW',0)} [See related topics](#)

## Defining password privileges using Copy

1. From the File menu, choose TeamSecurity.



2. Select one of the defined group or user names.

See [details](#).

3. Click Copy.

The Edit TeamSecurity dialog box appears.

Copy of *Name* appears in the "Group or user name" box, where *Name* is the defined group or user name you selected.

4. Enter a new name in the "Group or user name" box.
5. Enter a unique password in the "Approach file password" box.
6. Review the settings in the Database tab.

If you want to set a password for a database and require its use, click Database Password, [define the password](#), and then select "Require passwords to each database."

7. Review the settings in the View tab.
8. Review the settings in the Advanced tab.

**Caution** Once the Edit TeamSecurity dialog box is open, Approach will not let you define a password and exit the dialog box unless at least one group or user has been assigned password privileges in the Advanced tab.

9. Click OK.

The Confirm Password dialog box appears.

10. Confirm the password by entering it in the "Retype password" box.
11. Click OK to close the Confirm Password and Edit TeamSecurity dialog box.

The new name appears in the TeamSecurity dialog box.

12. Click Done.
13. From the File menu, choose Save Approach File.

---

{button ,AL('H\_DEFINING\_PASSWORD\_PRIVILEGES\_USING\_COPY\_DETAILS',1)} [See details](#)

{button ,AL('H\_DEFINING\_PASSWORD\_PRIVILEGES\_USING\_NEW\_STEPS;H\_DEFINING\_PASSWORDS\_FOR\_A\_DATABASE\_STEPS;H\_DELETING\_GROUPS\_OR\_USERS\_STEPS;H\_EDITING\_PASSWORD\_PRIVILEGES\_STEPS;H\_TEAMSECURITY\_REF;',0)} [See related topics](#)

### Details: Defining password privileges using Copy

The TeamSecurity dialog box has four predefined levels of user privileges. Each level is defined by a set of default privileges.

The four levels offer a suggested way of setting up your user privileges. You can create your own levels of user privileges and redefine the defaults in the Edit TeamSecurity dialog box.

The following table shows each level of default user privileges and the kinds of access it grants the user:

<u>Level of user privilege</u>	<u>Write privileges in databases</u>	<u>Have access to views</u>	<u>Can work in Design</u>	<u>Can change passwords</u>
Manager	Yes	Yes	Yes	Yes
Designer	Yes	Yes	Yes	No
Editor	Yes	Yes	No	No
Reader	No	Yes	No	No

### Approach file and database passwords

TeamSecurity lets you set access privileges and passwords for Approach files (.APR). After entering the password, you have access to the Approach file's associated database files for modifying and entering data, and entering new records.

Set passwords for database files in the Password tab of the Preferences dialog box. Set a read/write password, a read-only password, or both types of passwords for the database file. You can reach the Preferences dialog box by clicking Database Password in the Edit TeamSecurity dialog box.

---

{button ,AL('H\_DEFINING\_PASSWORD\_PRIVILEGES\_USING\_COPY\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_DEFINING\_PASSWORD\_PRIVILEGES\_USING\_NEW\_STEPS;H\_DEFINING\_PASSWORDS\_FOR\_A\_DATABASE\_STEPS;H\_DELETING\_GROUPS\_OR\_USERS\_STEPS;H\_EDITING\_PASSWORD\_PRIVILEGES\_STEPS;H\_TEAMSECURITY\_REF;',0)} [See related topics](#)

## Defining password privileges using New

1. From the File menu, choose TeamSecurity.



2. Click New.

The Edit TeamSecurity dialog box appears.

3. Enter the name of a group or individual user in the "Group or user name" box.
4. Enter a unique password in the "Approach file password" box.
5. Review the settings in the Database tab.

If you want to set a password for a database and require its use, click Database Password, [define the password](#), and then select "Require passwords to each database."

6. Review the settings in the View tab.
7. Review the settings in the Advanced tab.

**Caution** Once the Edit TeamSecurity dialog box is open, Approach will not let you define a password and exit the dialog box unless at least one group or user has been assigned password privileges in the Advanced tab.

8. Click OK.

The Confirm Password dialog box appears.

9. Confirm the password by entering it in the "Retype password" box.
10. Click OK to close the Confirm Password and Edit TeamSecurity dialog box.

The new name appears in the TeamSecurity dialog box.

11. Click Done.
12. From the File menu, choose Save Approach File.

---

{button ,AL(^H\_DEFINING\_PASSWORDS\_FOR\_A\_DATABASE\_STEPS;H\_DELETING\_GROUPS\_OR\_USERS\_STEPS;H\_EDITING\_PASSWORD\_PRIVILEGES\_STEPS;H\_DEFINING\_PASSWORD\_PRIVILEGES\_USING\_COPY\_STEPS;H\_TEAMSECURITY\_REF;','0)} [See related topics](#)

### **Deleting connections to Internet servers**

1. Choose File - Internet - FTP Connection Setup.
2. Click Hosts.  
The FTP Hosts dialog box appears.
3. Select the host you want to delete in the "Host description" box.
4. Click Delete.
5. Click Done to close the FTP Hosts dialog box.
6. Click OK to close the Internet Options dialog box.

---

{button ,AL(^H\_WORKING\_WITH\_THE\_INTERNET\_OVER;H\_SETTING\_AUTOMATIC\_CONNECTIONS\_TO\_THE\_I  
NTERNET\_STEPS;H\_EDITING\_CONNECTIONS\_TO\_INTERNET\_SERVERS\_STEPS;H\_MANAGING\_PROXIE  
S\_STEPS',0)} [See related topics](#)

### **Deleting database files**

When you delete a database file from within Approach, all associated files (index file, memo file, key field file) are also deleted. The .APR file is not deleted.

1. From the File menu, choose Delete Approach File.
2. Select the kind of file in the "Delete type" box.
3. Specify the file you want to delete.
4. Click Delete.  
A message box appears.
5. Click Yes to delete the file.

### **Deleting files using Windows Explorer**

You can delete files in the Windows Explorer, but to ensure that you delete all the files associated with the database, delete the file from Approach.

---

{button ,AL('H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_AND\_A\_DATABASE\_FILE\_STEPS;H\_DELETING\_FILES\_STEPS;',0)} [See related topics](#)



### **Deleting Approach files**

1. From the File menu, choose Delete Approach File.
2. Specify the file you want to delete.
3. Click Delete.

A message box appears.

4. Click Yes to delete the file.

Approach displays a message box for every joined database file associated with the Approach file (.APR).

5. Click Yes to delete the database file, No to keep the file.

Approach deletes all the index and memo files associated with the database file.

### **Deleting files using Windows Explorer**

You can delete files in the Windows Explorer, but you cannot delete an Approach file and its database files all in one step. To ensure that you delete all databases associated with your Approach file, delete the file from Approach.

---

{button ,AL('H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_AND\_A\_DATABASE\_FILE\_STEPS;H\_DELETING\_D  
ATABASE\_FILES\_STEPS;H\_APP\_DO\_YOU\_REALLY\_NEED\_THAT\_APR\_OVER;',0)} [See related topics](#)

## Deleting groups or users

Deleting a group or user deletes the password you associated with that group or user.

1. Choose File - TeamSecurity.



2. Select a group or user name.
3. Click Delete.

---

{button ,AL(^H\_DEFINING\_PASSWORD\_PRIVILEGES\_USING\_NEW\_STEPS;H\_DEFINING\_PASSWORDS\_FOR\_A\_DATABASE\_STEPS;H\_EDITING\_PASSWORD\_PRIVILEGES\_STEPS;H\_DEFINING\_PASSWORD\_PRIVILEGES\_USING\_COPY\_STEPS;H\_TEAMSECURITY\_REF;','0)} [See related topics](#)

### **Editing connections to Internet servers**

1. Choose File - Internet - FTP Connection Setup.
2. Click Hosts.  
The FTP Hosts dialog box appears.
3. Select the host you want to edit in the "Host description" box.
4. Make the changes to the connection.
5. Click Save.
6. Click Done to close the FTP Hosts dialog box.
7. Click OK to close the Internet Options dialog box.

---

{button ,AL(^H\_WORKING\_WITH\_THE\_INTERNET\_OVER;H\_SETTING\_AUTOMATIC\_CONNECTIONS\_TO\_THE\_I  
INTERNET\_STEPS;H\_DELETING\_CONNECTIONS\_TO\_INTERNET\_SERVERS\_STEPS;H\_MANAGING\_PROXI  
ES\_STEPS',0)} [See related topics](#)

## Editing password privileges

1. Choose File - TeamSecurity.



2. Select a group or user name.
3. Click Edit.  
The Edit TeamSecurity dialog box appears.
4. Change the password and/or the privileges defined in the Database, View, and Advanced tabs.
5. Click OK to close the Confirm Password and Edit TeamSecurity dialog box.
6. Click Done.
7. Choose File - Save Approach File.

---

{button ,AL(`H\_DEFINING\_PASSWORD\_PRIVILEGES\_USING\_NEW\_STEPS;H\_DEFINING\_PASSWORDS\_FOR\_A\_DATABASE\_STEPS;H\_DELETING\_GROUPS\_OR\_USERS\_STEPS;H\_DEFINING\_PASSWORD\_PRIVILEGES\_USING\_COPY\_STEPS;H\_TEAMSECURITY\_REF;`,0)} [See related topics](#)

## Editing SQL statements

**Command:** File - Open/Edit SQL



### Tab: SQL

To edit the last SQL statement you created while using the current Approach file (.APR), select "Edit the existing SQL statement" in the Tables tab before clicking the SQL tab.

The following procedure is the same whether you are editing an existing SQL statement or in the process of building a new one.

1. To move a field from the Fields box to the SELECT Statement box, move your cursor to the desired location and double-click the field.

This inserts the field name used in the SQL statement.

2. To edit the SQL statement, click in the SELECT Statement box and make your changes.

If you edit the SQL statement, you cannot go back through the SQL Assistant and change the query you made in the other tabs. All the tabs in the SQL Assistant are disabled except the SQL tab.

3. To restore the SQL statement that the Assistant created and remove any edits, click Restore SQL Statement.

All the tabs in the SQL Assistant become available.

4. Click Done.

---

{button ,AL('H\_CONNECTING\_TO\_AN\_SQL\_OR\_ODBC\_DATA\_SOURCE\_OVER;H\_CREATING\_FIND\_CONDITIONS\_IN\_THE\_CONDITION\_TAB\_STEPS;H\_CREATING\_JOINS\_IN\_THE\_JOIN\_TAB\_STEPS;H\_SELECTING\_FIELDS\_IN\_THE\_FIELDS\_TAB\_STEPS;H\_SORTING\_FIELDS\_IN\_THE\_SORT\_TAB\_STEPS;H\_SQL\_TABLES\_IN\_APPROACH\_REF;',0)} [See related topics](#)

### **Entering Approach file passwords**

1. Enter the Approach file password exactly as you defined it in the Edit TeamSecurity dialog box.  
The password is case-insensitive.
2. Click OK.
3. If you defined a password for the database file associated with the Approach file, enter it in the "Enter dBASE password" box.
4. Click OK.

---

{button ,AL(`H\_OPENING\_APPROACH\_FILES\_STEPS;'0)} [See related topics](#)

## FTP Hosts dialog box

### Choose a task

Connecting to Internet servers

Editing connections to Internet servers

Deleting connections to Internet servers

## Importing QMF forms in Approach

You must open a QMF Query before you import a QMF form. The type of file (such as DB2, dBASE IV, or Oracle) does not matter.

The QMF form does not contain any data, but its attributes are used to create a new Approach report or crosstab view and display data from the open file.



### Are you in Design?

1. Open a QMF Query.
2. Choose File - Import Approach File.
3. Select QMF Form in the "Files of type" box.  
The Logon to QMF Server dialog box appears.
4. Select a server in the "Server Name" box.  
If the server you select is an APPC server type, complete the "User ID" and "Password" boxes.
5. (Optional) Enter the name of the database the QMF server should connect to in the "Database Name" box.
6. If you do not enter a database name, a connection is made to the default database location on the QMF server.
7. Click OK.
8. (Optional) If a connection string appears, double-click the string.
9. Specify the name of the QMF form to import.
10. Click Open.
11. If the Variable Resolution dialog box appears, enter values for each variable.
12. The Import Approach File Setup dialog box appears (unless the data file and QMF form have fields with the same name, in which case they are mapped automatically).
13. Map the fields.
14. Click OK.

---

{button ,AL('H\_IMPORTING\_QMF\_FORMS\_IN\_APPROACH\_DETAILS',1)} [See details](#)

{button ,AL('H\_OPENING\_QMF\_FILES\_IN\_APPROACH\_STEPS;H\_QMF\_FILES\_IN\_APPROACH\_REF;H\_IMPORTING\_QMF\_QUERIES\_IN\_APPROACH\_STEPS;',0)} [See related topics](#)



### Details: Importing QMF forms in Approach

Some of the QMF form attributes that are supported on the host are not supported when you import the QMF form into Approach. The attributes that Approach does not support are listed below.

<u>Attributes</u>	<u>Details</u>
FORM.CONDITIONS	NA
FORM.DETAIL	<ul style="list-style-type: none"><li>• Repeat detail heading at the beginning of each new break level.</li><li>• Include detail values in the group summary.</li></ul>
Aggregation codes	<ul style="list-style-type: none"><li>• FIRST, LAST</li><li>• CSUM, PCT, CPCT, TPCT, and TCPCT are supported via field definition in Approach if entered manually by the user.</li><li>• STDEV produces different results because it is treated as the population instead of sample deviation in Approach.</li><li>• MAXIMUM and MINIMUM are ignored for character columns.</li></ul>
Form variables	<ul style="list-style-type: none"><li>• &amp;row, &amp;count, and some &amp;n variables for those aggregation functions that are not supported or explicitly supported.</li></ul>
FORM.CALC and column definition	<ul style="list-style-type: none"><li>• Across reports, including columns with CALCid usage code.</li><li>• PASS NULLS are ignored.</li><li>• Expressions with the following operators, functions, or variables: Arithmetic operators: %, //, and ** Comparative operators: ==, /=, /==, and &lt;&gt; Concatentation operator:    Logical operator: &amp;&amp; REXX execs and built-in functions Form variables that are not supported; however, this is the only attribute that does not support the variable &amp;PAGE Global variables Variables representing calculated column(s)</li></ul>
Multiple GROUP usage codes	<ul style="list-style-type: none"><li>• Treated as different GROUP levels.</li></ul>
Duplicate BREAK levels	<ul style="list-style-type: none"><li>• Treated as different BREAK levels.</li></ul>
Line breaks	<ul style="list-style-type: none"><li>• Line wrapping width</li><li>• Report text line width</li><li>• Column wrapped line kept on a page</li><li>• Page renumbering at the highest break level</li></ul>
Edit codes	<ul style="list-style-type: none"><li>• Wrap-related</li><li>• Binary</li><li>• Time stamp</li></ul>

Host related dependencies	<ul style="list-style-type: none"> <li>• Graphic</li> <li>• User-defined time/date</li> <li>• Locally-defined time/date edit codes</li> <li>• REXX execs on host</li> </ul>
Fixed columns	NA
Across-heading separator	<ul style="list-style-type: none"> <li>• NA; crosstab reports are in worksheet format.</li> </ul>
Column headings	<ul style="list-style-type: none"> <li>• Group and across-column headings in QMF across reports</li> </ul>

---

{button ,AL('H\_IMPORTING\_QMF\_FORMS\_IN\_APPROACH\_STEPS',1)} [Go to procedure](#)  
 {button ,AL('H\_QMF\_FILES\_IN\_APPROACH\_REF;H\_IMPORTING\_QMF\_FORMS\_IN\_APPROACH\_STEPS;H\_OPENING\_QMF\_FILES\_IN\_APPROACH\_STEPS','0')} [See related topics](#)

## Importing QMF queries in Approach

You can import an existing QMF Query's SQL statement using the SQL Assistant. After importing, you can execute the SELECT statement against a DB2 server. However, the DB2 data source must already be defined. If it is not defined, then QMF Query will not appear in the "Files of type" box.

1. Choose File - Open/Edit SQL.
2. Select "Create a new SQL statement."
3. Click Add.
4. Select QMF Query in the "Files of type" box.  
The Logon to QMF Server dialog box appears.
5. Select a server in the "Server Name" box.  
If the server you select is an APPC server type, complete the "User ID" and "Password" boxes.
6. (Optional) Enter the name of the database the QMF server should connect to in the "Database Name" box.  
If you do not enter a database name, a connection is made to the default database location of the QMF server.
7. Click OK.
8. (Optional) If a connection string appears, double-click the string.
9. Specify the name of the QMF query to import.
10. Click Open.
11. (Optional) If the Variable Resolution box appears, enter a value for each variable.  
The SQL statement of the QMF Query displays in the SQL tab (whether the Variable Resolution box appears or not).
12. Click Done.  
The DB2 Logon dialog box appears.
13. Select the correct database.
14. Complete the "User ID" and "Password" boxes.  
The SQL statement is submitted to the DB2 database directly.

---

{button ,AL('H\_QMF\_FILES\_IN\_APPROACH\_REF;H\_IMPORTING\_QMF\_FORMS\_IN\_APPROACH\_STEPS;H\_OPENING\_QMF\_FILES\_IN\_APPROACH\_STEPS;H\_IMPORTING\_DATA\_INTO\_DATABASES\_STEPS';,0)} [See related topics](#)

## Configuring ODBC drivers

If ODBC is installed on your computer, you need to install an ODBC driver in the Windows Control Panel for each database type you wish to open.

1. In Windows, click Start.
2. Under Settings, click Control Panel.
3. Double-click the ODBC icon.
4. In the Data Sources box, select Drivers.
5. In the Drivers box, click Add.
6. In the Add Driver box, type the name of the drive and directory for the driver in the text box, or click Browse to select a drive and directory name.
7. Click OK.
8. In the Install Drivers box, select the driver you want to install in the Installed ODBC Drivers list.
9. Click OK.

---

```
{button ,AL('H_OPENING_APPROACH_FILES_STEPS;H_DBASE_FILES_IN_APPROACH_REF;H_FOXPRO_FILES_IN_APPROACH_REF;H_MICROSOFT_ACCESS_TABLES_IN_APPROACH_REF;H_ORACLE_SQL_TABLES_IN_APPROACH_REF;H_PARADOX_FILES_IN_APPROACH_REF;H_SQL_TABLES_IN_APPROACH_REF',0)}
```

[See related topics](#)

## Managing proxies

For information and help using proxies, see your system administrator.

1. Choose File - Internet - FTP Connection Setup.
2. Click Hosts.  
The FTP Hosts dialog box appears.
3. Select "Use Proxy."
4. Click Edit Proxies.  
The Edit Proxies dialog box appears.
5. Do one of the following:
  - To add a proxy, click New and enter the proxy address and port.
  - To edit a proxy, select the proxy address and enter the new information.
  - To delete a proxy, select the proxy address and click Delete.
  - To make a proxy the default, select the proxy address and select "Default proxy."
6. Click Save.
7. Click Done to close the Edit Proxies dialog box.
8. Click Done to close the FTP Hosts dialog box.
9. Click OK to close the Internet Options dialog box.

---

{button ,AL(^H\_WORKING\_WITH\_THE\_INTERNET\_OVER;H\_SETTING\_AUTOMATIC\_CONNECTIONS\_TO\_THE\_I  
INTERNET\_STEPS;H\_CONNECTING\_TO\_INTERNET\_SERVERS\_STEPS;H\_DELETING\_CONNECTIONS\_TO\_  
INTERNET\_SERVERS\_STEPS;H\_EDITING\_CONNECTIONS\_TO\_INTERNET\_SERVERS\_STEPS;!,0)} See  
related topics

## Mapping fields

Approach uses field mapping to ensure

- The accuracy of field definitions
- The relationship between fields in a view and data in a database

## How do you map fields?

When you map fields, you work only

- In the center column, headed by a blue arrow



- In the right-hand column, which lists the fields of the current database

<u>To</u>	<u>Do this</u>
Map a field on the left to a field on the right	Click the center column between them. An arrow appears.
Unmap fields	Click the arrow between the fields to remove it.
Move a field on the right so it lines up with a field on the left	Drag the field and drop it on another. The two fields swap positions.
Unmap all fields at once	Click Clear.
Restore Approach's original attempt to map the fields	Click Clear, and then click Automatically Line Up Fields.

## When do you need to map fields?

Approach tries to map fields, but it cannot always follow the logic of what you want to do, so it's important to check how fields are mapped. Approach automatically maps fields with the same name unless they have different field types.

The following table describes the situations in which you may need to map fields.

<u>File command</u>	<u>Left column shows</u>	<u>Right column shows</u>	<u>Mapping answers this question</u>
Open (more information, below)	Fields as they were the last time you saved the .APR	Fields as they now are in the current database	Which fields on the left correspond to which fields on the right?
Import Data (in Browse)	Fields of data you want to import	Fields in the current database	Which fields in the current database should get the incoming data?
Import Approach File (in Design)	Fields used in the views you want to import	Fields in the current database	What data in the current database should appear in the fields of the incoming views?
Replace button in the	Fields in the current	Fields in the database file	Which fields on the left

Join dialog box	database and the database file it is joined to	joined to the current database and in the database file that is to replace the current database	correspond to which fields on the right?
-----------------	--	---	--

### Mapping fields when opening a file

When you open an Approach file, the field mapping dialog box appears if the following is true:

The last time you worked in this file, or in a file associated with the same database you are trying to open, you changed the definition of a field in the database, and then you closed the Approach file without saving it (the .APR).

Field definition changes that require you to save the Approach file:

- Deleting a field from the database (Create - Field Definition - Delete)
- Changing the name of a field
- Changing the field type

### Unmapped fields

You don't have to map all fields. Approach ignores all unmapped fields. They do not show data in the Approach file.

**File - Import Data:** Unmapped fields do not receive any imported data.

**File - Open and File - Import Approach File:** Field boxes that were associated with fields you did not map show no data.

- In Design, when View - Show Data is turned off, these field boxes display NO\_FIELD\_REFERENCE instead of a field name.
- In Browse, when you select one of these fields, a message tells you that you cannot edit the field. Go to Design and assign a database field to it.

## **New File**

**If you're trying to** add a new view, you do not need to create a new database or Approach (.APR) file. From the Create menu, choose the type of view you want to add.

At the end of this task, you will have created at least two files:

- A database file, where data is stored
- An Approach file (.APR), where you
  - Use forms and other views to enter the data that you want to store in the database
  - Manipulate your data using different views that you create

If you plan to join databases, you do not necessarily need to save an .APR for each database. For more information, see Do you really need that .APR?

**Tip** If you want to create a database from a spreadsheet, make sure the information in the first row of the spreadsheet can be used as field names in Approach.

### **Choose a task**

Creating a new database from scratch

Creating a new database with a set of ready-to-use fields

Creating a new database that is a ready-to-use application

### **How do I create an Approach file for a database that already exists?**

Opening databases created in other applications



## Opening Approach files

To use a database that already has an Approach file (.APR) associated with it, open the Approach file rather than the database file.

**If you're trying to** access an ODBC database from Approach, you must first configure the ODBC driver and create a data source for each database type.

1. From the File menu, choose Open.



2. Specify the Approach file to open.

**Caution:** If you select a database file, Approach creates a new .APR file for it, even if an Approach file associated with the database already exists. If you save this new Approach file, you may write over the existing one.

3. (Optional) To open the file only for viewing, select "Open as read-only."
4. Click Open.
5. If necessary, map the fields in the file and click OK.

## Opening one of the last Approach files used

Select one of the names at the bottom of the File menu or in the Welcome dialog box.

---

{button ,AL('H\_OPENING\_APPROACH\_FILES\_DETAILS',1)} See details

{button ,AL('H\_CLOSING\_APPROACH\_FILES\_STEPS;H\_IMPORTING\_APPROACH\_FILES\_STEPS;H\_MAPPING\_FIELDS\_REF;H\_OPENING\_DATABASES\_CREATED\_IN\_OTHER\_APPLICATIONS\_STEPS;H\_PASSWORDS\_OVER;H\_OPENING\_FILES\_CREATED\_IN\_PREVIOUS\_VERSIONS\_OF\_APPROACH\_REF;',0)} See related topics

## Details: Opening Approach files

### Open as read-only

If this setting is on, you cannot edit data, but you can save design changes in the Approach file. This setting applies only to your current session with the file.

### Database file passwords

If a database requires a password, Approach asks you to provide the password when you open an Approach file that uses that database.

A database can have a read/write password, a read-only password, or both a read/write and a read-only password.

---

{button ,AL(`H\_OPENING\_APPROACH\_FILES\_STEPS',1)} [Go to procedure](#)

{button ,AL(`H\_CLOSING\_APPROACH\_FILES\_STEPS;H\_IMPORTING\_APPROACH\_FILES\_STEPS;H\_MAPPING\_FIELDS\_REF;H\_OPENING\_DATABASES\_CREATED\_IN\_OTHER\_APPLICATIONS\_STEPS;H\_SETTING\_PASSWORD\_PRIVILEGES\_STEPS;',0)} [See related topics](#)

## Opening Approach files from an FTP server on the Internet

1. Choose File - Internet - Open from Internet.

Or

Choose File - Open and click Internet.



2. Select "FTP" as the server type.

3. (Optional) To create a new connection to an FTP server, click Hosts.

4. Select a host server from the "FTP Servers" box.

5. Click Connect if you do not have the Auto connect option checked in the Internet Options dialog box.

6. (Optional) Specify the directory containing the file you want to open.

7. Select the file.

8. Click Open.

---

{button ,AL(^H\_WORKING\_WITH\_THE\_INTERNET\_OVER;H\_OPENING\_APPROACH\_FILES\_FROM\_A\_SERVER\_ON\_THE\_INTERNET\_OVER;H\_OPENING\_APPROACH\_FILES\_FROM\_A\_WEB\_SERVER\_ON\_THE\_INTERNET\_STEPS;H\_SAVING\_APPROACH\_VIEWS\_TO\_OTHER\_FILE\_FORMATS\_STEPS;H\_SAVING\_APPROACH\_VIEWS\_TO\_THE\_INTERNET\_STEPS;H\_SETTING\_AUTOMATIC\_CONNECTIONS\_TO\_THE\_INTERNET\_STEPS;H\_CONNECTING\_TO\_INTERNET\_SERVERS\_STEPS;H\_DELETING\_CONNECTIONS\_TO\_INTERNET\_SERVERS\_STEPS;H\_EDITING\_CONNECTIONS\_TO\_INTERNET\_SERVERS\_STEPS;H\_MANAGING\_PROXIES\_STEPS',0)} [See related topics](#)

## Overview: Opening Approach files from a server on the Internet

### FTP and World Wide Web servers

You can download files from either a File Transfer Protocol (FTP ) server or from a Web server.

- If you download from an FTP server, you can browse through different directories to find the file you want.
- If you download from a Web server, you must know the exact name and location of the file, for example <http://www.lotus.com/helpfile.apr>.

### APT files

You can download Approach .APT files that you or another user place on the server. Approach places the file you download in a directory on your system as a read-only file. If you want to make changes to the file, choose File - Save As to save it under a new name as an .APR file. Approach prompts you for new names for the .APR and any associated databases.

### Auto connect to a server

You do not have to select a host server in the Open from Internet dialog box every time you open a file. Select one of the auto connect options from the Internet Options dialog box. The FTP server you select becomes the default for opening files from the Internet. See "[Setting automatic connections to the Internet](#)."

### List by description

Select the "List by description" box to display the FTP servers by name. Deselect "List by description" to display the FTP servers by their IP address.

---

{button ,AL('H\_OPENING\_APPROACH\_FILES\_FROM\_AN\_FTP\_SERVER\_ON\_THE\_INTERNET\_STEPS;H\_OPENING\_APPROACH\_FILES\_FROM\_A\_WEB\_SERVER\_ON\_THE\_INTERNET\_STEPS;H\_WORKING\_WITH\_THE\_INTERNET\_OVER;',0)} [See related topics](#)

## Opening Approach files from a Web server on the Internet

1. Choose File - Internet - Open from Internet.

Or

Choose File - Open and click Internet.



2. Select "WWW" as the server type.

3. Enter the URL path and the name of the file you want to open.

For example, to open an Approach file from the Lotus Web page, type **http://www.lotus.com/filename.APT**.

4. If you use a server proxy, select "Use proxy" and select the proxy name.

5. Click Open.

---

```
{button ,AL(^H_OPENING_APPROACH_FILES_FROM_A_SERVER_ON_THE_INTERNET_OVER;H_OPENING_APPROACH_FILES_FROM_AN_FTP_SERVER_ON_THE_INTERNET_STEPS;H_SAVING_APPROACH_VIEWS_TO_OTHER_FILE_FORMATS_STEPS;H_SAVING_APPROACH_VIEWS_TO_THE_INTERNET_STEPS;H_SETTING_AUTOMATIC_CONNECTIONS_TO_THE_INTERNET_STEPS;H_CONNECTING_TO_INTERNET_SERVERS_STEPS;H_DELETING_CONNECTIONS_TO_INTERNET_SERVERS_STEPS;H_EDITING_CONNECTIONS_TO_INTERNET_SERVERS_STEPS;H_MANAGING_PROXIES_STEP;H_WORKING_WITH_THE_INTERNET_OVER;'0)} See related topics
```

## **Details: Opening databases created in other applications**

### **Open as read-only**

If you check this setting, you cannot enter or edit data, but you can save style and layout changes.

### **SQL tables**

If you select Oracle, SQL Server, DB2-MDI, Notes, or any other client/server type and are not already connected to an SQL server, a dialog box appears that lets you connect to the server.

### **Key fields for a Paradox database**

Approach requires a key field to work with Paradox tables. If you open a Paradox database and Approach cannot find a key field, Approach asks if you want to make a copy of the database with a key field. Type a different name for the copy and click Save. Approach creates a copy of the database file and adds the new field to it, with a unique number for each record.

### **Saving in another file type**

You can save the database file as another file type. For example, if you open a database that's on a mainframe computer, save a copy of the database in dBASE IV so you can use it on your own computer.

---

{button ,AL('H\_OPENING\_DATABASES\_CREATED\_IN\_OTHER\_APPLICATIONS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_CONNECTING\_TO\_AN\_SQL\_OR\_ODBC\_DATA\_SOURCE\_OVER;H\_CREATING\_A\_NEW\_DATABASE\_FROM\_SCRATCH\_STEPS;H\_CREATING\_DATABASES\_FROM\_DELIMITED\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_FIXEDLENGTH\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_SPREADSHEETS\_STEPS',0)} [See related topics](#)

## Opening databases created in other applications

Opening a database created in another application in Approach creates a new Approach file (.APR).

The data remains in the original database file. The Approach file provides a set of views of the data and lets you enter new data.

1. Choose File - Open.



2. Select the database file type in the "Files of type" box.
3. Specify the database.
4. (Optional) To open the database file only for viewing, click "Open as read-only."
5. Click Open.

Approach creates a new file (.APR) with a default form and worksheet.

---

{button ,AL('H\_OPENING\_DATABASES\_CREATED\_IN\_OTHER\_APPLICATIONS\_DETAILS',1)} [See details](#)

{button ,AL('H\_CONNECTING\_TO\_AN\_SQL\_OR\_ODBC\_DATA\_SOURCE\_OVER;H\_CREATING\_A\_NEW\_DATABASE\_FROM\_SCRATCH\_STEPS;H\_CREATING\_DATABASES\_FROM\_DELIMITED\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_FIXEDLENGTH\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_SPREADSHEETS\_STEPS',0)} [See related topics](#)

## Opening QMF files in Approach

You can open QMF procedures and queries from Approach. The queries and procedures are run on the QMF server, and the results appear in an Approach form and worksheet.

1. Choose File - Open.



2. Select the QMF Procedure or QMF Query file type in the "Files of type" box.  
The Logon to QMF Server dialog box appears.
3. Select a server in the "Server Name" box.  
If the server you select is an APPC server type, complete the "User ID" and "Password" boxes.
4. (Optional) Enter the name of the database the QMF server should connect to in the "Database Name" box.  
If you do not enter a database name, a connection is made to the default database location on the QMF server.
5. Click OK.
6. (Optional) If a connection string appears, double-click the string.
7. Specify the name of the QMF procedure or query to open.
8. Click Open.
9. If the Variable Resolution dialog box appears, enter values for each variable.
10. Click OK to close the Variable Resolution dialog box.
11. Click OK.

---

{button ,AL(^H\_OPENING\_QMF\_FILES\_IN\_APPROACH\_DETAILS',1)} [See details](#)

{button ,AL(^H\_IMPORTING\_DATA\_INTO\_DATABASES\_STEPS;H\_QMF\_FILES\_IN\_APPROACH\_REF;H\_OPENING\_DATABASES\_CREATED\_IN\_OTHER\_APPLICATIONS\_STEPS;H\_IMPORTING\_QMF\_FORMS\_IN\_APPROACH\_STEPS;H\_IMPORTING\_QMF\_QUERIES\_IN\_APPROACH\_STEPS;',0)} [See related topics](#)



## Details: Opening QMF files in Approach

### DASPWAPI.INI

The names of all the server profile entries displayed in the "Server Name" box are defined in the client connections initialization file, DASPWAPI.INI.

Approach provides a sample DASPWAPI.INI file if it is not already on your system. You can customize the sample DASPWAPI.INI file to your needs. If you do not have an existing DASPWAPI.INI, then DASPWAPI.INI is located by default in the Approach main directory. You can change the location of the initialization file during installation or by using the DSSPATH registry setting.

Edit DASPWAPI.INI with any text editor. For more information on setting parameters in the client connections initialization file, see the header of the sample DASPWAPI.INI.

---

{button ,AL('H\_OPENING\_QMF\_FILES\_IN\_APPROACH\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_IMPORTING\_DATA\_INTO\_DATABASES\_STEPS;H\_QMF\_FILES\_IN\_APPROACH\_REF;H\_OPENING\_DATABASES\_CREATED\_IN\_OTHER\_APPLICATIONS\_STEPS;H\_IMPORTING\_QMF\_QUERIES\_IN\_APPROACH\_STEPS;',0)} [See related topics](#)

### Opening query files in Approach

- When you open a query file (.QRY), you automatically connect to a server using the log-on information in the file.
- The SELECT statement executes a find or sort and returns data to a read-only file on your hard-disk drive.

1. Choose File - Open.



2. Select Query in the "Files of type" box.

3. Specify the file you want to open.

4. Click Open.

5. If a Connect box appears, fill in the information.

The box appears if you are not already connected to the appropriate SQL server.

---

{button ,AL('H\_QUERY\_FILES\_IN\_APPROACH\_REF','0)} [See related topics](#)

## **Open dialog box**

See files in all drives and directories and open databases that have already been created, either in Approach or another application.

To open an existing database in Approach, open the Approach file associated with the database. When you open an Approach file, you may have to enter a password.

When you open a database created in another application, Approach automatically creates a new Approach file for it. After saving the Approach file, you can work with the database as if it had been created in Approach.

## **Choose a task**

[Opening Approach files](#)

[Entering Approach file passwords](#)

[Creating databases from spreadsheets](#)

[Opening databases created in other applications](#)

[Creating databases from delimited text files](#)

[Creating databases from fixed-length text files](#)

[Opening query files in Approach](#)

[Connecting to an SQL or ODBC data source](#)

### **Open from Internet dialog box**

You can open an Approach .APT file from a File Transfer Protocol (FTP) server or a World Wide Web server via the Internet. When you open an .APT file on the Internet, Approach copies the file to your workstation as a read-only file. If you want to make changes to the file, save it under a new .APR file name.

### **Choose a task**

[Opening Approach files from a Web server on the Internet](#)

[Opening Approach files from an FTP server on the Internet](#)

## Publishing Approach views to the Web

When you publish the current Approach view to the Web, not every part of the Approach view is saved in HTML format. For example, field data remains the same after conversion to HTML, but some user interface controls are changed or deleted.

The following table shows which parts of an Approach view are saved to HTML format.

<u>Parts of the view</u>	<u>Saved to HTML?</u>	<u>Comment</u>
Buttons	No	Buttons do not appear on the HTML page.
Check boxes	No	The check box's label and current value appear in HTML.
Radio buttons	No	The radio button's label and current value appear in HTML.
Pictures	No	All pictures are deleted.
Field data	Yes	All field data is saved.
Labels in reports, worksheets, and crosstabs	Yes	Labels appear at the top of each HTML page.
Labels on forms	Yes	Labels appear in HTML in the same relative position as in the view.
Scrolling lists	Yes	A scrolling list is converted to a field box and displays the current value.

---

{button ,AL('H\_SAVING\_APPROACH\_VIEWS\_TO\_OTHER\_FILE\_FORMATS\_STEPS;H\_SAVING\_APPROACH\_VIEWS\_TO\_THE\_INTERNET\_STEPS;',0)} [See related topics](#)

## **Save Approach File As dialog box**

The Save Approach File As dialog box lets you save copies of your Approach files and their associated database files under a new name. The copies can be saved to the same or a different location, and in the same or a different file type.

### **Choose a task**

[Saving a copy of an Approach file only](#)

[Saving a copy of an Approach file and a database file](#)

[Creating custom SmartMasters](#)

## Saving Approach files

Save an Approach file when you make design changes, create joins, or change field definitions. Examples of design changes include:

- Customizing the layout of a [view](#)
- Changing color, fonts, and styles
- Adding additional fields or changing the existing ones

## Saving an Approach file the first time

1. From the File menu, choose Save Approach File.



2. Specify a name and location for the file.
3. (Optional) Enter a description of the file.
4. Click Save.

## Saving changes to existing Approach files

From the File menu, choose Save Approach File.

## Saving joins

You must save the Approach file whenever you create joins.

## Why is Save Approach File dimmed on the menu?

Save Approach File is dimmed until you change the design of the .APR file. When you change the design of the .APR file, Save Approach File becomes available.

If you change data in records or add new records, Save Approach File stays dimmed because [Approach saves data automatically](#).

## Do you really need this .APR?

If you're building a database application and plan to [join](#) database files, you may not need this Approach file, but only the database file that Approach automatically created along with it. For more information, see [Do you really need that .APR?](#)

---

{button ,AL(^H\_SAVING\_APPROACH\_FILES\_DETAILS',1)} [See details](#)

{button ,AL(^H\_APPROACH\_SAVES\_DATA\_AUTOMATICALLY\_REF;H\_CREATING\_CUSTOM\_SMARTMASTERS\_STEPS;H\_SAVE\_APR\_DIALOG\_BOX\_CS;H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_AND\_A\_DATABASE\_FILE\_STEPS;',0)} [See related topics](#)

## Details: Saving Approach files

### Approach files and database files

You work with two kinds of files in Approach: Approach files (.APR) and database files.

An Approach file stores

- [Views](#), and all their style and layout information
- [Calculated fields](#)
- [Variable fields](#)

You do all your work in Approach files, including entering and editing data, finding and sorting records, and organizing and printing information.

The data you see in an Approach file is stored behind the scenes in one or more database files. You do not work directly in a database file, but use the Approach file as a "window" into it. You can work with database files in a variety of file formats in Approach.

When you create a new database file in Approach (or open an existing database file, spreadsheet, or text file from another application), Approach automatically creates and opens a new Approach file so that you can begin entering data. Then whenever you want to work with the data again, you open the Approach file for it rather than the database file. You can do this from the Welcome dialog box or the File menu.

**You don't need to save changes to your data.** Approach automatically saves changes to data in an underlying database file as you work and whenever you close a file.

**You need to save an Approach file** manually after Approach creates the file (such as for a new database file) and whenever you make design, join, or field definition changes. You do this by choosing File - Save Approach File.

You can also save a copy of a database file and an Approach file, either to back up a database or to prepare a template for other databases.

---

{button ,AL(^H\_SAVING\_APPROACH\_FILES\_STEPS',1)} [Go to procedure](#)

{button ,AL(^H\_APPROACH\_SAVES\_DATA\_AUTOMATICALLY\_REF;H\_CREATING\_CUSTOM\_SMARTMASTERS\_STEPS;H\_SAVE\_APR\_DIALOG\_BOX\_CS;H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_AND\_A\_DATABASE\_FILE\_STEPS;',0)} [See related topics](#)



## Saving Approach views to other file formats

You can save reports, worksheets, and forms to other file formats. The available file formats are .htm (for HTML), .rtf (Rich Text Format), and .txt (Plain Text). Forms can only be saved to the .htm file format. The .rtf and .txt file formats are only available for reports and worksheets.

**Note** File - Save View As is only available in the Browse and Print Preview environments.

1. Choose File - Save View As.
2. Specify a location to save the file in the "Save in" box (unless you want to save the file to an FTP server).
3. Enter a name in the "File name" box.
4. Select a file type in the "Save as type" box.
5. (Optional) To specify layout and navigation preferences for an HTML file, click Preferences.
  - Enter your preferences.
  - To save your preferences as the default, click Save Default.
  - Click OK.
6. To save the view as an HTML file to your local drive, click Save.
7. (Optional) To save the view as an HTML file to an FTP server on the Internet, click Internet.  
The Save to Internet dialog box appears.
8. (Optional) Select a host server and specify a location on the FTP server for the file.
9. (Optional) Click Save.  
The Preferences dialog box appears.
10. (Optional) Specify layout and navigation preferences.
11. (Optional) Click OK.

---

{button ,AL(^H\_SAVING\_APPROACH\_VIEWS\_TO\_OTHER\_FILE\_FORMATS\_DETAILS',1)} [See details](#)

{button ,AL(^H\_SAVING\_APPROACH\_VIEWS\_TO\_THE\_INTERNET\_STEPS;H\_OPENING\_APPROACH\_FILES\_FROM\_AN\_FTP\_SERVER\_ON\_THE\_INTERNET\_STEPS;H\_OPENING\_APPROACH\_FILES\_FROM\_A\_WEB\_SERVER\_ON\_THE\_INTERNET\_STEPS;H\_SAVING\_APPROACH\_FILES\_STEPS;H\_PUBLISHING\_APPROACH\_VIEWS\_TO\_THE\_WEB\_REF;',0)} [See related topics](#)

## **Details: Saving Approach views to other file formats**

### **HTML files**

You can save Approach views as Hypertext Markup Language (HTML) files. HTML is an authoring language used to create documents for the World Wide Web. HTML files contain commands, called tags, that specify how a document appears onscreen in a browser.

HTML files also support links to other documents, graphics, audio, and visual files.

Approach automatically creates tags and links when you save the view. If you view HTML files with a text editor, such as Wordpad, you can see the tags around the contents of the file.

### **Creating .HTM files**

Saving Approach views as HTML files creates a separate .HTM file for each page of the view. Each of these .HTM files is saved under the name you entered in the "File name" box. All the pages except for the first one end with an underscore character ( \_ ) and a page number.

These files are saved on your local drive in whatever directory you indicate unless you choose to save them directly to the Internet.

For example, if you save a three-page worksheet named "Employee" to the HTML format, Approach creates the following files:

- EMPLOYEE.HTM contains page 1 of the worksheet.
- EMPLOYEE\_2.HTM contains page 2 of the worksheet.
- EMPLOYEE\_3.HTM contains page 3 of the worksheet.

### **Viewing .HTM files**

To view .HTM files, open them in a text editor or double-click them in Windows Explorer. When the Open With dialog box opens, create an association between the .HTM file and whatever Internet browser you use. This method lets you view the files as they look on the Internet.

Each .HTM file represents a page of the view you save. When you move from one page to another, you are moving from one .HTM file to another. By default, you can navigate through the pages by clicking Previous, First, Next, or Last at the bottom of each page. Approach lets you position the navigation commands at the top of the page, the bottom of the page, at both locations, or not display them.

After saving your Approach views to the HTML file format, upload the .HTM files to the Internet using your FTP software.

### **Saving forms as HTML files**

When you save a form to HTML, one page is created regardless of how many records are in the found set. When you save worksheets and reports, everything in the found set is saved and as many pages as needed are created.

### **Internet**

Save your HTML files to an FTP site on the Internet by clicking Internet. The Internet button is only available for the HTML file type. Enter your FTP server information and specify a location to save the file in the Save to Internet dialog box. When you click Save, the Preferences dialog box appears (even if you have already entered your preferences). This lets you make any necessary changes to the preferences before you save the HTML file to the Internet.

### **HTML preferences**

You can specify HTML layout and navigation preferences and an Internet e-mail address by clicking Preferences in the Save View As dialog box.

Select/deselect the Preferences options:

- Specify whether you want Approach to create an Index page
- Specify whether to display a border around tables.
- Specify where navigation links (Previous, First, Next, Last) appear on each HTML page.
- Specify an Internet e-mail address (for forms only) in the "Send e-mail from HTML forms to this address" box.

When you use this option, your HTML form on the Internet includes the specified e-mail address. Anyone who wants to respond to your HTML form can automatically send a return message to this address.

### **Saving preferences**

When you select your preferences and click OK, they are used only for the current save operation. They do not become default preferences. After you finish the current save operation and close the Save View As dialog box, these

settings do not remain. The next time you open the Preferences dialog box the default settings are again in effect. If you want to save your current preferences as defaults, click Save Default.

### **Saving views as .RTF and .TXT files**

Save Approach views to the .RTF and .TXT formats when you want to create a report from information in the view. Use your word processor's Copy and Paste Special commands to bring the .RTF or .TXT files into your word processor and edit the report.

---

{button ,AL('H\_SAVING\_APPROACH\_VIEWS\_TO\_OTHER\_FILE\_FORMATS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_SAVING\_APPROACH\_VIEWS\_TO\_THE\_INTERNET\_STEPS;H\_OPENING\_APPROACH\_FILES\_FROM\_AN\_FTP\_SERVER\_ON\_THE\_INTERNET\_STEPS;H\_OPENING\_APPROACH\_FILES\_FROM\_A\_WEB\_SERVER\_ON\_THE\_INTERNET\_STEPS;H\_SAVING\_APPROACH\_FILES\_STEPS;H\_PUBLISHING\_APPROACH\_VIEWS\_TO\_THE\_WEB\_REF;',0)} [See related topics](#)

## Saving Approach views to the Internet

Approach lets you combine selected views and data into a single .APT file and place it on an Internet server. Other Approach users can download the .APT file and extract their own read-only version of your information.

1. Choose File - Internet - Save to Internet.

Or

Choose File - Save As and click Internet.



2. Under Save, either use the default option "Current view only" or select "All of the views."
3. (Optional) Deselect "Include data from" if you want only the Approach (.APR) file saved in the .APT file.
4. Select the amount of data you want to save: "All databases," "Found set," "Current record," or "Blank databases." If you selected "All of the views" under Save, only "All databases" or "Blank databases" are available.
5. Click Save.
6. (Optional) If you have no servers configured, click Hosts.  
Enter the connection information in the FTP Hosts dialog box. If you do not know the host's IP address, contact your Network Administrator. You must click Save to save the information before you click Done.
7. Select a host server from the "FTP Servers" box.
8. Click Connect.
9. Specify a location on the server for the file.
10. Enter a file name with an .APT file extension in the "File name" box.
11. Select Lotus Approach (.APT) in the "Save as type" box.
12. Click Save.

---

{button ,AL('H\_SAVING\_APPROACH\_VIEWS\_TO\_THE\_INTERNET\_DETAILS',1)} [See details](#)

{button ,AL('H\_SETTING\_AUTOMATIC\_CONNECTIONS\_TO\_THE\_INTERNET\_STEPS;H\_CONNECTING\_TO\_INTERNET\_SERVERS\_STEPS;H\_SAVING\_APPROACH\_VIEWS\_TO\_OTHER\_FILE\_FORMATS\_STEPS;H\_EDITING\_CONNECTIONS\_TO\_INTERNET\_SERVERS\_STEPS;H\_WORKING\_WITH\_THE\_INTERNET\_OVER;H\_OPENING\_APPROACH\_FILES\_FROM\_AN\_FTP\_SERVER\_ON\_THE\_INTERNET\_STEPS;H\_OPENING\_APPROACH\_FILES\_FROM\_A\_WEB\_SERVER\_ON\_THE\_INTERNET\_STEPS;',0)} [See related topics](#)

## **Details: Saving Approach views to the Internet**

### **Saving Approach files as .APT files**

File - Internet - Save to Internet lets you share Approach views across the Internet with other Approach users. When you save an Approach view to the Internet, the .APR file and its associated databases (.DBF files) are packaged as an .APT file to an FTP (File Transfer Protocol) server. The .APT file is copied to the specified Internet location.

When other users want to access the Approach view, they use an FTP server to download it. The .APT file is copied to the local directory. This file is read-only until the recipient chooses the File, Save As command. When the file is saved, both an .APR and a database file (.DBF) are created.

### **Auto connect to a server**

You do not have to select a host server in the Save to Internet dialog box every time you upload a file. Select one of the auto connect options from the Internet Options dialog box. The FTP server you select becomes the default for saving views to the Internet. See "[Setting automatic connections to the Internet.](#)"

### **List by description**

Select the "List by description" box to display the FTP servers by name. Deselect "List by description" and click the drop-down box to display the list of FTP servers by their IP address.

---

{button ,AL('H\_SAVING\_APPROACH\_VIEWS\_TO\_THE\_INTERNET\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_SETTING\_AUTOMATIC\_CONNECTIONS\_TO\_THE\_INTERNET\_STEPS;H\_SAVING\_APPROACH\_VIEWS\_TO\_OTHER\_FILE\_FORMATS\_STEPS;H\_CONNECTING\_TO\_INTERNET\_SERVERS\_STEPS;H\_DELETING\_CONNECTIONS\_TO\_INTERNET\_SERVERS\_STEPS;H\_EDITING\_CONNECTIONS\_TO\_INTERNET\_SERVERS\_STEPS;H\_WORKING\_WITH\_THE\_INTERNET\_OVER;',0)} [See related topics](#)

## **Details: Saving a copy of an Approach file and a database file**

### **Exact copy**

Exact copy makes an exact copy of the database, including the data. Use this setting to create a backup of a database.

### **Blank copy (save without records)**

Blank copy makes a copy of the database with everything *except* the data. Use this setting to create a template for other databases.

### **Same database**

Same database associates the new Approach file to the same database file. The name of the database file does not change.

### **Saving joined databases**

When you save joined databases, the Save Database As dialog box appears for each database. The name of each joined database appears in the File name box. Select one of the Save options for each database and click Save. You can save a copy of the joined database with or without data on an individual basis.

---

{button ,AL('H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_AND\_A\_DATABASE\_FILE\_STEPS',1)} Go to procedure

{button ,AL('H\_CREATING\_CUSTOM\_SMARTMASTERS\_STEPS;H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_ONLY\_STEPS;H\_SPECIFYING\_A\_KEY\_FOR\_A\_PARADOX\_DATABASE\_STEPS;',0)} See related topics

## Saving a copy of an Approach file and a database file

Saving a copy of an Approach file (.APR) and its associated database file(s) lets you do any of the following:

- Back up a database application
- Move and rename Approach and database files
- Create a template or SmartMaster application for new databases

1. From the File menu, choose Save As.



2. Specify a different location and/or name for the copy of the Approach file.

3. (Optional) Enter a description of the file.

4. Click Save.

Approach saves the Approach file (.APR) and then displays the Save Table As dialog box.

5. Specify a different location and/or name for the copy of the database file.

6. (Optional) To change the type of database, select a type in the "Save as type" box.

7. Under Save, select "Exact copy," "Blank copy," or "Same database."

**Note** If you select "Exact Copy" or "Blank Copy" and do not specify a different database file name and/or location for the copied file, none of the changes you have made so far are saved, and the message "Database cannot be saved over itself" appears.

8. Click Save.

When you save joined database files, the Save Table As dialog box appears for each database.

9. (Optional) Repeat steps 5 - 8 for each joined database file.

10. (Optional) If you saved the data to a different database file format, specify a key field.

---

{button ,AL('H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_AND\_A\_DATABASE\_FILE\_DETAILS',1)} [See details](#)

{button ,AL('H\_CREATING\_CUSTOM\_SMARTMASTERS\_STEPS;H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_ONLY\_STEPS;',0)} [See related topics](#)

### **Saving a copy of an Approach file only**

You can set up multiple Approach files that are all associated with the same database file(s).

1. Choose File - Save As.



2. Specify a different location and/or name for the copy of the Approach file.
3. (Optional) Enter a description of the file.
4. Select "Save .APR file only."
5. Click Save.

---

{button ,AL(`H\_CREATING\_CUSTOM\_SMARTMASTERS\_STEPS;H\_SAVING\_A\_COPY\_OF\_AN\_APPROACH\_FILE\_AND\_A\_DATABASE\_FILE\_STEPS;');0)} [See related topics](#)



## Selecting fields for an SQL SELECT statement

Command: File - Open/Edit SQL



**Tab:** Fields

1. Be sure the database containing the field you want is showing in the Database box.
2. Select a field in the Fields box.  
Use SHIFT+click or CTRL+click to select more than one field.
3. Click Add.
4. To add additional fields, repeat steps 1 - 3.
5. Click Next.

---

{button ,AL(^H\_CONNECTING\_TO\_AN\_SQL\_OR\_ODBC\_DATA\_SOURCE\_OVER;H\_CREATING\_FIND\_CONDITIONS\_IN\_THE\_CONDITION\_TAB\_STEPS;H\_CREATING\_JOINS\_IN\_THE\_JOIN\_TAB\_STEPS;H\_EDITING\_SQL\_STATEMENTS\_IN\_THE\_SQL\_TAB\_STEPS;H\_SORTING\_FIELDS\_IN\_THE\_SORT\_TAB\_STEPS;H\_SQL\_TABLES\_IN\_APPROACH\_REF;H\_DBASE\_FILES\_IN\_APPROACH\_REF;','0)} [See related topics](#)

## Selecting tables for an SQL SELECT statement

Command: File - Open/Edit SQL



### Tab: Tables

1. Select "Create a new SQL Statement."
2. To add one or more tables to the Selected Tables box, click Add.  
The Open dialog box appears.
3. Select a database file type in the "Files of type" box.
4. Click Connect.  
The Connect To dialog box appears if it is needed for the file type selected in step 2.
5. Enter information into Server name, User name, and Password, or select a Prior connection.  
On some types of connections, you can reuse the information in Prior connections.
6. Click OK to close the Connect To dialog box.
7. Select the name of the table to open in the File name box.
8. Click Open.  
All the selected tables appear in the Selected Tables box.
9. Click Next.

### Removing a table

To remove a table from the Selected Tables box, select the table and click Remove.

### Connecting to dBASE files

dBASE files do not require entering information into the Connect To dialog box.

You can only have one non-SQL database (such as dBASE) open at any time.

---

{button ,AL(^H\_CONNECTING\_TO\_AN\_SQL\_OR\_ODBC\_DATA\_SOURCE\_OVER;H\_CREATING\_FIND\_CONDI  
TIONS\_IN\_THE\_CONDITION\_TAB\_STEPS;H\_CREATING\_JOINS\_IN\_THE\_JOIN\_TAB\_STEPS;H\_EDITING\_SQL\_S  
TATEMENTS\_IN\_THE\_SQL\_TAB\_STEPS;H\_SELECTING\_FIELDS\_IN\_THE\_FIELDS\_TAB\_STEPS;H\_SORTING  
\_FIELDS\_IN\_THE\_SORT\_TAB\_STEPS;H\_SQL\_TABLES\_IN\_APPROACH\_REF;',0)} [See related topics](#)

## Setting automatic connections to the Internet

If you regularly connect to the same server, set options so that you automatically connect to that server when opening or saving a file on the Internet.

1. Choose File - Internet - FTP Connection Setup.
2. To connect to the same server whenever you download files, select "Auto connect Open from Internet" and the name of the server.
3. To connect to the same server whenever you upload files, select "Auto connect Save to Internet" and the name of the server.
4. To record the date, time, and location of the files you download, select "Capture record of Open from Internet."
5. (Optional) To add or edit connection information, click Hosts.
6. Click OK.

---

{button ,AL(^H\_WORKING\_WITH\_THE\_INTERNET\_OVER;H\_CONNECTING\_TO\_INTERNET\_SERVERS\_STEPS;  
H\_DELETING\_CONNECTIONS\_TO\_INTERNET\_SERVERS\_STEPS;H\_EDITING\_CONNECTIONS\_TO\_INTERNET\_SERVERS\_STEPS;',0)} [See related topics](#)

## Sorting fields for an SQL SELECT statement

Command: File - Open/Edit SQL



**Tab:** Sort

1. Be sure the database containing the field you want is showing in the Database box.
2. Select a field in the Fields box.  
Use SHIFT+click or CTRL+click to select more than one field.
3. Click Add.
4. To determine the sort order, select Ascending or Descending.
5. To add additional fields, repeat steps 1 - 4.
6. Click Next.

---

{button ,AL(^H\_CONNECTING\_TO\_AN\_SQL\_OR\_ODBC\_DATA\_SOURCE\_OVER;H\_CREATING\_FIND\_CONDITIONS\_IN\_THE\_CONDITION\_TAB\_STEPS;H\_CREATING\_JOINS\_IN\_THE\_JOIN\_TAB\_STEPS;H\_EDITING\_SQL\_STATEMENTS\_IN\_THE\_SQL\_TAB\_STEPS;H\_SELECTING\_FIELDS\_IN\_THE\_FIELDS\_TAB\_STEPS;H\_SORTING\_FIELDS\_IN\_THE\_SORT\_TAB\_STEPS;H\_SQL\_TABLES\_IN\_APPROACH\_REF;H\_DBASE\_FILES\_IN\_APPROACH\_REF',0)} [See related topics](#)

## TeamSecurity

When you open the Edit TeamSecurity dialog box, all the databases and views are already selected by default. If you are setting the privileges for other users, you must deselect any databases or views you do not want them to have access to.

### Groups of users

A group consists of a number of individuals who use the same name and password to access an Approach file.

For example, if you wanted to have a group called Team A, enter Team A as the group name, enter a unique password, and set the privileges you want everyone in the group to have. Then inform everyone belonging to Team A to use that unique password.

### Single-password access

After you set your password, the user only has to enter a single password to have access to the Approach files (.APR). Even if the database is joined to other database files, the user only has to enter the password once when opening the Approach file containing the joined databases.

To set passwords for the Approach file's associated database files, you must open the Preferences dialog box and define the database password in the Password tab. You can reach the Preferences dialog box by clicking Database Password in the Edit TeamSecurity dialog box.

### Example

Say that the Employee database is joined to the Product, Salary, and Region databases. Use TeamSecurity to assign the same password to all four databases at the Approach file level. Once you open Employee and enter your password once, you can open Product, Salary, and Region without being prompted for additional passwords.

If all four databases had been assigned different passwords in the Preferences dialog box, you would need to enter database passwords for each file.

### Database

Define read/write and read-only privileges in the Database tab. To give the user read/write privileges to modify existing data, enter new data or new records, select the database. Deselect the database to make it read-only.

### Requiring database passwords

Select "Require passwords for each database" to override single-password access and require users to enter a password for each database.

### View

Select which views a user can have access to in the View tab. For example, you might want to let a certain user have access to the database and worksheet, but not have access to forms and reports.

Any views that exist display in the View tab. Selecting the view lets the user have access to it. Deselecting the view means it is hidden from the user.

**Note** New views added after you define user privileges are available by default, so the password administrator must edit privileges to hide the new view.

### Advanced

In the Advanced tab, you specify who has designer privileges and can change passwords. This is the highest level of TeamSecurity. Any user having password privileges can also decide read-only and view privileges for other users. At this level of privilege, you also have access to Design; other users do not.

There must be at least one user at the password privileges level of security, and you can have as many users at this level as you want. Once the Edit TeamSecurity dialog box is open, Approach will not let you define a password and exit the dialog box until someone has been assigned password privileges in the Advanced tab. If no one was assigned password privileges, then all users could potentially be locked out of the Edit TeamSecurity dialog box.

## **TeamSecurity dialog box**

The TeamSecurity dialog box lets you define passwords for the Approach (.APR) file, as well as who has the right to change or define passwords. You can limit which views the users have access to, their read/write privileges in the databases associated with the Approach file, and who can make changes to the Approach file.

Set passwords for databases in the Preferences dialog box.

### **Choose a task**

[Defining password privileges using Copy](#)

[Defining password privileges using New](#)

[Editing password privileges](#)

[Deleting groups or users](#)

[Defining passwords for a database](#)

## Welcome dialog box: Open an Existing Approach File

### Most recently used files

Double-click the file you want in the list, or select a file and click OK.

### Browse for More Files

Click to open the Open dialog box, where you can see files in all drives and directories. Use this dialog box to open existing data files created with other applications as well as Approach (.APR) files.

### Open SQL

Click to open the SQL Assistant, where you can create an SQL SELECT statement.

### Hiding the Welcome dialog box

1. Choose File - User Setup - Approach Preferences.



2. On the Display tab, under Show, deselect Welcome dialog.
3. Click OK.

## **Overview: Opening Approach files on the Internet**

Using Approach, you can open a compacted Approach (.APT) file from a File Transfer Protocol (FTP) server or a World Wide Web server via the Internet. You can also save an .APR and its associated databases as an .APT file to an FTP server.

Before you can open or save a document on the Internet, the following must be true:

- Your computer and the server must both be connected to the Internet.
- Your computer must have a WinSock-compatible TCP/IP stack installed.
- The server must meet one of the following criteria:
  - It is a public Web server.
  - It supports anonymous FTP.
  - It supports FTP and you have an account with permission to access files.

## **Opening and modifying files**

When you open an .APT file on the Internet, Approach copies the file to your computer, where you can view it as a read-only file. If you want to make changes to the file, from the File menu, choose Save As, and Approach prompts you for a new .APR file name and new names for all the associated databases.

If you have read-write permission for an FTP server, you can save the modified file. From the File menu, choose Internet, and then choose Save to Internet. Approach compacts the .APR and associated databases into a single .APT file, so other users can open the file to view the changes.

## **FTP servers**

FTP servers are owned by companies or Internet providers who use them to store files for displaying on the Internet. If you have access to an FTP server, you can store and retrieve files in much the same way as you would do the same tasks on your computer. To connect to an FTP server you need to know its unique IP address.

You can maintain a list of the addresses of FTP servers you use most often. You can also add, edit, and delete FTP connection information. Access to FTP servers can be anonymous or require a user ID and password. You can access a server directly or via a firewall, which is hardware or software designed to prevent unauthorized access to a server.

## **Web servers**

Web servers display Web pages on the Internet. They have a unique IP address and a domain name such as lotus.com. When you enter the URL (Universal Resource Locator) <http://www.lotus.com> in your browser, it sends a request to the server lotus.com to send a page, so it sends INDEX.HTML and your browser displays it.

To open other files on a Web server you must know the exact path and file name, for example:

<http://www.lotus.com/support/approach.apt>

## **Connecting to servers**

If you regularly connect to the same server, you can set Internet options so you automatically connect to that server when you open or save a file on the Internet. You can also capture a transaction record of the date, time, and full path of the file you open from the Internet.

For each Internet connection, Approach keeps a log of the messages sent from the server. The log file is called LTSNET.LOG and is stored in the Windows\Temp directory. Approach only maintains a log of your most recent connection and writes over the file each time you connect to a server.

## **Internet SmartMaster application**

Approach has a SmartMaster application called Internet World Wide Web Sites that lets you work with the Internet. It contains a list of over 500 Web sites that you can browse through using the WebTrek browser supplied with Approach, or your own Internet browser tool. Web pages are listed by title, category, and URL, and you can sort on any of these fields.

If you would like to search for a particular Web site, you can search by category, keyword, or URL. If information about a Web site changes, you can edit the data. You can also add new Web sites to the database.

## **Internet file retriever**

You can use Approach to download files that are not Approach files from FTP or World Wide Web servers, such as bitmaps and sound files. From the File menu, choose Internet, and then Open from Internet, and enter the file name



of the file you want to download. Approach places the file in your working directory.  
You can then open the file in the appropriate application, such as Paintbrush.

---

```
{button ,AL(`H_OPENING_APPROACH_FILES_FROM_A_SERVER_ON_THE_INTERNET_OVER;H_OPENING_AP  
PROACH_FILES_FROM_AN_FTP_SERVER_ON_THE_INTERNET_STEPS;H_OPENING_APPROACH_FILES_  
FROM_A_WEB_SERVER_ON_THE_INTERNET_STEPS;H_SAVING_APPROACH_VIEWS_TO_OTHER_FILE_F  
ORMATS_STEPS;H_SAVING_APPROACH_VIEWS_TO_THE_INTERNET_STEPS;H_SETTING_AUTOMATIC_C  
ONNECTIONS_TO_THE_INTERNET_STEPS;H_CONNECTING_TO_INTERNET_SERVERS_STEPS;H_DELETI  
NG_CONNECTIONS_TO_INTERNET_SERVERS_STEPS;H_EDITING_CONNECTIONS_TO_INTERNET_SERV  
ERS_STEPS;H_MANAGING_PROXIES_STEPS',0)} See related topics
```

## Approach saves data automatically

When the time comes to save your work, keep these points in mind:

- If all you did was enter or edit data, you DO NOT have to save your work; Approach saves the data in the database file the moment you enter a record, move to another record, or change to another view.

This idea may take some getting used to, but you can be sure that Approach is saving any data you enter. You never have to worry about this.



- If you created new views or worked in Design to change the layout of views or the style of objects, use File - Save Approach File to save the Approach file (.APR).



## How to tell if you need to save the Approach file

- If the command File - Save Approach File is available, then you have made a change that requires you to save the Approach file.
- If you have changed data in the database or entered new data, the command File - Save Approach File is not available. That is because Approach takes care of saving data for you automatically.

## Approach files (.APR) and database files

Whenever you work in Approach, you work in an Approach file (.APR). The data you see in Approach, however, is not actually stored in the Approach file, but in the database file(s) associated with the Approach file.

With this arrangement, you have much greater freedom:

- You can create forms, reports, and other kinds of views, all in the same Approach file, with each view associated with a different database file.
- Approach does not convert your data to a new database format: you have access to your data in the original format.
- You have access through Approach to a large selection of database types, for example, Lotus Notes, dBASE IV, and Paradox.
- You have access to and can produce output in a large selection of database types, such as Lotus Notes, dBASE IV, and Paradox. You don't need to own the database product in which the database file was created.
- You can share your data with others who are not using Approach. Again, no conversions are needed!

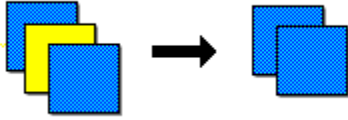
---

{button ,AL('H\_APP\_APPROACH\_FILES\_APR\_AND\_DATABASE\_FILES\_OVERVIEW','0)} [See related topics](#)

## A sort is not a find

Finds and sorts are easy to confuse, but really they give you quite different results.

### A find selects a subset of records



### A sort arranges records



<u>Do a</u>	<u>When you want to</u>
Find	Look for certain records from the database that satisfy conditions you give to Approach. After you do the find, you're working with a found set--a subset of all the records in the database.
Sort	Organize the records in a database in a certain order, for example, alphabetical order from A - Z. You're working with all the records, or if you already did a find, with the found set of records.

## After you do a find

- You can work with the found set the same way you work with the entire database: sort it, create a report based on the data, and so on.
- You can save the find as a named find so that you can use it again.



## How to go back to working with all the data after a find

To work with all your records again, rather than just the found set, select All Records from the named find box in the action bar.



If the action bar is not visible, then from the context menu, choose Find, and then choose Find All.



## Browse is for data, Design is for style

In Approach, you do all your work in an Approach file (.APR), which consists of one or more views.

You must also be sure to be in the right environment to do the task you want to do.

### Approach has different environments for different tasks



In Browse, you use a view to work with the data stored in database files. You can do the following kinds of tasks in Browse:

- Enter data
- Create and update records
- Find specific information
- Sort records



In Design, you work with Approach views to do the following kinds of tasks:

- Customize view layout
- Add color, change fonts and styles
- Make calculations and summaries

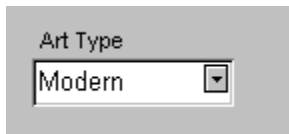
These environments reflect Approach's relationship to your data.

- In Browse, you work with data stored in a database file (such as .DBF, .123, or .NSF). Because you access the data directly, your changes are saved automatically.
- In Design, you cannot enter or edit data; rather, you work with views and objects, which are stored in the Approach file (.APR).

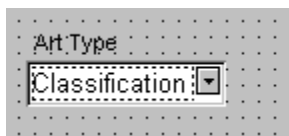
### How to tell which environment you're in

Right away you notice that these two environments look different:

- Background

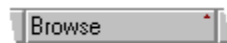


Browse

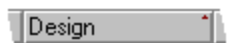


Design

- Status bar also indicates the environment.



Browse



Design

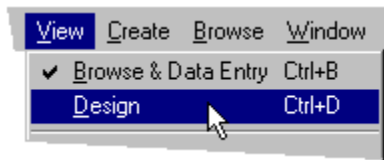
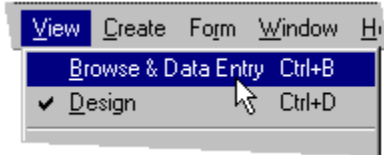
### How to switch environments

Go to another environment from any of these places in Approach:

- Action bar



- View menu



- Environment button (in the status bar)



## Select Print Preview to see report summaries

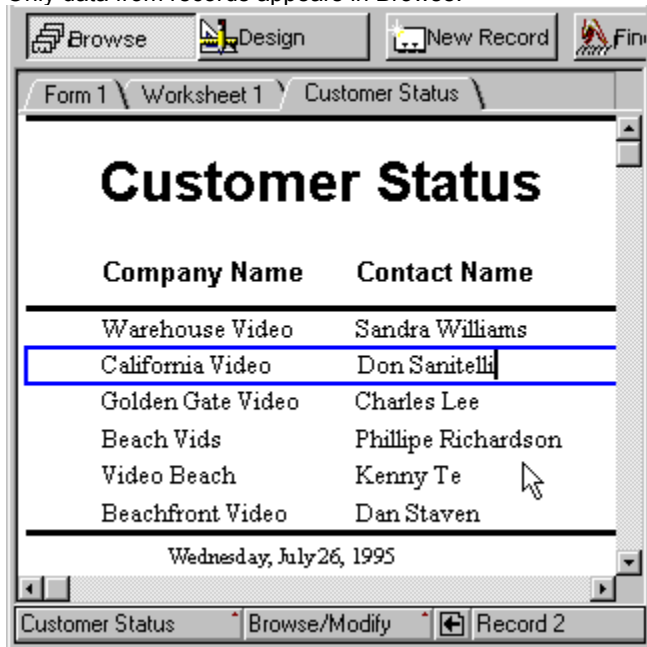
If you're in a report and can't see aspects of the report like

- Totals and subtotals
- Group names

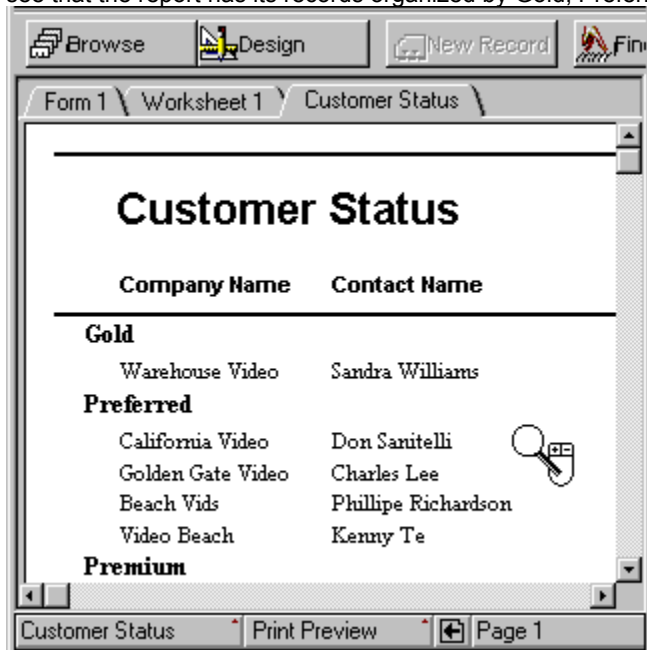
It's probably because you're in Browse. You need to be in Print Preview. To go to Print Preview: From the File menu, choose Print Preview.



Only data from records appears in Browse:



Summaries and group names appear in Print Preview. Here's that same report seen in Print Preview. You can now see that the report has its records organized by Gold, Preferred, and Premium customer groups.



Print Preview also shows how fields are arranged before printing. For example, if you set a field to slide left to the end of the previous field, Print Preview shows the final position of the field data.

You can also see report totals and group names in Design when View - Show Data is turned on.



### **Showing summaries in reports**

You can set Approach to display report summaries by default whenever you go to a report view. From the File menu, choose User Setup, and then choose Approach Preferences. In the Display tab, select "Report summaries." Click Save Default, and then click OK.

From now on, whenever you go to a report, Approach automatically switches to the Print Preview or Design environment, so you can see the summaries.

## Assigning Approach field names

<b>If you are</b>	<b>And you want</b>	<b>Then</b>
Exporting data from Approach	To export the names of the fields that contain that data	Select "First row contains field names"
Importing data into Approach	The data in the first row of the sheet to be defined as field names	Select "First row contains field names"
Opening a sheet in Approach	The data in the first row of the sheet to be defined as field names	Select "First row contains field names"



### Changing the icon for inserted OLE objects

1. Under Icon, do one of the following:
  - To display the object as the current icon, select Current.
  - To display the object as the default icon, select Default.
  - To display the object as an icon created from a file (such as an .exe or .bmp file), select "From File" and enter the path and filename.
2. Enter a new label in the "Label" box or use the default label.
3. Click OK.

---

{button ,AL(^H\_EMBEDDING\_NEW\_OLE\_OBJECTS\_STEPS;H\_EMBEDDING\_EXISTING\_OLE\_OBJECTS\_STEPS;H\_CREATING\_OLE\_OBJECTS\_FROM\_FILES\_STEPS;',0)} [See related topics](#)

## Overview: Communicating between applications using OLE

In the Microsoft Windows environment, information shared between applications can be either static or dynamic.

### Static shared information: Using Edit Copy and Edit Paste

To share static information, use the Clipboard to copy data from one application and paste it into another application. When you change the original information, the copy that you pasted does not automatically change. You must repeat the copy and paste to keep the information up to date.

### Dynamic shared information: Links

To share information dynamically, create a link between the two applications. A link is a communication channel through which

- Information is transferred from one application to another.
- Information can be automatically updated in the receiving (or client) application whenever the information changes in the originating (or server) application.

### The communication channel: OLE

Windows provides two kinds of communication channels to create links: Dynamic Data Exchange (DDE) and Object Linking and Embedding (OLE). Whenever you create a link involving Approach, you are using OLE.

### Linking servers to clients

Every link connects a server and a client. For example, when you create a link from a Lotus Word Pro document to a PicturePlus field in Approach, Word Pro is the server because it provides data to Approach, and Approach is the client because it uses the data from Word Pro.

A server can provide data to several clients, and a client can obtain data from several servers. Approach can be both an OLE server and a client simultaneously.

A link is like a telephone conversation. The client starts the conversation by calling the server. If the server responds, the client then asks the server for a specific piece of information. If the server has the information, it provides the information to the client.

As long as the conversation continues, the server notifies the client whenever the information changes. Either the client or the server can end the conversation at any time.

### Automatic and manual links

When you establish a link, you can choose either automatic or manual links. Most links are automatic links, so when the information in the server changes, the link is automatically updated.

Links can also be manual. With a manual link, the link is updated only when you choose Edit - Manage Links and click Update Now. You can create manual links, or change existing automatic links to manual links.

When you have many links in a file, and the data in the server application changes frequently, you may want to make the links manual to improve system performance.

### OLE embedded objects

In addition to creating OLE links, you can also use OLE to create OLE embedded objects. Embedded objects are not links, but they share some characteristics of links.

Similar to links, OLE embedded objects give you access to the server application when you are in the client application. When you embed an object, however

- The data is stored in the client application.
- There is no link to a file in the server application.
- You edit the embedded object by opening the server application from within the client application.

Embed objects using Create - Object or Edit - Paste Special.

---

{button ,AL('H\_CREATING\_APPROACH\_OLE\_OBJECTS\_FROM\_OTHER\_APPLICATIONS\_STEPS;H\_CREATING\_APPROACH\_OLE\_OBJECTS\_IN\_APPROACH\_STEPS;H\_CREATING\_OLE\_OBJECTS\_FROM\_FILES\_STEPS;H\_EMBEDDING\_AN\_APPROACH\_OBJECT\_IN\_ANOTHER\_APPLICATION\_OVER;H\_OLE\_EMBEDDED\_OBJECTS\_OVER;H\_OLE\_LINKS\_OVER',0)} [See related topics](#)



## Copying PicturePlus pictures to a file

You can copy the picture in a PicturePlus field to a graphics file only if the picture is not an OLE object.

**Tip** When you create a PicturePlus field in the Field Definition box, click Options and deselect "Allow OLE objects."



### Are you in Browse?

1. Select the PicturePlus field that contains the image you want to copy.
2. From the Edit menu, choose Picture, and then choose Export.



3. Select the directory where you want to export the file.
4. Enter a name for the file in the "File name" box.
5. Select the file type in the "Picture type" box.
6. Click Export.

---

{button ,AL('H\_CREATING\_APPROACH\_OLE\_OBJECTS\_FROM\_OTHER\_APPLICATIONS\_STEPS;H\_CREATING\_APPROACH\_OLE\_OBJECTS\_IN\_APPROACH\_STEPS;H\_FILE\_EXTENSIONS\_IN\_APPROACH\_REF;H\_PASTING\_PICTURES\_IN\_FIELDS\_STEPS;H\_PASTING\_PICTURES\_IN\_VIEWS\_STEPS;H\_SETTING\_OLE\_OPTIONS\_FOR\_PICTUREPLUS\_FIELDS\_STEPS',0)} [See related topics](#)

## Creating Approach OLE objects from other applications

When you create a new Approach object from within another application, it can contain either Approach as an application or a single view that you create using an Approach assistant.

1. Embed a new OLE object following the instructions provided by the container application.
2. Select the type of Approach object you want to use; either the Approach application or one of the Approach views.
3. (Optional) To have the object appear as an icon, select "Display As Icon."
4. (Optional) To change the icon, click Change Icon.
5. Click OK.  
The Approach Open dialog box appears.
6. Select the database you want to use.
7. Click Open.  
If you selected a view, the appropriate assistant appears.
8. Use the assistant to create the view.
9. Click Done.
10. From the menu in Approach, choose File - Exit & Return.

If you do not select "Display As Icon" when selecting the type of Approach object, the entire view is embedded in the container application.

**Note** You can create objects in Approach for the application or the following object types:

- Chart
- Crosstab
- Envelope
- Form
- Form Letter
- Mailing Labels
- Report
- Worksheet

---

{button ,AL('H\_COPYING\_PICTUREPLUS\_PICTURES\_TO\_A\_FILE\_STEPS;H\_CREATING\_APPROACH\_OLE\_OBJECTS\_IN\_APPROACH\_STEPS;H\_CREATING\_OLE\_OBJECTS\_FROM\_FILES\_STEPS;H\_OLE\_EMBEDDED\_OBJECTS\_OVER;',0)} [See related topics](#)

**Details: Creating Approach OLE objects in Approach**

You can choose whether to include data in a view object and the amount of data to be included.

If you include data in a view object, the object and its data are a self-contained unit. This format is convenient for sending an Approach form to someone via e-mail. The recipient can then enter data into the form and send it back to you.

If you choose not to include data in the object, Approach still adds references to the data so that you can see data in the OLE object as long as the object and the database file it points to are on the same network or hard drive.

---

{button ,AL('H\_CREATING\_APPROACH\_OLE\_OBJECTS\_IN\_APPROACH\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_COPYING\_PICTUREPLUS\_PICTURES\_TO\_A\_FILE\_STEPS;H\_CREATING\_APPROACH\_OLE\_OBJECTS\_FROM\_OTHER\_APPLICATIONS\_STEPS;',0)} [See related topics](#)

## Creating Approach OLE objects in Approach (Copy View)

When you create an Approach OLE object from within Approach, it becomes available to any other application for linking.



### Are you in Browse?

1. Go to a view you want to include in the OLE object.
2. Be sure nothing is selected in the view.  
One way to be sure is to check the context menu. If it refers to an object in the view (instead of the view) then an object has been selected.
3. Choose Edit - Copy View.
4. To create an object that
  - Consists of only the current view, select "Copy current view only."
  - Includes all of the views in the current Approach file, select "Copy all views."
5. To include data in the object, select "Include data from."
6. Select the amount of data: All databases, Found Set, or Current Record.  
Found Set is not available when choosing fields from joined databases.
7. Click OK.

Approach copies the object to the Clipboard.

Choose Edit - Paste or Edit - Paste Special in another application to embed or link the Approach object.

---

{button ,AL('H\_CREATING\_APPROACH\_OLE\_OBJECTS\_IN\_APPROACH\_DETAILS',1)} See details

{button ,AL('H\_COPYING\_PICTUREPLUS\_PICTURES\_TO\_A\_FILE\_STEPS;H\_CREATING\_APPROACH\_OLE\_OBJECTS\_FROM\_OTHER\_APPLICATIONS\_STEPS;H\_OLE\_EMBEDDED\_OBJECTS\_OVER;',0)} See related topics

## Creating linked objects from files

1. Do one of the following:
  - To add the object as part of the design of a view, go to [Design](#) and click where you want the object to appear.
  - To make the linked object part of a record, go to [Browse](#), go to the record, and select a PicturePlus field.
2. From the Create menu, choose Object.



3. Select "Create from File."
4. Specify the path and name of the file you want to link to.  
Click Browse to select a file in the Browse dialog box.
5. (Optional) To have the object appear as an icon, select "Display As Icon."
6. (Optional) To [change the icon](#)>STEPS, click Change Icon.
7. Select "Link" to link the object to its source file.
8. Click OK.

If you do not select "Display As Icon" when creating linked objects from files, the contents of the file are pasted as an object to the view or PicturePlus field. Any changes to the source file are reflected in the linked object in Approach.

---

{button ,AL('H\_EDITING\_LINKED\_OBJECTS\_STEPS;H\_EMBEDDING\_NEW\_OLE\_OBJECTS\_STEPS;H\_INSERTING\_LINKED\_OBJECTS\_FROM\_THE\_CLIPBOARD\_STEPS;H\_MODIFYING\_LINKS\_BETWEEN\_OBJECTS\_STEPS;H\_OLE\_EMBEDDED\_OBJECTS\_OVER;','0)} [See related topics](#)



### **Editing embedded objects**

- Go to Design to edit an object embedded in a view.
  - Go to Browse and go to the record that contains the embedded object.
1. Double-click the object you want to edit.
  2. Make the changes you want in the embedded object and choose File - Update from the server application.  
If the server application supports in-place editing, then it displays Approach menus. Choose the appropriate Approach commands to update and save the file.
  3. Close the server application window and return to the Approach window.

---

{button ,AL(`H\_EMBEDDING\_EXISTING\_OLE\_OBJECTS\_STEPS;H\_EMBEDDING\_NEW\_OLE\_OBJECTS\_STEPS  
;0)} See related topics

## Editing linked objects

- If the linked object is a design element, go to [Design](#).
  - If the linked object is in a PicturePlus field, go to [Browse](#), go to the record that contains the object, and select the PicturePlus field.
1. Double-click the object to open the source document.  
The server application opens in a separate window.
  2. Make your changes to the object in the server application.
  3. Choose File - Save from the server application.
  4. Choose File - Exit from the the server application.  
Any changes made to the object in the source document are updated in the Approach view.
- 

{button ,AL(`H\_INSERTING\_LINKED\_OBJECTS\_FROM\_THE\_CLIPBOARD\_STEPS;H\_CREATING\_OLE\_OBJECTS\_FROM\_FILES\_STEPS;H\_MODIFYING\_LINKS\_BETWEEN\_OBJECTS\_STEPS;`,`0)} [See related topics](#)

## Overview: Embedding an Approach object in another application

### Approach as an OLE server

When you embed an Approach object into a file in another application, the Approach object is stored in the other application file, but you use Approach to create and edit the object from inside the other application.

### Embedding an existing object

To create an Approach object based on an Approach file that already exists, in Approach go to Browse and choose Edit - Copy View. Then use Edit - Paste Special in the other application, selecting the appropriate Approach object Clipboard format to embed the object in the other application's file.

### OLE-specific File commands

When the current Approach window contains an Approach object embedded in another application, the following commands are available in the Approach File menu:

- File - Close & Return: Closes the Approach window and returns to the client application.
- File - Update: Updates data in the embedded object.
- File - Save Copy As: Saves a copy of the Approach object as an Approach file or another file type.
- File - Exit & Return: Ends the Approach session and returns to the client application.

---

{button ,AL(`H\_COMMUNICATING\_BETWEEN\_APPLICATIONS\_USING\_OLE\_OVER;H\_CREATING\_APPROACH\_OLE\_OBJECTS\_FROM\_OTHER\_APPLICATIONS\_STEPS;H\_CREATING\_APPROACH\_OLE\_OBJECTS\_IN\_APPROACH\_STEPS;H\_CREATING\_OLE\_OBJECTS\_FROM\_FILES\_STEPS;H\_OLE\_EMBEDDED\_OBJECTS\_OVER;H\_OLE\_LINKS\_OVER',0)} [See related topics](#)

## Embedding OLE objects based on existing files

An embedded object is different from a link. Changes in the embedded object do not update the original file, nor do changes in the original file update the embedded object.

Embedded objects are stored separately from the original file. Objects embedded in records are stored in the database. Objects embedded as part of the design of a view are stored in the Approach file.

1. In the server application, create the object you want to embed.
2. Open the Approach file and go to the view you want to use.
3. Do one of the following:
  - To embed the object as part of the design of a view, go to Design and click where you want the object to appear.
  - To embed the object part as part of a record, go to Browse, go to the record, and select a PicturePlus field.
4. From the Create menu, choose Object.



5. Click "Create from File."
6. (Optional) To have the object appear as an icon, select "Display As Icon."
7. (Optional) To change the icon>STEPS, click Change Icon.
8. Click Browse to select a file in the Browse dialog box.
9. Click OK.

If you do not select "Display As Icon" when embedding an OLE object based on an existing file, the contents of the file as an object are inserted into the view or PicturePlus field. You can only make changes to the object when the server application window is still open.

## Deleting embedded objects

In Design, select the object and choose Edit - Cut or Clear.

In Browse, select the PicturePlus field and choose Edit - Cut or Clear.

---

{button ,AL('H\_CREATING\_OLE\_OBJECTS\_FROM\_FILES\_STEPS;H\_EDITING\_EMBEDDED\_OBJECTS\_STEPS;  
H\_EMBEDDING\_NEW\_OLE\_OBJECTS\_STEPS;H\_OLE\_EMBEDDED\_OBJECTS\_OVER;','0')} [See related topics](#)

## Embedding new OLE objects

You can embed an OLE object without creating the object first.

A new embedded object is different from a link. Anything you do in an embedded object is unrelated to any file that exists in the server application.

Embedded objects are stored separately from the original file. Objects embedded in records are stored in the database. Objects embedded as part of the design of a view are stored in the Approach file.

1. Open the Approach file and go to the view you want to use.
2. Do one of the following:
  - To embed the object as part of the design of a view, go to Design and click where you want the object to appear.
  - To embed the object part as part of a record, go to Browse, go to the record, and select a PicturePlus field.
3. From the Create menu, choose Object.



4. Select "Create New."
5. (Optional) To have the object appear as an icon, select "Display As Icon."
6. (Optional) To change the icon>STEPS, click Change Icon.
7. Select the type of object you want to create in the "Object Type" box.
8. Click OK.
9. In the server application window, create the object and choose File - Update.
10. Close the server application window and return to Approach.

If you do not select "Display As Icon" when embedding a new OLE object, a object of the type you selected is inserted into the view or PicturePlus field. You can only make changes to the object when the server application window is still open.

---

```
{button ,AL(^H_CHANGING_THE_ICON_FOR_INSERTED_OLE_OBJECTS_STEPS;H_EDITING_EMBEDDED_OBJECTS_STEPS;H_EMBEDDING_EXISTING_OLE_OBJECTS_STEPS;H_OLE_EMBEDDED_OBJECTS_OVER;',0
)} See related topics
```

## Details: Exporting data from Approach

### Delimited text files

If you select the Text - Delimited file type, Approach opens the Text File Options dialog box.

A delimited text file uses separators (special characters like commas, spaces, or tabs) to show where one field ends and the next one begins. If you're exporting data as a text file to another application as the destination, check that application's documentation to be sure you have chosen the correct delimiters in Approach.

### Character set for text files

Identify the character set to be used in the export file. If you want to export DOS text with international characters, [change the character set of the current database](#) before exporting it.

DOS text with international characters uses the DOS or OS/2 (PC-8) character set.

### Fixed-length text files

If you select the Text - Fixed-Length file type, Approach opens the Fixed-Length Text File Setup dialog box.

In a fixed-length text file, a specific field is always the same length in each record, regardless of how much data it contains. When you export a fixed-length text file, you provide the names, data types, and widths of each field. You enter the starting position for only the first field; Approach automatically calculates the starting position for all fields after the first one.

### Oracle, SQL Server, DB2, or server-based ODBC files

If you select Oracle, SQL Server, DB2, or a server-based ODBC application, Approach opens the appropriate Connect dialog box. Complete this dialog box to connect to the server.

### Selecting records to export

- "Found set only" exports only the records you've located with the most recent find request.
- "All records" exports all records in the database.

---

{button ,AL(`H\_EXPORTING\_DATA\_FROM\_APPROACH\_STEPS',1)} [Go to procedure](#)

{button ,AL(`H\_CREATING\_DATABASES\_FROM\_DELIMITED\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_FIXEDLENGTH\_TEXT\_FILES\_STEPS;H\_IMPORTING\_APPROACH\_FILES\_STEPS;H\_IMPORTING\_DATA\_INTO\_DATABASES\_STEPS;H\_ODBC\_DATA\_SOURCES\_IN\_APPROACH\_REF',0)} [See related topics](#)

## Exporting data from Approach

Exporting saves selected data in a format that can be used by other applications. You can export all types of fields except variable fields and summary calculated fields.



### Are you in Browser?

1. Open the Approach file (.APR) associated with the database you want to export.
2. (Optional) To export only a found set, perform the find before exporting.
3. From the File menu, choose Export Data.



4. Select a database file type in the "Export type" box.  
A new database file is created to receive the exported data.
5. Name the new database file.
6. Under Export, select "Found set only" or "All records."
7. To identify the data to be exported, be sure the displayed database is the one you want.
8. Select a field and click Add.
9. To add additional fields, repeat steps 7 and 8.
10. Click Export.
11. (Optional) If you exported the data to a different database file format, specify a key field.

---

{button ,AL('H\_EXPORTING\_DATA\_FROM\_APPROACH\_DETAILS',1)} [See details](#)

{button ,AL('H\_CREATING\_DATABASES\_FROM\_DELIMITED\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_FIXEDLENGTH\_TEXT\_FILES\_STEPS;H\_IMPORTING\_APPROACH\_FILES\_STEPS;H\_IMPORTING\_DATA\_INTO\_DATABASES\_STEPS;H\_ODBC\_DATA\_SOURCES\_IN\_APPROACH\_REF;H\_APP\_ASSIGNING\_APPROACH\_FIELD\_NAMES\_REF;H\_APP\_SPECIFYING\_A\_KEY\_FIELD\_STEPS;',0)} [See related topics](#)

## Importing Approach files

- Importing an Approach file adds its views and macros to the receiving .APR file.
- Importing an Approach file does not import any data into the database of the receiving .APR file.



### Are you in Design?

1. Open the Approach file you want to import views into.
2. Choose File - Import Approach File.
3. Select the Approach file you want to import.
4. Click Open.

The Import Approach File Setup dialog box appears (unless both Approach files have databases with the same fields, in which case they are mapped automatically).

5. Map the fields.
6. Click OK.

Approach adds the views and macros of the imported file to the receiving .APR file.

---

{button ,AL('H\_EXPORTING\_DATA\_FROM\_APPROACH\_STEPS;H\_IMPORTING\_DATA\_INTO\_DATABASES\_STEPS';0)} [See related topics](#)



### Details: Importing data into databases

If you're working with a found set rather than the entire database, Approach updates only the records in the found set.

### Delimited text files

If you select the Text - Delimited file type, Approach opens the Text File Options dialog box.

A delimited text file uses separators (special characters like commas, spaces, or tabs) to show where one field ends and the next one begins. Refer to the manual for the application used to create the delimited text file to see what field separator it uses.

### Character set for text files

Identify the character set used in the import file. If you import DOS text with international characters, change the character set of the current database before importing into it.

DOS text with international characters uses the DOS or OS/2 (PC-8) character set.

### Fixed-length text files

If you select the Text - Fixed-Length file type, Approach opens the Fixed-Length Text File Setup dialog box.

In a fixed-length text file, a specific field is always the same length in each record, regardless of how much data it contains. When you import a fixed-length text file, you provide the names, data types, and widths of each field. You enter the starting position for only the first field; Approach automatically calculates the starting position for all fields after the first one.

### Oracle, SQL Server, DB2, or server-based ODBC files

If you select Oracle, SQL Server, DB2, or a server-based ODBC application, Approach opens the appropriate Connect dialog box. Complete this dialog box to connect to the server.

### Import options

<u>This option</u>	<u>Does this</u>
Add imported data as new records	Adds the imported data as new records at the end of the database; the new records have data only in the fields you map.
Use imported data to update existing records	Updates the data in existing records (only for the fields you map) when data in the fields you specify matches imported data.
Use imported data to update & add to existing records	Updates the data in records that match imported data and adds new records for the data that does not match existing records.

The options to update and append data do not apply to text files, Lotus 1-2-3, and Microsoft Excel. To use these file types, you must convert them to a .DBF file before importing.

### Viewing records

To view the actual data in the records of the imported file, click the previous record and next record buttons at the bottom left of the Import Setup dialog box.

---

{button ,AL('H\_IMPORTING\_DATA\_INTO\_DATABASES\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_CREATING\_DATABASES\_FROM\_DELIMITED\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_FIXEDLENGTH\_TEXT\_FILES\_STEPS;H\_FOXPRO\_FILES\_IN\_APPROACH\_REF;H\_IMPORTING\_APPROACH\_FILES\_STEPS;H\_ODBC\_DATA\_SOURCES\_IN\_APPROACH\_REF;H\_PARADOX\_FILES\_IN\_APPROACH\_REF',0)} [See related topics](#)

## Importing data into databases



### Are you in Browse?

1. Open the Approach file (.APR) associated with the database you want to import data into.
2. Choose File - Import Data.



3. Select the database file containing the data you want to import.
4. Click Import.

Your next step depends on the file type you selected. See [details](#)

### Assigning imported data to the correct fields

The Import Setup dialog box appears. The left-hand column lists information from the import file. The right-hand column lists the fields of the current database. The arrows show how Approach plans to map the imported data.

1. Be sure the database you want to import data into is showing in the "Fields in" box.
2. [Map the fields](#).

### Selecting an import option

1. Select an import option.

If you select the second or third option, a new column appears at the far right.

In this column, click the field(s) whose data must be matched exactly by the imported data. This ensures that Approach updates existing records accurately.

2. Click OK.

---

{button ,AL('H\_IMPORTING\_DATA\_INTO\_DATABASES\_DETAILS',1)} [See details](#)

{button ,AL('H\_CREATING\_DATABASES\_FROM\_DELIMITED\_TEXT\_FILES\_STEPS;H\_CREATING\_DATABASES\_FROM\_FIXEDLENGTH\_TEXT\_FILES\_STEPS;H\_FOXPRO\_FILES\_IN\_APPROACH\_REF;H\_IMPORTING\_APPROACH\_FILES\_STEPS;H\_PARADOX\_FILES\_IN\_APPROACH\_REF;',0)} [See related topics](#)

### Inserting linked objects from the Clipboard (Paste Special)

1. In the server application, create the object you want to link to.
2. Choose Copy in the application to copy the object to the Clipboard.
3. Open an Approach file and go to the view you want to use.
4. Do one of the following:
  - To add the object as part of the design of a view, go to Design and click where you want the object to appear.
  - To make the linked object part of a record, go to Browse, go to the record, and select a PicturePlus field.
5. From the menu, choose Edit - Paste Special.



6. (Optional) To have the object appear as an icon, select "Display As Icon."
7. (Optional) To change the icon>STEPS, click Change Icon.
8. Select "Paste Link."
9. Click OK.

If you do not select "Display As Icon" when linking objects, a picture of the Clipboard contents is pasted to the view or PicturePlus field. Any changes to the source file are reflected in the linked object in Approach.

---

{button ,AL(`H\_CREATING\_OLE\_OBJECTS\_FROM\_FILES\_STEPS;H\_EDITING\_LINKED\_OBJECTS\_STEPS;H\_EMBEDDING\_EXISTING\_OLE\_OBJECTS\_STEPS;H\_EMBEDDING\_NEW\_OLE\_OBJECTS\_STEPS;H\_MODIFYING\_LINKS\_BETWEEN\_OBJECTS\_STEPS;';0)} See related topics

## Insert Object dialog box

You can embed or link new objects or objects created from files.

### Choose a task

[Creating linked objects from files](#)

[Embedding new OLE objects](#)

[Embedding OLE objects based on existing files](#)

---

{button ,AL('H\_EDITING\_LINKED\_OBJECTS\_STEPS;H\_INSERTING\_LINKED\_OBJECTS\_FROM\_THE\_CLIPBOARD\_STEPS;H\_MODIFYING\_LINKS\_BETWEEN\_OBJECTS\_STEPS;',0)} [See related topics](#)

## Details: Modifying links

You can update a linked object either automatically or manually.

- Automatic updating means that the object is updated whenever the source object changes.
- Manual updating means that the object is updated only when you specifically update it.

If you make frequent changes to an object, select Manual as its update method. You might want to wait until you're finished before manually updating it.

When Approach is the container application, it updates linked objects only if the source application is running. If you have a linked object in a PicturePlus field, Approach updates the object only when you manually update it.

Select the type of update you want in the Manage Links dialog box::

<u>To</u>	<u>Click</u>
Change when the link is updated	Automatic or Manual
Manually update the link	Update Now
Activate a linked object	Open Source
Change the link to another source file (if, for example, you change the name or location of the source file)	Change Source and select a new file or path for the link in the Change Link dialog box
Break a link and convert the object into a graphic element	Break Link

---

{button ,AL(`H\_MODIFYING\_LINKS\_BETWEEN\_OBJECTS\_STEPS',1)} [Go to procedure](#)

{button ,AL(`H\_EDITING\_LINKED\_OBJECTS\_STEPS;H\_INSERTING\_LINKED\_OBJECTS\_FROM\_THE\_CLIPBOARD\_STEPS;H\_CREATING\_OLE\_OBJECTS\_FROM\_FILES\_STEPS',0)} [See related topics](#)

## Modifying links

- If the linked object is a design element, go to [Design](#).
- If the linked object is in a PicturePlus field, go to the record that contains the object and select the PicturePlus field. You must be in [Browse](#).

1. Choose Edit - Manage Links.



2. Select the link you want to modify and make the necessary changes.

3. Click OK.

---

{button ,AL('H\_MODIFYING\_LINKS\_BETWEEN\_OBJECTS\_DETAILS',1)} [See details](#)

{button ,AL('H\_EDITING\_LINKED\_OBJECTS\_STEPS;H\_INSERTING\_LINKED\_OBJECTS\_FROM\_THE\_CLIPBOARD\_STEPS;H\_CREATING\_OLE\_OBJECTS\_FROM\_FILES\_STEPS;',0)} [See related topics](#)

## Overview: OLE embedded objects

### What is an OLE embedded object?

An OLE embedded object is a piece of data stored in a file in one application (the client) that you create and edit using another application (the server).

With an embedded object, you can use the features of the server application to manipulate data in the client application. For example, you can embed a Lotus Word Pro Document object in an Approach file. You use Word Pro to create and edit the data of the embedded object, but that data is stored in either the Approach file or a database associated with the file.

### What does an embedded object look like?

In Approach, you can make an embedded object part of the records of a database or part of the layout of a view. To make the embedded object

- Part of the records of a database, define a PicturePlus field to contain the object and add the field to a view. Then in Browse, double-click the field to work with the embedded object.
- Part of the layout of a view, in Design, use Create - Object to create the object and add it to the view. Then in Design, select the object to work with it.

### What can you do with an OLE embedded object?

After you create an embedded object, you can move the object, copy it, or delete it just as you would any field or drawn object.

When the object is in place, the action bar appears so you can make any changes to the settings. To close the action bar, click away from the object. To edit the object, double click it.

<u>To</u>	<u>Do this</u>
Copy OLE object to other application	Click and drag object
Move OLE object to other application	Hold Shift key and drag object

Double-click an embedded object to activate the server application so that you can edit the object. You can use all the features of the server application to change the object's data or appearance. For example, you can use Lotus Word Pro to format text in a Word Pro Document object so that it appears in two-column format.

### When should you use OLE embedded objects?

Use OLE embedded objects when

- You need to use information in one application that you can only create or format in another application.
- You don't need to share the information between applications.

For example, if you want to place two-column text on a page of an Approach form, and you don't need to use the data in any other application except Approach, you can embed a Word Pro Document object in a PicturePlus field or as part of the layout of the form.

### Example: Why embed an object in a PicturePlus field?

Suppose you have a database in which you keep the specifications of all your products. You decide it would be helpful if you also showed a picture of the product as part of its record.

A photographer photographs all your products, and you have these photographs converted to a graphics format of a product that supports OLE as a server, and which is supported by Approach. Define a PicturePlus field, and then add the new field to a view of the database.

Next, in Browse, you single-click the PicturePlus field to select it. Choose Create - Object and select Create from file. Then specify the file that contains the image you want to add to this record.

### Example: Why embed an object as part of the layout of a view?

Suppose you want the background of an Approach form to be a professionally designed piece of artwork, but you don't have the resources to create such a background yourself. You can use any of the SmartMaster backgrounds available in Freelance Graphics as the background for a form simply by embedding it as an OLE object on the form.

## OLE terminology

Every OLE embedded object has a class name.

<u>Term</u>	<u>Description</u>
Class name	The name of the application used to create and edit the object, and the type of object. For example, Approach Form or 1-2-3 Worksheet.

---

{button ,AL(^H\_COMMUNICATING\_BETWEEN\_APPLICATIONS\_USING\_OLE\_OVER;H\_CREATING\_APPROACH\_OLE\_OBJECTS\_FROM\_OTHER\_APPLICATIONS\_STEPS;H\_CREATING\_APPROACH\_OLE\_OBJECTS\_IN\_APPROACH\_STEPS;H\_CREATING\_OLE\_OBJECTS\_FROM\_FILES\_STEPS;H\_EMBEDDING\_AN\_APPROACH\_OBJECT\_IN\_ANOTHER\_APPLICATION\_OVER;H\_OLE\_LINKS\_OVER',0)} [See related topics](#)



## Overview: OLE links

### What is a link?

A link is a connection between data in one application (the server) and another application (the client). With an automatic link, the data in the client automatically changes when you change the original data in the server.

In order for Approach to update information as an OLE client, the server application must be up and running.

### What does a link look like?

In Approach, you can make a link part of the records of a database or part of the layout of a view. To make the link

- Part of the records of a database, define a PicturePlus field to contain the link and add the field to a view. Then in Browse, double-click the field to work with the link.
- Part of the design of a view, in Design, use Create - Object to create the link and add the link to the view. Then in Design, select the link to work with it.

### What can you do with a link?

After you create a link, you can do anything with it that you can do with other objects in Approach. For example, you can move the link, copy it, or delete it just as you would a field or drawn object.

There are also operations that you can perform only with links:

- Double-click a link to activate the server application so that you can change the original data for the link.
- Using Edit - Manage Links, you can display and change information about a link. For example, you can edit a link so that it refers to a different piece of data in the server application or change a link from automatic to manual.

### When should you use links?

Use links when **all** of the following are true:

- You need to share data between applications.
- You expect the shared data to change.
- You need to update the shared data when the original data changes.

For example, if you keep sales and promotional information for your products in Lotus Word Pro documents and you want to make this information part of the records in your products database, you can create a link in a PicturePlus field to the Word Pro documents. In this example, Approach is the client and Word Pro is the server.

### When not to use links

Do not use links when **any one** of the following is true:

- You need to use the data in only one application.  
Instead, create an OLE embedded object.
- You do not expect the data to change.  
Instead, use the Clipboard to move a static snapshot of the data to Approach.
- You do not need to update the shared data when the original data changes.  
Again, use the Clipboard to move the data into Approach.

For example, if you use Freelance Graphics to create your company logo, and you want to use the logo on Approach forms and in Word Pro documents, you would not use links, since the logo is not likely to change. Instead, you could simply copy the logo in Freelance Graphics and paste it into Approach and Word Pro.

### Link terminology

Every link has an application, a topic, and an item.

<u>Term</u>	<u>Description</u>
Application	The OLE class name for an OLE link, for example, Word Pro Document
Topic	Usually the name of a file in the server application, for example C:\WORD_PRO\DOCS\REPORT.SAM
Item	A region in the topic, such as a range in

a spreadsheet or a bookmark in a word  
processing document

---

{button ,AL(^H\_COMMUNICATING\_BETWEEN\_APPLICATIONS\_USING\_OLE\_OVER;H\_CREATING\_APPROACH\_OLE\_OBJECTS\_FROM\_OTHER\_APPLICATIONS\_STEPS;H\_CREATING\_APPROACH\_OLE\_OBJECTS\_IN\_APPROACH\_STEPS;H\_CREATING\_OLE\_OBJECTS\_FROM\_FILES\_STEPS;H\_EMBEDDING\_AN\_APPROACH\_OBJECT\_IN\_ANOTHER\_APPLICATION\_OVER;H\_OLE\_EMBEDDED\_OBJECTS\_OVER',0)} [See related topics](#)

## **Sending e-mail messages from inside Approach**

If you are connected to a network and have access to an e-mail application, you can send e-mail messages through Approach.

1. Choose File -TeamMail - Send New Message.



2. To send a message that includes a Windows Metafile (.WMF) version of the current view, select "Snapshot of the current view."
3. Click Send.
4. Enter your name and password in your e-mail system's login box.
5. Enter recipients, send mode, subject information, and message text in the TeamMail dialog box.
6. Click Send.

---

{button ,AL(`H\_SENDING\_EMAIL\_MESSAGES\_WITH\_ATTACHMENTS\_FROM\_INSIDE\_APPROACH\_STEPS',0)}  
[See related topics](#)

**Details: Sending e-mail messages with attachments from inside Approach**

You can select either or both of the following options:

To send a Windows Metafile (.WMF) image of the current Approach file view, select "Snapshot of the current view."

To send the current Approach file with either all views or the current view only, select "Approach file with."

When you attach an Approach file, you can include copies of all databases associated with the Approach file or a blank copy of each database associated with the Approach file.

---

{button ,AL('H\_SENDING\_EMAIL\_MESSAGES\_WITH\_ATTACHMENTS\_FROM\_INSIDE\_APPROACH\_STEPS',1)}  
[Go to procedure](#)

{button ,AL('H\_SENDING\_EMAIL\_MESSAGES\_FROM\_INSIDE\_APPROACH\_STEPS',0)} [See related topics](#)

## **Sending e-mail messages with attachments from inside Approach**

If you are connected to a network and have access to an e-mail application, you can attach Approach views and data to your e-mail messages.

1. Choose File - TeamMail - Send New Message.



2. Select "Approach file with."
3. Select either "Current view only" or "All of the views."
4. Select "Include data from."
5. Select either "All databases," "Found set," "Current record," or "Blank databases" to attach to the e-mail.  
If you selected "All of the views," you can only include data from "All databases" or "Blank databases."
6. To send a message that includes a Windows Metafile (.WMF) version of the current view, select "Snapshot of the current view."
7. Click Send.
8. Enter your name and password in your e-mail system's login box.
9. Enter recipients, send mode, subject information, and message text in the TeamMail dialog box.
10. Click Send.

---

{button ,AL('H\_SENDING\_EMAIL\_MESSAGES\_WITH\_ATTACHMENTS\_FROM\_INSIDE\_APPROACH\_DETAILS',1)  
} [See details](#)

{button ,AL('H\_SENDING\_EMAIL\_MESSAGES\_FROM\_INSIDE\_APPROACH\_STEPS',0)} [See related topics](#)

**TeamMail dialog box**

Send e-mail messages from inside Approach with TeamMail for Lotus Approach.

**Choose a task**

[Sending e-mail messages from inside Approach](#)

[Sending e-mail messages with attachments from inside Approach](#)

## Cannot join these two databases because it would create a circular join

### Explanation

You are trying to join to a database already in the join path. This would create a circular join. Relational databases such as Approach do not allow circular join relationships.

A circular join occurs when three or more databases are joined and you can follow the path of the join lines from the original database to other databases and back to the original database.

For example, suppose database1 is joined to database2, database2 is joined to database3, and database3 is joined to database 4. Database4 cannot be joined to database1, or else it forms a circular relationship.

(Insert simple diagram of joined tables.)

There must be an end to a path of join lines.

(Insert simple diagrams of valid join relationships.)

### Solution

To avoid circular joins, you may want to create an alias join. By joining a database to an alias "copy" of itself, you can link records that have related information in the database.

## Do you really want to delete the file/database \*.\*?

<u>If you start by deleting...</u>	<u>Then..</u>
an .APR file	confirm you want to delete the file.  Approach deletes the .APR file and proceeds to delete the associated database files.
a database file	confirm you want to delete the selected database file.  Approach deletes the database file and all files associated with the database (index file, memo file, key field file.)



## **Cannot delete the database "Filename" because someone is using it.**

### **Explanation**

This message appeared for one of the following reasons:

- You had another Approach file (.APR) open that used this database.
- You had the database open in another application.
- Another user on the network had the database open.

### **Solution**

Do one of the following:

- Close the other Approach file (.APR).
- Close the database in the other application.
- Wait until the other user closes the database.

## **Cannot find the Memo and PicturePlus file for "Filename".**

### **Explanation**

Approach cannot locate the file that contains the data in memo and PicturePlus fields. Approach looks for this file in the same directory as the .DBF file. If this file is in a different directory, renamed, or deleted, Approach cannot find it.

The file has a different extension depending on the type of database you are using:

- For dBASE III or dBASE IV, the extension is .DBT.
- For Paradox 4.0, the extension is .MB.
- For Paradox 3.5, the extension is .DBQ.
- For FoxPro, the extension is .FPT.

### **Solution**

Locate the file for the database, or use a backup copy.

## **Cannot insert a record into "Filename".**

### **Explanation**

You did not have the Insert option checked in the Relational Options dialog box. This is an option that defines characteristics of the join relationship. It lets you edit fields from this database on this view.

### **Solution 1**

Switch to a view based on "Filename."

### **Solution 2**

1. Choose Create - Join.
2. Double-click the line drawn between the two databases.
3. Click the appropriate Insert option.
4. Click OK to close the Relational Options dialog.
5. Click OK.

## **Cannot modify the database "Filename" because someone is using it.**

### **Explanation**

This message appeared for one of the following reasons:

- You had more than one Approach file (.APR) open that is associated with database "Filename," and tried to do one of the following:
  - Create a database field
  - Change the data type of a field
  - Change the size of a field
- You tried to modify a database on the network that someone else is using.
- You had the database open in another application.

### **Solution**

- If you have more than one Approach file (.APR) open, close all the other .APR files and try again.
- If the file is on the network, and the error persists, make sure no one else has the data file open.

## **Cannot open a Paradox 4.x database while in 3.5 networking mode.**

### **Explanation**

You tried to open a Paradox 4.x file and Approach was setup to open Paradox 3.x files only.

### **Solution**

1. Choose File - Open
2. From Files of type, select Paradox.
3. Click Connect.
4. Select "Use Paradox 4.x networking".

## **Cannot open database "Filename" because of a file mismatch.**

### **Explanation**

Someone else had the database open either in Approach, Paradox, or some other application that can open Paradox databases, using a different \*.NET file.

- The \*.NET file for Paradox 3.x files is PARADOX.NET.
- The \*.NET file for Paradox 4.x files is PDOXUSRS.NET.

### **Solution 1: To find out where Approach is looking for this file**

1. Choose File - Open.
2. From Files of type, select Paradox.
3. Click Connect.
4. Note the Network Control File Path where Approach is looking for the \*.NET file.
5. Verify the drive and path in the other application that has the file open.

### **Solution 2: To find out where Paradox is looking for this file**

1. In DOS, change to the Paradox directory.
2. Run NUPDATE.EXE.
3. Select the .SOM file, and press SPACEBAR.
4. Press F2 twice to see the path for Network Control File.

**Note** This drive and path needs to be the same as Approach if you want Approach and Paradox to share the data file at the same time.

## **Cannot open the database "Filename" because it is open exclusively.**

### **Explanation**

You tried to open a database file that someone else had open, and the file was not set up as a shared database.

### **Solution**

If it is a dBASE III+ or dBASE IV file, you can make it a shared database.

1. Close all open files in Approach.
2. Choose File - Open.
3. In the list of file types, select dBASE IV.
4. Click Setup.
5. Do one of the following:
  - For networks with dedicated servers (for example, Novell), select "Database sharing."
  - For networks with nondedicated servers (for example, LANtastic), select both "Database sharing" and "Local databases are shared."
  - If no third party application uses the database files, select "Sharing data only with other Approach users."

## **Cannot open the database "Filename" exclusively because someone is using it.**

### **Explanation**

You tried to open the database for exclusive use, but another user already had the database open in sharing mode.

### **Solution**

To open the database for exclusive use, the other users must close the database file.

To open files in sharing mode, follow these steps:

1. Close all open files in Approach.
2. Choose File - Open.
3. In the list of file types, select dBASE IV.
4. Click Setup.
5. Do one of the following:
  - For networks with dedicated servers (for example, Novell), select "Database sharing."
  - For networks with nondedicated servers (for example, LANtastic), select both "Database sharing" and "Local databases are shared."
  - If no third party application uses the database files, select "Sharing data only with other Approach users."



## **Cannot save a database over itself.**

### **Explanation**

You chose File - Save As to save an exact copy of a database by the same name in the same location. This applies to all joined databases in the .APR file.

### **Solution**

Do one of the following:

- Save the file under a new name.
- Save it to a different directory.
- Use the Maintain Original File option in the Save Table As dialog box.
- Choose File - Save to save the file with the same name in the same directory.

**Note** You do not need to use File - Save As to save changes to the data. Approach does this automatically.

## Common messages in Approach

Cannot delete the database "Filename" because someone is using it  
Cannot find the Memo and PicturePlus file for "Filename"  
Cannot insert a record into "Filename"  
Cannot join these two databases because it would create a circular join  
Cannot modify the database "Filename" because someone is using it  
Cannot open a Paradox 4.x database while in 3.5 networking mode  
Cannot open database "Filename" because of a file mismatch  
Cannot open the database "Filename" because it is open exclusively  
Cannot open the database "Filename" exclusively because someone is using it  
Cannot save a database over itself  
Couldn't create database "Filename"  
Couldn't find database "Filename"  
Couldn't load the "Filename" DynaLink  
Couldn't open or write to server's named pipe  
Do you really want to delete the file/database \*.\*?  
Field "Fieldname" is used in a join  
"Fieldname" must be filled in and cannot be left blank

N labels won't fit between left and right margins  
N labels won't fit between top and bottom margins  
Network driver not loaded  
Not enough memory to display all Database Values for "Fieldname" in the list

One or more fields in this Approach file do not match up with current database fields

Server is not available  
Someone locked this record in the database "Filename"  
Someone modified this record in the database "Filename"

The 1-2-3 table being used is protected  
The current printer setup cannot print N labels across the page  
The current printer setup cannot print N labels down the page  
The entry in "Fieldname" is not 'one of' the items in the data validation list  
The entry in "Fieldname" must be in the range N1 to N2  
The entry in "Fieldname" must be unique  
The entry in "Fieldname" must match an entry in the "Check Entered Data" field  
The find rule in "Fieldname" is not valid  
The formula in the "Formula is true" validation option must return a yes/no value  
The formula in the data entry option equates to an incompatible data type for this field  
The maximum record size was exceeded for "Filename"  
There is a missing ')'  
There is a missing '('  
There is a missing double quote (") in this field  
There is a missing single quote (') in this field  
This calculated field uses a formula that refers to itself  
This change may erase or truncate the contents of the field in each record of the database  
This change may truncate the contents of the field in each record of the database  
This field is used in a join. Modifying this field is not revertible  
Too many files open

Values in the field "Fieldname" are not grouped together

## Couldn't create database "Filename".

### Explanation

Approach could not create the database for one of the following reasons:

- Your computer cannot work with any more files.
- You are out of disk space.
- You have a corrupt .ADX file.

### Solution

Try each of these solutions:

#### Increase the file handles in your CONFIG.SYS file

This lets your computer work with more files.

1. Edit your CONFIG.SYS file.
2. Update the files= line.  
It is automatically set to 60, so change it to a number larger than 60.
3. Save the file and then restart your computer.

#### Make a copy of your .ADX file

You may have a corrupt .ADX file. Saving your database with a new name filters out any corruptions.

1. Choose File - Save As.
2. Enter a new filename.
3. Click Save.
4. Enter a new filename for the database.
5. Select Exact Copy.
6. Click Save.

## **Couldn't find database "Filename".**

### **Explanation**

The Approach file (.APR) stores the path and name of the database file. If you moved or deleted the database file(s), Approach does not know the correct location.

### **Solution**

Click Yes, then locate the database by Browsing.

## Couldn't load the "Filename" DynaLink.

### Explanation

Approach was unable to find the files it needed to load the DynaLink file.

### Solution

1. To find the name of the directory where Approach is looking for the files, open the registry to location HKEY\_LOCAL\_MACHINE\Software\Lotus\Components
  - For standalone installations of Approach, check the entry LocalPath =
  - For network installations of Approach, check the entry NetworkPath =
2. Verify that the following six files exist in the directory:
  - LTBUBN12.DLL
  - LTDLGN03.DLL
  - LTICNC71.DLL
  - LTSBC61.DLL
  - LTTMC11.DLL
  - LTUIN21.DLL
3. If these files do not exist, do one of the following
  - Check if the files exist in another LOTUSAPP directory.  
If they exist, do one of the following:
    - a. Edit the path in the registry to reflect the directory where they exist.
    - b. Move the files to the directory listed in the registry.
  - Re-install Approach to install the .DLL files Approach needs.

## **Couldn't open or write to server's named pipe.**

### **Explanation**

Approach uses two named pipe connections to connect to the server, and the server ran out of connections.

### **Solution**

Contact your system administrator to check the following:

- Network driver
- Network configuration
- Network cables
- Verify there are at least two connections available.

### **Editing the registry**

1. In the Windows taskbar, click Start, and then choose Run.
2. Type **regedit**
3. Click OK.  
The Registry Editor appears.
4. Navigate to:  
HKEY\_CURRENT\_USER  
Software  
Lotus  
Approach  
97.0
5. Open the folder required by your task.
6. Make the changes to the appropriate data values.

## Error messages

Error messages may come from three different sources:

- An ODBC driver
- The database system
- The driver manager

### ODBC driver errors

An error reported on an ODBC driver has the following format:

*[vendor] [ODBC\_component] message*

*ODBC\_component* is the component in which the error occurred. For example, an error message from the INTERSOLV SQL Server driver would look like this:

[INTERSOLV] [ODBC SQL Server driver] Login incorrect.

If you get this type of error, check the last ODBC call your application made for possible problems, or contact your ODBC application vendor.

### Database system errors

An error that occurs in the data source includes the data source name, in the following format:

*[vendor] [ODBC\_component] [data\_source] message*

With this type of message, *ODBC\_component* is the component that received the error from the data source indicated. For example, you may get the following message from an Oracle data source:

[INTERSOLV] [ODBC Oracle driver] [Oracle] ORA-0919: specified length too long for CHAR column

If you get this type of error, you did something incorrectly with the database system. Check your database system documentation for more information, or consult your database administrator.

### Driver manager errors

The driver manager is a .DLL that establishes connections with drivers, submits requests to drivers, and returns results to applications. An error that occurs in the driver manager has the following format:

*[vendor] [ODBC DLL] message*

*Vendor* can be Microsoft, Apple, or INTERSOLV. For example, an error from the Microsoft driver manager might look like this:

[Microsoft] [ODBC Driver Manager] Driver does not support this function

If you get this type of error, consult the *Programmer's Reference* for the Microsoft ODBC Software Development Kit, available from Microsoft.



**"Fieldname" must be filled in and cannot be left blank.**

**Explanation**

The designer of this field assigned it a validation option of Filled in, so you cannot leave it blank.

**Solution 1**

Enter some data.

**Solution 2**

1. In Design, select the field.
2. Choose Create - Field Definition.
3. Click Options.
4. Click the Validation tab.
5. Deselect Filled in.
6. Click OK.

## **Field "Fieldname" is used in a Join.**

### **Explanation**

You tried to map a join field to a PicturePlus, Boolean or variable field, that cannot be used in a join.

### **Solution**

For information on mapping fields, see [Mapping Fields](#).

1. Align the database field on the right side with the field on the left.
2. Click the middle column between the fields.  
A blue arrow appears.
3. Click OK.
4. Choose File - Save Approach File.

**Network driver not loaded.****Explanation**

Approach could not locate the SQLNet driver.

**Solution**

Check your Oracle client online documentation.

## **Not enough memory to display all Database Values for "Fieldname" in the List.**

### **Explanation**

You are defining a drop-down list field based on values contained in another field. Approach can display up to 200 values in the drop-down list. If the list contains more than 200 values, Approach warns you it cannot display them all in this dialog. However, the list still contains all the values you entered, and will function normally when you are in Browse.

### **Solution**

Click OK to acknowledge the message. You can continue to enter more values if necessary.

## **N labels won't fit between left and right margins.**

### **Explanation**

Approach cannot fit this arrangement of labels on the page. The combined label width, gaps between the labels, and margin size add up to more than the width of the page.

### **Solution 1**

In the Options tab of the Mailing Label Assistant, do one of the following:

- Decrease the number of labels going across.
- Decrease the Horiz. gap
- Decrease the Left margin.
- Decrease the right margin.

### **Solution 2**

1. In the Options tab of the Mailing Label Assistant, choose Printer Setup.
2. Specify a wider paper size.

### **Solution 3**

Choose a different printer.

## **N labels won't fit between top and bottom margins.**

### **Explanation**

Approach cannot fit this arrangement of labels on the page. The combined label height, gaps between the labels, and margin size add up to more than the height of the page.

### **Solution 1**

In the Options tab of the Mailing Label Assistant, do one of the following:

- Decrease the number of labels going down.
- Decrease the Vert. gap
- Decrease the Top margin.
- Decrease the Bottom margin.

### **Solution 2**

1. In the Options tab of the Mailing Label Assistant, choose Printer Setup.
2. Specify a taller paper size.

### **Solution 3**

Choose a different printer.

**One or more fields in this Approach file do not match up with current database fields.**

**Explanation**

This database was modified outside of the current APPROACH FILE (.APR). One or more fields of the database file(s) no longer match the fields in the .APR.

**Solution**

To keep full functionality, click Yes to map the unmatched fields.

## **Server is not available.**

### **Explanation**

Approach could not access the files on the server, because of one of the following reasons:

- The server was down.
- All connections were in use.

### **Solution**

Verify with your network administrator that the server is running, and that there is a connection available for this server.



## Someone locked this record in the database "Filename".

### Explanation

- Another person was using this database to do a find. This required Approach to create an index. So you were locked out until Approach finished creating the index.
- That database does not have Optimistic Record Locking turned on, and another person is editing this record.

### Solution

- Wait until Approach finishes creating the index.
- If Approach isn't creating an index and you get this error, verify that all users are using optimistic record locking. If all users have this option checked, more than one user can edit the same record at the same time. If all users do not have this option checked, only one user at a time can edit any given record.

## **Someone modified this record in the database "Filename".**

### **Explanation**

This message occurred because

- Someone else on the network tried to edit the same record in the database at the same time you did.
- The file uses optimistic record locking.

### **Solution**

Do one of the following:

- If you want to write over the other person's changes, click Yes.  
Approach saves your changes and writes over the changes made by another user on the network.
- If you do not want to write over the other person's changes, click No.  
Approach displays the changes made by the other user in your view of the record.
- If you do not want to write over the changes, or update the record with the other user's changes, click Cancel to continue with your edits.

**There is a missing ')'.**

**Explanation**

You entered a formula that contains an open parenthesis, without a corresponding close parenthesis.

As a general rule, the number of open parentheses should equal the number of close parentheses. Also, the parentheses need to be located in the correct position.

**Solution**

Enter the missing close parenthesis.

## **There is a missing double quote (") in this field.**

### **Explanation**

You entered a find condition that includes an odd number of double quotation marks. Approach requires you to enter field names containing special characters within a pair of double quotation marks.

### **Solution**

- To search for text within fields whose name contains special characters, such as a space, type the field name in double quotation marks.
- To search for text containing special characters, type the whole string in single quotation marks.
- To search for text containing a double quotation mark, put two double quotation marks where the original double quotation mark appears.

### **Example 1**

"table.field name"

### **Example 2**

To find

My "other" life.

Type:

My ""other"" life.

**There is a missing '('.**

**Explanation**

You entered a formula that contains a close parenthesis, without a corresponding open parenthesis.

As a general rule, the number of open parentheses should equal the number of close parentheses. Also, the parentheses need to be located in the correct position.

**Solution**

Enter the missing open parenthesis.

**There is a missing single quote (') in this field.**

**Explanation**

You entered a find condition that includes an odd number of single quotation marks. Approach requires you to enter text containing special characters within a pair of single quotation marks.

**Solution**

- To search for text containing special characters, type the whole string within a pair of single quotation marks.
- To search for text containing a single quotation mark, put two single quotation marks where the original single quotation mark appears.

**Example**

To find

Approach's Help System

Type:

Approach"s Help System

## **The 1-2-3 table being used is protected.**

### **Explanation**

You tried to add a record to the database file. Approach tried to use the next row in the range for the new record, and it found that something already exists in this row.

### **Solution**

- In Lotus 1-2-3, check the range that Approach is getting the data from. If data appears in any of the cells in the row beneath the last row in the range, do one of the following:
  - Delete the data.
  - Extend the range.
- Remove any range protection that is defined in the Lotus 1-2-3 spreadsheet.

**The current printer cannot print N labels down the page.**

**Explanation**

Approach cannot fit this arrangement of custom labels on the page.

**Solution 1**

In the Options tab of the Mailing Label Assistant, do one of the following:

- Decrease the number of labels going down.
- Decrease the height of the label.

**Solution 2**

1. In the Options tab of the Mailing Label Assistant, choose Printer Setup.
2. Specify a taller paper size.

**Solution 3**

Choose another printer.



**The current printer setup cannot print N labels across the page.**

**Explanation**

Approach cannot fit the arrangement of custom labels on the page.

**Solution 1**

In the Options tab of the Mailing Label Assistant, do one of the following:

- Decrease the number of labels going across.
- Decrease the width of the label.

**Solution 2**

1. In the Options tab of the Mailing Label Assistant, choose Printer Setup.
2. Specify a wider paper size.

**Solution 3**

Choose another printer.

**The entry in "Fieldname" is not 'one of' the items in the data validation list.**

**Explanation**

The designer of this field assigned it a validation option that requires you to select a value that is one of a set of predefined values.

**Solution 1**

Select one of the values as defined in the Validation tab of the Field Definition dialog.

**Solution 2**

1. In Design, select the field.
2. Choose Create - Field Definition.
3. Click Options.
4. Click the Validation tab.
5. In the "One of" box enter the value you want to use, and then click Add.  
You can also deselect the option.
6. Click OK.

**The entry in "Fieldname" must be in the range N1 to N2.**

**Explanation**

The designer of this field assigned it a validation option that requires you to enter a value that falls between a specified range of values.

**Solution 1**

Enter some data that falls within the specified range.

**Solution 2**

1. In Design, select the field.
2. Choose Create - Field Definition.
3. Click Options.
4. Click the Validation tab.
5. Change the range specified in the "From" and "To" boxes, or deselect the option.
6. Click OK.

**The entry in "Fieldname" must be unique.**

**Explanation**

The designer of this field assigned it a validation option of Unique, and you tried to enter a value that is already in this field in another record.

**Solution 1**

Enter some data that is not already in this field in another record.

**Solution 2**

1. In Design, select the field.
2. Choose Create - Field Definition.
3. Click Options.
4. Click the Validation tab.
5. Deselect "Unique."
6. Click OK.

**The entry in "Fieldname" must match an entry in the Check Entered Data field.**

**Explanation**

The designer of this field assigned it a validation option that requires you to select a value that is present in another field in this or another database.

**Solution 1**

Select one of the values as defined in the Validation tab of the Field Definition dialog.

**Solution 2**

1. In Design, select the field.
2. Choose Create - Field Definition.
3. Click Options.
4. Click the Validation tab.
5. Change "In Field" to use the field that contains the value you want to enter.  
You can also deselect the option.
6. Click OK.

## **The find rule in "Fieldname" is not valid.**

### **Explanation**

Your find condition is missing information Approach needs to complete the find.

### **Solution**

Check to make sure you did each of the following:

- Include the name of the database when entering field names (DATABASE.FIELD), if you have joined databases in the Approach file. Enclose the field name in double quotation marks if it contains special characters.
- Spell field names and functions correctly.
- Include all quotation marks, apostrophes, commas, open or close parentheses.
- Use the symbol , (comma) instead of the word "or."
- Space the data correctly. You don't usually need spaces, but in some cases you need to use them to separate functions from data or field names.

**The formula in the data entry option equates to an incompatible data type for this field.**

**Explanation**

You tried to write a formula that would result in a data type different from the one defined for this field.

**Solution**

Rewrite the formula so it results in the correct data type for the field.

**Example**

If the field is defined as date, make the Creation formula or Modification formula result in a date. For example, use the TexttoDate function.

**The formula in the "Formula is true" validation option must return a yes/no value.**

**Explanation**

The formula does not evaluate to Yes or No; it requires Approach to make some other evaluation beyond a simple yes/no test.

**Solution**

Write the formula so that when Approach uses the formula to test an entered value, the response required by the formula is Yes or No.

**Examples: Formulas that return a yes/no value**

Length(FieldName)=5

Isblank(FieldName)

If(FieldName>1,'Yes','No')

**Examples: Formulas that do not return a yes/no value**

Length(FieldName) - returns a numeric value

Position(FieldName,'#',1) - returns a numeric value

If(FieldName='Approach','Easy to Use','Too Difficult') - returns either Easy to Use or Too Difficult



## The maximum record size was exceeded for "Filename".

### Explanation

You tried to create a database containing records whose size exceeds the database type's limitations.

### Solution

Do one of the following:

- Delete some fields.
- Reduce the size of the fields.
- Click Cancel, then create a new database that supports a larger record size.

---

```
{button ,AL(^H_DBASE_FILES_IN_APPROACH_REF;H_FOXPRO_FILES_IN_APPROACH_REF;H_IBM_DB2_TAB  
LES_IN_APPROACH_REF;H_LOTUS_NOTES_FILES_IN_APPROACH_REF;H_ODBC_DATA_SOURCES_IN_A  
PPROACH_REF;H_ORACLE_SQL_TABLES_IN_APPROACH_REF;H_PARADOX_FILES_IN_APPROACH_REF;  
H_QUERY_FILES_IN_APPROACH_REF;H_SQL_SERVER_TABLES_IN_APPROACH_REF;',0)} See related  
topics
```

**This calculated field uses a formula that refers to itself.**

**Explanation**

You tried to create a calculated field that refers to itself in its own formula, or another field's formula refers to itself.

**Solution**

Change the formula for this field to a valid formula.

**Example**

You cannot have this formula in the field TOTAL, as it refers to itself:

PRICE\*QUANTITY=TOTAL

Use this formula instead:

PRICE\*QUANTITY

This will place the result of the calculation in the calculated field TOTAL.

**This change may erase or truncate the contents of the field in each record of the database.**

**Explanation**

You tried to change the data type of the field definition, such as changing a text field to a number field, and this may cause the loss of information in the field.

**Solution**

Approach does not prevent you from making this change.

Consider saving a copy of the database before you make the change. If you make a mistake, you can revert to the copy.

**This change may truncate the contents of the field in each record of the database.**

**Explanation**

You tried to reduce the size of the field, and this may cause the loss of information in the field.

**Solution**

Approach does not prevent you from making this change.

Consider saving a copy of the database before you make the change. If you make a mistake, you can revert to the copy.

**This field is used in a join. Modifying this field is not revertible.**

**Explanation**

You tried to enter a value in the join field from the detail database . If you click OK to confirm this entry, the value of the join field in the detail database changes and information from the record in the detail database no longer appears in the current view. Undesirable results such as changes to the wrong record, or creation of unwanted records can also occur.

It is best only to enter or edit data in a join field when the join field is from the main database for the view.

To see which database the view is based on, in Design, click the view tab and open the InfoBox. Then click the Basics tab of the InfoBox. The main database is named in the "Main database" box on this tab.

**Solution**

Click Cancel.

To avoid this message, in Design, do one of the following:

- Change the field on the view to the join field from the main database for that view.
- On the Basics tab of the InfoBox for this field, change the join field to Read-only.
- Remove the field from the view.

**Changing the value of the join field in the detail database**

If you want to be able to change the value of the join field in the detail database, on the current view, add a button that switches to a view where this database is the main database.

## **Too many files open.**

### **Explanation**

If you are on a peer-to-peer network, like LANtastic or Windows for Workgroups, this error occurred if you tried to open too many files.

### **Solution**

Try each of these solutions, in the following order:

- If you are using WIN 95:
  - Try increasing the FILES= line in the server CONFIG.SYS file to a number higher than the default of 60.
  - Try increasing the amount of Buffers in the server CONFIG.SYS file to a number higher than the default of 30.
- If you are on a Novell network, make sure the files setting in the NET.CFG file is large enough to accommodate the number of open files.
- Close one or more Approach files and try again.

## **Values in the field "Fieldname" are not grouped together.**

### **Explanation**

You tried to create a report or summary group, or switch to a report that grouped records on fields that were not part of the current sort order.

### **Solution 1**

Click Yes to re-sort the records by the grouped field.

### **Solution 2**

1. Click No to keep the current sort order.
2. (Optional) Change the default sort order so Approach sorts the grouped records in the required order.

## **Copyright and trademark information**

Under the copyright laws, neither the documentation nor software may be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine-readable form, in whole or in part, without the prior written consent of Lotus Development Corporation, except in the manner described in the software agreement.

© Copyright 1992, 1998

Lotus Development Corporation  
55 Cambridge Parkway  
Cambridge, MA 02142

All rights reserved. Published in the United States.

Lotus, Lotus Notes, Lotus Organizer, LotusScript, Lotus SmartSuite, 1-2-3, Ami Pro, Approach, DataLens, Freelance Graphics, Notes Mail, Organizer, PowerKey, SmartIcons, SmartPics, SmartSuite, Symphony, Word Pro, and Working Together are registered trademarks, and Lotus Notes Network, Lotus Passport, Notes, Notes HiTest, Notes Reporter, NotesFlow, Notes/FX, SmartMaster, TeamMail, and TeamReview are trademarks of Lotus Development Corporation. cc:Mail is a trademark of cc:Mail, Inc. a wholly owned subsidiary of Lotus Development Corporation. DB2, IBM, and OS/2 are registered trademarks, and OS/2 Warp is a trademark, of International Business Machines Corporation.

Other product and company names mentioned herein may be the trademarks or registered trademarks of their respective owners.



## **Create Object dialog box**

**Want the big picture about OLE?** See (Overview : Communicating between apps using OLE)

Insert the following items in a form, report, mailing label, or form letter.

- An embedded OLE object
- A linked object created from a file
- An ActiveX control
- A JavaBean

### **Choose a task**

[Adding custom controls to the Tools palette](#)

[Registering custom controls](#)

[Overview: ActiveX Controls](#)

[Inserting custom controls in views](#)

[Changing properties of custom controls](#)

[Creating linked objects from files](#)

[Embedding OLE objects based on existing files](#)

[Embedding new OLE objects](#)

(When the JavaBean topics get written, need to add more jumps to this list)

## Finding records that must satisfy multiple conditions (AND)

Approach lets you specify multiple conditions to find only the records that match all of the conditions.

This is called an AND find.

### Which kind of AND find do you want to do?

- AND find with conditions entered in one field

**Example:** Find all records that list a salary greater than \$25,000 AND less than \$35,000 in the Gross\_Salary field.

To do this in a find request, see [Finding records with AND conditions in one field](#).

- AND find with conditions entered in multiple fields

**Example:** Find all records that have both "Finance" in the Department field AND "San Francisco" in the City field.

To do this in a find request, see [Finding records with AND conditions in more than one field](#).

### AND finds in the Find Assistant

You can do both kinds of AND finds in the Find Assistant:

- See [Creating a find condition with the Find Assistant](#).
- See [Finding records using Query by Box](#) to do a find by manipulating graphical representations of find conditions.

---

{button ,AL('H\_CREATING\_FIND\_REQUESTS\_STEPS;H\_FINDING\_RECORDS\_THAT\_MUST\_SATISFY\_AT\_LEAST\_ONE\_OF\_MULTIPLE\_CONDITIONS\_(OR)\_REF;H\_NAMING\_FINDS\_BASED\_ON\_FIND\_REQUESTS\_STEPS';0)} [See related topics](#)

## Finding records that satisfy at least one of multiple conditions (OR)

Approach lets you specify multiple conditions to find records that match at least one--but not necessarily all--of the conditions.

This is called an OR find.

### Which kind of OR find do you want to do?

- OR find with conditions entered in one field

**Example:** Find all records that have either "Finance" OR "Payroll" in the Department field.

To do this in a find request, see [Finding records with OR conditions in one field](#).

- OR find with conditions entered in multiple fields

**Example:** Find all records that have either "Finance" in the Department field OR "San Francisco" in the City field.

To do this in a find request, see [Finding records with OR conditions in more than one field](#).

### OR finds in the Find Assistant

You can do both kinds of OR finds in the Find Assistant:

- See [Creating a find condition with the Find Assistant](#).
- See [Finding records using Query by Box](#) to do a find by manipulating graphical representations of find conditions.

---

{button ,AL('H\_CREATING\_FIND\_REQUESTS\_STEPS;H\_NAMING\_FINDS\_BASED\_ON\_FIND\_REQUESTS\_STEP  
S;H\_FINDING\_RECORDS\_THAT\_MUST\_SATISFY\_MULTIPLE\_CONDITIONS\_(AND)\_REF;',0)} [See related  
topics](#)

## Finding records with AND conditions in one field



### Are you in Browse?

Approach lets you specify several conditions within one field to find only the records that match all of the conditions.

1. Change to the view you want to use for finding records.
2. Choose Find - Find using *[view]* on the context menu.

Or click Find in the action bar.



3. Enter the values you want to find in the appropriate field. Separate the conditions with ampersands.
4. Press ENTER.

Approach displays the found set. Check the status bar to see the size of the found set ("Found *n* of *nn*").

**Note** The found set remains the only records available to you until you select All Records from the named find box in the action bar, or do another find.



5. (Optional) To change one of the conditions or narrow your search by adding more conditions, choose Find - Find Again on the context menu.

### Example

To find all employees who earn between \$25,000 and \$35,000, type **>\$25,000 & <\$35,000** in the Gross\_Salary field of an employee form find request.

---

```
{button ,AL(`H_CREATING_FIND_REQUESTS_STEPS;H_FINDING_RECORDS_WITH_OR_CONDITIONS_IN_MORE_THAN_ONE_FIELD_STEPS;H_FIND_RECORDS_TO_SATISFY_ONE_OF_SEVERAL_CONDITIONS_(OR)_STEPS;H_FINDING_RECORDS_THAT_SATISFY_MULTIPLE_CONDITIONS_(AND)_STEPS;H_APP_FIND_REQUESTS_OVER;H_REPEATING_FINDS_STEPS;H_FINDING_RECORDS_THAT_MUST_SATISFY_MULTIPLE_CONDITIONS_(AND)_REF;H_NAMING_FINDS_BASED_ON_FIND_REQUESTS_STEPS;','0)} See related topics
```

## Overview: Find types

In Approach you can find records that match certain criteria called "find conditions", by using any one of three methods:

- Entering [find requests](#) in Find

You enter your conditions in a blank form or worksheet. Simply enter the value(s) you want to find in the appropriate fields, or use operators and functions to do more elaborate finds.

- Using the [Find Assistant](#)

Approach guides you through finding the records you want to display. You can use the same operators and functions as in your find request, but you can also find duplicate records, distinct records, and records containing the highest or lowest values in the database. You can also sort the found set and name the find so you can use it again.

- Using [Query by Box](#)

In the Find Assistant you can choose the Query by Box find type so you can graphically design your search criteria.

Use the table below to determine which procedure to use for the best results.

<u>To find records containing</u>	<u>Example</u>	<u>See</u>
A specific number, date, time, or Boolean	Find invoices due on 5/19/97.	<a href="#">Finding numbers, dates, and times</a> <a href="#">Finding today's date</a>
A number, date, or time within a range	Find car owners in the age range 25-35.	<a href="#">Finding values in a range</a>
Specific text, or text containing a string of characters	Find customers in San Jose, San Francisco, Santa Barbara (all contain the string "San").	<a href="#">Finding text with wildcards</a>
Text with a specific case format (uppercase, lowercase, mixed case)	Find "boxer" but not "Boxer".	<a href="#">Finding case-sensitive text</a>
Empty fields	Find clients without a contact name.	<a href="#">Finding blank or nonblank fields</a>
A name you do not know how to spell, but you know its sound	Finding a customer whose name sounds like Philip.	<a href="#">Finding a word that sounds like another</a>
A comparison of data in two or more fields	Finding expense items where the actual price was higher than the budgeted price.	<a href="#">Using If statements to find data</a>
A specific check box or radio button selection	Finding all male employees (radio button selection) who have laptop PCs (check box setting).	<a href="#">Finding radio button and check box settings</a>
Two or more conditions in different fields	Find customers in Boston who ordered hockey sticks.	<a href="#">Finding records with AND conditions in more than one field</a>
Two or more conditions in the same field	Find companies whose name contains Sports and Corporation.	<a href="#">Finding records with AND conditions in one field</a>
Any one of multiple conditions in the same field	Finding employees in the Training or Documentation departments.	<a href="#">Finding records with OR conditions in one field</a>
Any one of multiple conditions in different fields	Finding movies starring Harrison Ford, or directed by Steven Spielberg.	<a href="#">Finding records with OR conditions in more than one field</a>



### Copying named finds

1. Choose Create - Named Find/Sort.
2. Select the named find or sort you want to copy.
3. Click Copy.  
The Named Find/Sort dialog box appears.
4. Enter a new name for the find or sort.
5. Click OK.
6. (Optional) To edit the copy, select the name from the list and click Edit Find or Edit Sort.
7. Click Done.

---

{button ,AL(^H\_DELETING\_NAMED\_FINDS\_STEPS;H\_EDITING\_NAMED\_FINDS\_STEPS;H\_NAMING\_FINDS\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_NAMING\_FINDS\_BASED\_ON\_FIND\_REQUESTS\_STEPS;H\_NAMING\_SORTS\_STEPS;H\_FINDING\_RECORDS\_WITH\_THE\_FIND\_ASSISTANT\_OVER;',0)} [See related topics](#)

## Creating a find condition with the Find Assistant

1. Choose Find - Find Assistant on the context menu.



2. In the "Type of find" box, select Basic Find.

3. Click the Condition 1 tab.

4. Select the database and the field you want to use in the find condition.

5. Under Operator, select the condition you want data to fulfill.

6. Enter the value used for the find condition in the "Values" box.

To create an OR find in the selected field, enter values on additional lines in the Values box.

7. (Optional) To create additional conditions based on other fields, click Find on Another Field.

A second Condition tab appears. Select

- "Find more records" to relate conditions with OR
- "Find fewer records" to relate conditions with AND

8. Repeat steps 4 - 6 for each additional condition.

9. To delete a condition, click the Condition's tab and then click Delete Condition.

The Delete Condition button appears on all the Condition tabs after you click Find on Another Field.

10. Click Next or Done.

**Note** The Description box displays the find condition you create in an English language format.

---

```
{button ,AL('H_FINDING_DISTINCT_OR_UNIQUE_RECORDS_WITH_THE_FIND_ASSISTANT_STEPS;H_FINDING_DUPLICATE_RECORDS_WITH_THE_FIND_ASSISTANT_STEPS;H_FINDING_RECORDS_USING_QUERY_BY_BOX_STEPS;H_FINDING_THE_TOP_OR_LOWEST_VALUES_WITH_THE_FIND_ASSISTANT_STEPS;H_SELECTING_A_FIND_TYPE_WITH_THE_FIND_ASSISTANT_REF;H_DELETING_FIND_CONDITIONS_STEPS;',0)} See related topics
```



### Details: Creating find requests

For simple finds, just enter the value you want to find in the appropriate field. For example, to find all employees whose last name is "Smith", type **smith** in the LASTNAME field.

Combine operations with values for more powerful finds.

### Operators in find requests

Use the following operators with the find condition you enter in a field. Enter an operator in the field, or click where you want the operator to go and then click its icon in the set of SmartIcons.

<u>This operator</u>	<u>Specifies</u>
<	Less than
>	Greater than
<=	Less than or equal to
>=	Greater than or equal to
=	Equal to (if alone, finds records having no data in the field)
<>	Not equal to (if alone, finds records having data in the field)
,	OR conditions within a field
&	AND conditions within a field
...	Range of values (for example, A...D)
*	Wildcard for zero or more characters
?	Wildcard for one character
@	<u>Function</u> or field reference indicator used with another operator, such as in =@Today(). Do not use the @ (at sign) within If statements.
!	Case-sensitive text find
~	Sounds like
If	Compound expressions

### Examples of find requests

For examples of find requests that use operators, see [Overview: Find Types](#).

### Field references in find requests

Part of a find condition can refer to values in other fields. Precede the field name with @ (at sign). For example, to find all employees whose bonus for 1997 was greater than their 1996 bonus, enter @BONUS96 in the field BONUS97. Don't use @ with fields used in an If statement. Approach assumes the contents of the If statement are parameters, so you do not have to use the @ for field names. For more information about specifying a field name, see [Overview: Field references, constants, and operators](#).

### Troubleshooting formulas in find requests

If the formula you enter in your find request results in no records found, and you know records exist for the conditions you set, it is possible your formula is incorrect. To test the formula, create a calculated field in the Field Definition dialog box, reproduce the formula there, and make corrections. When the checkered flag is no longer crossed out you know the formula is correct. You can then copy and paste the formula into your find request.

### Finding on a summary field

Find on a summary field only if it summarizes a group of records sorted by a field. Finds do not work on a grand total summary field, but they work on one that summarizes a number of records.

### Indexing

Approach automatically creates an index the first time you find or sort on a field and stores the index in a file with the extension .ADX. This makes any subsequent finds or sorts on that field faster.

---

{button ,AL('H\_CREATING\_FIND\_REQUESTS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_FINDING\_RECORDS\_THAT\_SATISFY\_MULTIPLE\_CONDITIONS\_(AND)\_STEPS;H\_FINDING\_RECORDS\_WITH\_OR\_CONDITIONS\_IN\_MORE\_THAN\_ONE\_FIELD\_STEPS;H\_FINDING\_RECORDS\_THAT\_SATISFY\_AT\_LEAST\_ONE\_OF\_SEVERAL\_CONDITIONS\_(OR)\_STEPS;H\_NAMED\_FIND\_SORT\_DIALOG\_BOX\_CS;H\_APP\_FIND\_REQUESTS\_OVER',0)} [See related topics](#)

## Creating find requests

- A find request starts out as a blank copy of the current view. Use it to enter [find conditions](#).
- The group of records that match the find conditions is called the found set.



### Are you in Browse?

1. Change to the view you want to use for finding records.
2. Choose Find - Find using *[view]* on the [context menu](#).

Or click Find in the [action bar](#).



3. Enter find conditions in the fields just as you would enter data in a regular view.

See [details](#) .

4. Press ENTER.

The [found set](#) remains the only records available to you until you select All Records from the named find box in the action bar, or do another find. Check the status bar to see the size of the found set ("Found *n* of *nn*").



5. (Optional) To change one of the conditions or narrow your search by adding more conditions, choose Find - Find Again on the context menu.

---

{button ,AL('H\_CREATING\_FIND\_REQUESTS\_DETAILS',1)} [See details](#)

{button ,AL('H\_DELETING\_A\_FOUND\_SET\_OF\_RECORDS\_STEPS;H\_APP\_FIND\_REQUESTS\_OVER;H\_FINDING\_RECORDS\_WITH\_THE\_FIND\_ASSISTANT\_OVER;H\_NAMING\_FINDS\_BASED\_ON\_FIND\_REQUESTS\_STEPS;H\_REPEATING\_FINDS\_STEPS;H\_FINDING\_RECORDS\_TO\_SATISFY\_ONE\_OF\_SEVERAL\_CONDITIONS\_(OR)\_STEPS;',0)} [See related topics](#)

## Overview: Defining find conditions graphically in Query by Box

Query by Box creates a box for each find condition you build from elements in Table, Field, Operator, and Value. You define relationships between find conditions by clicking AND or OR.

You can move these boxes. To move a box, position the mouse pointer on it, hold down the left mouse button, and then drag the box to its new position.

Since the relative position of the boxes indicates the logical relationship of the conditions displayed in them, moving them changes that relationship.

### Example

You are a teacher working with a database table containing students' records. In the Query by Box tab, you create two boxes:

A   AVG\_GRADE>89

B   ATTENDANCE=14

<b>If you move box</b>	<b>You create</b>
<b>B</b> Inside box A	An AND relationship Both A and B must be true for every record, so your results show only one kind of student: Those whose average grade is greater than 89 and who showed up for 14 class meetings
Next to box A	An OR relationship Either A or B must be true for every record, so your results show two kinds of students: Those whose average grade is greater than 89 (but who may have showed up for less than 14 class meetings) Those who showed up for 14 classes (but whose average grade may be less than 89)

---

{button ,AL(^H\_MULTIPLE\_FIND\_CONDITIONS\_IN\_QUERY\_BY\_BOX\_OVER;H\_FINDING\_RECORDS\_USING\_QUERY\_BY\_BOX\_STEPS;,"0)} [See related topics](#)

## Deleting find conditions

You can delete find conditions, but only if Basic find is the type of find.

**If you're trying to delete a named find**, choose Create - Named Find/Sort.

1. In the Find Assistant, click the tab of the condition you want to delete.
2. Click Delete Condition.

---

{button ,AL(^;H\_CREATING\_A\_FIND\_CONDITION\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_CREATING\_FIND\_REQUESTS\_DETAILS;H\_FIND\_RECORDS\_TO\_SATISFY\_ONE\_OF\_SEVERAL\_CONDITIONS\_(OR)\_STEPS;H\_FINDING\_RECORDS\_THAT\_SATISFY\_MULTIPLE\_CONDITIONS\_(AND)\_STEPS;H\_FINDING\_RECORDS\_WITH\_OR\_CONDITIONS\_IN\_MORE\_THAN\_ONE\_FIELD\_STEPS',0)} [See related topics](#)

## Deleting named finds

If you're trying to delete one find condition from a set of find conditions, see [Deleting find conditions](#).

1. Choose Create - Named Find/Sort.
2. Select the named find you want to delete.
3. Click Delete.

---

{button ,AL(^H\_COPYING\_NAMED\_FINDS\_STEPS;H\_EDITING\_NAMED\_FINDS\_STEPS;H\_EDITING\_NAMED\_SORTS\_STEPS;H\_NAMING\_FINDS\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_NAMING\_FINDS\_BASED\_ON\_FIND\_REQUESTS\_STEPS;H\_NAMING\_SORTS\_STEPS;H\_RUNNING\_NAMED\_FINDS\_STEPS',0)} [See related topics](#)

## Editing named finds

1. Choose Create - Named Find/Sort.
2. Select the named find you want to edit.
3. Click Edit Find.

If the named find was created in the Find Assistant, the Find Assistant appears.

If the named find was created in a view, the view appears displaying the find condition.

4. To edit the named find in the Find Assistant, see [Selecting a find type with the Find Assistant](#).
5. To edit the named find, see [Creating find requests](#).

**Note** You can also edit a named find in the Find Assistant by clicking "Edit an existing named find" in the Find Type tab and then editing the steps of the named find.

---

{button ,AL('H\_DEFINING\_FIND\_CONDITIONS\_GRAPHICALLY\_IN\_QUERY\_BY\_BOX\_OVER;H\_FINDING\_RECO  
RDS\_USING\_QUERY\_BY\_BOX\_STEPS;H\_MULTIPLE\_FIND\_CONDITIONS\_IN\_QUERY\_BY\_BOX\_OVER;H\_D  
ELETING\_NAMED\_FINDS\_STEPS;H\_COPYING\_NAMED\_FINDS\_STEPS;','0)} [See related topics](#)

### **Editing named sorts**

1. Choose Create - Named Find/Sort.
2. Select the named sort you want to edit.
3. Click Edit Sort.  
The Sort dialog box appears.
4. Be sure the database containing the field you want is showing in the Database box.
5. Select a field in the Fields box.
6. Click Add.
7. Select a field in the "Fields to sort on" box.
8. Select either Ascending or Descending in the Sort order box.
9. To add additional fields, repeat steps 4 - 9.
10. Click OK.
11. Click Done.

---

{button ,AL('H\_COPYING\_NAMED\_FINDS\_STEPS;H\_DELETING\_NAMED\_FINDS\_STEPS;H\_EDITING\_NAMED\_FINDS\_STEPS;H\_NAMING\_FINDS\_BASED\_ON\_FIND\_REQUESTS\_STEPS;H\_NAMING\_FINDS\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_REMOVING\_OR\_REORDERING\_FIELDS\_WHILE\_CREATING\_NEW\_VIEWS\_STEPS;H\_RUNNING\_NAMED\_FINDS\_STEPS;H\_NAMING\_SORTS\_BASED\_ON\_THE\_CURRENT\_SORT\_ORDER\_STEPS;',0)} [See related topics](#)



## Finding a word that sounds like another

Use this feature when you know how a name or other proper noun sounds, but aren't sure how to spell it.

Precede the find text with a tilde (~).



### Example

The find text **~Philip** finds "Philip," "Filip," and other similar-sounding words.

---

```
{button ,AL(`H_FINDING_BLANK_OR_NONBLANK_FIELDS_STEPS;H_FINDING_CASESENSITIVE_TEXT_STEPS;H_FINDING_NUMBERS_DATES_AND_TIMES_STEPS;H_FINDING_TEXT_WITH_WILDCARDS_STEPS;H_FINDING_VALUES_IN_A_RANGE_STEPS;`,0)} See related topics
```

### **Finding blank or nonblank fields**

Approach can isolate records with blank values in a particular field.

A field is considered blank if it has a Null value or no value.

Approach can also find on fields that are not blank.

### **Finding blank fields**

Enter an equal sign (=) by itself in a field.



### **Finding nonblank fields**

Enter a not-equal sign (<>) by itself in a field.



---

{button .AL(^H\_FINDING\_CASESENSITIVE\_TEXT\_STEPS;H\_FINDING\_NUMBERS\_DATES\_AND\_TIMES\_STEPS;  
H\_FINDING\_TEXT\_WITH\_WILDCARDS\_STEPS;H\_FINDING\_VALUES\_IN\_A\_RANGE\_STEPS;';0)} [See related topics](#)

### Finding case-sensitive text

Limit a specific find to be case-sensitive even in a database that is not normally case-sensitive in its searches.

Type an exclamation point (!) in front of the find condition text.



### Example

In a database that is not case-sensitive, the find text **Madrid** finds text that begins with "Madrid," "madrid," and any other combination of uppercase and lowercase letters. The text **!Madrid** finds only text that begins with "Madrid" (with a capital M).

---

```
{button ,AL(^H_FINDING_BLANK_OR_NONBLANK_FIELDS_STEPS;H_FINDING_NUMBERS_DATES_AND_TIME  
S_STEPS;H_FINDING_TEXT_WITH_WILDCARDS_STEPS;H_FINDING_VALUES_IN_A_RANGE_STEPS;!,0)}
```

[See related topics](#)

## Finding distinct records with the Find Assistant

Find distinct records lets you use either the entire database or the current found set for find operations.

1. Choose Find - Find Assistant on the [context menu](#).



2. In the Type of find box, select Find distinct records.

The Find Distinct tab appears.

3. Click the Find Distinct tab.

You can only search for distinct records in the main database of the current view, whose name appears in the "Database to search" box.

4. Be sure the database containing the field you want is showing in the Database box.
5. Select a field in the Fields box.
6. Click Add.
7. To add additional fields, repeat steps 4 - 6.
8. Click Next or Done.

---

{button ,AL('H\_CREATING\_A\_FIND\_CONDITION\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_FINDING\_DUPLICATE\_RECORDS\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_FINDING\_RECORDS\_USING\_QUERY\_BY\_BOX\_STEPS;H\_FINDING\_THE\_TOP\_OR\_LOWEST\_VALUES\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_REMOVING\_OR\_REORDERING\_FIELDS\_WHILE\_CREATING\_NEW\_VIEWS\_STEPS;H\_SELECTING\_A\_FIND\_TYPE\_WITH\_THE\_FIND\_ASSISTANT\_REF',0)} [See related topics](#)

## Finding duplicate records with the Find Assistant

Find duplicate records lets you use either the entire database or the current found set for find operations.

1. Choose Find - Find Assistant from the context menu.



2. In the Type of find box, select Find duplicate records.

The Find Duplicates tab appears.

3. Click the Find Duplicates tab.

You can only search for duplicates in the main database of the current view, whose name appears in the "Database to search" box.

4. Be sure the database containing the field you want is showing in the Database box.

5. Select a field in the Fields box.

6. Click Add.

7. To add additional fields, repeat steps 4 - 6.

8. Click Next or Done.

**Note** If you click "Exclude first record found in each set of duplicates," then the first record found by Approach in a set of duplicate records will not be included in the found set. Use this option to delete duplicate records in the found set but leave the first record untouched.

---

```
{button ,AL('H_CREATING_A_FIND_CONDITION_WITH_THE_FIND_ASSISTANT_STEPS;H_FINDING_DISTINCT_OR_UNIQUE_RECORDS_WITH_THE_FIND_ASSISTANT_STEPS;H_FINDING_RECORDS_USING_QUERY_BY_BOX_STEPS;H_FINDING_THE_TOP_OR_LOWEST_VALUES_WITH_THE_FIND_ASSISTANT_STEPS;H_REMOVING_OR_REORDERING_FIELDS_WHILE_CREATING_NEW_VIEWS_STEPS;H_SELECTING_A_FIND_TYPE_WITH_THE_FIND_ASSISTANT_REF',0)} See related topics
```

### **Finding numbers, dates, and times**

Find a value in a numeric, Boolean, date, or time field.

You can also find a value in a calculated field that returns a number, Boolean value, date, or time.

#### **Finding a number**

Type the number in a numeric or calculated field.

Do not type format characters such as currency symbols or commas with the number. If the field has a format, Approach provides these characters automatically.

#### **Finding a Boolean value**

Type **0** or **1**, or **Y** or **N**, in a Boolean or calculated field.

#### **Finding a date**

Type the date as numbers in a date or calculated field.

Separate the numbers with non-numeric characters such as slashes (/). Type a single number to find a day for the current month and year. The order of the month, day, and year is determined by the date format of the operating system.

Type 1, 2, 3, or 4 digits for the year. Approach interprets one-digit (9) and two-digit (95) years to refer to the twentieth century. If you don't type a year, Approach assumes the current year (based on your system settings) and enters it for you.

#### **Finding a time**

Type the time as numbers in a time or calculated field.

Separate the numbers with colons (:). Type a single number to enter an hour.

Use either a 12-hour or a 24-hour format. If you enter an hour less than 12 without a suffix of AM or PM, Approach assumes AM.

---

{button ,AL(^H\_FINDING\_BLANK\_OR\_NONBLANK\_FIELDS\_STEPS;H\_FINDING\_CASESENSITIVE\_TEXT\_STEPS  
;H\_FINDING\_TEXT\_WITH\_WILDCARDS\_STEPS;H\_FINDING\_TODAYS\_DATE\_STEPS;H\_FINDING\_VALUES\_I  
N\_A\_RANGE\_STEPS;'0)} [See related topics](#)

### **Finding radio button and check box settings**

Approach lets you look for all records that have a specified combination of radio button and check box settings.

Turn on the radio buttons and checkboxes in the find request to specify the combination you want to find.

To specify a No value for a check box, such as "payment not received," click the check box to turn it on and then click it again to turn it off. A check box is Null (containing no value either positive or negative) until it is clicked at least once.

---

```
{button ,AL(`H_FINDING_BLANK_OR_NONBLANK_FIELDS_STEPS;H_FINDING_CASESENSITIVE_TEXT_STEPS;H_FINDING_NUMBERS_DATES_AND_TIMES_STEPS;H_FINDING_TEXT_WITH_WILDCARDS_STEPS;H_FINDING_VALUES_IN_A_RANGE_STEPS;`,0)} See related topics
```

## Finding records with AND conditions in more than one field



### Are you in Browse?

Enter conditions in more than one field in a single find request, and Approach finds only the records that satisfy all the conditions.

1. Change to the view you want to use for finding records.
2. Choose Find - Find using *[view]* on the context menu.  
Or click Find in the action bar.



3. Enter values in the appropriate fields.
4. Press ENTER.

Approach displays the found set. Check the status bar to see the size of the found set ("Found *n* of *nn*"). The found set remains the only records available to you until you select All Records from the named find box in the action bar, or do another find.



5. (Optional) To change one of the conditions or narrow your search by adding more conditions, choose Find - Find Again on the context menu.

### Example

To find all employees who work in the Finance department and live in San Francisco, type **Finance** in the Department field and **San Francisco** in the City field of an employee form. Only records that satisfy both of these conditions appear in the found set.

---

```
{button ,AL(^H_CREATING_FIND_REQUESTS_STEPS;H_FINDING_RECORDS_WITH_OR_CONDITIONS_IN_MORE_THAN_ONE_FIELD_STEPS;H_FIND_RECORDS_TO_SATISFY_ONE_OF_SEVERAL_CONDITIONS_(OR)_STEPS;H_APP_FINDING_RECORDS_WITH_AND_CONDITIONS_WITHIN_ONE_FIELD_STEPS;H_DELETING_A_FOUND_SET_OF_RECORDS_STEPS;H_FINDING_RECORDS_THAT_SATISFY_MULTIPLE_CONDITIONS_(AND)_STEPS;H_DELETING_FIND_CONDITIONS_STEPS;H_NAMING_FINDS_BASED_ON_FIND_REQUESTS_STEPS;H_APP_FINDING_RECORDS_THAT_MUST_SATISFY_MULTIPLE_CONDITIONS_REF;H_FINDING_RECORDS_USING_QUERY_BY_BOX_STEPS;','0)} See related topics
```



## Finding records using Query by Box



[Show me a QuickDemo](#)

1. Choose Find - Find Assistant on the context menu.



2. In the Type of find box, select Find using Query by Box.

The Query by Box tab appears.

3. Click Next.

4. Select a database in the Table box.

5. Select a field in the Field box.

6. Select an operator in the Operator box.

The operator you select defines the relationship between the data in the selected field in Field box and the value you enter in Value.

7. Enter a value in the Value box.

A graphical representation of the find condition appears.

8. (Optional) To create an AND find, click And.

(Optional) To create an OR find, click Or.

9. (Optional) Repeat steps 4 - 7 for each condition you create.

10. Click Next or Done.

---

{button ,AL('H\_DEFINING\_FIND\_CONDITIONS\_GRAPHICALLY\_IN\_QUERY\_BY\_BOX\_OVER;H\_MULTIPLE\_FIND\_CONDITIONS\_IN\_QUERY\_BY\_BOX\_OVER;H\_SELECTING\_A\_FIND\_TYPE\_WITH\_THE\_FIND\_ASSISTANT\_REF;',0)} [See related topics](#)

## Finding records with OR conditions in more than one field



### Are you in Browse?

For each field where you want to enter additional OR conditions, you must create a new find request form.

1. Change to the view you want to use for finding records.
2. Choose Find - Find using *[view]* on the context menu

Or click Find in the action bar.



3. Enter the OR condition for the first field.
4. To add an additional condition on a different field, do one of the following:
  - Click New Condition in the action bar.



- Choose Find - Find More on the context menu.

A new find request appears.

5. Enter the OR condition for another field.
6. (Optional) To enter additional OR conditions for other fields click New Condition in the action bar.
7. Press ENTER.

Approach displays the found set. Check the status bar to see the size of the found set ("Found *n* of *nn*"). The found set remains the only records available to you until you select All Records from the named find box in the action bar, or do another find.



8. (Optional) To change one of the conditions or narrow your search by adding more conditions, choose Find - Find Again on the context menu.

### Example

To find all employees who work in the Finance department or live in San Francisco, type **Finance** in the Department field of one find request and **San Francisco** in the City field of a second find request.

---

```
{button ,AL(^H_CREATING_FIND_REQUESTS_STEPS;H_DELETING_A_FOUND_SET_OF_RECORDS_STEPS;H_FINDING_RECORDS_THAT_SATISFY_MULTIPLE_CONDITIONS_(AND)_STEPS;H_FIND_RECORDS_TO_SATISFY_ONE_OF_SEVERAL_CONDITIONS_(OR)_STEPS;H_DELETING_FIND_CONDITIONS_STEPS;H_NAMING_FINDS_BASED_ON_FIND_REQUESTS_STEPS;H_APP_FINDING_RECORDS_THAT_MUST_SATISFY_MULTIPLE_CONDITIONS_REF;H_FINDING_RECORDS_USING_QUERY_BY_BOX_STEPS;';0)} See related topics
```

## Overview: Finding records with the Find Assistant

The Find Assistant guides you through the process of finding and displaying a set of records that meet conditions you define.

To use the Find Assistant, choose Find - Find Assistant on the [context menu](#).



With the Find Assistant, you select the type of find and specify a find condition. You can also sort the found set, and name the find so you can use it again.

The Find Assistant starts with four tabs: Find Type, a context-sensitive tab, Sort, and Name.

### Find Type

Select from the different find types. You can select a general purpose find or a more specialized find, such as one that finds only one instance of each value in a field, or top or lowest values. You can also perform a find using Query by Box.

### Context-sensitive

The context-sensitive tab changes depending on the find type you select. On each of these tabs, you must select a database, fields from the database, and conditions for the find.

### Sort

Sorting your records is an optional step. The Sort tab lets you select a database, the fields to sort on, and the order of the sort.

### Name

In Name, you can review and name the find.

A description box displays your find in an English language format.

Naming a find makes it easy for you to perform the find again. You don't have to re-create the find; you just select the named find from the named find box in the [action bar](#).

---

```
{button ,AL(^H_CREATING_A_FIND_CONDITION_WITH_THE_FIND_ASSISTANT_STEPS;H_FINDING_DISTINCT
_OR_UNIQUE_RECORDS_WITH_THE_FIND_ASSISTANT_STEPS;H_FINDING_DUPLICATE_RECORDS_WIT
H_THE_FIND_ASSISTANT_STEPS;H_FINDING_RECORDS_USING_QUERY_BY_BOX_STEPS;H_FINDING_T
HE_TOP_OR_LOWEST_VALUES_WITH_THE_FIND_ASSISTANT_STEPS;H_SELECTING_A_FIND_TYPE_WIT
H_THE_FIND_ASSISTANT_REF',0)} See related topics
```

## Finding text with wildcards

When you choose the Find command from a context-sensitive menu, you define a find condition by entering text in a blank field. Approach can find text that matches a string of characters, a word, or a phrase in a text field. You can also include the asterisk (\*) and question mark (?) wildcards in a find.

Use wildcards when you create a find condition from the view. The Find Assistant has a set of operators you can use when creating a find condition that takes the place of wildcards.

### Finding text

Type the characters in a text field.

If you want the match to be exact, precede the characters with an equal sign.



#### Example of an exact match

- **Payroll** finds "Payroll," "Payroll Dept.," and any other text that begins with the find text.
- **=Payroll** finds only "Payroll."

### Matching any number of characters in a field

Include an asterisk (\*) in the find text.



#### Example of using asterisk (\*)

- **\*past\*** finds records that contain the text "past" anywhere in the find field.
- **san\*** can find "San Francisco" and "Santa Rosa" but not "Asante."
- **\*r\*** can find "red" and "green" but not "blue."
- **\*o** can find "solo" and "trio" but not "dot."
- **g\*s** can find "grants" and "goods" but not "green."

### Matching a single character in a field

Include a question mark (?) in the find text for wildcard replacement of a single character.



#### Example of using question mark (?)

- **to?** can find "toy" and "tom" but not "today."
- **?an** can find "ran" and "pan" but not "plan."
- **to??y** can find "today" and "Tommy" but not "toy" and "tom."
- **?o?** can find "Tom" and "son" but not "today" and "Troy."

---

{button ,AL(^H\_FINDING\_BLANK\_OR\_NONBLANK\_FIELDS\_STEPS;H\_FINDING\_CASESENSITIVE\_TEXT\_STEPS;H\_FINDING\_NUMBERS\_DATES\_AND\_TIMES\_STEPS;H\_FINDING\_VALUES\_IN\_A\_RANGE\_STEPS;';0)} [See related topics](#)

## Finding the top or lowest values with the Find Assistant

1. Choose Find - Find Assistant on the [context menu](#).



2. In the Type of find box, select Find the top or lowest values.  
The Find Top/Lowest tab appears.
3. Click the Find Top/Lowest tab.  
You can only search for the top or lowest values or percentages in the main database of the current view, whose name appears in the "Database to search" box.
4. Select a top or lowest value or percentage in the "Find the" box.
5. Select the number or percentage of values.
6. Select a field to find values for in the Fields box.
7. To select a [summary report](#):
  - Select a [calculated field](#) in the "values in field" box.
  - Select the type of summary report you want to use in the "Summarized on" box.Summary reports only display when you select a calculated field from a report that has [grouped records](#).
8. Click Next or Done.

---

{button ,AL(^H\_CREATING\_A\_FIND\_CONDITION\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_FINDING\_DISTINCT\_OR\_UNIQUE\_RECORDS\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_FINDING\_DUPLICATE\_RECORDS\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_FINDING\_RECORDS\_USING\_QUERY\_BY\_BOX\_STEPS;H\_SELECTING\_A\_FIND\_TYPE\_WITH\_THE\_FIND\_ASSISTANT\_REF',0)} [See related topics](#)

## Finding today's date

Enter a comparison operator and **@Today()** in a date or calculated field.

The Today function returns the current date on your system clock, and the at sign (**@**) tells Approach to compare the system date from the Today function with values in the records.

### Examples

- **=@Today()** finds records with fields that match today's date.
- **>=@Today()** finds records with fields that either match or are later than today's date.

---

{button ,AL(`H\_FINDING\_BLANK\_OR\_NONBLANK\_FIELDS\_STEPS;H\_FINDING\_CASESENSITIVE\_TEXT\_STEPS;H\_FINDING\_NUMBERS\_DATES\_AND\_TIMES\_STEPS;H\_FINDING\_TEXT\_WITH\_WILDCARDS\_STEPS;H\_FINDING\_VALUES\_IN\_A\_RANGE\_STEPS;',0)} [See related topics](#)

## Finding values in a range

- Approach looks for values that fall within an inclusive range in a text, numeric, date, time, or memo field.
- You can also find values in a calculated field that return a number, date, time, or text string.

Enter an ellipsis (...) between the beginning value and the ending value of the range.



### Example

**H...J** in a text field finds all text strings that begin with the letters H or I. It would find the letter J but not any text strings that had letters after J (such as Jack).

**7...9** in a numeric field finds the values 7, 8, and 9 (but not 9.0000001).

The string **5/1/96...5/31/96** finds all dates in the month of May 1996.

---

```
{button ,AL(^H_FINDING_BLANK_OR_NONBLANK_FIELDS_STEPS;H_FINDING_CASESENSITIVE_TEXT_STEPS;H_FINDING_NUMBERS_DATES_AND_TIMES_STEPS;H_FINDING_TEXT_WITH_WILDCARDS_STEPS;H_FINDING_THE_TOP_OR_LOWEST_VALUES_WITH_THE_FIND_ASSISTANT_STEPS;';0)} See related topics
```

## Finding records with OR conditions in one field



### Are you in Browse?

1. Change to the view you want to use for finding records.
2. Choose Find - Find using *[view]* on the context menu.  
Or click Find in the action bar.



3. Enter the values you want to find in the appropriate field. Separate the values with commas.
4. Press ENTER.

Approach displays the found set. Check the status bar to see the size of the found set.

**Note** The found set remains the only records available to you until you select All Records from the named find box in the action bar, or do another find.



5. (Optional) To change one of the conditions or narrow your search by adding more conditions, choose Find - Find Again on the context menu.

### Example

To find all employees who work in the Finance department or the Payroll department, type **Finance,Payroll** in the Department field of an employee form find request.

---

```
{button ,AL('H_CREATING_FIND_REQUESTS_STEPS;H_FINDING_RECORDS_THAT_SATISFY_MULTIPLE_CONDITIONS_(AND)_STEPS;H_FINDING_RECORDS_THAT_MUST_SATISFY_MULTIPLE_CONDITIONS_(AND)_REF;H_NAMING_FINDS_BASED_ON_FIND_REQUESTS_STEPS;',0)} See related topics
```



## Overview: Multiple find conditions in Query by Box

### Conditions related by AND

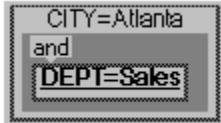
Connect two or more find conditions with AND when you want to retrieve only those records for which all the conditions are true. For example, you want to retrieve records of employees who work in the Atlanta office and who are in the Sales department.

There are two find conditions:

CITY=Atlanta

DEPT=SALES

The find condition CITY=Atlanta AND DEPT=SALES is represented as



### Conditions related by OR

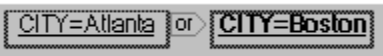
Connect two or more find conditions with OR when you want to retrieve records for which at least one of the conditions is true. For example, you want to retrieve records of employees who work either in the Boston or the Atlanta office.

There are two find conditions, and each record must fulfill at least one condition. It is true if it meets either condition:

CITY=BOSTON

CITY=ATLANTA

The find condition CITY=BOSTON OR CITY=ATLANTA is represented as



### Conditions related by multiple operators

You can connect three or more find conditions with combinations of AND and OR relationships.

For example, you want to retrieve the records of employees in either the Boston or the Atlanta office who are in the Sales department.

There are three conditions. All records must meet the condition:

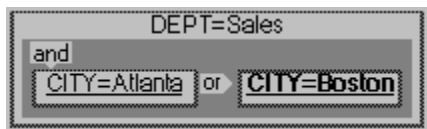
DEPT=SALES

In addition, each record must fulfill one of the following conditions, but not both:

CITY=BOSTON

CITY=ATLANTA

The conditions DEPT=SALES AND (CITY=Atlanta OR CITY=Boston) are represented as



---

{button ,AL(^H\_DEFINING\_FIND\_CONDITIONS\_GRAPHICALLY\_IN\_QUERY\_BY\_BOX\_OVER;H\_FINDING\_RECO  
RDS\_USING\_QUERY\_BY\_BOX\_STEPS;:,0)} [See related topics](#)

## **Named Find/Sort dialog box**

The Named Find/Sort dialog box lets you define and name finds and sorts. After saving the finds and sorts, you easily edit, copy, delete, and use them to find or sort again.

### **Choose a task**

[Naming finds based on find requests](#)

[Naming finds with the Find Assistant](#)

[Editing named finds](#)

[Copying named finds](#)

[Deleting named finds](#)

[Running named finds](#)

[Naming sorts based on the current sort order](#)

[Editing named sorts](#)

## Naming and reviewing finds with the Find Assistant

**Command:** Find - Find Assistant on the [context menu](#).



### Tab: Name

The Name tab lets you name your find and review it.

If you defined a sort condition in the Sort tab as well as a find, then the named find will contain both a find and a sort. Both the find and sort conditions display in an English language format under Description.

### Naming finds

Name the find by entering a name in the named find box. By naming the find (and at the same time a sort, if you define one), you can repeat the find without having to create the find again.

To perform the find again, do one of the following:

- Select the name from the named find box in the [action bar](#).
- Choose Create - Named Find/Sort, select the named find and click Run.

Named finds and sorts can only be used in the Approach file (.APR) where they are created.

### Reviewing finds

The find appears in a box in Name in an English language format. The find is based on your input in the other Find Assistant tabs.

---

{button ,AL(^H\_EDITING\_IN\_QUERY\_BY\_BOX\_STEPS;H\_EDITING\_NAMED\_FINDS\_STEPS;H\_SORTING\_FIELD\_S\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_DELETING\_NAMED\_FINDS\_STEPS;','0)} [See related topics](#)

### **Naming finds based on find requests**

1. Choose Create - Named Find/Sort.
2. Click New.  
A message box asks if you want to define your find using the current view or the Find Assistant.
3. Click View.
4. Create the find request.
5. Press ENTER.  
The Name Find/Sort dialog box appears.
6. Enter a name for the find.
7. Click OK.  
The Named Find/Sort dialog box displays the name of the new find in the list of finds and sorts.
8. (Optional) To perform the new find, select it from the list and click Run.
9. Click Done.

**Note** Named finds and sorts can only be used in the Approach file (.APR) where they are created.

---

{button ,AL(`H\_COPYING\_NAMED\_FINDS\_STEPS;H\_DELETING\_NAMED\_FINDS\_STEPS;H\_EDITING\_NAMED\_FINDS\_STEPS;H\_EDITING\_NAMED\_SORTS\_STEPS;H\_NAMING\_FINDS\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_NAMING\_SORTS\_BASED\_ON\_THE\_CURRENT\_SORT\_ORDER\_STEPS;H\_RUNNING\_NAMED\_FINDS\_STEPS;';0)} See related topics

## Naming finds with the Find Assistant



[Show me a QuickDemo](#)

1. Choose Create - Named Find/Sort.
2. Click New.  
A message box asks if you want to define your find using the current view or the Find Assistant.
3. Click Assistant.  
The [Find Assistant](#) dialog box appears.
4. Using the tabs of the Find Assistant, create the find and then name it.
5. Click Done in the Find Assistant.  
The Named Find/Sort dialog box displays the name of the new find in the list of finds and sorts.
6. (Optional) To perform the new find, select it from the list and click Run.
7. Click Done.

---

{button ,AL(`H\_COPYING\_NAMED\_FINDS\_STEPS;H\_DELETING\_NAMED\_FINDS\_STEPS;H\_EDITING\_NAMED\_FINDS\_STEPS;H\_EDITING\_NAMED\_SORTS\_STEPS;H\_NAMING\_FINDS\_BASED\_ON\_FIND\_REQUESTS\_STEPS;H\_NAMING\_SORTS\_STEPS;H\_RUNNING\_NAMED\_FINDS\_STEPS',0)} [See related topics](#)

### **Naming sorts based on the current sort order**

1. Define your sort order.
2. Choose Create - Named Find/Sort.
3. Select <Current Find/Sort>.
4. Enter a name for the sort.
5. Click Done.

The named sort appears in the named find/sort box on the action bar.

**Note** Named finds and sorts can only be used in the Approach file (.APR) where they are created.

---

{button ,AL('H\_EDITING\_NAMED\_SORTS\_STEPS','0)} [See related topics](#)

## Repeating finds

Approach keeps track of your most recent find so that you can easily repeat it. This is useful when you want to edit the find and narrow its scope to include other conditions.

To repeat a find, you must be in a view based on the same database used when the find was created and have not used the Find All command.

1. Choose Find - Find Again on the context menu.



2. The find request appears. Edit the request to redefine the found set.
3. Press ENTER.

---

{button ,AL('H\_SHOWING\_ALL\_RECORDS\_STEPS;H\_RUNNING\_NAMED\_FINDS\_STEPS;',0)} [See related topics](#)

## Running named finds

You can also run a named find by selecting it from the named find box in the [action bar](#).

1. Choose Create - Named Find/Sort.
2. Select the named find you want to run.
3. Click Run.

**Note** The name of the find you select appears in the action bar until you select All Records from the named find box in the action bar.



---

{button ,AL(^H\_COPYING\_NAMED\_FINDS\_STEPS;H\_DELETING\_NAMED\_FINDS\_STEPS;H\_EDITING\_NAMED\_FINDS\_STEPS;H\_EDITING\_NAMED\_SORTS\_STEPS;H\_NAMING\_FINDS\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_NAMING\_FINDS\_BASED\_ON\_FIND\_REQUESTS\_STEPS;H\_NAMING\_SORTS\_STEPS',0)} [See related topics](#)



## Selecting a find type with the Find Assistant

**Command:** Find - Find Assistant on the [context menu](#).



### **Tab:** Find Type

The Find Type tab lets you select a find type. Different find types retrieve very different information from the same database.

Each find type has a context-sensitive tab associated with it. Click this context-sensitive tab after you select a find type.

### **Basic find**

Executes the most common finds and can include AND and OR conditions.

### **Find duplicate records**

Finds records that have duplicate values in one or more fields.

### **Find distinct records**

Finds records with distinct values in one or more fields.

### **Find the top or lowest values**

Finds some number or percentage of the highest or lowest values in numeric or calculated fields.

### **Find using Query by Box**

Lets you graphically create finds and can include AND and OR conditions.

### **Clearing finds**

To clear the find so that you can work with all the records in the database, select All Records from the named find box in the [action bar](#).

---

```
{button ,AL('H_CREATING_A_FIND_CONDITION_WITH_THE_FIND_ASSISTANT_STEPS;H_FINDING_DISTINCT_OR_UNIQUE_RECORDS_WITH_THE_FIND_ASSISTANT_STEPS;H_FINDING_DUPLICATE_RECORDS_WITH_THE_FIND_ASSISTANT_STEPS;H_FINDING_RECORDS_USING_QUERY_BY_BOX_STEPS;H_FINDING_THE_TOP_OR_LOWEST_VALUES_WITH_THE_FIND_ASSISTANT_STEPS',0)} See related topics
```

## Showing all records

If you're trying to determine the number of records in the current found set and the number of records in the entire database, look at the status bar. For example, a find condition where five of ten records in a database match the condition displays as "Found 5 of 10."

- When you finish working with a found set, select All Records in the named find box in the action bar so you can see all the records in the database again.



This also returns records to their original sort order.

- You can also choose Find - Find All on the context menu.



---

{button ,AL('H\_REPEATING\_FINDS\_STEPS;',0)} [See related topics](#)

## Sorting fields with the Find Assistant

This is an optional step. You can create a find condition without sorting the fields.

**If you're trying to** sort all the records in a database, choose Sort - Define on the [context menu](#). Sorting fields with the Find Assistant sorts the [found set](#) only.

1. Choose Find - Find Assistant on the context menu.



2. Select a find type, click the context tab, and create the find conditions.
3. Click the Sort tab.
4. Be sure the database containing the field you want is showing in the Database box.
5. Select a field in the Fields box.
6. Click Add.
7. Select the field in the "Fields to sort on" box.
8. Select either Ascending or Descending in the Sort order box.
9. To add additional fields, repeat steps 4 - 8.
10. To select a [summary report](#):
  - Select a [calculated field](#) in the "Fields to sort on" box.
  - Select a summary field in the "Summary fields" Box.
  - Select the type of summary report you want to use in the "Summarized on" box.

Summary fields and reports only display when you select a calculated field from a report that has [grouped records](#).

11. Click Next or Done.

**Note** You can only name a find or sort in the Name tab of the Find Assistant. You must define a find condition in the assistant before you name the sort.

---

```
{button ,AL(^H_NAMING_AND_REVIEWING_FINDS_WITH_THE_FIND_ASSISTANT_REF;H_REMOVING_OR_REORDERING_FIELDS_WHILE_CREATING_NEW_VIEWS_STEPS;H_SORTING_RECORDS_BY_A_FIELD_IN_A_VIEW_ASCENDING_DETAILS;H_SORTING_RECORDS_BY_A_FIELD_IN_A_VIEW_DESCENDING_DETAILS;H_SPECIFYING_A_SORT_ORDER_DETAILS;H_NAMING_SORTS_BASED_ON_THE_CURRENT_SORT_ORDER_STEPS;',0)} See related topics
```

## Sorting records by a field in a view (Ascending)

Approach lets you quickly sort the records in a view in ascending order.



### Are you in Browse?

1. Click a field to select it.
2. Choose Sort - Ascending on the context menu.



---

```
{button ,AL(`H_SORTING_FIELDS_WITH_THE_FIND_ASSISTANT_STEPS;H_SORTING_RECORDS_BY_A_FIELD_IN_A_VIEW_DESCENDING_STEPS;H_SPECIFYING_A_SORT_ORDER_STEPS;H_NAMING_SORTS_BASED_ON_THE_CURRENT_SORT_ORDER_STEPS;','0)} See related topics
```

## Sorting records by a field in a view (Descending)

Approach lets you quickly sort the records in a view in descending order.



### Are you in Browse?

1. Click a field to select it.
2. Choose Sort - Descending on the context menu.



---

```
{button ,AL(`H_SORTING_FIELDS_WITH_THE_FIND_ASSISTANT_STEPS;H_SORTING_RECORDS_BY_A_FIELD_IN_A_VIEW_ASCENDING_STEPS;H_SPECIFYING_A_SORT_ORDER_STEPS;H_NAMING_SORTS_BASED_ON_THE_CURRENT_SORT_ORDER_STEPS;');0)} See related topics
```

## **Details: Specifying a sort order**

### **Approach Index**

Approach automatically creates an index the first time you find or sort on a field (except for memo fields). This is a way for Approach to organize your data so subsequent finds or sorts on that field go faster.

### **Sort fields**

A sort field can be any data type (except PicturePlus, variable, or memo) that returns text or a number, Boolean value, date, or time. Sort records by text fields in alphabetical order, by numeric fields in numerical order, by Boolean fields using Yes or No, and by date and time fields in chronological order.

The first field you specify is the primary sort field. Approach sorts the records by the contents of that field. Specify other sort fields for Approach to use in case any records have the same value in the primary field. For example, you might use Last Name as a primary sort field and First Name as an additional sort field.

### **Ascending or descending order**

Ascending order sorts records from

- A to Z, for text (case-insensitive)
- Smallest to largest, for numbers
- Earliest to latest, for dates and times

Descending order sorts from

- Z to A, for text (case-insensitive)
- Largest to smallest, for numbers
- Latest to earliest, for dates and times

---

{button ,AL('H\_SPECIFYING\_A\_SORT\_ORDER\_STEPS',1)} [Go to procedure](#)

## Specifying a sort order

You can sort either the current [found set](#) or the entire database.

1. Find the records you want to sort, or show all records in the database.
2. Choose Sort - Define from the [context menu](#).
3. Be sure the database containing the field you want is showing in the Database box.
4. Select a field in the Fields box.
5. Click Add.
6. Select a field in the "Fields to sort on" box.
7. Select either Ascending or Descending in the Sort order box.
8. Repeat Steps 3 - 7 for any other fields to be sorted.
9. Click OK.

## Including summary fields in the sort

1. While the Sort box is open, click Summaries.
2. Select a field from the "Summary fields" box.
3. Click Add.
4. Select a Summarized on option.
5. To add additional fields, repeat steps 2 - 4.
6. Click Summaries.
7. Click OK.

---

{button ,AL('H\_SPECIFYING\_A\_SORT\_ORDER\_DETAILS',1)} [See details](#)

{button ,AL('H\_SORTING\_FIELDS\_WITH\_THE\_FIND\_ASSISTANT\_STEPS;H\_SORTING\_RECORDS\_BY\_A\_FIELD\_IN\_A\_VIEW\_ASCENDING\_STEPS;H\_SORTING\_RECORDS\_BY\_A\_FIELD\_IN\_A\_VIEW\_DESCENDING\_STEPS;H\_NAMING\_SORTS\_BASED\_ON\_THE\_CURRENT\_SORT\_ORDER\_STEPS;',0)} [See related topics](#)

## Overview: The found set

The found set is the group of records that match your find. It is the result of performing a find either in the Find Assistant or by choosing Find - Find on the context menu.

The status bar shows the number of records in the current found set and the number of records in the entire database. For example, a find condition where five of ten records in a database match the condition displays as "Found 5 of 10."

Check the status bar to see if you are still in the found set or are using the entire database. Click the status bar if you don't see the number of records.

Approach works with the current found set until you perform another find or select All Records from the named find box in the action bar. Selecting All Records shows all the records in the database and returns the records to their original sort order.



Results of the same find can differ

Be careful using a named find in any view other than the one you created it for.

Remember that in an Approach file that has joined databases, each view in the file can have a different main database. Therefore, the results of a find run in one view can differ from results of the same find run in another view.

When you're creating a find using the Find Assistant, Approach always shows you the fields of the view's main database first. Check that the database is the one you want and will give you the found set you expect.

---

{button ,AL(`H\_CREATING\_FIND\_REQUESTS\_STEPS;H\_FINDING\_RECORDS\_WITH\_THE\_FIND\_ASSISTANT\_OVER;H\_MAIN\_AND\_DETAIL\_DATABASES\_IN\_A\_VIEW\_OVER;H\_APP\_FIND\_REQUESTS\_OVER',0)} See related topics



## Details: Using If statements to find data

### Field names

Enclose a field name in double quotation marks if it begins with a number, if it contains a space, a period, a comma, or one of the following characters:

/, #, +, -, <, >, (, )

### Joined databases

If the Approach file has joined databases, include the name of the database in the reference. Separate the database name and the field name with a period. For example:

CUSTOMER.Address

### Example of references to joined databases

The following conditional statement returns YES where the value of the Quantity field in the ORDERS database is greater than the Quantity field in the SUPPLY database.

If(ORDERS.Quantity>SUPPLY.Quantity)

### Combining expressions

It is possible to combine expressions in an If statement with the And and Or operators. This is a more concise way to express compound conditions than using multiple fields with different conditions.

### Example of combining expressions

If((Department='Finance')And(City='San Francisco'))

If((Amount>200)Or(Date<'4/30/94'))

If((Today()-InvoiceDate<=90)And(BalanceDue>0))

### Example of a comparison expression

This statement finds records that have a higher value in the ActualCost field than in the Budget field:

If(ActualCost>Budget)

---

{button ,AL('H\_USING\_IF\_STATEMENTS\_TO\_FIND\_DATA\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_FINDING\_BLANK\_OR\_NONBLANK\_FIELDS\_STEPS;H\_FINDING\_CASESENSITIVE\_TEXT\_STEPS;H\_FINDING\_NUMBERS\_DATES\_AND\_TIMES\_STEPS;H\_FINDING\_TEXT\_WITH\_WILDCARDS\_STEPS;H\_FINDING\_VALUES\_IN\_A\_RANGE\_STEPS;',0)} [See related topics](#)

## Using If statements to find data

When you use an If statement for finding data, Approach returns a value of Yes or No based on the If statement for each record in the database. The records that return Yes are included in the found set.

1. Put the statement in any field in the request.

It does not have to be one of the fields referred to in the statement.

The statement can include field references, constants, and any other relational operators.

2. Enclose text, date, and time constants in single quotation marks.
3. Press ENTER to begin the find.

---

{button ,AL(`H\_USING\_IF\_STATEMENTS\_TO\_FIND\_DATA\_DETAILS`,1)} [See details](#)

{button ,AL(`H\_FINDING\_BLANK\_OR\_NONBLANK\_FIELDS\_STEPS;H\_FINDING\_CASESENSITIVE\_TEXT\_STEPS  
;H\_FINDING\_NUMBERS\_DATES\_AND\_TIMES\_STEPS;H\_FINDING\_TEXT\_WITH\_WILDCARDS\_STEPS;H\_FIN  
DING\_VALUES\_IN\_A\_RANGE\_STEPS`,0)} [See related topics](#)

### **Installing more Approach options**

If you chose not to install certain Approach options in your initial installation, you can install them at any time.

1. Insert the CD-ROM in the appropriate drive and close the drive door.
2. Click Start, and then choose Run.
3. Type **x:install**, where x: is the CD-ROM drive.
4. Click OK.  
The Lotus Install program starts.
5. Follow the instructions in Install.
6. In the Install Options & Approach Folder dialog box, select "Customize features - Manual install."
7. Click Next.
8. On the Approach, SmartMasters, and PowerKeys tabs, select the options you want to install.
9. Deselect all other features on all tabs.
10. Click Next and continue to follow the instructions in Install.

## Uninstalling Approach and Approach options

If you want to remove some Approach options, Lotus recommends that first you uninstall Approach. Then, do a manual [install](#) and select the options you want.

This procedure ensures that you remove files stored in non-Approach directories, as well as Approach settings in the Windows registry. The procedure does not remove files in your approach\work directory.

1. Click Start, and then choose Settings, and then choose Control Panel.
2. Double-click the Add/Remove Programs icon.  
The Add/Remove Programs Properties dialog box appears.
3. Select the edition of Lotus Approach you want to uninstall.
4. Click Add/Remove.  
A confirmation box appears.
5. Click Yes.
6. Skip any folders that are not empty.  
When all files are removed a box appears.
7. Click Yes.
8. In Windows Explorer, delete any remaining Approach files and folders you no longer want to keep.

---

{button ,AL(`H\_APP\_INSTALLING\_MORE\_APPROACH\_OPTIONS\_STEPS;',0)} [See related topics](#)

### **Getting help from the Internet**

If you are experiencing problems and you can't find help in the online Help or paper documentation, contact Lotus Customer Support on the Internet.

**Note** You must have a default browser registered in Approach to use Internet support.

#### **To get help from Customer Support**

1. Choose Help - Lotus Internet Support - Lotus Customer Support.



Approach opens your Internet browser application at the Lotus Customer Support page.

2. Navigate through the menus to find the information you need.

#### **To download files from the Lotus FTP site**

1. Choose Help - Lotus Internet Support - Lotus FTP Site.



2. Navigate through the menus to find the file(s) you want to download.

#### **To browse the Lotus Web pages**

1. Choose Help - Lotus Internet Support - Lotus Home Page.



2. Navigate through the menus to find the information you need.

## Using QuickDemos

QuickDemos are short, live demonstrations of actual tasks in Approach.

### Running a QuickDemo

1. Click a topic in the list of QuickDemos that follows.  
A Help topic appears.
2. In the Help topic, click the QuickDemo icon.



### List of QuickDemos

[Adding a repeating panel to existing forms](#)

[Adding new records](#)

[Finding records using Query by Box](#)

[Naming finds with the Find Assistant](#)

[Switching to another view with a macro](#)

### What does a QuickDemo do?

- Opens a sample file. Your Approach files are not affected by the QuickDemo.
- Performs the task described in the Help topic, one step at a time.  
QuickDemos are short; they take only a few minutes to run.  
Lotus recommends that you let a QuickDemo play until it ends. If you must stop the QuickDemo, press ESC.
- Closes the sample file.
- Displays the Help topic again.

Having seen the QuickDemo, you can now follow the Help topic to complete the task yourself. Help stays visible while you work.

## Using Help

### Press F1 (Help) for help where you are

Approach provides assistance on the task you can do from where you are. If you can do more than one task, Approach gives you a list of tasks to select from.

### If you don't know where to start

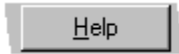
1. Choose Help - Help Topics.
2. Click Index.
3. Enter the task or term you want information on.
4. Select the index entry you want, and then click Display.

### Press F1 (Help) or click Help in a dialog box or InfoBox

- In the [InfoBox](#)



- In a dialog box



### If you need more information about a task

Scroll to the bottom of the Help topic. Click one of the buttons to see

- Details on the current context
- An example of the task
- A procedure giving steps to complete the task
- Topics related to the current topic

### If you see "If you're trying to" in a topic

Check the note to be sure you're in the right place in Approach to accomplish your task.

### Let us know how we're doing!

We'd like to hear how we can help you better. Please send your comments, suggestions, and questions about the Help system to

User Assistance  
Lotus Approach  
800 El Camino Real West  
Mountain View, CA 94040

## **Overview: Using LotusScript in Approach**

LotusScript is an object-oriented programming language for automating tasks in applications you develop in Approach. LotusScript is more powerful and flexible than the Approach macro language, but it also requires that you have some basic programming skills.

Some of the tasks that you can accomplish with LotusScript in Approach include the following:

- Triggering the execution of scripts in response to many different user actions (clicking or double-clicking the mouse, pressing a key)
- Changing the attributes (color, size, position, visibility) of a text block or other display element in view
- Displaying or manipulating Approach dialog boxes
- Quickly searching or making global changes to data in large databases
- Automating the display and modification of data in views
- Incorporating OCXs (OLE Custom Controls) into an application

For more information about LotusScript, see the following topics:

[LotusScript Index](#)

[Approach classes](#)

[Approach events](#)

[Approach methods](#)

[Approach properties](#)

### **Automating Approach tasks**

When you are planning to automate Approach tasks, keep in mind some of the other tools Approach provides for automating tasks. In some cases, there may be a better method than writing a script for accomplishing a particular task.

For example, creating a named find lets you search for records according to the find conditions you define. Then, by saving the conditions, you can easily repeat the search anytime. A named find is easier and more efficient than doing the same task in LotusScript.

The following topics describe automating Approach tasks without using LotusScript:

[Named finds](#)

[Drill-down to Data](#)

[Macros](#)



## Build the database in Approach



### [Previous topic](#)

After you walk through this process to create an outline of fields and databases, you are ready to create the database application in Approach.

1. [Create a database](#) for each group of fields, or open a SmartMaster template that comes close to what you need.
2. [Create the fields](#) in each database. You can reduce the amount of data you have to enter and maintain by using [calculated fields](#).
3. Repeat steps 1 and 2 for other databases in your design.
4. [Join the databases](#) together from inside one Approach file. (You can use one Approach file for the entire application.)
5. Create [views](#) like [forms](#) or [reports](#) for entering information into the databases. Use data-entry controls to make entering data faster and more consistent.
6. Delete the extra Approach files. Once you have joined the databases and created the views you need in one APR, you don't need all the other APR files.
7. Create views like reports or charts for presenting the information, especially the relationships across the [joined databases](#).

Now you're the director.



## Check for redundant information



[Previous topic](#)

This final pass through the fields you listed for your database application is a clean-up step that makes the databases as small and fast as possible.

### Duplicated fields

In most cases, if two databases have more than the join field or fields in common, figure out which database is a better fit for the duplicated fields and remove them from the other database. You may want to go back over your main ideas for each database to help decide where the data belongs.

**No field other than a join field should appear more than one time in the entire set of information.**

The exception to this rule is a case where you want one copy of the data to stay the same even if you change the original. For example, in your database for your business, you have only one field for the price of a product, and you refer to that price field on an order. Later, if you change the price in the product database (for example, a sale price at the year's end), the old orders automatically update to use the new price.

In this case, you would keep the duplicate price fields to allow for a current price that can change, and a price history that stays the same. Approach makes it easy for you to look up the value in a field, like the current price for a product, when you fill in another field, like the price on an order.

### Unnecessary fields

If any fields can be produced from other data or existing information, remove these fields from your lists. Approach can make calculations using database information, current time and date, and constants, so that you do not need to store values that can be generated.

For example, if you record the quantity and price of an item ordered, you can define a formula to describe the "Extended Price" as equal to price \* quantity.



[Next topic](#)

## Identify main ideas and group fields under them



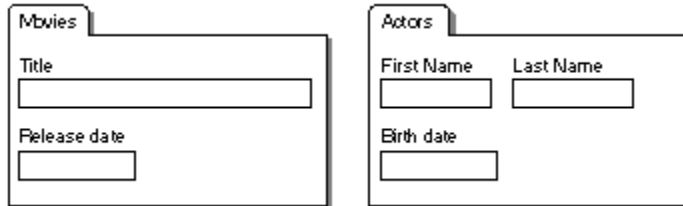
[Previous topic](#)

### Records

The database you design collects related fields into groups called **records**. **Related** is the important word here.

For example, you have fields that describe the different characteristics of a movie, like the director, the title, and so on. **All of the fields for one movie appear in the same record.**

The fields with actor information though, like the actor's birth date, hometown, and real name, would not go into a record about a movie. Collect these fields into a record that describes a particular actor.

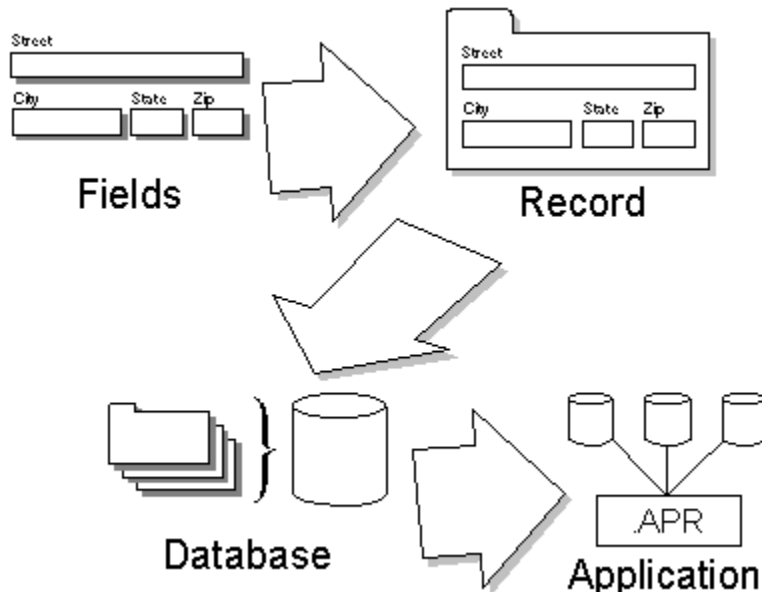


If you collect all of the movie records together, you have a database. If you collect all of the actor records together, you have another database.

### Databases

This word is being thrown around a lot. Just what is a database anyway? The basic definition: "**a database is a collection of related records.**" Again, that crucial word **related**. If you have records that each describe a movie, when you collect all of the records about movies together, you have a database.

Because Approach is a **relational database manager**, the relation between the fields in a record and the records in a database is carefully defined. You may end up with a lot of small fields, records, and databases that are built up on very narrow relationships between each piece. These databases together form a system or application to help you get to the information in the easiest way possible.



### Main ideas for movies

Now that you have all of these fields, the next step is to gather them into meaningful groups.

What makes a meaningful group depends on how you are going to use the information. Funny how the database design keeps coming back to "what are you going to do with it?"

Look back at the questions you asked earlier, like "What movies did Orson Welles direct?" These questions refer to the movie title and data about the movie such as release dates, color, and who recommended it to you. They also refer to other information that isn't so dependent on one movie: information about directors, actors, and producers.

### **Categorizing data into main ideas**

For the movie list, the main ideas are best represented by these categories:

- Movie
- Director
- Producer
- Actors

Here's another example of choosing main ideas. If you are setting up a database to track your small business's paperwork, such as invoices and orders, your list of main ideas might look like this:

- Orders
- Customers
- Products
- Suppliers

### **Records for movies**

In this process you group fields to build records. All of the fields in a record must relate to each other in the same way. That is, if your main idea for the group revolves around the field Title, all of the fields in the record must further describe the movie with that title. You wouldn't put an actor's birth date in such a record, but you would include the date the movie was released.

You are working towards a clear one-to-one correspondence between each of the fields in a single record. A more complicated relationship between a field and the main idea of the record indicates that the field belongs in another, separate database.

### **Fields that contain more than one piece of data**

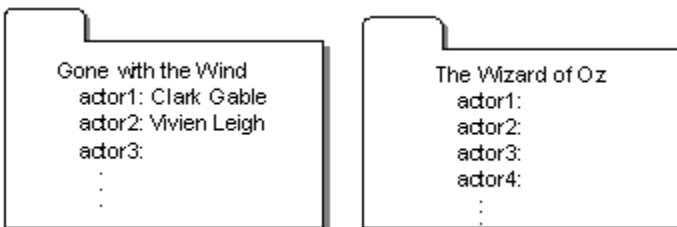
At this point, you should identify fields that need to contain more than one piece of data or need to appear more than one time.

**If you have sequentially numbered fields or more than one piece of information in a field, group these fields under another main idea.**

You discover such a field: Actors. Movies typically have more than one actor. But don't add all of the names to a single Actors field.

Don't make a separate field for each actor in the movie. The following records are examples of the kind of repeated fields you want to avoid.

#### **Don't do this:**



Because you don't know in advance how many actors each movie has, this method may leave many fields blank. Also, if you search for an actor, you have to look in all of the actor fields, because you won't remember—and you shouldn't have to!—if you put Vivien Leigh in the Actor1 or Actor2 field.

Another way to handle more than one actor is to make another record in the same database and repeat the movie information in the second record. These are repeated records and you want to avoid this, too, to save disk space and assure accuracy of the information.

#### **Don't do this, either:**



**When you design a database system for a relational database manager like Approach, fields numbered in sequence tell you that you need to pull those fields out into their own database.**

In this case, that's what you will do for actors: Make Actor a main idea, build records around that main idea, and build another database to store those records. Later, you can join the two databases so that you can do finds on them together.



Your plan now calls for four groups of fields:

<u>Movies</u>	<u>Actors</u>	<u>Directors</u>	<u>Producers</u>
Title	Last name	Last name	Last name
Release date	First name	First name	First name
Type of film	Birth date	Birth date	Birth date
Description	Nationality	Nationality	Nationality
Available on video?	Home town		
Color?			
Language			
Recommended by?			



[Next topic](#)

## Make connections between the groups



[Previous topic](#)

A group of related records forms a database. Each group you created around Movie, Actor, Director, and Producer becomes the basis for records in four separate databases.

Approach makes it easy to see the data in one database from inside another database. You can get to the data in both databases. This way Approach really helps you cut down on tedious data entry because you don't have to duplicate all of the data needed by all groups.

Now it's time to create the connections between the databases so that the information can be shared between them. Note, however, that you're still working on paper. Later, in Approach, you can make these same connections with a few clicks of the mouse.

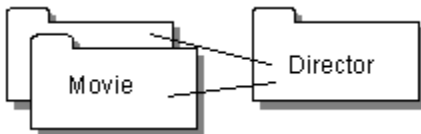
### Join fields and joined databases

Approach connects databases using **joins** between fields common to both databases. The join establishes the relationship between the two databases. For example, the join tells which director needs to be put with which movies.

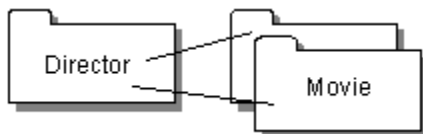
#### Database relationships

Databases can be related in four ways:

- One-to-many: The main idea in one database can be connected to more than one record in another database. At first you think that the Movie database and the Actor database are related this way because one movie can have more than one actor. This relationship, however, ignores that one actor could be in many movies. A better example is the relationship between a customer database and an order database. One customer can have many orders.
- One-to-one: The main idea in one database is connected to only one main idea in the other database. You don't normally use one-to-one relationships in Approach, because you can put all of the fields in a single database.
- Many-to-one: Many of the records in a database can be connected to only one idea in another database. The Movie database is related to the Director database this way: many movies have one director.



Approach treats this relationship as the reverse of the one-to-many relationship. You don't have to do anything special to make a distinction between the two types. For example, the Movie and Director databases are also related one-to-many if you express the relationship like this: One director can direct many movies.



- Many-to-many: The main idea in a database can be connected many times to many of the records in another database. This is the best way to describe the relationship between the Movie and Actor databases. One actor can be in many movies, and one movie can have many actors.

If you look at your database system, you see three relationships:

- Movie to director (many to one)
- Movie to producer (many to one)
- Movie to actors (many to many)

To make the connections between these databases, you need to identify a field that each pair of databases has in common. That field will be the **join field**.

### Identify the join field

So far, there isn't a duplicated field between the databases. You have to create a field to be the join field.

It's usually best to define one field in each database specifically to be a join field and then enter a unique value, like a serial number or an ID, in that field in the records. **Define the field in the "one" database.**

For the relationships between movies and their directors, the Director database is the "one" database (one director directs many movies). If you put a "Director Last Name" field in the movie database, you have a field that joins the databases. However, several directors may have the same last name, so this join doesn't identify unique director records. There are ways you can make a better connection.

### Making the join field unique

The join field or fields must uniquely identify a record in one of the databases--the Director database, in this case. If it doesn't, here are some things you can do to make the join field unique:

- Generate another field that is unique for each record; an ID field, for example an order number or a part number.

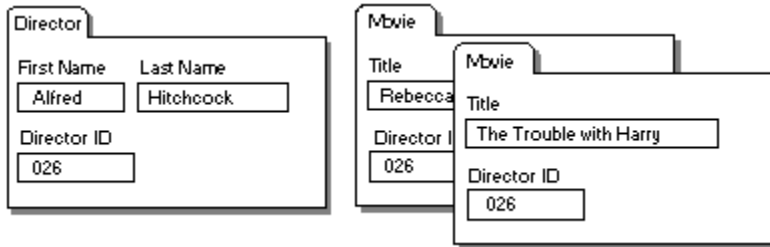
For example, generate a Director ID just in case two directors in the list have the same name. (For movies this is true, too. Remember *King Kong*? There's one starring Fay Wray and another starring Jessica Lange.)

When you build your database in Approach, you can have Approach automatically fill a field with a unique ID number for every record.

- Use more than one field in the join.

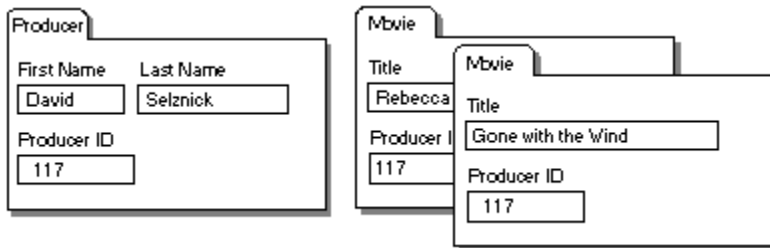
You could use First and Last Name fields to make sure you have specified a single director. (For the movie, you can use Title and Release Date. The original *King Kong* came out in 1933. The remake appeared in 1976.)

To apply this idea to the Movie and Director databases:



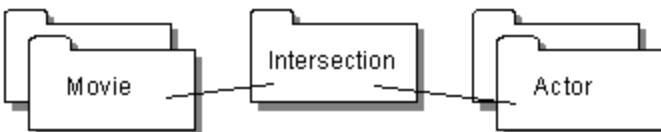
Both the director Alfred Hitchcock and the movies share the Director ID of 026. This value serves as the connection between the two databases.

The same arrangement works for the relationship between the Producer and Movie databases: create the join field in the "one" database (Producer) and add that field to the "many" database (Movie).



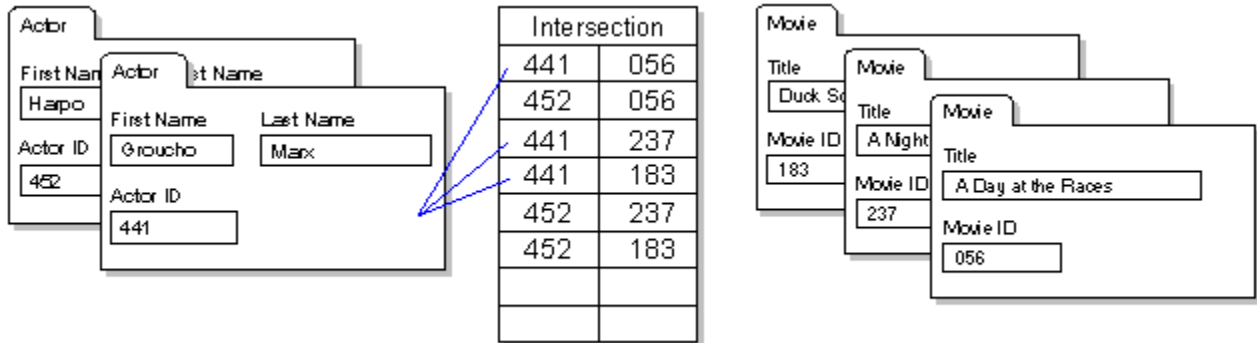
### Building a many-to-many relationship

The Movie and Actor databases have a many-to-many relationship. The Help topic [Many-to-many relationships](#) describes the nuts and bolts for creating this join in Approach. This relationship always uses a third database (Intersection) to act as the "one" database between two "many" databases. The new "one" database contains two join fields: One for the one-to-many with movies and the other for the one-to-many with actors.

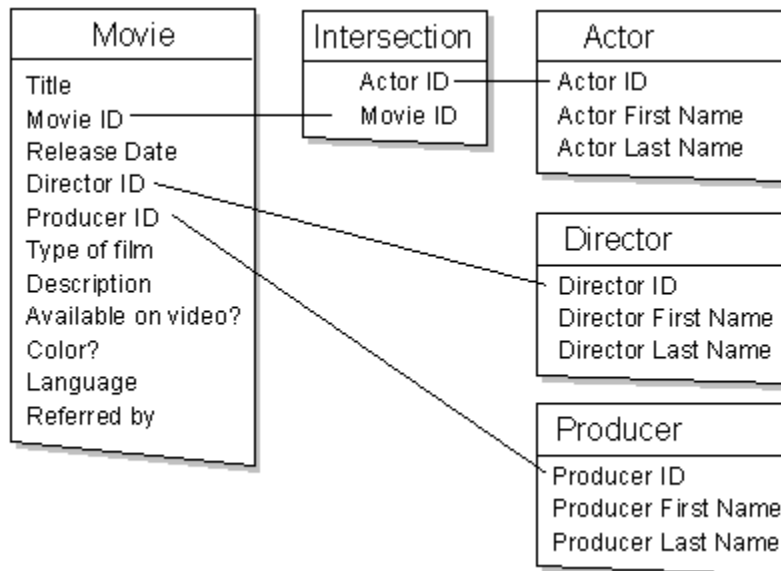


The Intersection database must meet the same requirements that the other databases meet: each field in the

database must describe the main idea of the database and must appear only one time to describe that main idea. There is a record in the Intersection database for each actor and movie combination, each "filming event" for that actor. For example, Groucho Marx appears in three movies on your list: *A Day at the Races*, *A Night at the Opera*, and *Duck Soup*. So there are three records for Groucho in the Intersection database, one for each movie. Each of these records stores only the Movie ID and Groucho's Actor ID.



Looking at the your database system, you now have five databases and four joins between them:



[Next topic](#)

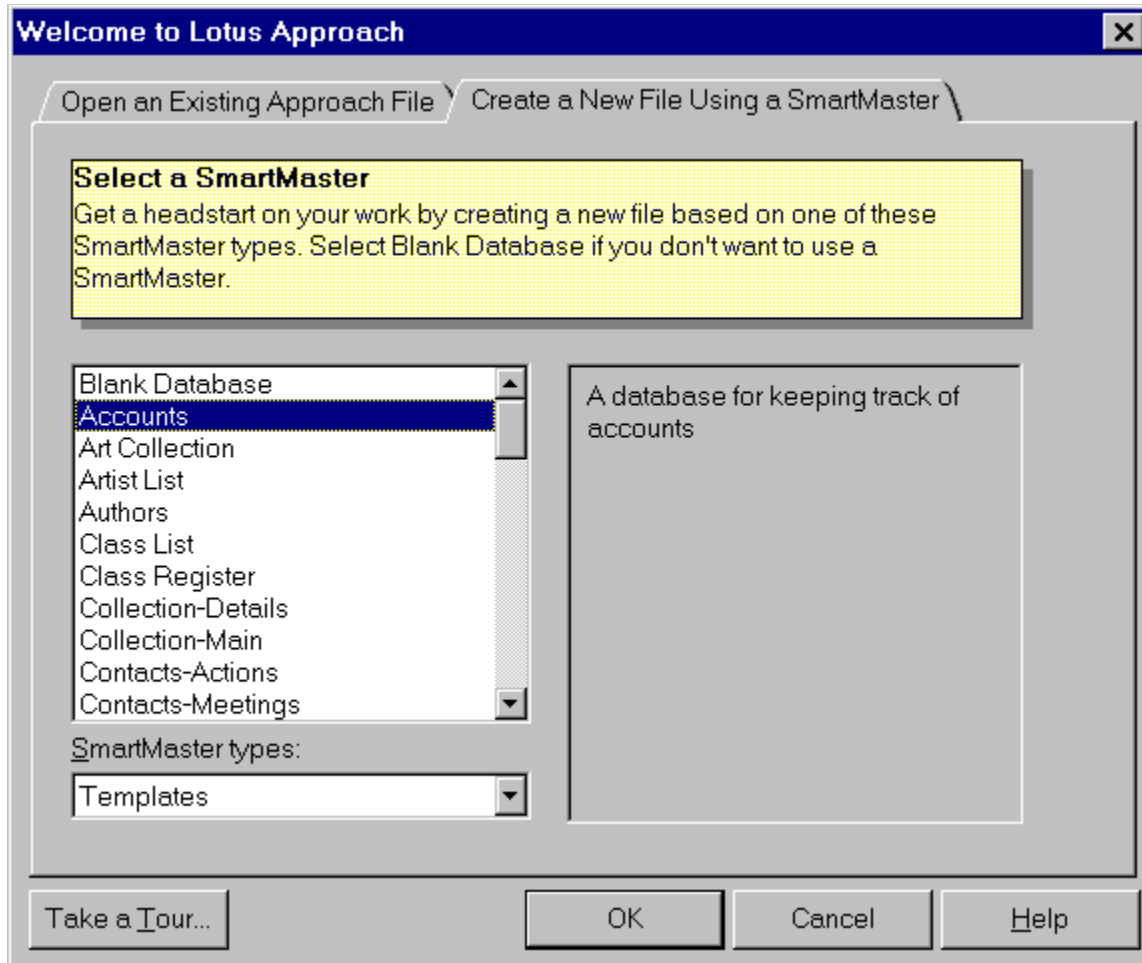


## Use SmartMasters



[Previous topic](#)

The planning process is crucial. Once you design your database system, however, check to see if Approach has already built a database template or an application like the one you planned. Approach provides lots of SmartMaster templates and applications that are ready to use. Templates provide the basic structure for creating your own set of joined databases. SmartMaster applications provide complete, pre-built solutions for common database systems. You can use the templates and applications whole or customize them to suit your needs.



Choose a SmartMaster template or application that is the best match for your data needs.



[Next topic](#)

## What kind of data?



### Previous topic

Fields: Think of them as building blocks of data, from which you construct meaningful information. Fields are the smallest unit of data in a database, and in general, the smaller the better.

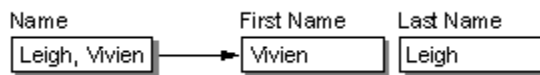
## How many fields in your database?

Don't worry about the number of fields in a database, but do think carefully about how to break up data into fields. Approach looks at fields to find the answers to your questions, and while Approach can search easily and quickly across dozens, even hundreds, of fields to find an answer, it is much more difficult to look deeply into a single field and pull out the one piece of data you want.

**Spread your data out into many fields so it's easier to see.**

## Names in fields

For example, it's common to think of a person's name as a single unit, like the person. Analyzed into its components, however, a name often comprises two or three units; First name, Middle name, Last name. If you're tracking people, it's a good idea to break the idea of Name down into its component parts; therefore, you'll need at least two fields, First Name and Last Name.

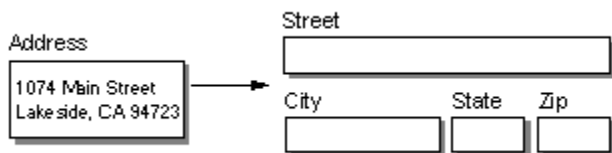


## Addresses in fields

Same with addresses. Besides the name of the person living at the address, an address often comprises at least four or five pieces of data: street, city, state, postal code, and country.

If you put all that data into a single field, that may be OK, so long as the only question you'll ever ask is: What's John Smith's address? But will you ever ask the question: Who are all the people in my database who live in the 94114 postal code? If so, your single field won't be the best solution.

If you divide the address into its logical, usable components, you can ask all kinds of questions and get answers back quickly and easily.

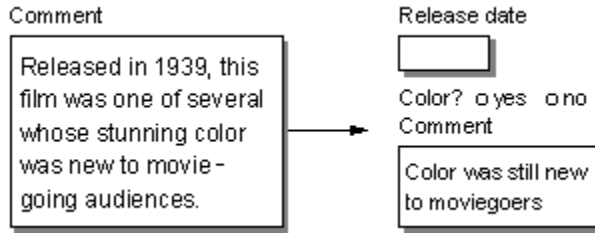


**The key to defining fields is to separate each piece of information that you may use to search through the data, to calculate other values, to categorize your data.**

## Comment field trap

Beware of "comment" or "note" fields, like that "All other data about the movie" field mentioned earlier. Such fields are great for collecting information that doesn't quite fit into neat little fields; for example, a synopsis of a movie plot. If there is specific information that you need to record, however, don't leave it up to chance in a broad category field.

Comment fields work well for elaborating other specified details or recording a log of changes or additions to a record.



### More fields for the movie database

You've been thinking of more questions:

- What movies did Orson Welles direct?
- I remember that Mom had recommended a movie. Which one was that?
- When did *20,000 Leagues Under the Sea* come out?
- What were the color movies produced when color was first popular, say before 1944?
- What Charlie Chaplin movies are available on video?

The list of fields is taking shape. You continue to pull more and more specific pieces of data out of that single giant comment field you started with. Note that these fields are not in any particular order yet.

Title	Release date
Actors (first, last name)	Type of film
Color?	Description
Available on video?	Language
Director (first, last name)	Recommended by?
Producer (first, last name)	



[Next topic](#)

## What questions will you ask the database?



[Previous topic](#)

The example developed through these topics is a simple one based on a personal hobby, but the thought processes are the same that a database administrator would go through to build the databases that store data for a large company.

### Using what you learn here to design a database

You can apply what you learn here to any database you design. When you finish reading this series of topics, you'll be ready to plan your database. Once you've got a plan on paper, you'll be ready to create an [Approach file \(.APR\)](#) based on your plan and then enter the data you want the database to store (or import it from another application where it already exists).

It's likely that the more you use your Approach database, the more demands you'll make of it. Approach will be able to meet these demands. **Rely on the user assistance provided in the book and in this Help system to reveal the many tasks you can accomplish in Approach.**

Back to the example. . .

### Asking your database the easy questions

Let's say you've built a database. The first task you attempt--or in database parlance, the first **find** you do--is to look for all of the information on the movie *Strangers on a Train*.

That's easy. If that's the only way you approach movies, you'll be fine with a database containing two units of data (called **fields**):

- Field: Movie title
- Field: All other data about the movie

Done.

### Asking your database more complex questions

But what about all those other, more complex questions you were asking earlier? What would your two-field database do for you when you ask questions like

- Which of Hitchcock's movies are out on video?

That's a two-part question. You are asking Approach to search every record in the database and come back with a list of movies that satisfy these two conditions: Hitchcock is in the Director field and Yes is in the field called Available on video.

So, if you don't have a field that contains only the director's name and you don't have a field that identifies whether a movie is available on video, you can't ask this question.

### Adding more fields to answer complex questions

To answer the more complex questions, you've gone from a two-field database to a four-field database:

- Field: Movie title
- Field: Director
- Field: Available on video
- Field: All other data about the movie

See how it works? You're pulling specific pieces of data out of the mass of movie data and creating individual fields to store those small pieces of data.

If you spend some time thinking about the questions you'll ask--the kind of **finds** you'll do--you'll discover a lot about the fields you'll need to create.



[Next topic](#)

## What will a database do for you?



[Previous topic](#)

### **Track all your data**

You don't want to keep all this data in your head, and you now know that keeping it in a static list doesn't help much either. You want the database to track all the tiny pieces of data. That's easy; databases you create in Approach can accommodate lots of data.

So you want the database to be your memory for all this movie data. The amount of data a database has to store won't be a problem, though it will require some work to type the data.

### **Access all your data**

But more important, you want to be able to get information--meaningful data ("just the movies that fit my mood")--out. You want to be able to ask a specific question and get a concise answer. The really challenging part is organizing the data so that you can combine it in different ways to answer your questions.

### **Answer your data questions**

Approach can deliver answers to your questions in seconds. But in order for a database to answer intelligently, you must build some of your own intelligence into the database: Train it to speak your language so that it can respond to the questions you ask.

### **Organize and plan first, let the database work later**

Organization and planning are key. If you expend the effort in planning now, Approach will do the all the heavy lifting later. Some time spent planning before you create an Approach file pays off in the speed, flexibility, and responsiveness of the database when you start pulling information out of it.



[Next topic](#)

## Why build a database?

The following sequence of topics describes how to build a database that works well in Approach.

- We recommend that you read the topics in sequence, using the Next topic button at the end of each topic to continue.
- To print the entire sequence, click Help Topics at the top of this window, click the Contents tab in the Help Browser, double-click the Getting Started book at the top of the list, click the Planning a database book, and click Print at the bottom of the Help Browser.

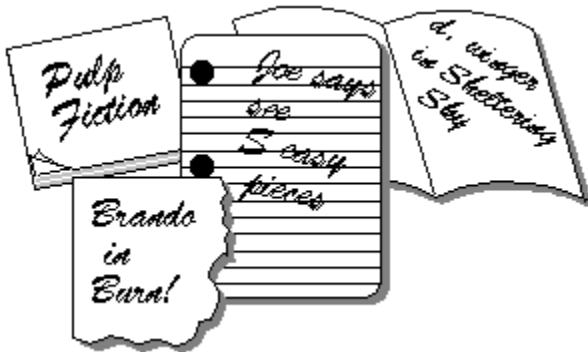
## Planning your database



Suppose you're a movie fan who wants to keep track of movies you hear about and want to see. You scan the new arrivals at the video store and read the reviews in the paper.

At first, you accumulate a bunch of notes to yourself about the movies you want to see, and you keep the notes in a folder in your desk.

Eventually, the folder becomes a disorganized collection of odd scraps of paper, napkins, and newspaper clippings. You continue to gather data, but because trying to find anything in the folder is frustrating, you're losing track of your information.



## Creating one list of data may not be enough

You decide to put all the data in a list. You fire up the computer, start Word Pro, and start typing. You notice that you have more than one note about some movies, but you type in everything because you want to preserve the data you've gathered. Word Pro can even put the list in alphabetical order (you never realized how many movie titles began with "The").

You get about a third of the way through the folder before you get tired. At least it's a start.

One night, you want to rent a comedy. You leaf through the folder, you scan the list. Alphabetical order doesn't help you find comedies. Nothing is categorized. Some movies you remembered to label; others not. You wish that instead of typing one long list, you had created many lists: one for comedies, one for dramas, one for action movies, and so on.

## Why dynamic data is useful

The more you think about it, the more lists you wish you had: one for Hitchcock movies, one for movies released after 1960, one for foreign-language movies, one for musicals. But you'd have to put *The Trouble with Harry* on both the list of comedies and the list of Hitchcock movies. Too much typing, you think.

You say to yourself: I wish I had a list with movable entries. I wish I could press a key and the entries would organize themselves the way I want to see them--or better yet, I'd press a key and I'd see a list of just the movies that fit my mood.

You want dynamic data. You want certain pieces of data pulled out of a large mass and organized into meaningful information. You've just discovered you need a database. You choose Approach. Good choice!



[Next topic](#)

### **Changing the status to single-user**

You can temporarily change your network environment so that you can open network databases as a single user. This prevents other users from having access to your databases.

### **For dBASE databases**

Deselect "Database sharing" in the dBASE Network Connection dialog box.

### **For Paradox databases**

Delete the text in the User name and "Network control file path" boxes in the Paradox Network Connection dialog box.

---

{button ,AL(`H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_DBASE\_FILES\_STEPS;H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_PARADOX\_FILES\_STEPS;`,`),0)} [See related topics](#)



## Details: Entering passwords

### Database file passwords

If a database file was opened in dBASE III, dBASE IV, or FoxPro it can have two types of passwords:

- Read/write password, which gives you complete access to the file
- Read-only password, which allows you to read data, but not modify it

A database can have a read-only, a read/write, or both a read/write and a read-only password.

If a database file has passwords, the Enter Database Password dialog box appears when you try to open Approach files that use the database.

### Approach file passwords

If an Approach file (.APR) has a password (which is always defined in TeamSecurity), the Enter Approach File Password dialog box appears when you try to open it.

---

{button ,AL('H\_ENTERING\_PASSWORDS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_CREATING\_NEW\_PASSWORD\_PRIVILEGES\_STEPS;H\_DEFINING\_PASSWORDS\_FOR\_A\_DATA  
BASE\_STEPS;H\_DELETING\_PASSWORD\_PRIVILEGES\_STEPS;H\_EDITING\_PASSWORD\_PRIVILEGES\_STE  
PS;H\_SETTING\_PASSWORD\_PRIVILEGES\_STEPS;H\_TEAMSECURITY\_DIALOG\_BOX\_CS';,0)} [See related  
topics](#)

## Entering passwords

If you try to open a database file with a password or make design or join changes in an Approach file with a password, an Enter Password dialog box appears.

1. Type the password in the text box.

You must spell a password exactly as it was defined. Passwords are not case-sensitive.

2. Click OK.

If you have joined multiple database files that are password protected with the same password, and you open the .APR file, Approach prompts you for a password.

You can require passwords for each database by choosing File - TeamSecurity, clicking New, Edit, or Copy and selecting "Require passwords for each database" in the Database tab.

---

{button ,AL('H\_ENTERING\_PASSWORDS\_DETAILS',1)} [See details](#)

{button ,AL('H\_CREATING\_NEW\_PASSWORD\_PRIVILEGES\_STEPS;H\_DEFINING\_PASSWORDS\_FOR\_A\_DATA\_BASE\_STEPS;H\_DELETING\_PASSWORD\_PRIVILEGES\_STEPS;H\_EDITING\_PASSWORD\_PRIVILEGES\_STEPS;H\_PASSWORDS\_OVER;H\_SETTING\_PASSWORD\_PRIVILEGES\_STEPS;H\_TEAMSECURITY\_DIALOG\_BOX\_CS',0)} [See related topics](#)

### **Details: Refreshing data from the network onscreen**

Refresh Data does the following:

- Updates the data onscreen to match the database on the network
- Enters changes to the database
- Inserts new records into the found set or sort order, as appropriate

### **Why refresh data?**

As you work in a network database, Approach places a copy of the data you see onscreen in your computer's memory. If other users are making changes to the database at the same time you are, their changes do not always appear instantly onscreen. Refresh your data when you want to see the current version of it.

### **Downloading data in Print Preview**

When you print data from a network, by default Approach refreshes the data from the network database whenever there are changes made to the database. If you preview data before printing and other users make changes to the database while you're previewing and preparing to print, the data you print may not be the same as the data you previewed.

To change this setting from the default, open the Preferences dialog box, click the General tab, and select "Download data before Print Preview."

When this option is selected, Approach downloads a copy of the current set of network data to your hard disk whenever you change to Print Preview to "freeze" the data you see onscreen. This way, you can be sure you're looking at the same data that will be printed. Downloading is useful when you preview a report that includes a summary, or a data set that many users are working on at once.

---

{button ,AL('H\_REFRESHING\_THE\_DATA\_NETWORK\_ONSCREEN\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_DBASE\_FILES\_STEPS;H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_PARADOX\_FILES\_STEPS';,0)} [See related topics](#)

## Refreshing data from the network onscreen

Approach refreshes the data from a network database when you

- Find or sort data
- Edit data
- Preview or print

You can also refresh the data yourself by choosing Refresh Data on the [context menu](#).

---

{button ,AL('H\_REFRESHING\_THE\_DATA\_NETWORK\_ONSCREEN\_DETAILS',1)} [See details](#)

{button ,AL('H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_DBASE\_FILES\_STEPS;H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_PARADOX\_FILES\_STEPS;',0)} [See related topics](#)

## Details: Saving changes to shared records

### Optimistic record locking

With optimistic record locking on, when two users edit the same record, the changes are saved in the database for the first user to enter the changes. When the second user tries to save any changes, a message box warns that the changes may write over those made by the first user.

### Full record locking

If you don't want other users to edit a record at the same time as you, you can turn off optimistic record locking. Using full record locking, once you click a record, other network users can view the record but not make changes to it until you press ENTER and release the record lock.

---

{button ,AL('H\_SAVING\_CHANGES\_TO\_SHARED\_RECORDS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_DBASE\_FILES\_STEPS;H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_PARADOX\_FILES\_STEPS;H\_SPECIFYING\_LOCKING\_PROTOCOLS\_FOR\_SHARED\_DBASE\_FILES\_STEPS;',0)} [See related topics](#)

### **Saving changes to shared records**

Optimistic record locking is the default setting for Approach. If you have optimistic record locking set for your network environment, other users can edit a record at the same time you do.

When you try to commit the changes you've made to a shared record that has been modified by another user, a message box appears that gives you a choice of either saving or canceling your changes.

### **Saving your changes**

Click Yes to save your changes and write over changes made by other users.

This writes over all changes made to the record since your view of it was last refreshed.

### **Canceling your changes**

Click No to refresh your copy and see changes made to the record by other users. You can then make your changes on top of theirs.

**Note** To turn off optimistic record locking, choose File - User Setup - Approach Preferences and click the General tab. Deselect "Lock records using optimistic record locking."

---

{button ,AL('H\_SAVING\_CHANGES\_TO\_SHARED\_RECORDS\_DETAILS',1)} [See details](#)

{button ,AL('H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_DBASE\_FILES\_STEPS;H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_PARADOX\_FILES\_STEPS;H\_SPECIFYING\_LOCKING\_PROTOCOLS\_FOR\_SHARED\_DBASE\_FILES\_STEPS;',0)} [See related topics](#)

**Details: Setting file-sharing options for dBASE files**

- You can have any Approach file active when you open the File - Open dialog box.
- The dBASE options affect all dBASE files you open.

**Database sharing**

By default, this setting lets other users open and make changes to a network dBASE file you already have open.

If the setting is off, no one else can open the file until you close it.

If this setting is on, make sure everyone you work with on a network uses the same locking protocol to access dBASE files.

**Local databases are shared**

If you're using a peer-to-peer network system such as LANtastic or Windows for Workgroups and the system is set up for sharing local files, this setting allows other users to open dBASE files already open on your local drive.

If this setting is off, other users can open a dBASE file on your local drive only if you do not already have the file open. This is true only if "Database sharing" is on and your network software allows you to share local files.

**Sharing data only with other Approach users**

This setting optimizes performance for files that are shared only with other Approach users.

Turn this setting off if you or other network users plan to use dBASE files with other applications.

---

{button ,AL(^H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_DBASE\_FILES\_STEPS',1)} [Go to procedure](#)

{button ,AL(^H\_CHANGING\_THE\_STATUS\_TO\_SINGLE\_USER\_STEPS;H\_DBASE\_FILES\_IN\_APPROACH\_REF;  
H\_SPECIFYING\_LOCKING\_PROTOCOLS\_FOR\_SHARED\_DBASE\_FILES\_STEPS;',0)} [See related topics](#)

## Setting file-sharing options for dBASE files

The dBASE file-sharing options let you specify whether or not

- To let other users work with network files you have open
- To make your local files available to other users
- To optimize performance for files used only with Approach

**Commands on the File menu:** New Database, Open, Save As, Import Data, Export Data, Import Approach File

1. Select dBASE IV or dBASE III+ in the "Files of type" box.

2. Click Setup.

The dBASE Network Connection dialog box appears.

3. To let other users work with files you have open, select "Database sharing."

4. To make open files on your local drive available to other users, select "Local databases are shared."

Available on peer-to-peer networks only.

5. To optimize performance for files shared only with other Approach users, select "Sharing data only with other Approach users."

6. Click OK to close the dBASE Network Connection dialog box.

7. Click OK.

8. Close and reopen any dBASE files for the changes to affect them.

---

{button ,AL('H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_DBASE\_FILES\_DETAILS',1)} [See details](#)

{button ,AL('H\_CHANGING\_THE\_STATUS\_TO\_SINGLE\_USER\_STEPS;H\_DBASE\_FILES\_IN\_APPROACH\_REF;H\_SPECIFYING\_LOCKING\_PROTOCOLS\_FOR\_SHARED\_DBASE\_FILES\_STEPS;',0)} [See related topics](#)



### **Details: Setting file-sharing options for Paradox files**

The Paradox options affect all Paradox files you open.

#### **Types of networking**

- If you select "Use Paradox 3.5 networking," you can open Paradox 3.5 files but not Paradox 4 files on a network.  
When you create or export a Paradox file (whether or not you are using a network), the file is in the 3.5 file type.
- If you select "Use Paradox 4.x networking," you can open both Paradox 3.5 and Paradox 4 files on a network.  
When you create or export a Paradox file (whether or not you are using a network), the file is in the 4.x file type.  
Paradox 4.x networking includes Paradox for Windows.
- Paradox 4 users cannot share data concurrently with users of Paradox 3.5.

#### **Paradox control files**

Paradox databases use network control files to monitor user count and to control database-sharing on a network. If you want to share Paradox files with other users, you need to specify the location of the control files. Check with your network administrator for the location of these files.

- Paradox 4.x, including Paradox for Windows: the file is PDOXUSRS.NET.
- Paradox 3.5: the file is PARADOX.NET.

The control files for Paradox 3.5 and Paradox 4.x should be in the same directory.

If you do not specify a location for the control files, open Paradox databases on a network as a single user.

---

{button ,AL(`H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_PARADOX\_FILES\_STEPS',1)} [Go to procedure](#)

{button ,AL(`H\_CHANGING\_THE\_STATUS\_TO\_SINGLE\_USER\_STEPS;H\_CREATING\_SECONDARY\_INDEXES\_FOR\_PARADOX\_DATABASES\_STEPS;H\_PARADOX\_FILES\_IN\_APPROACH\_REF;',0)} [See related topics](#)

### Setting file-sharing options for Paradox files

For Paradox files, you can specify 3.5 or 4.x networking and the location of the Paradox network control files.

**Commands on the File menu:** New Database, Open, Save As, Import Data, Export Data, Import Approach File

1. Select Paradox in the "Files of type" box.
2. Click Setup.  
The Paradox Network Connection dialog box appears.
3. Select the type of networking.  
For Paradox for Windows, select Paradox 4.x networking.
4. Enter your user name in the User name box.
5. Enter the directory location for the control files in the "Network control file path" box.  
Do not include the name of the control files in the path. For example, if the files are in the SHARE directory on the f drive, type f:\SHARE, not f:\SHARE\PDOXUSRS.NET.
6. Click OK to close the Paradox Network Connection dialog box.
7. Click OK.
8. Close and reopen any Paradox files for the changes to take effect.

---

{button ,AL('H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_PARADOX\_FILES\_DETAILS',1)} [See details](#)

{button ,AL('H\_CHANGING\_THE\_STATUS\_TO\_SINGLE\_USER\_STEPS;H\_CREATING\_SECONDARY\_INDEXES\_FOR\_PARADOX\_DATABASES\_STEPS;H\_PARADOX\_FILES\_IN\_APPROACH\_REF;',0)} [See related topics](#)

**Details: Specifying locking protocols for shared dBASE files**

To maintain the integrity of data, all users who share dBASE files should specify the same locking protocol. The locking protocols for dBASE IV and dBASE III+ are not compatible with each other.

- If all the users in a group are working through a dBASE IV application, change the protocol to dBASE4.
- If all the users in a group are working through a dBASE III+ application, change the protocol to dBASE3.
- If you have a mixed group of dBASE III+ and dBASE IV users, change the protocol to dBASE3 for all users. dBASE III+ users cannot select dBASE4 as their locking protocol. However, dBASE IV users can select dBASE3 as their locking protocol.

---

{button ,AL('H\_SPECIFYING\_LOCKING\_PROTOCOLS\_FOR\_SHARED\_DBASE\_FILES\_STEPS',1)} Go to procedure

{button ,AL('H\_CHANGING\_THE\_STATUS\_TO\_SINGLE\_USER\_STEPS;H\_SETTING\_DATABASE\_OPTIONS\_DETAILS;H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_DBASE\_FILES\_STEPS;',0)} See related topics

## Specifying locking protocols for shared dBASE files

If you share dBASE files with other users, you must all specify dBASE IV or dBASE III+ as the locking protocol for the files. The default protocol is dBASE IV.

You must change the locking protocols in the registration database.

1. In the Windows 95 taskbar, click Start.

2. Click Run.

The Run dialog box opens.

3. Type **regedit**.

4. Click OK.

The Registry Editor appears.

5. Navigate to:

HKEY\_USERS

Software

Lotus

Approach

97.0

General

6. Scroll to sdBASEFileSharing and double-click it.

The Edit String dialog box appears.

7. Depending on the locking protocol you use, type one of the following:

- **dBASE4**

- **dBASE3**

8. Click OK.

9. Restart Approach for the change to take effect.

---

{button ,AL('H\_SPECIFYING\_LOCKING\_PROTOCOLS\_FOR\_SHARED\_DBASE\_FILES\_DETAILS',1)} [See details](#)

{button ,AL('H\_CHANGING\_THE\_STATUS\_TO\_SINGLE\_USER\_STEPS;H\_SETTING\_DATABASE\_OPTIONS\_DETAILS;H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_DBASE\_FILES\_STEPS;',0)} [See related topics](#)

## Charting a different data set

You can change the set of data a chart displays by specifying a new data source.

1. From the Chart menu, choose Chart Properties.
2. From the Chart Object menu, choose Chart Data Source.  
The Chart Data Source Assistant appears, with the current data source highlighted for each field.
3. Select a field to appear on the x-axis.
4. Click the Y-axis tab.
5. Define the calculation for the y-axis.
6. (Optional) Click the Series tab.
7. (Optional) Select a field for the series.
8. Click Done.

---

{button ,AL(^H\_CHART\_ASSISTANT\_OVER;H\_CREATING\_CHARTS\_FROM\_CROSSTABS\_STEPS;H\_CREATING\_CHARTS\_IN\_REPORTS\_STEPS;H\_CREATING\_PIE\_CHARTS\_STEPS;H\_DECIDING\_WHAT\_NEW\_CHARTS\_SHOULD\_LOOK\_LIKE\_REF;H\_DRILL\_DOWN\_TO\_DATA\_FOR\_CHARTS\_STEPS;','0)} [See related topics](#)

## Overview: Charts

A chart is an Approach view that shows data in a graphic representation. If you're analyzing data, charts can identify trends and relationships. Charts are dynamic; if you change the data the chart is based on, Approach updates the chart automatically.

You can create four different chart types, in two-dimensional (2D) or three-dimensional (3D) format. After creating a chart, you can change its type and add text and graphics to it. In addition to graphic information, a chart can also include a title, a subtitle, a legend, a crosstab table, and a note.

Approach gives you two ways to create charts: with the Chart Assistant or directly from a crosstab.

Charts can also be placed in the summary panel of a report.

## Chart Assistant

The Chart Assistant guides you through creating a chart. In the Chart Assistant, you give the chart a name, layout (the chart type), and style (2D or 3D). You also select the fields that appear on the chart axes. If the chart contains a series (a set of values plotted along the x-axis), you select the field for grouping the series. The chart legend explains the series.

If you create a pie chart, you select the field whose values appear as pie slices.

The Chart Assistant lets you choose from four types of charts: bar, line, area, or pie. In the Chart InfoBox, you can change the chart type to another of the 20 types supported by Lotus Chart.

## Chart axes

All charts except pie charts plot data against a horizontal x-axis and a vertical y-axis.

- The x-axis defines the categories you want to plot, such as years, geographic areas, age ranges, or the names of your sales personnel.
- The y-axis defines the values plotted in the chart that correspond to the x-axis categories. For instance, the y-axis could show the quantity or dollar amount of units sold by each of your sales personnel.

You can show tick marks and labels for units of measure with an axis, and you can title each axis to describe the data plotted against it.

## Creating charts from crosstabs

You can create a chart directly from a crosstab by clicking the Chart icon in the crosstab view. Approach creates a vertical bar chart displaying the data in the crosstab. The values in the body of the crosstab are plotted as the chart bars. The crosstab rows are charted along the x-axis, and crosstab groups (from the columns) form the series that appear in the legend.

## Drill Down to Data

Drill Down to Data lets you display the records that the chart is based on. Select the bar, line, area, or pie portion of a chart, and then from the Chart Object menu choose Drill Down to Data. The records that contribute to that portion of the chart appear in a worksheet or other view that you specify.

## Modifying charts

The Chart and Chart Object menus are context-sensitive. What you select in a chart determines which menu displays and which properties you can change in the InfoBox.

- The Chart Object menu displays in the menu bar when you are in a chart in Design and you select a graphic object in the chart such as a title, label, bar, line, or pie slice. Use these commands to modify chart parts, including title, legend, axes and grids, series, and series labels. You can also select a different source of data for the chart or a different type of chart.
- The Chart menu displays when you click near the border of the chart. Use these commands to delete or duplicate the entire chart or pages of a multi-page chart.

## Opening the InfoBox for a chart object

From the Chart or Chart Object context menu, choose Chart Properties or click the Show InfoBox icon when you see the Chart Object context menu.



## Opening the InfoBox for a chart

Click the Show InfoBox icon when you see the Chart context menu, or double-click the margin (between the border and the grid) of the chart view.

---

```
{button ,AL(`H_CREATING_CHARTS_FROM_CROSSTABS_STEPS;H_DECIDING_WHAT_NEW_CHARTS_SHOULD_LOOK_LIKE_REF;H_DRILL_DOWN_TO_DATA_FOR_CHARTS_STEPS;H_SELECTING_A_FIELD_FOR_THE_SERIES_STEPS;H_SELECTING_A_FIELD_FOR_THE_X_AXIS_STEPS;H_SELECTING_FIELDS_FOR_THE_Y_AXIS_STEPS;H_CREATING_PIE_CHARTS_STEPS;',0)} See related topics
```

## Creating charts from crosstabs

When you create a chart directly from a crosstab, the values in the crosstab cells are plotted as the chart bars. The crosstab rows are charted along the x-axis, and crosstab groups (from columns) form the series that appear in the legend.

Approach uses a preset chart type for a chart created from a crosstab, initially set to bar chart.

1. Make sure that the crosstab contains the data you want to chart.
2. Choose Crosstab - Chart this Crosstab.



Approach creates the chart and displays it with a default title and default axis titles.

---

{button ,AL('H\_CHART\_ASSISTANT\_OVER;H\_CREATING\_CHARTS\_IN\_REPORTS\_STEPS;H\_DECIDING\_WHAT\_NEW\_CHARTS\_SHOULD\_LOOK\_LIKE\_REF;H\_DRILL\_DOWN\_TO\_DATA\_FOR\_CHARTS\_STEPS;',0)} See related topics



## Creating charts in reports

Enhance your reports and summarize data by creating charts in the summary panels.

1. Go to or create a report that has [summary panels](#).
2. Select a summary panel and drag its border to make space for the chart.
3. Choose Create - Control - Chart.  
The mouse pointer changes to cross hairs.
4. Drag to draw the chart area inside the report panel.  
The Chart Assistant appears.
5. [Enter a name for the chart, and select layouts and styles](#).
6. [Select a field for the x-axis](#).
7. [Select field\(s\) for the y-axis](#).
8. [Select a field for the series](#).
9. Click Done.

The chart you created becomes part of the report.

---

{button ,AL('H\_CREATING\_CHARTS\_FROM\_CROSSTABS\_STEPS;H\_CREATING\_PIE\_CHARTS\_STEPS;H\_DRILL\_DOWN\_TO\_DATA\_FOR\_CHARTS\_STEPS;',0)} [See related topics](#)

## Creating pie charts

Command: Create - Chart



### Tab: Pie fields

Pie charts let you define the relationships of the various parts to the whole. For example, a pie chart could show you each salesperson's orders (using a sum calculation) as a percentage of the total orders of the whole company.

1. Be sure the database containing the field you want is showing in the "Database" box.
2. Select a field for the pie slices in the "Show a new slice for" box.
3. Select a calculation in the "Each slice shows the" box.
4. Be sure the database containing the field you want is showing in the "in database" box.
5. Select a field to be calculated in the "of field" box.

Summarizing the values in this field determines the sizes of the pie slices.

6. Click Done.

---

{button ,AL('H\_CHART\_ASSISTANT\_OVER;H\_DECIDING\_WHAT\_NEW\_CHARTS\_SHOULD\_LOOK\_LIKE\_REF;H\_DRILL\_DOWN\_TO\_DATA\_FOR\_CHARTS\_STEPS;H\_SELECTING\_A\_FIELD\_FOR\_THE\_SERIES\_STEPS;H\_SELECTING\_A\_FIELD\_FOR\_THE\_X\_AXIS\_STEPS;H\_SELECTING\_FIELDS\_FOR\_THE\_Y\_AXIS\_STEPS;',0)}  
[See related topics](#)

## Deciding what new charts look like

Approach provides a number of layouts and styles. Select one of each to determine the basic appearance of the chart. The Sample Chart previews each combination.

**Command:** Create - Chart



**Tab:** Layout





### View name & title

The name you enter appears as a default in printed charts, in the title at the top of the chart, and in the view tab. For example:



### Layout

Approach lets you choose from four chart types in the Chart Assistant. After you create the chart, use the InfoBox to select another type for the chart.

<u>Chart type</u>	<u>Description</u>	<u>Looks like</u>
Bar chart	Each bar represents a single value in a series. The height of each bar shows a value at a point in time. Bar charts are useful for comparing individual values.	
Line chart	Each point along a line represents a value at a particular period or point in time, and each line represents a category of data. Use line charts to trace the changes in sets of data over time.	
Area chart	Shows trends in data over time by emphasizing the area under the curve created by each data series. Use area charts to see relationships between sets of data rather than individual data points.	
Pie chart	The relationship of various parts to the whole. Each data value is represented by a slice of the pie, and the size of the slice corresponds to the percentage of the total.	

### Style

Approach lets you select either 2D or 3D chart styles.

---

```
{button ,AL('H_CREATING_CHARTS_FROM_CROSSTABS_STEPS;H_CREATING_CHARTS_IN_REPORTS_STEP  
S;H_CREATING_PIE_CHARTS_STEPS;H_DRILL_DOWN_TO_DATA_FOR_CHARTS_STEPS;H_SELECTING_A  
FIELD_FOR_THE_SERIES_STEPS;H_SELECTING_A_FIELD_FOR_THE_X_AXIS_STEPS;H_SELECTING_FI  
ELDS_FOR_THE_Y_AXIS_STEPS;',0)} See related topics
```

## Drilling down to data for charts

You can select a view to display the drill-down data.

If you do not identify the drill-down view, Approach creates a new worksheet to display the data. The drill-down view displays the set of records that corresponds to the selected portion of the chart.



### Are you in Design?

1. To open the Approach Chart InfoBox, double-click the margin (between the border and the grid) of the chart view.
2. Click the Basics tab in the [InfoBox](#).



3. Select the view you want in the "Drill down view" box.
4. (Optional) [Move, collapse, or close](#) the InfoBox.
5. Select the graphical representation in the chart (for example, a bar or a pie slice) for which you want the detail data.
6. From the Chart Object menu, choose Drill Down to Data.



The selected drill-down view appears, displaying the detail data.

7. To return to the original chart view, click its view tab.

Approach returns to the chart and displays the original found set.

---

{button ,AL(`H\_DRILL\_DOWN\_TO\_DATA\_OVER;H\_CHART\_ASSISTANT\_OVER;H\_CHOOSING\_DRILLDOWN\_VIEWS\_STEPS;H\_CREATING\_CHARTS\_IN\_REPORTS\_STEPS;H\_DECIDING\_WHAT\_NEW\_CHARTS\_SHOULD\_LOOK\_LIKE\_REF;H\_SELECTING\_A\_FIELD\_FOR\_THE\_X\_AXIS\_STEPS;H\_SELECTING\_FIELDS\_FOR\_THE\_Y\_AXIS\_STEPS;','0)} [See related topics](#)

### Details: Selecting a field for the series (chart legend)

A series lets you plot more than one value for each value on the x-axis. Use the series to further analyze the x-axis values.

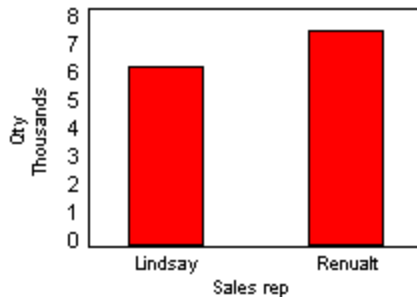
If you do not select a field in the Series tab, your chart does not contain a legend. To add a series after creating the chart, choose Chart - Chart Data Source and specify a new data source. To create a legend in an existing chart, select the Legend option in the Chart InfoBox.

### Example

You run a small company that sells three products and has a staff of two sales representatives.

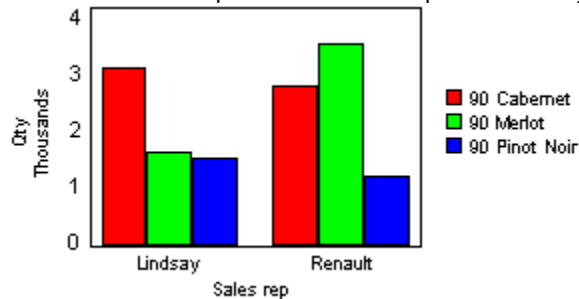
Suppose you want to create a bar chart comparing the performance of your sales representatives in October. You define the x-axis to display the names of your sales reps. You define the y-axis to display their sales for the month of October.

If you finished your chart at this point, the chart would display two bars, one for each sales rep. Each bar would represent each rep's combined total sales for all three products.



To further analyze the reps' sales performance by each product, in the Series tab of the assistant, select the Product field.

Now your chart displays six bars (3 products x 2 reps) in two groups, one group for each sales rep. In each group there would be a separate bar for each product sold by the rep.



A legend appears in your chart. It contains three labels identifying your three products.

---

{button ,AL('H\_SELECTING\_A\_FIELD\_FOR\_THE\_SERIES\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_CHART\_ASSISTANT\_OVER;H\_CREATING\_PIE\_CHARTS\_STEPS;H\_DECIDING\_WHAT\_NEW\_CHARTS\_SHOULD\_LOOK\_LIKE\_REF;H\_DRILL\_DOWN\_TO\_DATA\_FOR\_CHARTS\_STEPS;H\_SELECTING\_A\_FIELD\_FOR\_THE\_X\_AXIS\_STEPS;H\_SELECTING\_FIELDS\_FOR\_THE\_Y\_AXIS\_STEPS;',0)} [See related topics](#)

## Selecting a field for the series (chart legend)

(Optional) Select a field for the series to create a legend for a chart.

**Command:** Create - Chart



**Tab:** Series

1. Be sure the database containing the field you want is showing in the "Database" box.
2. Select a field in the "Field" box.
3. Select a custom grouping for the field in the "Group by" box.

The grouping options that display correspond to the type of field you select. When you select a date, the grouping options for dates appear. When you select a text field, the grouping options for a text field appear. This is also true for time fields and numeric fields. The default selection creates a group for every unique value of the field.

4. Click Done.
5. If the Define Main Database dialog box appears, select the database you want to be the main database for the chart and click OK.

This dialog box appears if the chart uses fields from more than one joined database. The first database you select in the Chart Assistant is preselected as the main database.

---

{button ,AL(`H\_SELECTING\_A\_FIELD\_FOR\_THE\_SERIES\_DETAILS`,1)} [See details](#)

{button ,AL(`H\_CHART\_ASSISTANT\_OVER;H\_CREATING\_PIE\_CHARTS\_STEPS;H\_DECIDING\_WHAT\_NEW\_CHARTS\_SHOULD\_LOOK\_LIKE\_REF;H\_DRILL\_DOWN\_TO\_DATA\_FOR\_CHARTS\_STEPS;H\_SELECTING\_A\_FIELD\_FOR\_THE\_X\_AXIS\_STEPS;H\_SELECTING\_FIELDS\_FOR\_THE\_Y\_AXIS\_STEPS`,`0)} [See related topics](#)

## Selecting a field for the x-axis

You must select a field for the x-axis for all chart types except pie chart.

**Command:** Create - Chart



**Tab:** X-Axis

1. Be sure the database containing the field you want is showing in the "Database" box.
2. Select a field in the "X-Axis field" box.
3. Select a custom grouping for the field in the "Group by" box.

The grouping options that display correspond to the type of field you select. When you select a date, the grouping options for dates appear. When you select a text field, the grouping options for a text field appear. This is also true for time fields and numeric fields. The default selection creates a group for every unique value of the field.

4. Click Next.

---

{button ,AL(`H\_CHART\_ASSISTANT\_OVER;H\_CREATING\_PIE\_CHARTS\_STEPS;H\_DECIDING\_WHAT\_NEW\_CHARTS\_SHOULD\_LOOK\_LIKE\_REF;H\_DRILL\_DOWN\_TO\_DATA\_FOR\_CHARTS\_STEPS;H\_SELECTING\_A\_FIELD\_FOR\_THE\_SERIES\_STEPS;H\_SELECTING\_FIELDS\_FOR\_THE\_Y\_AXIS\_STEPS;`,`0)}` [See related topics](#)

## Selecting fields for the y-axis

You must select a field for the y-axis for all chart types except pie chart. The field you select for the y-axis should perform a summary calculation such as summing a quantity field, counting an ID field, and so on.

You can select additional fields to create as many as five y-axes.

**Command:** Create - Chart



**Tab:** Y-Axis

1. Be sure the database containing the field you want is showing in the "Database" box.
2. Select a field in the "Y-Axis field" box.
3. Click Add.
4. Select the calculation type for the field from the "Chart the" box.

Each field you add to the y-axis box must have a calculation type assigned to it. Each calculation type has its own icon that displays to the left of the selected field name.

Change the calculation type by clicking the icon to the left of the field name and selecting a different calculation type icon from the pop-up box.

5. (Optional) To add additional fields, repeat steps 1 - 4.
6. Click Next or Done.

---

{button ,AL('H\_CHART\_ASSISTANT\_OVER;H\_CREATING\_PIE\_CHARTS\_STEPS;H\_DECIDING\_WHAT\_NEW\_CHARTS\_SHOULD\_LOOK\_LIKE\_REF;H\_DRILL\_DOWN\_TO\_DATA\_FOR\_CHARTS\_STEPS;H\_SELECTING\_A\_FIELD\_FOR\_THE\_SERIES\_STEPS;H\_SELECTING\_A\_FIELD\_FOR\_THE\_X\_AXIS\_STEPS;','0')} [See related topics](#)



## Creating a custom menu by copying one that exists



### Are you in Design?

1. Choose Create - Custom Menu.
2. Select the menu you want to base your work on.
3. Click Copy.  
The Define Custom Menu Bar dialog box appears.
4. Name the menu bar.
5. To create the new menu , redefine menu types, and add, move, and delete top-level commands and menu items.
6. Click OK to close the Define Custom Menu Bar dialog box.
7. Click Done.

---

{button ,AL(`H\_CREATING\_CUSTOM\_MENUS\_STEPS;H\_CUSTOM\_MENUS\_REF;H\_DELETING\_CUSTOM\_MENUS\_STEPS;H\_EDITING\_CUSTOM\_MENUS\_STEPS;H\_MOVING\_AND\_DELETING\_CUSTOMMENU\_COMMANDS\_STEPS;',0)} [See related topics](#)

## Creating custom menus

This task builds a menu from scratch.

If it makes more sense for you to create a menu by changing one that already exists, use Create - Custom Menu - Copy.



Are you in Design?

### Creating top-level commands for the menu bar

1. Choose Create - Custom Menu.
2. Click New.  
The Define Custom Menu Bar dialog box appears.
3. Name the menu bar.
4. Under Menu Type, double-click Standard Menu to open the drop-down box.
5. Select the type of menu you want to base this menu on.
6. Under Menu Name, click Menu and name the top-level command.  
This name appears on the menu bar of your custom menu.
7. To add items under this top-level command, go on to the next procedure.  
To add another top-level command, click Add Menu and repeat steps 4 - 6.

### Creating items under the top-level command

1. Under Item Action, double-click the cell to open the drop-down box.
2. Select a menu item.
3. To change the name of the menu item, under Item Name, select the cell and edit the name.
4. To add another item to the menu, click Add Item and repeat steps 1 - 3.

### When you finish

1. Click OK to close the Define Custom Menu Bar dialog box.
2. Click Done.
3. Attach the menu to a view using the Basics tab of the view InfoBox.

A custom menu is visible only in the view you attach it to, and only in Browse.

---

```
{button ,AL(^H_CREATING_A_CUSTOM_MENU_BY_COPYING_ONE_THAT_EXISTS_STEPS;H_CUSTOM_MENU_S_REF;H_DELETING_CUSTOM_MENUS_STEPS;H_EDITING_CUSTOM_MENUS_STEPS;H_MOVING_AND_DELETING_CUSTOMMENU_COMMANDS_STEPS;,'0)} See related topics
```

## Custom menus

Custom menus are visible only in views you attach them to, and only in Browse.

### Menu types

<u>To display a menu with a list of</u>	<u>Select</u>
Commands.	Standard Menu
Commands, followed by the names of the last five Approach files opened.	Menu + Files
Commands, followed by the names of each open Approach file and its current view.	Window Menu
Commands specific to the kind of view, for example, the Browse or Worksheet commands. You cannot alter this menu.	Context Menu
Available macros. You cannot add items to this menu.	Macro List
All the views in the Approach file. You cannot add items to this menu.	View List
NotesFlow Action commands.	NotesFlow Actions

### Keyboard shortcuts

Keyboard shortcuts let you choose commands by pressing ALT and a letter underlined in the menu name.

To identify this letter, type **&** (ampersand) right before the letter you want to underline in the Menu Name or Item Name cell. For example:

Calculation &Macro List

Underlines the letter M in Macro, so you can open the menu in Browse by pressing ALT+M.

**Note** To show an ampersand in a name, type **&&**. For example:

&Add && Delete

Places the ampersand between Add and Delete and also underlines the letter A in Add.

### Item Action drop-down box

The Item Action drop-down box shows

- All the commands you can add to a custom menu
- The names of all views and macros in the Approach file
- A blank line
- A menu divider (a line of hyphens)

---

{button ,AL(^H\_CREATING\_A\_CUSTOM\_MENU\_BY\_COPYING\_ONE\_THAT\_EXISTS\_STEPS;H\_CREATING\_CUSTOM\_MENUS\_STEPS;H\_DELETING\_CUSTOM\_MENUS\_STEPS;H\_EDITING\_CUSTOM\_MENUS\_STEPS;H\_MOVING\_AND\_DELETING\_CUSTOMMENU\_COMMANDS\_STEPS;:,0)} [See related topics](#)

## Custom Menu dialog box

### Choose a task

[Creating custom menus](#)

[Creating a custom menu by copying one that exists](#)

[Editing custom menus](#)

[Moving and deleting commands on custom menus](#)

[Deleting custom menus](#)

---

{button ,AL('H\_CUSTOM\_MENU\_REF';0)} [See related topics](#)

## Defining passwords for a database

Approach can set database passwords for dBASE, FoxPro, and Paradox databases only.

Set two passwords:

- One for users who need complete access to the database
- Another for users who need only to look at the data

**If you're trying to** set a password for the Approach file, click [TeamSecurity](#).

1. From the File menu, choose User Setup, and then choose Approach Preferences.



2. Click the Password tab.
3. Be sure the database you want to protect is showing in the "Database" box.
4. Enter the password in the "[Read/write password](#)" box.
5. Click Save Default.  
The Confirm Password dialog box appears.
6. Confirm the password by entering it in the Confirm Password box and click OK.  
The "Read-only password" box becomes available.
7. (Optional) Enter another password in the "[Read-only password](#)" box.
8. Confirm the read-only password and click OK.
9. Click OK.

---

{button ,AL('H\_PASSWORDS\_OVER;',0)} [See related topics](#)

## Deleting custom menus

If you delete a menu that is attached to a view, Approach replaces it with the default menu for the view.



### Are you in Design?

1. Choose Create - Custom Menu.
2. Select the custom menu.
3. Click Delete.

A message box appears to confirm your choice.

4. Click Yes.
5. Click Done.

---

{button ,AL(`H\_CREATING\_A\_CUSTOM\_MENU\_BY\_COPYING\_ONE\_THAT\_EXISTS\_STEPS;H\_CREATING\_CUSTOM\_MENU\_STEPS;H\_CUSTOM\_MENU\_REF;H\_EDITING\_CUSTOM\_MENU\_STEPS;H\_MOVING\_AND\_DELETING\_CUSTOMMENU\_COMMANDS\_STEPS;','0)} [See related topics](#)

## Displaying the contents of drop-down lists automatically

**Command:** File - User Setup - Approach Preferences



**Tab:** General

Under Navigation, select "Expand drop-down lists automatically."

When users tab into a field that is a drop-down box or a field box and list, it immediately expands to display the items on the list.

**If this setting is off:** Users must click the box or its arrow to display the list.

## Saving preferences

To save your preferences for future work sessions in Approach:

- If an Approach file is open: click Save Default, and then click OK.
- If an Approach file is not open: click OK.

## Downloading data before previewing

**Command:** File - User Setup - Approach Preferences



**Tab:** General

Under Data, select "Download data before Print Preview."

This option copies the current data set from the network database to your hard disk. Copying the data can take time, so do it when network activity is low.

The data set you print is the version on your hard disk rather than the one in the network database. That way, you can be sure what you're printing is what you previewed.

**If this setting is off:** When you print from the data on the network, you may not always print the data set you preview. This can happen because other people working in the network database may change the data between the time you preview it and the time you print. Most of the time this is not a problem, and leaving this setting off saves a lot of time.

## Saving preferences

To save your preferences for future work sessions in Approach:

- If an Approach file is open: click Save Default, and then click OK.
- If an Approach file is not open: click OK.



## Editing custom menus



### Are you in Design?

1. Choose Create - Custom Menu.
2. Select the custom menu.
3. Click Edit.  
The Define Custom Menu Bar dialog box appears.
4. To edit the menu, redefine menu types, and add, move, and delete top-level commands and menu items.
5. Click OK to close the Define Custom Menu Bar dialog box.
6. Click Done.

---

{button ,AL(`H\_CUSTOM\_MENUS\_REF;H\_DELETING\_CUSTOM\_MENUS\_STEPS;H\_MOVING\_AND\_DELETING\_CUSTOMMENU\_COMMANDS\_STEPS;',0)} [See related topics](#)

## Entering data using optimistic record locking

**Command:** File - User Setup - Approach Preferences



**Tab:** General

Under Data, select "Lock records using optimistic record locking."

This option allows two users to edit a record at the same time.

- When two users edit the same record, the changes are saved in the database for the first user to enter them. Then when the second user tries to enter changes, Approach asks the user whether to save and write over the changes of the first user, or cancel.
- Approach runs faster with optimistic record locking on because it does not have to check whether to lock a record when a user tries to view it.

**If this setting is off:** You're using full record locking. This means that two users can view a record at the same time, but only the first user to begin editing the record can save changes.

## Saving preferences

To save your preferences for future work sessions in Approach:

- If an Approach file is open: click Save Default, and then click OK.
- If an Approach file is not open: click OK.

## Identifying default directories

**Command:** File - User Setup - Approach Preferences



**Tab:** General

Click Default Directories.

The Default Directories dialog box appears, where you identify the following directories:

<u>The path you enter for</u>	<u>Tells Approach where to</u>
Default working directory	Save newly created files.
SmartMaster directory	Store Approach files that you save as SmartMaster applications (.MPR).

## Saving preferences

To save your preferences for future work sessions in Approach:

- If an Approach file is open: click Save Default, and then click OK.
- If an Approach file is not open: click OK.

## Making calculated fields available for joins

**Command:** File - User Setup - Approach Preferences



**Tab:** General

Under Show, select "Calculated fields in the Join dialog."

Showing calculated fields in the Join dialog box lets you join databases on fields of this type.

Calculated fields appear in italics at the bottom of the field lists in the Join dialog box.

**If this setting is off:** You cannot join databases on calculated fields.

## Saving preferences

To save your preferences for future work sessions in Approach:

- If an Approach file is open: click Save Default, and then click OK.
- If an Approach file is not open: click OK.

---

{button ,AL(`H\_JOINED\_DATABASES\_OVER;H\_JOIN\_DIALOG\_BOX\_CS;',0)} [See related topics](#)

## Moving and deleting commands on custom menus

### Moving menus or items

1. In the Define Custom Menu Bar dialog box, click the left margin next to the top-level menu or item you want to move.

To select more than one menu or item, drag in the left margin.

Both cells are highlighted, and the mouse pointer changes to a hand.

2. Drag the command or item to another location.

### Deleting menus or items

1. Select the top-level menu or item to delete.
2. Click Delete Menu or Delete Item.

---

```
{button ,AL('H_CREATING_A_CUSTOM_MENU_BY_COPYING_ONE_THAT_EXISTS_STEPS;H_CREATING_CUS  
TOM_MENU_STEPS;H_CUSTOM_MENU_REF;H_DELETING_CUSTOM_MENU_STEPS;H_EDITING_CUS  
TOM_MENU_STEPS;',0)} See related topics
```

## Moving between fields using ENTER

**Command:** File - User Setup - Approach Preferences



**Tab:** General

Under Navigation, select "Use Enter key to move between fields."

When you select this option, pressing ENTER on a form in Browse acts exactly like pressing TAB: it moves you to the next field in the tab order. It does not add data to the database.

To add data to the database, you must press CTRL+ENTER or click.



**If this setting is off:** Pressing ENTER enters the data in the database, but does not move you to the next field.

## Saving preferences

To save your preferences for future work sessions in Approach:

- If an Approach file is open: click Save Default, and then click OK.
- If an Approach file is not open: click OK.

---

{button ,AL(^H\_MOVING\_BETWEEN\_FIELDS\_REF;H\_MOVING\_FROM\_PAGE\_TO\_PAGE\_IN\_FORMS\_STEPS;H\_CHANGING\_THE\_TAB\_ORDER\_ON\_VIEWS\_STEPS;','0)} [See related topics](#)

## Overview: Passwords

### Defining passwords

To define

- Approach file passwords, choose File - TeamSecurity.



- Database passwords, choose File - User Setup - Approach Preferences and click the Password tab.

### Entering passwords

A password is a sequence of characters you must enter before you can work in an Approach file.

- Passwords are not case-sensitive.
- They can have up to 16 characters.

### Approach file password

A file can have more than one password. Different passwords for the same file can give you different privileges in that file.

For example, one password can give you complete access to edit and enter data in the associated databases as well as change the design of the views. Another password for the same file might let you do nothing except look at data. This is useful for files on networks; such files often must be available to many users, not all of whom should be able to change the file.

### Database passwords

Database passwords can be set for dBASE, Paradox, and FoxPro databases only.

This password grants you read-only access or read/write access to the database(s) associated with the file.

- A read-write password gives users complete access to the data in the database file.
- A read-only password allows users to read data in a database, but not modify it.

You can give users access to password-protected databases even if they don't know the database password. Choose File - TeamSecurity and create an Approach file password that allows users access to the databases.

---

{button ,AL('H\_DEFINING\_PASSWORDS\_FOR\_A\_DATABASE\_STEPS;H\_TEAMSECURITY\_DIALOG\_BOX\_CS','0  
)} [See related topics](#)

## Placing calls from Approach files

### Why place calls from Approach?

Suppose your company is offering a special price on a product for a limited time. You want to call your customers to let them know as soon as possible, but you don't like the idea of having to punch in all those numbers.

By using the phone numbers that you have in your customer database, you can automate the dialing of phone numbers and make the task as efficient, error-free, and speedy as possible.

### Preparing to place calls

1. Connect a modem to your computer.
2. Open the Approach file for the database containing the phone numbers.
3. (Optional) If you want to call only certain customers, do a find and work with the found set of phone numbers.
4. Choose File - User Setup - Approach Preferences.



5. Click the Dialer tab and enter the information required.

### Placing the calls



#### Are you in Browse?

1. Click the phone number field.
2. Choose Browse - Dial.



The Dialing dialog box appears, and Approach dials the number.

**Note** If you don't select a field containing phone numbers, the Dial Number dialog box appears. Enter a number and click OK.

3. Conduct your business on the phone, and then hang up.
4. Go to the next record.
5. Repeat steps 1 - 4.



## Preferences dialog box: Display tab

### Choose a task

[Setting display preferences for the Approach window](#)

[Setting preferences for the Design environment](#)

[Adding custom controls to the Tools palette](#)

---

```
{button ,AL('H_Setting_a_default_sort_order_for_looking_at_records_in_Browse_steps;H_PREFERENCES_DIALOG_BOX_INDEX_TAB_CS;H_PREFERENCES_DIALOG_BOX_GENERAL_TAB_CS;H_PREFERENCES_DIALOG_BOX_DATABASE_TAB_CS;H_DEFINING_PASSWORDS_FOR_A_DATABASE_STEPS;H_SETTING_DIALING_PREFERENCES_REF;';0)} See related topics
```

## Preferences dialog box: General tab

### Choose a task

[Making calculated fields available for joins](#)

[Showing the Add Field dialog box after creating new fields](#)

[Showing the Cancel Macro dialog box while running macros](#)

[Moving between fields using ENTER](#)

[Displaying the contents of drop-down lists automatically](#)

[Identifying default directories](#)

[Downloading data before previewing](#)

[Entering data using optimistic record locking](#)

---

{button ,AL('H\_PREFERENCES\_DIALOG\_BOX\_DISPLAY\_TAB\_CS;H\_Setting\_a\_default\_sort\_order\_for\_looking\_at\_records\_in\_Browse\_steps;H\_PREFERENCES\_DIALOG\_BOX\_INDEX\_TAB\_CS;H\_PREFERENCES\_DIALOG\_BOX\_DATABASE\_TAB\_CS;H\_DEFINING\_PASSWORDS\_FOR\_A\_DATABASE\_STEPS;H\_SETTING\_DIALING\_PREFERENCES\_REF;',0)} [See related topics](#)

**Details: Setting a default sort order for looking at records in Browse**

The sort order you set here does not affect the order of records in the database, only the order in which they appear by default when you display them in Browse. (Databases generally store records in the order that you entered them.)

**The primary sort field**

The first field in the "Fields to sort on" box is the primary sort field. Approach sorts records based on the data in this field.

For example, Last Name is a common primary sort field to display the records in an employee database in alphabetical order.

**Subsequent sort fields**

The second sort field, and any others you select, give Approach a way to settle conflicts when more than one record has the same data in the primary sort field.

For example, an employee database has 12 records containing the name Smith in the primary sort field, Last\_Name. You select First\_Name as the second sort field. Approach then sorts the record for Jane Smith before the record for John Smith.

---

{button ,AL(`H\_SETTING\_A\_DEFAULT\_SORT\_ORDER\_FOR\_RECORDS\_IN\_BROWSE\_STEPS',1)} Go to  
procedure

### Setting a default sort order for looking at records in Browse

For each Approach file, you can set a sort order to move through records in that order in Browse.

**Caution** When you create a default sort order it could slow performance on a large database, since Approach has to sort the database before displaying the records.

1. Open the Approach file (.APR).
2. Choose File - User Setup - Approach Preferences.



3. Click the Order tab.
4. Be sure the database showing in the "Maintain default sort for" box is the one you want.
5. Select a field in the "Fields" box.
6. Click Add.
7. Select an ascending or descending sort order for the field.
8. To add additional fields, repeat steps 4 - 7.
9. (Optional) To use this sort order when you open this file in the future, click Save Default.
10. Click OK.

---

{button ,AL('H\_SETTING\_A\_DEFAULT\_SORT\_ORDER\_FOR\_RECORDS\_IN\_BROWSE\_DETAILS',1)} [See details](#)

## Setting dialing preferences

These preferences associate a modem with an Approach file and record information about the phone you use with Approach. While setting preferences, have the documentation for your modem at hand.

**Command:** File - User Setup - Approach Preferences



**Tab:** Dialer

**Save Default:** Saves your preferences for future work sessions in Approach.

### Modem settings

<u>Option</u>	<u>Description</u>
Modem port	Specifies the computer communication port that the modem is connected to.
Baud rate	Specifies the baud rate of the modem.
Dial prefix	Some modems need prefix and suffix codes to dial. For example, you may need to dial a credit card number after dialing the phone number. Store such codes here rather than with each phone number.
Dial suffix	
Hang-up	Consult your modem documentation for the command string used to hang up.
Initialize	Consult your modem documentation for the command string to initialize the modem.

### Dialing settings

<u>Option</u>	<u>Description</u>
Access code	Specifies the number(s) for accessing an exchange or phone system, and if necessary, a comma for a pause. For example, to dial 9 for an outside line, type <b>9,</b> . The comma inserts a pause to wait for the outside line.
Do not dial	Specifies numbers to omit when dialing. For example, use this option to remove the area code or international dialing code when you are dialing within that area code or country.
Dial Type	Most telephones use tone dialing. Rotary phones use pulse dialing.

---

{button ,AL(^H\_PLACING\_CALLS\_FROM\_APPROACH\_FILES\_STEPS;',0)} [See related topics](#)

## Setting display preferences for the Approach window

Command: File - User Setup - Approach Preferences



Tab: Display

<u>To display</u>	<u>Select</u>
Buttons at the top of the window providing shortcuts for common tasks.	SmartIcons
Buttons at the bottom of the window for switching views, switching environments, and displaying information about the current view.	Status bar
Buttons at the top of window for switching environments, doing finds, entering new records, and when you choose View - Show Tab Order, changing the tab order.	Action bar
Tabs showing view names. Click a tab to go to the view. When off, use status bar to switch views.	View tabs
Command descriptions in the title bar when you highlight a menu command.	Title bar Help
A dialog box for opening and creating files when you start Approach or close a file.	Welcome dialog

### Showing summaries in reports

Select "Report summaries" to ensure that you see summaries whenever you go to a report. With this option, Approach displays the report in either the Print Preview or Design environment.

**Note** To see summaries, you must also turn on View - Show Data.

### Changing the default style

Click Default Style to display the Define Style dialog box, where you edit the default style.

The default style is a collection of style properties that Approach uses to create new views and objects, including the following:

- Font and attributes for field data
- Color and borders of field boxes
- Font and attributes for labels
- Attributes for PicturePlus fields
- Color and borders of views

Like any other named style, you can change the default style so that new views and objects have properties you prefer.

### Saving preferences

To save your preferences for future work sessions in Approach:

- If an Approach file is open: click Save Default, and then click OK.
- If an Approach file is not open: click OK.

---

{button ,AL(^H\_SETTING\_PREFERENCES\_FOR\_THE\_DESIGN\_ENVIRONMENT\_REF;',0)} [See related topics](#)

## Setting preferences for database files

**Command:** File - User Setup - Approach Preferences



**Tab:** Database

### For dBASE and FoxPro files

You should periodically compress the file.

When you delete records in dBASE or FoxPro databases, the records are only marked for deletion; they are not actually deleted until you compress the file. Approach file compression removes unused space left by deleted records and rebuilds the index.

Compressing the file can help improve performance, ensure the integrity of the index, and use disk space more efficiently.

### For dBASE, FoxPro, and Paradox files

You can do the following:

- Select read-only access to the database file.
- Select either the DOS or Windows character set.

The character set determines how you enter special characters that are not on the keyboard. For example, if you are using the DOS set and want to type the symbol for Yen (¥), press ALT and type 157 on the numeric keypad. Using the Windows set, press ALT and type 165 on the numeric keypad.

### For Paradox 4.0 files

You can change the case-sensitivity for doing finds in Paradox 4.0 database files. In Paradox 4.0 files, finds are initially not case-sensitive, but you can change them to be case-sensitive in Approach.

Finds in Paradox 3.5 files are always case-sensitive.

### For Lotus Notes, SQL, Access, and ODBC tables

The options for these tables affect all of the tables you create or open in Approach, not just the table selected in the Preferences dialog box.

- For Lotus Notes, SQL, Access, and ODBC: Select read-only access to the database file.
- For SQL, Access, and ODBC: Display SQL system tables in the list of file names in dialog boxes.

### Save Default

Saves your preferences for future work sessions in Approach.

Options available on the Database tab vary according to the file type of the database you select.

## Setting preferences for the Design environment

Command: File - User Setup - Approach Preferences



Tab: Display

### Settings for the Design environment

<u>To display</u>	<u>Select</u>
Data from a record instead of field names.	Data
Rulers to help you design a view.	Rulers
Add Field dialog box.	Add Field dialog
A floating palette of buttons for creating drawn objects, fields, and macro buttons.	Tools palette

### Settings for the grid

<u>To</u>	<u>Select</u>
Show a grid to help you see the alignment of objects.	Show grid
Force objects to line up along the grid when you draw, move, or resize them.	Snap to grid
Specify inches or centimeters as the unit of measurement for the grid.	Units
Specify a width for the increments on the grid.	Width

### Saving preferences

To save your preferences for future work sessions in Approach:

- If an Approach file is open: click Save Default, and then click OK.
- If an Approach file is not open: click OK.

---

{button ,AL('H\_SETTING\_DISPLAY\_PREFERENCES\_FOR\_THE\_APPROACH\_WINDOW\_REF';,0)} [See related topics](#)



## Showing the Add Field dialog box after creating new fields

**Command:** File - User Setup - Approach Preferences



**Tab:** General

Under Show, select "Add Field dialog after creating new fields."

To simplify adding new fields to a view, have Approach automatically display the Add Field dialog box, which lists the fields you just created using the Field Definition box. With this option, expect the following:

- The Add Field box appears when you close the Field Definition dialog box, if you have added new fields to the database.
- Add Field shows only the fields you just defined or edited. To see all fields of the database, click Show All Fields at the bottom of the Add Field dialog box.

**If this setting is off:** Add fields by choosing Add Field on the context menu.

## Saving preferences

To save your preferences for future work sessions in Approach:

- If an Approach file is open: click Save Default, and then click OK.
- If an Approach file is not open: click OK.

## Showing the Cancel Macro dialog box while running macros

**Command:** File - User Setup - Approach Preferences



**Tab:** General

Under Show, select "Cancel Macro dialog when running macros."

To let users cancel a macro while it is running, have Approach display the Cancel Macro dialog box.

**If this setting is off:** Users have no visual clues for canceling a macro. They must press ESC.

## Saving preferences

To save your preferences for future work sessions in Approach:

- If an Approach file is open: click Save Default, and then click OK.
- If an Approach file is not open: click OK.

### **Using the Index to get Help**

If Help is not available in the current context, use the Index to get Help.

1. In the Help window, click Help Topics.
2. Click Index.
3. Enter the task or term you want information on.
4. Select the index entry you want, and then click Display.

## **dBASE files in Approach**

**Approach creates and uses these files:** dBASE III+ and dBASE IV

**File extension:** .DBF

**Network:** You can share Approach dBASE files on a network.

### **Viewing dBASE files in Approach**

These are the main differences between viewing dBASE files in Approach and in other dBASE applications:

- In a dBASE file created in Approach, you can use field names with any characters, up to 32 characters long. If you view the file in other dBASE applications, you may see a modified version of your field names.
- Memo fields greater than 5,000 characters cannot be viewed in the internal memo editor for dBASE III+.
- Memo fields greater than 64,000 characters cannot be viewed in the internal memo editor for dBASE IV.
- Approach PicturePlus fields cannot be viewed in other dBASE applications.

### **Restrictions on field names**

**Maximum length of field names:** 32 characters

**Permitted characters:** Any, including letters, whole numbers, spaces, commas, periods, arithmetic signs

Other dBASE applications have more restrictions on the length of field names and on the characters you can use. For field names that do not satisfy other applications, Approach saves both the name you give the field and a modified name that other applications can read. If you open the database in another dBASE application, you see the modified field names.

### **Restrictions on field lengths**

You must specify a field length for text and numeric fields. Other fields are fixed in length or do not require a specified length.

**Maximum length for text fields:** 254

**Maximum length for numeric fields:** 19. You can specify up to 15 decimal places, but the total cannot exceed 19.

### **Index files**

Approach uses its own indexes for keeping track of records in a dBASE file.

### **Limits on files, records, and fields**

<u>Item</u>	<u>Limit</u>
File size	2 gigabytes
Database files open	Up to 30, depending on memory
Records per database	1,000,000,000
Record size	4,000 bytes
Fields per record	128 (dBASE III+) 255 (dBASE IV)
Fields used in a sort	255
Size of a memo file	Limited by disk space
Size of a PicturePlus file	Limited by disk space
Indexes per database	255

---

{button ,AL('H\_OPENING\_DATABASES\_CREATED\_IN\_OTHER\_APPLICATIONS\_STEPS;H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_DBASE\_FILES\_STEPS';,0)} [See related topics](#)

## Files created or used by Approach

The file extensions most often used in Approach:

- .DBF for dBASE and FoxPro files
- .DB for Paradox files
- .APR for Approach files

## Files created or used by Approach

The following table gives the extensions for Approach files and data-related files that Approach creates or uses.

You may see other extensions for files that another database application has created. For information about those extensions, see the documentation for the application.

When n appears in an extension, it stands for a variable number. For example, the extension .Xnn might appear in a file name as .X24.

<u>Extension</u>	<u>File type</u>
.ADX	Approach dBASE index
.APR	Approach file, for storing views
.APT	Consolidated Approach data and views, created when you attach an .APR file to a TeamMail message
.APX	Approach-specific Paradox information file
.CDX	FoxPro compound index
.DB	Paradox database file
.DBF	dBASE or FoxPro database file
.DBQ	Paradox memo file
.DBT	dBASE memo file
.FPT	FoxPro memo file
.IDX	FoxPro 2.0 index
.LCK	Paradox lock file
.MB	Paradox 4.0/Windows memo file
.MDB	Microsoft Access database file
.MDX	Maintained dBASE index
.MPR	Approach SmartMaster Application
.NDX	Nonmaintained dBASE index
.NRP	Notes Reporter file
.NSF	Notes database file
.OYZ	Approach alternate dBASE index
.QRY	Approach query file, for SQL tables
.SMI	Lotus SmartIcon file
.VEW	Approach file, for storing views; versions earlier than 3.0
.Xnn	Paradox single secondary index
.Ynn	Paradox single secondary index
.XGn	Paradox composite secondary index

.YGn	Paradox composite secondary index
------	-----------------------------------

Approach creates an .OYZ file only if it needs to create an index and an .ADX file already exists for another application.

### Text and spreadsheet files

You can use the following text and spreadsheet files for creating database files and for importing and exporting data.

<u>Extension</u>	<u>File type</u>
.TXT	Delimited or fixed-length text
.WKS	Lotus 1-2-3 Release 1A
.WK1	Lotus 1-2-3 Release 2
.WK3	Lotus 1-2-3 Release 3
.WK4	Lotus 1-2-3 Release 4 or 5
.WRK	Symphony Release 1 or 1.01
.WR1	Symphony Release 1.1, 1.2, or 2
.XLS	Excel 3.0 or 4.0

### Graphic files

You can use graphic files for importing images into a PicturePlus field and for putting an object on a view as a design element. These are the filename extensions for supported file types:

<u>Extension</u>	<u>File type</u>
.BMP	Windows bitmap
.EPS	Encapsulated Postscript
.GIF	Graphics interchange
.JPG	JPEG (Joint Photographic Experts Group)
.PCX	Windows Paintbrush
.TGA	Targa
.TIF	TIFF (Tagged Image File Format)
.WMF	Windows metafile

### LotusScript files

These are the filename extensions for supported LotusScript file types:

<u>Extension</u>	<u>File type</u>
.LSS	ASCII text files containing LotusScript code
.LSO	Compiled LotusScript files

### Approach files

Approach files (.APR) store views, and all their style and layout information, calculated fields, variable fields, macros, and scripts.

The Approach file does not store any data. Instead, you do all your work in the Approach files, including entering and editing data, finding and sorting records, and organizing and printing information.

When you create a new database file in Approach (or open an existing database file, spreadsheet, or text file from another application), Approach automatically creates or opens a new Approach file for it.

### Index files

Database applications create index files that list all the values for a field and records in a database file. An index is created when you use a field in a find, list, or join. Approach uses its own index file (.ADX) for dBASE and FoxPro

databases, and the Paradox index (.X\*, .Y\*) for Paradox databases.

Approach creates an .OYZ file only if it needs to create an index and an .ADX file already exists for another application.

### **Memo files**

When you define a field as the memo field type, Approach creates a corresponding memo (.DBT) file to store the field's information. Memo files allocate space in 4K sections and can contain a maximum 64K of information.

### **LotusScript files**

These are the file extensions for supported LotusScript file types:

<u>Extension</u>	<u>File type</u>
.LSS	ASCII text files containing LotusScript code
.LSO	Compiled LotusScript files

### **Text and spreadsheet files**

You can use the following text and spreadsheet files for creating database files and for importing and exporting data.

<u>Extension</u>	<u>File type</u>
.TXT	<u>Delimited</u> or <u>fixed-length</u> text
.WKS	Lotus 1-2-3 Release 1A
.WK1	Lotus 1-2-3 Release 2
.WK3	Lotus 1-2-3 Release 3
.WK4	Lotus 1-2-3 Release 4 or 5
*.123	Lotus 1-2-3 97
.WRK	Symphony Release 1 or 1.01
.WR1	Symphony Release 1.1, 1.2, or 2
.XLS	Excel 3.0 or 4.0

### **Graphic files**

You can use graphic files for importing images into a PicturePlus field and for putting an object in a view as a design element. These are the file extensions for supported file types:

<u>Extension</u>	<u>File type</u>
.BMP	Windows bitmap
.EPS	Encapsulated Postscript
.GIF	Graphics interchange
.JPG	JPEG (Joint Photographic Experts Group)
.PCX	Windows Paintbrush
.TGA	Targa
.TIF	TIFF (Tagged Image File Format)
.WMF	Windows metafile

## FoxPro files in Approach

Approach creates and uses these files: FoxPro 2.1

**File extension:** .DBF

**Network:** You cannot share FoxPro files on a network in Approach. You can open a FoxPro file on a network, but other users will not be able to open it at the same time.

## Viewing FoxPro files in Approach

These are the main differences between viewing FoxPro files in Approach and in other FoxPro applications:

- In a FoxPro file created in Approach, you can use field names with any characters, up to 32 characters long. If you view the file in other FoxPro applications, you may see a modified version of your field names.
- Approach PicturePlus fields cannot be viewed in other FoxPro applications.

## Restrictions on field names

**Maximum length of field names:** 32 characters

**Permitted characters:** Any, including letters, whole numbers, spaces, commas, periods, arithmetic signs

Other FoxPro applications have more restrictions on the length of field names and on the characters you can use. For field names that do not satisfy other applications, Approach saves both the name you give the field and a modified name that other applications can read. If you open the database in another FoxPro application, you see the modified field names.

## Restrictions on field lengths

You must specify a field length for text and numeric fields. Other fields are fixed in length or do not require a specified length.

**Maximum length for text fields:** 254

**Maximum length for numeric fields:** 19. You can specify up to 15 decimal places, but the total cannot exceed 19.

## Index files

Approach uses its own indexes for keeping track of records in a FoxPro file.

## Limits on files, records, and fields

<u>Item</u>	<u>Limit</u>
File size	2 gigabytes
Database files open	Up to 30, depending on memory
Records per database	1,000,000,000
Record size	4,000 bytes
Fields per record	255
Fields used in a sort	255
Size of a memo file	Limited by disk space
Size of a PicturePlus file	Limited by disk space
Indexes per database	255

---

{button ,AL(`H\_OPENING\_DATABASES\_CREATED\_IN\_OTHER\_APPLICATIONS\_STEPS';,0)} See related topics



## IBM DB2 tables in Approach

### Approach can open these files:

- IBM DB2/2, DB2/6000, and DB2/HP-UX tables, opened directly in Approach, through ODBC support
- IBM DB2, DB2/400, and SQL/DS tables, via the IBM Distributed Database Connection Services (DDCS), through ODBC support
- IBM DB2 tables, through the Micro Decisionware Database Gateway (MDI), version 2.0 or later

### Viewing DB2 tables in Approach

These are the main differences between viewing DB2 tables in Approach and in other DB2 applications:

- Date fields in DB2 include both a date and a time. In Approach, these fields appear as two fields: a date field and a time field. The extension "\_Time" is added to the time field.

For example, suppose the DB2 date field Shipped has the value "5/10/94 10:35PM." Approach displays a date field Shipped with the value "5/10/94" and a time field Shipped\_Time with the value "10:35PM."

- You can create memo and PicturePlus fields in a DB2 table you open through ODBC, but not in a DB2 table you open through MDI. Approach PicturePlus fields cannot be viewed in other DB2 applications.

If you read a DB2 table without a unique index, Approach opens a read-only copy of the table.

After you connect to a DB2 server, all the user names appear in the list view. Double-click your user name to display the tables that belong to you in the list view.

### Restrictions on field names for tables opened through ODBC

<u>Data type</u>	<u>Maximum length of field names</u>
PicturePlus	12 characters
Boolean	11 characters
All others	18 characters

**Permitted characters:** The first character in a field name must be a letter. After that, the name can have letters and whole numbers.

**Characters not to use:** Spaces and ODBC keywords are not allowed.

### Restrictions on field names for tables opened through MDI

<u>Data type</u>	<u>Maximum length of field names</u>
Boolean	11 characters
All others	18 characters

**Permitted characters:** The first character in a field name must be a letter. After that, the name can have letters, whole numbers, and the underscore character (\_).

### Restrictions on field lengths

You must specify a field length for text fields. Other fields are fixed in length or do not require a specified length.

**Maximum length of text fields:** 254

### Limits on tables, records, and fields

<u>Item</u>	<u>Limit</u>
Table size	Limited only by disk space
Tables open at a time	255
Records per table	Limited only by disk space
Record size	2,000 or 4,000 bytes
Fields per record	300
Fields used in a sort	As many fields as are in the table
Memo and picture fields per table	Limited only by disk space (available only for DB2 tables you open through ODBC)



## Lotus Notes files in Approach

**Approach creates and uses these files:** Approach only creates forms within .NSF files. Approach does not create the .NSF files.

**File extension:** .NSF

**Network:** You can share .NSF files on a Notes server but not on a local network file server.

## Viewing Lotus Notes files in Approach

Approach has transparent access to Notes database files. All of Approach's reporting, forms, and updating capabilities can be used with data stored in Notes.

Approach and Notes can pass information back and forth via global variables using [Notes/FX](#).

Approach users can distribute forms, reports, worksheets, charts, mailing labels, and crosstabs via Notes mail.

## Restrictions on field names

**Maximum length of field names:** 32

**Permitted characters:** Field names must begin with a letter and may contain up to 32 bytes. The field name can include letters, numbers, and the symbols \_ and \$.

## Restrictions on field lengths

**Maximum length for text fields:** 254

**Maximum length for numeric fields:** Fixed

## Index files

No maximum

## Limits on files, records, and fields

<u>Item</u>	<u>Limit</u>
File size	No limits
Database files open	Limited by Approach
Records per database	No limits
Record size	Limited by Approach
Fields per record	Limited by Approach
Fields used in a sort	32
Size of a memo file	No limit
Size of a PicturePlus file	No limit
Indexes per database	No limit (50 maximum in VSE)

## Microsoft Access tables in Approach

**Approach works with these files:** Microsoft Access database tables. To open an Access table in Approach, the table must be part of an Access database that has been set up using the 32-BIT ODBC Admin. You can use ODBC Admin to create a data source that either links to an existing Access database or creates a new Access database.

To open a table in an Access database from Approach:

1. Choose File - Open.
2. Select Microsoft Access Driver (\*.MDB) from the "Files of type" box.
3. Select the database.
4. Specify the table to open.
5. Click Open.

You can also add tables to the Access database. The new tables can be from another Access database or any other file type. Choose File - Export Data to export them to the Access database.

**File extension:** .MDB

**Network:** You can share Access tables on a network in Approach. The connection to Access is through the ODBC driver.

## Viewing Access tables in Approach

These are the main differences between viewing Access tables in Approach and in the Microsoft Access application:

- Approach PicturePlus fields cannot be viewed in Access.
- In Approach, fields in the Access currency field type are converted to numeric fields.
- Timestamp fields in Access include both a date and a time. In Approach, these fields appear as two fields: a date field and a time field. The extension "\_Time" is added to the time field.

For example, suppose the Access timestamp field Shipped has the value "5/10/94 10:35PM." Approach displays a date field Shipped with the value "5/10/94" and a time field Shipped\_Time with the value "10:35PM."

If you read an Access table without a unique index, Approach opens a read-only copy of the file.

## Restrictions on field names in Microsoft Access

<u>Data type</u>	<u>Maximum length of field names</u>
Text, memo, Boolean (bit), numeric (numeric/currency)	32 characters
Date, time	26 characters

**Permitted characters:** The first character in a field name must be a letter. After that, the name can have letters and whole numbers.

**Characters not to use:** Spaces and ODBC keywords

## Restrictions on field lengths

You must specify a field length for text fields. Other fields are fixed in length or do not require a specified length.

**Maximum length for text fields:** 255

## Limits on tables, records, and fields in Microsoft Access

<u>Item</u>	<u>Limit</u>
Table size	1 gigabyte (versions 1.1 and 2.0) 128 megabytes (version 1.0)
Tables open at a time	Up to 255, depending on memory
Records per database	Limited by the size of the database
Record size	Limited by the number of fields
Fields per record	255
Fields used in a sort	10
Size of a memo field	32,000 bytes

Size of a PicturePlus file	1 gigabyte (versions 1.1 and 2.0) 128 megabytes (version 1.0)
Indexes per database	32

## ODBC data sources in Approach

Approach is fully compatible with the Open Database Connectivity standard (ODBC). You can use only 32-bit drivers.

Approach supports the following ODBC drivers:

Informix

Oracle

SQL Server

Sybase

## Viewing ODBC data sources in Approach

These are the main differences between viewing ODBC data in Approach and in other applications:

- You can add PicturePlus fields to an ODBC data source in Approach only if the driver supports the Long Var Binary field type. You can add memo fields only if the driver supports the Long Var Char field type.
- You cannot view Approach PicturePlus fields in other ODBC applications.
- In Approach, fields in the ODBC field types Big Int, Tiny Int, Small Int, Real, Numeric, Decimal, Integer, Double, and Float are converted to numeric fields.
- Timestamp fields in ODBC include both a date and a time. In Approach, these fields appear as two fields: a date field and a time field. The extension "\_Time" is added to the time field.

For example, suppose the ODBC Timestamp field Shipped has the value "5/10/94 10:35PM." Approach displays a date field Shipped with the value "5/10/94" and a time field Shipped\_Time with the value "10:35PM."

If you read an ODBC data source without a unique index or timestamp, Approach opens a read-only copy of the view file or table.

## Restrictions on field names

The maximum length of a field name depends on whether the ODBC driver supports the data type of the field:

<u>Data type (ODBC data types in parentheses)</u>	<u>If the driver supports the data type</u>	<u>If the driver does not support the data type</u>
Text (Char or Var Char)	30 or limit of driver	(Always supported)
Numeric (Bit Int, Tiny Int, Small Int, Real, Numeric, Decimal, Integer, Double, or Float)	30 or limit of driver	30 or limit of driver; stored as text
Memo (Long Var Char)	30 or limit of driver	Field is disabled
Boolean (Bit)	30 or limit of driver	(30 or limit of driver) - 7; stored as text
Date (Date)	30 or limit of driver	(30 or limit of driver) - 6; stored as timestamp (if supported) or as text
Time (Time)	30 or limit of driver	(30 or limit of driver) - 6; stored as timestamp (if supported) or as text
PicturePlus (Long Var Binary)	(30 or limit of driver) - 6	Field is disabled

If two lengths are given for a field name (such as "30 or limit of driver"), the maximum can only be the shorter of the two lengths.

**Permitted characters:** The first character in a field name must be a letter. After that, the name can have letters and

whole numbers.

**Characters not to use:** Spaces and ODBC keywords

**Restrictions on field lengths**

You must specify a field length for text fields. Other fields are fixed in length or do not require a specified length.

**Maximum length of text fields:** The limit of the ODBC driver. Most drivers have a limit of 255.

**Limits on tables, records, and fields**

In an ODBC data source, the size of the table and the number of records in it are limited only by disk space. You can have up to 255 tables open at a time.

The limits on record size, fields per record, fields in a sort, and memo and picture fields are determined by the database application for the ODBC data source. For more information, consult the documentation for the ODBC driver or for the database application.

## Oracle SQL tables in Approach

**Approach can work with these files:** Tables in Oracle SQL, version 7

**Network:** You can work with an Oracle table on a server or on your local drive.

### Viewing Oracle SQL tables in Approach

These are the main differences between viewing tables in Approach and in other Oracle SQL applications:

- Approach PicturePlus fields cannot be viewed in other Oracle SQL applications.
- In Oracle SQL, null and blank field values sort greater than nonblank field values.
- Date fields in Oracle SQL include both a date and a time. In Approach, these fields appear as two fields: a date field and a time field. The extension "\_Time" is added to the time field.  
For example, suppose the Oracle SQL date field Shipped has the value "5/10/94 10:35PM." Approach displays a date field Shipped with the value "5/10/94" and a time field Shipped\_Time with the value "10:35PM."
- When reading Oracle SQL 7 tables, Approach treats varchar2 fields with more than 255 characters as memo fields.

If you read an Oracle view file based on more than one Oracle table, Approach opens a read-only copy of the view file.

After you connect to an Oracle 7 server, all the user names appear in the list view. Double-click your user name to display the tables that belong to you in the list view.

### Restrictions on field names

If an Oracle table is created with lowercase field names, you must enclose the field names in double quotation marks (" ") to access the fields.

<u>Data type</u>	<u>Maximum length of field names</u>
Text, memo, numeric	30 characters
Date, time, Boolean, PicturePlus	23 characters

**Permitted characters:** All, except the double quotation mark (" ")

**Characters not to use:** Double quotation mark (" ")

**Oracle field names in formulas:** Enclose the field name in double quotation marks (" ") if you want the field name in lowercase or if it contains a space, period, comma, or any of the following characters:

/ \* + - < > (

### Restrictions on field lengths

You must specify a field length for text fields. Other fields are fixed in length or do not require a specified length.

**Maximum length for text fields:** 255.

In Oracle 7, a text field can be up to 2,000 characters. If you create a text field that is longer than 255 characters, Approach treats it as a memo field.

### Limits on tables, records, and fields

<u>Item</u>	<u>Limit</u>
Table size	Limited only by disk space
Tables open at a time	255
Records per table	Limited only by disk space
Record size	Limited by the number of fields and the size of the field type
Fields per record	254
Fields used in a sort	As many fields as are in the table
Size of a memo or picture field	2 gigabytes (Oracle 7)
Memo and picture fields per	1 memo field or 1 picture field



table

(but varchar2 fields already in  
an Oracle 7 table are treated  
as memo fields in Approach)

## Paradox files in Approach

**Approach creates and uses these files:** Paradox 3.5 and Paradox 4.0. All characteristics of Paradox 4.0 described in this topic also apply to Paradox for Windows.

**File extension:** .DB

**Network:** You can share Approach Paradox files on a network.

Paradox files require a **key field**. When you create a Paradox database in Approach or try to use one that does not have a key field, the Choose Key Field dialog box appears automatically. You can either add a new field to be the key or select an existing one or a combination of fields.

## Viewing Paradox files in Approach

Because Paradox 3.5 does not support memo or PicturePlus fields, you cannot view them using Paradox 3.5.

You can view memo and PicturePlus fields in Paradox 4.0, unless the database was created in the Paradox 3.5 file type. However, Paradox 4.0 PicturePlus fields are read-only in Approach.

## Restrictions on field names

<u>Data type</u>	<u>Maximum length of field names</u>
Text, numeric, date	25 characters
Time, memo, Boolean, PicturePlus	18 characters

**Permitted characters:** Letters, whole numbers, spaces, commas, periods, arithmetic signs

**Paradox field names in formulas:** Enclose the field name in double quotation marks (" ") if it contains a space, period, comma, or any of the following characters:

/ \* + - < >

## Restrictions on field lengths

You must specify a field length for text fields. Other fields are fixed in length or do not require a specified length.

**Maximum length for text fields:** 255

## Index files

A primary **index** for a Paradox file is built on the key field specified when you create the file. Indexes in Paradox 3.5 are case-sensitive and in Paradox 4.0 are case-insensitive.

## Limits on files, records, and fields

<u>Item</u>	<u>Limit</u>
File size	4 gigabytes
Database files open	2 to 10, depending on the number of secondary index files open
Records per database	2,000,000,000
Record size	1,350 bytes
Fields per record	255
Fields used in a sort	255
Size of a memo file	Limited by disk space
Size of a PicturePlus file	Limited by disk space
Indexes per database	255

---

{button ,AL(`H\_CREATING\_SECONDARY\_INDEXES\_FOR\_PARADOX\_DATABASES\_STEPS;H\_SETTING\_FILESHARING\_OPTIONS\_FOR\_PARADOX\_FILES\_STEPS;H\_SPECIFYING\_A\_KEY\_FIELD\_FOR\_A\_PARADOX\_DATA\_BASE\_STEPS;';0)} [See related topics](#)



## QMF files in Approach

### Approach can open these files:

- QMF Query - When you select a QMF Query, the query is run on the QMF server. The results appear in an Approach form and worksheet. This data is read-only.
- QMF Procedure - When you select a QMF Procedure, the procedure is run on the QMF server. The last data set used by the procedure appears in an Approach form and worksheet. This data is read-only.

QMF files opened in Approach cannot be updated, edited, or saved.

To access QMF files on the server, you must use SRPI or APPC connections.

### Approach can import these files:

- QMF Form - When you select a QMF Form to import, the form is downloaded from the QMF server. It does not contain any data, but its attributes are used to create a new Approach report or crosstab view.
- QMF Query - If you have the DB2 data source defined, you can import a QMF Query using the SQL Assistant. The SQL statement of the QMF Query is downloaded from the QMF server. Use the DB2 data source to connect to DB2 and submit the SQL statement to DB2 directly.

## Viewing QMF tables in Approach

- Timestamp fields in QMF include both a date and a time. In Approach, these fields appear as two fields: a date field and a time field. The extension "\_TIME" is added to the time field.  
For example, suppose the QMF timestamp field SHIPPED has the value "5/10/94 10:35PM." Approach displays a date field SHIPPED with the value "5/10/94" and a time field SHIPPED\_TIME with the value "10:35PM."
- After you connect to a QMF server, all the user names appear in the list view. Double-click your user name to display the QMF objects that belong to you in the list view.

## Limits on tables, records, and fields

<u>Item</u>	<u>Limit</u>
Table size	Limited only by disk space
Tables open at a time	Limited only by disk space
Records per table	Limited only by disk space
Record size	Limited only by the QMF export facility
Fields per record	Limited by the database QMF uses
Fields used in a sort	As many fields as are in the table
Field name	18 characters

## Query files in Approach

Query files allow you to quickly connect to a server and gain access to specific information in either SQL or non-SQL databases (such as dBASE, FoxPro, and Paradox).

**File extension:** .QRY

Create or edit a query file using any text editor. These are the commands you can use:

Type=Oracle or SQLServer or DB2-MDI or Notes or ODBC type

Network=*protocol letter* (for Oracle SQL\*NET1.x only)

Path=*name of the database server*

User=*your name*

Password=*your password*

Database=*name of the database* (for SQL Server only)

Select *valid SELECT statement*

The commands for a query file are case-insensitive. They can appear in any order with the exception of the SELECT statement, which must be the last command.

All of the commands except for Type and Select are optional. If the query file does not contain enough log-on information, a Connect dialog box appears when you open the file so that you can fill in the remaining information.

If you include spaces or nonalphanumeric characters in a parameter, the parameter must be enclosed in double quotation marks (" ").

This is an example of an Oracle query file:

```
Type=Oracle
Network=X (for Oracle SQL*NET1.x only)
Path=ORASRV
User=Rich
Password=sequoia
Select Name,Address,City From Employee
```

This is an example of a dBASE query file:

```
Type=dBASE
Select firstname, lastname from "c:\temp\emp.dbf"
```

## Creating a query file

You can also create a query file by either saving or exporting, as long as there is an SQL table active in Approach.

## SQL Server 4.x tables in Approach

**Approach can work with these files:** Tables in Microsoft SQL Server (any version under 5.0) and Sybase SQL Server (version 4.x).

### Viewing SQL Server tables in Approach

These are the main differences between viewing tables in Approach and in other SQL Server applications:

- Approach PicturePlus fields cannot be viewed in other SQL Server applications.
- SQL Server has a field type specifically for currency. In Approach, this is converted to a numeric field.
- Date fields in SQL Server include both a date and a time. In Approach, these fields appear as two fields: a date field and a time field. The extension "\_Time" is added to the time field.

For example, suppose the SQL Server date field Shipped has the value "5/10/94 10:35PM." Approach displays a date field Shipped with the value "5/10/94" and a time field Shipped\_Time with the value "10:35PM."

If you read an SQL Server view file or an SQL Server table without a unique index or timestamp, Approach opens a read-only copy of the view file or table.

After you connect to the SQL Server, all the active databases appear in the list view. When you double-click the database to which you have access, all the tables belonging to that database appear in the list view.

### Restrictions on field names

<u>Data type</u>	<u>Maximum length of field names</u>
Text, memo, numeric, Boolean	30 characters
Date, time, PicturePlus	24 characters

**Permitted characters:** The first character in a field name must be a letter, the number sign (#), or the underscore character (\_). After that, the name can have letters, whole numbers, and the following characters: # \_ \$

**Characters not to use:** Spaces

### Restrictions on table names

A table name beginning with a number sign (#) denotes a temporary table. Other object names cannot begin with a #. Table names have the same restrictions as field names.

### Restrictions on field lengths

You must specify a field length for text fields. Other fields are fixed in length or do not require a specified length.

**Maximum length for text fields:** 255

### Limits on tables, records, and fields

<u>Item</u>	<u>Limit</u>
Table size	Limited only by disk space
Tables open at a time	255
Records per table	Limited only by disk space
Record size	1,962 bytes, not including picture and memo fields
Fields per record	250
Fields used in a sort	16
Size of a memo or picture field	2 gigabytes
Memo and picture fields per table	Limited only by disk space

## Troubleshooting IBM DB2 using CAE

In order to connect to IBM DB2 using IBM CAE's ODBC Driver, you must first:

- Install the DB2 server
- Install IBM's 32-bit CAE 2.1.2 or greater
- Install Lotus Approach on the client machine
- Install the ODBC driver support (this icon is in the "IBM DB2 Database" group for Windows NT or the "DB2 Client for Windows 95" folder for Windows 95)
- Correctly Catalog a node and then the Database using the named node at the DB2> prompt
- Update the Database Manager Configuration File at the DB2> prompt to make sure the NNAME entry is not empty
- Be able to connect to the Database at a DB2> prompt
- Configure the ODBC Data Source using the ODBC 32-bit or CLI/ODBC Administrator
- Have a proper ID and Password and adequate rights

## Error messages

In any multi-component setup it's easy to forget a step, but sometimes hard to determine which step was missed. Error messages associated with the most common problems that might arise (and their possible solutions) are shown below.

- *Couldn't open the database, return code -35*

The most likely cause of this message is that the server is not operational, or the communication link is not up, or has not been properly configured. If Approach and DB2 are running on the same machine, start DB2. Otherwise, inform the person responsible for the DB2 server of the problem.

- *Couldn't open the database, return code -1038*

The DB2 table contains a BLOB or CLOB column. Lotus Approach cannot open these tables. The EMP\_PHOTO and EMP\_RESUME tables include such columns.

- *The file (database) is read-only*

The most common reason for this message is that you do not have appropriate privileges for the table. If you do have privileges for the table, the table may not have a primary key. Lotus Approach requires a primary key if the table is to be updated. The EMP\_ACT table in the Sample database, for example, does not have a primary key.

- *Server is not available*

If you get this message when opening a database (and you know there are no server problems) you probably neglected to bind the database to the ODBC driver manager.

Another possible reason is that you may not have catalogued the database as an ODBC data source. Correct this problem by using the ODBCAD32.EXE program.

## Help

Specific help on individual error messages and more detailed help on specific clients is available from the Lotus KnowledgeBase on the Lotus Home Page at [www.lotus.com](http://www.lotus.com) and from Approach Customer Support.

## Troubleshooting Microsoft SQL Server

Approach uses a 32-bit ODBC driver to connect to Microsoft SQL Server. Standard ODBC troubleshooting procedures apply to connections of this data type. The following information applies to Microsoft SQL Server versions 4.x and 6.x.

In order to connect to Microsoft SQL Server, you must also have:

- The Net Library and dB Library
- A properly configured client (or the settings manually updated in the registry)

It is not necessary (though it may be more convenient for some users) to install the client for Microsoft SQL Server as long as the Net Library and db Library (NTWDBLIB.DLL) are installed. Approach will install NTWDBLIB.DLL and DBNMPNTW.DLL if you want to use Named Pipes as your default protocol. However, to use a different protocol you must install the proper 32-bit Net Lib .DLL's.

The following table shows a list of the .DLL's needed for each protocol:

<u>Protocol</u>	<u>Microsoft</u>
NWLINK IPX/SPX	DBMSSPXN.DLL
TCP/IP	DBMSSOCN.DLL
DEC NET	N/A
MuliProtocol	DBMSRPCN.DLL
Named Pipes	DBNMPNTW.DLL

If you have installed the Microsoft clients, they have utilities that will test your connection without using the ODBC driver. The recommended utility for Microsoft SQL Server is ISQLW.

### Help

Specific help on individual error messages and more detailed help on specific clients is available from the Lotus KnowledgeBase on the Lotus Home Page at [www.lotus.com](http://www.lotus.com) and from Approach Technical Support.



## **Troubleshooting Oracle Server**

Approach uses a 32-bit ODBC driver to connect to Oracle Server. Standard ODBC troubleshooting procedures apply to connections of this data type. Approach cannot connect to Oracle 6 and below because these versions do not support a 32-bit SQL\*Net 2.1 client.

In order to connect to Oracle Server you must:

- Install a 32-bit Oracle client supporting SQL\*Net 2.1
- Configure the client (i.e. update the SQLNET.ORA and TNSNAMES.ORA in the ORANT\NETWORK\ADMIN directory)
- Add \ORANT\BIN to your search path
- Be able to connect through the Oracle client (i.e. through SQLDBA)

Be sure the Oracle 7 Client is installed before setting up the corresponding ODBC data sources.

## **Help**

Specific help on individual error messages and more detailed help on specific clients is available from the Lotus KnowledgeBase on the Lotus Home Page at [www.lotus.com](http://www.lotus.com) and from Approach Technical Support.

## Troubleshooting Sybase SQL Server 4.x

Approach uses a 32-bit ODBC driver to connect to Sybase SQL Server. Standard ODBC troubleshooting procedures apply to connections of this data type. The following information applies to Sybase SQL Server versions 4.x.

In order to connect to Sybase SQL Server, you must also have:

- The Net Library and dBLibrary
- A properly configured client (or the settings manually updated in the registry)

It is not necessary (though it may be more convenient for some users) to install the client for Sybase SQL Server as long as the Net Library and dBLibrary are installed. Approach will install NTWDBLIB.DLL and DBNMPNTW.DLL if you want to use Named Pipes as your default protocol. However, to use a different protocol you must install the proper 32-bit Net Lib .DLL's.

The following table shows a list of the .DLL's needed for each protocol:

<u>Protocol</u>	<u>Microsoft</u>
NWLINK IPX/SPX	DBMSSPXN.DLL
TCP/IP	DBMSSOCN.DLL
DEC NET	N/A
MuliProtocol	DBMSRPCN.DLL
Named Pipes	DBNMPNTW.DLL

If you have installed the Sybase clients, they will have utilities to test your connection. The recommended utility for Sybase SQL Server is SybPing.

### Help

Specific help on individual error messages and more detailed help on specific clients is available from the Lotus KnowledgeBase on the Lotus Home Page at [www.lotus.com](http://www.lotus.com) and from Approach Technical Support.

## Troubleshooting Sybase System 10 and 11

Approach uses a 32-bit ODBC driver to connect to Sybase System 10 and 11. Standard ODBC troubleshooting procedures apply to connections of this data type.

In order to connect to Sybase System 10 and 11, you must also have:

- The Net Library
- A properly configured client (or the settings manually updated in the registry)

It is necessary to install the Sybase Open Client for Sybase System 10 and 11.

The following table shows a list of the .DLL's needed for each protocol:

<u>Protocol</u>	<u>Sybase</u>
NWLINK IPX/SPX	NLNWLINK.DLL
TCP/IP	NLWNSCK.DLL
DEC NET	NLDECNET.DLL
MultiProtocol	N/A
Named Pipes	NLMSNMP.DLL

If you have installed the Sybase System 10 or 11 clients, they will have utilities to configure the appropriate protocols for your databases and to test your connection. The recommended utilities for Sybase System 10 and 11 are SQLEdit and SybPing.

### Help

Specific help on individual error messages and more detailed help on specific clients is available from the Lotus KnowledgeBase on the Lotus Home Page at [www.lotus.com](http://www.lotus.com) and from Approach Technical Support.

## **Overview: Installing additional language versions of Approach**

SmartSuite lets you access your Lotus applications in multiple languages. The first language you install becomes your default language. To add a second or third language version of Approach, you must run the Install again. The Install program informs you that you already have an existing copy of the product in a different language and preserves the directory structure of the default language.

The Install program adds icons for the additional languages to the Windows Start menu. These icons are identified by the two-character ISO language tag.

For example, the icon for the French version of Approach is labeled Approach - FR.

## **Choosing another language version**

If you installed additional language versions of Approach, you can choose another language version by right-clicking:

- The Approach application icon in the Lotus Applications folder in SmartCenter
- A SuiteStart icon

## **What's new in Approach?**

Lotus Approach Release 9 for Windows 95 and Windows NT includes new functionality that helps you easily migrate Approach documents to the Internet.

### **Publishing Approach views and named finds to the Internet:**

You can publish the current view, a specified view, or a specified named find to an Internet site.

### **Building Web sites that integrate Approach documents:**

Using Lotus FastSite, you can build a Web site that combines Approach views and named finds with other SmartSuite product documents.

## Keyboard shortcuts

To use keyboard shortcuts, do the following.

1. Press ALT.
2. Press the letter of the command in the main menu.

For example, to select all records in a worksheet, press ALT + E A (Edit - Select All).

You can also use the following shortcuts for many common commands.

<b>Command</b>	<b>Shortcut</b>	<b>Context</b>
Browse	CTRL+B	All
Copy	CTRL+C or CTRL+INS	All
Cut	CTRL+X or SHIFT+DEL	All
Delete Record	CTRL+DEL	Browse
Design	CTRL+D	All
Fast Format(On/Off)	CTRL+M	Design
Find	CTRL+F	Browse
Find All	CTRL+A	Browse
Find/Sort Assistant	CTRL+I	All
First Record	CTRL+HOME	Browse
Go To Record	CTRL+W	Browse
Group	CTRL+G	Design
Hide Record	CTRL+H	Browse
Insert Current Time	CTRL+SHIFT+T	All
Insert Previous Value	CTRL+SHIFT+P	All
Insert Today's Date	CTRL+SHIFT+D	All
Last Record	CTRL+END	Browse
New Record	CTRL+N	Browse
Next Record	PG DN	Browse
Next View	CTRL +PG DN	All
Open	CTRL+O	All
Paste	CTRL+V or SHIFT+INS	All
Previous Record	PG UP	Browse
Previous View	CTRL +PG UP	All
Print	CTRL+P	All
Print Preview(On/Off)	CTRL+SHIFT+B	All
Properties (InfoBox)	CTRL+E or ALT+ENTER	Design
Refresh Data	CTRL+R	All
Save Approach File	CTRL+S	All
Show/Hide Tools Palette	CTRL+L	Design
Show/Hide Rulers	CTRL+J	Design
Snap to Grid(On/Off)	CTRL+Y	Design
Sort	CTRL+T	Browse
Spell Check	CTRL+F2	All
Undo	CTRL+Z or	All

	ALT+BACKSPACE	
Ungroup	CTRL+U	Design
Zoom In	CTRL+	All
Zoom Out	CTRL+↓	All
Zoom To 100%	CTRL +1	All

---

{button ,AL(^H\_CUSTOM\_MENU\_REF;H\_MOVING\_BETWEEN\_FIELDS\_REF;H\_MOVING\_WITHIN\_FIELDS\_REF;H\_SELECTING\_WITHIN\_FIELDS\_REF;H\_SELECTING\_REPEATING\_PANELS\_STEPS;H\_SELECTING\_OBJECTS\_STEPS;H\_SELECTING\_TEXT\_IN\_A\_TEXT\_BLOCK\_STEPS;','0)} [See related topics](#)

## Moving between fields

### Forms, reports, and mailing labels

<u>To move to</u>	<u>Press</u>
The next field in the <u>tab order</u>	TAB
The previous field in the tab order	SHIFT+TAB

You can set your preferences to use ENTER to move between fields. If you do, TAB continues to behave as described above.

### Worksheets and crosstabs

<u>To move to</u>	<u>Press</u>
The next field in a row	→ or TAB
The previous field in a row	← or SHIFT+TAB
The next cell in a column	↓
The previous cell in a column	
The next cell in a column of selected cells	ENTER
The previous cell in a column of selected cells	SHIFT+ENTER

---

{button ,AL('H\_KEYBOARD\_SHORTCUTS\_REF;H\_MOVING\_FROM\_PAGE\_TO\_PAGE\_IN\_FORMS\_STEPS;H\_MOVING\_ONE\_RECORD\_AT\_A\_TIME\_STEPS;H\_MOVING\_WITHIN\_FIELDS\_REF;H\_SELECTING\_WITHIN\_FIELDS\_REF;H\_SETTING\_GENERAL\_WORKING\_PREFERENCES\_REF',0)} [See related topics](#)



## Moving within fields and text blocks

<u>To move</u>	<u>Press</u>
Down one line	↓
Left one character	←
Left one word	CTRL+ ←
Right one character	→
Right one word	CTRL+ →
To start of line	HOME
To end of line	END
Up one line	

---

{button ,AL('H\_KEYBOARD\_SHORTCUTS\_REF;H\_MOVING\_BETWEEN\_FIELDS\_REF;H\_MOVING\_BETWEEN\_FIELDS\_USING\_ENTER\_STEPS;H\_MOVING\_FROM\_PAGE\_TO\_PAGE\_IN\_FORMS\_STEPS;H\_MOVING\_ONE\_RECORD\_AT\_A\_TIME\_STEPS;H\_SELECTING\_WITHIN\_FIELDS\_REF;','0)} [See related topics](#)

## Selecting within fields and text blocks

<u>To select</u>	<u>Press</u>
Down one line	SHIFT+↓
Left one character	SHIFT+←
Left one word	CTRL+SHIFT+←
Right one character	SHIFT+ →
Right one word	CTRL+SHIFT+ →
Up one line	SHIFT+

---

{button ,AL(^H\_KEYBOARD\_SHORTCUTS\_REF;H\_MOVING\_BETWEEN\_FIELDS\_REF;H\_MOVING\_BETWEEN\_FIELDS\_USING\_ENTER\_STEPS;H\_MOVING\_FROM\_PAGE\_TO\_PAGE\_IN\_FORMS\_STEPS;H\_MOVING\_ONE\_RECORD\_AT\_A\_TIME\_STEPS;H\_SELECTING\_WITHIN\_FIELDS\_REF;';0)} [See related topics](#)

## Details: Previewing views

### Data

- All data from Browse appears in Print Preview.
- You can move through records in Print Preview as you can in Browse.
- You cannot click in the fields, edit data, or edit design objects.
  - Go to Browse if you need to change data.
  - Go to Design if you need to make style or layout changes, including changes to drawn objects and text blocks.

### Non-printing objects

To make a non-printing object appear in Preview, go to Design and select "Show in Print Preview" in the Basics tab of the InfoBox. This is useful when you're in Preview and you want to run a macro attached to a button that you don't want to print.

### Summary data

If Approach has any fields that summarize data from multiple records, Approach calculates the summary in Preview and shows the results.

### Closing up space between objects

If a view has fields or other objects that need to slide up or left, the fields slide into position in Preview, if those options are set in the [InfoBox](#).

### Zooming with the mouse

<u>To</u>	<u>Click</u>
Zoom in (magnify)	Left mouse button
Zoom out (bird's-eye view)	Right mouse button
See the view at 100%	The percentage in the status bar and select 100%

---

{button ,AL('H\_PREVIEWING\_VIEWS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_DOWNLOADING\_DATA\_BEFORE\_PREVIEWING\_STEPS;H\_PREVENTING\_OBJECTS\_AND\_FIELDS\_FROM\_PRINTING\_STEPS;H\_PRINTING\_VIEWS\_STEPS;H\_REFRESHING\_THE\_DATA\_NETWORK\_ONS\_SCREEN\_STEPS;H\_SELECT\_PRINT\_PREVIEW\_TO\_SEE\_REPORT\_SUMMARIES\_REF;H\_SPECIFYING\_THE\_PRINTER\_PAPER\_AND\_ORIENTATION\_STEPS;H\_ZOOMING\_IN\_AND\_OUT\_STEPS;',0)} [See related topics](#)

## Previewing views

The Preview environment shows what a view looks like when you print it.

Choose File - Print Preview.

- You see the view at 85%.
- The mouse pointer changes to the zoom cursor.

To turn Preview off, choose File - Print Preview.

You can zoom in and out while looking at a view in Preview; zooming doesn't affect the way Approach prints the view.

---

{button ,AL('H\_PREVIEWING\_VIEWS\_DETAILS',1)} [See details](#)

{button ,AL('H\_PRINTING\_VIEWS\_STEPS;H\_REFRESHING\_THE\_DATA\_NETWORK\_ONSCREEN\_STEPS;H\_SELECT\_PRINT\_PREVIEW\_TO\_SEE\_REPORT\_SUMMARIES\_REF;H\_SPECIFYING\_THE\_PRINTER\_PAPER\_AND\_ORIENTATION\_STEPS;H\_ZOOMING\_IN\_AND\_OUT\_STEPS;H\_DOWNLOADING\_DATA\_BEFORE\_PREVIEWING\_STEPS;',0)} [See related topics](#)

## Overview: Printing Approach views

- You can print all the records in a database or a [found set](#).
- You can print from any view.
- To print a single record, print from a [form](#).

### Printing forms

When you print records from a form, Approach starts a new page for each record and for each form page.

To show more records per page, print from a report or worksheet view.

### Non-printing objects

To prevent objects in a view from printing—for example, buttons that run macros—go to Design and define those objects as non-printing in the Basics tab of the InfoBox.

To see non-printing objects in Preview, select "Show in Print Preview" in the Basics tab of the InfoBox. This is useful when you're in Preview and you want to run a macro attached to a button that you don't want to print.

### Summary data on reports

Approach calculates summaries that apply to a range of records when you print. To see summary data right before you print, choose File - Print Preview. If you want to be sure that the summary data you see on the screen is the same as what is printed, select "Download on Preview."

See [Downloading data before previewing](#).

### Closing up space between objects

If a view has fields or other objects that are designated to slide up or left, the fields slide when you print. To see the spacing between objects right before you print, choose File - Print Preview.

---

```
{button ,AL('H_CLOSING_EXTRA_SPACE_BETWEEN_FIELDS_STEPS;H_DOWNLOADING_DATA_BEFORE_PREVIEWING_STEPS;H_FORMATTING_WORKSHEETS_OR_CROSSTABS_FOR_PRINTING_STEPS;H_PREVIEWING_OBJECTS_AND_FIELDS_FROM_PRINTING_STEPS;H_PREVIEWING_VIEWS_STEPS;H_PRINTING_A_DIAGRAM_OF_JOIN_RELATIONSHIPS_STEPS;H_PRINTING_A_LIST_OF_DATABASE_FIELDS_STEPS;H_PRINTING_REPORTS_STEPS;H_PRINTING_VIEWS_STEPS;H_SPECIFYING_THE_PAPER_ORIENTATION_AND_MARGINS_STEPS;',0)} See related topics
```

## Details: Printing views

### Print range

<u>To print</u>	<u>Select</u>
All records in the database	All records
The current record when you're using a form	Current record
A range of records	Record, and specify from where to where

### Print to file

Printing to a file is useful if you do not have a printer connected to your computer and would like to print to a disk.

### Collate copies

If you print more than one copy of the print job, select Collate copies to have Approach print one copy of the whole print job before printing another.

Otherwise, all copies of page 1 are printed, and then all copies of page 2, and so on.

---

{button ,AL('H\_PRINTING\_VIEWS\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_FORMATTING\_WORKSHEETS\_OR\_CROSSTABS\_FOR\_PRINTING\_STEPS;H\_PREVENTING\_OBJECTS\_AND\_FIELDS\_FROM\_PRINTING\_STEPS;H\_PREVIEWING\_VIEWS\_STEPS;H\_PRINTING\_APPROACH\_VIEWS\_OVER;H\_PRINTING\_REPORTS\_STEPS;H\_SPECIFYING\_THE\_PRINTER\_PAPER\_AND\_ORIENTATIONS\_DETAILS;',0)} [See related topics](#)

## Printing views

1. Check the status bar to be sure you're using the set of records you want to print.

**Note** Even when printing a form, which shows only one record at a time, you can print the entire set of records Approach is working with at the moment.

2. (Optional) Choose Sort from the [context menu](#) to sort the records.
3. (Optional) Choose File - Print Preview to see how the view looks when you print it.
4. Choose File - Print.

The Print dialog box appears.

5. Make printing adjustments in the Print dialog box.

**Note** If you change the printer, you may notice a difference in your layout, especially if the printer you select does not support the fonts you chose for the view you want to print.

6. (Optional) To change the paper size, paper source, or page orientation, click Properties.
7. Click Print.

## Canceling a print job

To cancel a print job, press ESC.

---

{button ,AL('H\_PRINTING\_VIEWS\_DETAILS',1)} [See details](#)

{button ,AL('H\_FORMATTING\_WORKSHEETS\_OR\_CROSSTABS\_FOR\_PRINTING\_STEPS;H\_PREVENTING\_OBJECTS\_AND\_FIELDS\_FROM\_PRINTING\_STEPS;H\_PREVIEWING\_VIEWS\_STEPS;H\_PRINTING\_APPROACH\_VIEWS\_OVER;H\_PRINTING\_REPORTS\_STEPS;H\_SPECIFYING\_THE\_PRINTER\_PAPER\_AND\_ORIENTATIONS\_DETAILS;H\_CLOSING\_EXTRA\_SPACE\_BETWEEN\_FIELDS\_STEPS;H\_PAGINATING\_REPORTS\_STEPS;H\_PRINTING\_A\_DIAGRAM\_OF\_JOIN\_RELATIONSHIPS\_STEPS;H\_PRINTING\_A\_LIST\_OF\_DATABASE\_FIELDS\_STEPS;H\_PRINTING\_MACRO\_COMMANDS\_STEPS;',0)} [See related topics](#)

## Properties of printers

**Command:** File - Page Setup - Printer - Properties

The most frequently used printing options appear in the Page Setup dialog box. The settings under Paper and Orientation are the same in Page Setup as in the Properties dialog box.

All other options available for the printer you're using appear in the Properties dialog box.

These options vary from printer to printer, but generally they include options for

- Paper size, orientation, and source
- Graphics resolution, dithering, and mode
- Fonts
- Device options

## Changes made to printer properties

Changes you make in the Properties dialog box remain as the settings for the printer until you change them again.

To restore the original settings of the printer, click Restore Defaults.

---

{button ,AL('H\_PRINTING\_APPROACH\_VIEWS\_OVER;H\_SPECIFYING\_THE\_PAPER\_ORIENTATION\_AND\_MAR  
GINS\_STEPS;H\_SPECIFYING\_THE\_PRINTER\_PAPER\_AND\_ORIENTATION\_STEPS;','0)} [See related topics](#)



## Specifying the paper, orientation, and margins for printing



### Are you in Design?

1. Choose File - Page Setup.
2. Under Paper, select a paper size and, if necessary, a paper source.
3. Under Orientation, select "Portrait" or "Landscape."
4. (Optional) To specify a printer, click Printer.

**Note** If you change the printer, you may notice a difference in your layout, especially if the printer you select does not support the fonts you chose for the view you want to print.

5. (Optional) To change other settings for the printer, click Properties
6. Click OK.

---

{button ,AL(^H\_PREVIEWING\_VIEWS\_STEPS;H\_PRINTING\_APPROACH\_VIEWS\_OVER;H\_PRINTING\_VIEWS\_S  
TEPS;H\_SELECTING\_PRINT\_SETTINGS\_FOR\_ENVELOPES\_STEPS;H\_PROPERTIES\_OF\_PRINTERS\_REF;  
.0)} See related topics

## Details: Specifying the printer, paper, and orientation

### Orientation

If you see that the view won't fit on a page in Print Preview, adjusting the page orientation may help.

- Portrait prints the view with its top along the short edge of the paper.
- Landscape prints the view with its top along the long edge of the paper.

### Printer

Change the printer you use for this print job from the default printer to any other that is connected to your computer.

The default printer is determined by the operating system. To select another printer as the default printer, make this change in the print settings for the operating system.

---

{button ,AL('H\_SPECIFYING\_THE\_PRINTER\_PAPER\_AND\_ORIENTATION\_STEPS',1)} [Go to procedure](#)

{button ,AL('H\_FORMATTING\_WORKSHEETS\_OR\_CROSSTABS\_FOR\_PRINTING\_STEPS;H\_PREVIEWING\_VIEWS\_STEPS;H\_PRINTING\_APPROACH\_VIEWS\_OVER;H\_PRINTING\_VIEWS\_STEPS;H\_SELECTING\_PRINT\_SETTINGS\_FOR\_ENVELOPES\_STEPS;H\_PROPERTIES\_OF\_PRINTERS\_REF;',0)} [See related topics](#)

### **Specifying the printer, paper, and orientation**

1. Choose File - Print, and click Properties.
2. Under Printer, select a printer.
3. (Optional) To change other settings for the printer, click Properties.  
See [Properties of printers](#)
4. Under Paper, select a paper size and, if necessary, a paper source.
5. Under Orientation, select Portrait or Landscape.
6. Click OK.

---

{button ,AL('H\_SPECIFYING\_THE\_PRINTER\_PAPER\_AND\_ORIENTATION\_DETAILS',1)} [See details](#)

{button ,AL('H\_FORMATTING\_WORKSHEETS\_OR\_CROSSTABS\_FOR\_PRINTING\_STEPS;H\_PREVIEWING\_VIEWS\_STEPS;H\_PRINTING\_APPROACH\_VIEWS\_OVER;H\_PRINTING\_VIEWS\_STEPS;H\_SELECTING\_PRINT\_SETTINGS\_FOR\_ENVELOPES\_STEPS;H\_PROPERTIES\_OF\_PRINTERS\_REF;',0)} [See related topics](#)

