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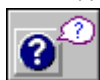
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## About finding records

Finding records allows you to focus on a subset of your data. You tell Approach what to search for by entering search criteria in one or more find requests. When you finish searching, Approach displays only the records that meet the search criteria; this is the found set.

### Creating a find request



A new find request is a blank copy of the view you're currently using. You enter the criteria in fields of the find request. If the view contains a summary field, you see the summary field along with all of the other fields in the find request.

### Finding records with multiple criteria (And)



When you enter criteria in more than one field in a find request, Approach finds the records that match all the criteria. This is known as an And search.

### Finding records with one of several criteria (Or)



You can specify several criteria and have Approach find the records that match at least one of the criteria. This is known as an Or search.

### Finding text with wildcards



Approach can find text that matches a string of characters, a word, or a phrase in a text field. You can include asterisk (\*) and question mark (?) wildcards in a text search. Asterisks match any number of characters and question marks match any single character.

### Finding case-sensitive text



Whether a search is case-sensitive depends on the file type of your database. A search in a dBASE, FoxPro, or Paradox 4.0 database is not normally case-sensitive, but a search is case-sensitive in a Paradox 3.5 database, a SQL table, or a database you open through ODBC.

You can limit a specific search to be case-sensitive even in a database that is not normally case-sensitive in its searches.

### Finding a word that sounds like another



Approach can locate words that sound like other words. This is particularly useful when you know how a name or other proper noun sounds, but aren't sure how to spell it.

### Finding numbers, dates, and times



You can find a value in a numeric, Boolean, date, or time field or in a calculated field that returns a number, Boolean value, date, or time.

### Finding values in a range



Approach can look for values that fall within an inclusive range in a text, numeric, date, or time field or in a calculated field that returns a number, date, or time.

### Finding today's date



You can find the current date in a date field or in a calculated field that returns a date.

### Finding radio button and checkbox settings



You can look for all records that have a particular combination of radio button and checkbox settings.

### Finding find or nonblank fields



Approach can isolate records with blank values in a particular field. This can help you identify errors in data entry or find records that don't have complete information yet. A field is considered blank if it has a Null value or no value.

Approach can also find fields that are not blank.

### Using an If statement to find data



An If statement is a concise and powerful tool for comparing data in two or more fields. You can use an If statement in a find request to build complex search criteria.

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.

### Repeating a search



Approach keeps track of your most recent search so that you can easily repeat it, as long as you are still in a view based on the same database and you have not used the Show All command.

### Showing all records



When you're finished working with a found set, you can go back to seeing all the records in the database. This also returns records to their original sort order.

### See also

[Find](#)

[Saving a find request as part of a macro](#)

## Creating a find request



A new find request is a blank copy of the view you're currently using. You enter the criteria in fields of the find request.

1. Change to the view you want to use for finding records.
2. Click the Find icon.



3. Type search criteria in the appropriate fields.
4. Click OK in the find request, click the Enter icon, or press ENTER to begin the search.



If you want to cancel a find while Approach is still searching, press ESC.

### See also

[Finding a set of records with a macro](#)

## Details: Creating a find request



You can type criteria in a find request just as you type data in a regular form or report. Type criteria in as many fields as necessary to define the search.

### Approach SmartIndex

Approach automatically creates an index the first time you find or sort on a field. This makes any subsequent finds or sorts on that field go faster.

### Finding on a summary field

You can find on a summary field only if it summarizes a group of records sorted by a field. You can't find on a grand total summary field or one that summarizes by a number of records.

### Using operators in a find request

You can use the following operators with search criteria. Either type an operator in the field, or click where you want the operator to go and then click its icon in the icon bar.

This operator	Specifies
<	Less than
>	Greater than
<=	Less than or equal to
>=	Greater than or equal to
=	Equal to (if alone, finds records with blank fields)
<>	Not equal to (if alone, finds records with nonblank fields)
,	Or criteria within a field
&	And criteria within a field
...	Range of values (for example, A...D)
*	Wildcard for zero or more characters
?	Wildcard for one character
@	Comparison with the result of a formula (used with another operator, such as in =@Today())
!	Case-sensitive text search
~	Sounds like
If	Complex expressions

## Finding records with multiple criteria (And)



When you enter criteria in more than one field in a find request, Approach finds the records that match all the criteria. This is known as an And search.

- Type criteria in more than one field in a find request.  
For example, to find all employees who work in the Finance department and live in San Francisco, enter **Finance** in the Department field and **San Francisco** in the City field of an employee form find request.

### See also

[Using an If statement to find data](#)

## Finding records with one of several criteria (Or)



You can specify several criteria and have Approach find the records that match at least one of the criteria. This is known as an Or search.

### To find records with Or criteria in one field:

- Separate the criteria with a comma in that field in one find request.

You can type a comma or click the Find Or icon.



For example, to find all employees who work in the Finance department or the Payroll department, enter **Finance,Payroll** in the Department field of an employee form find request.

### To find records with Or criteria in more than one field:

1. Type the Or criteria for the first field.
2. For each additional field, click Find More in the find request, click the Find icon again, or choose Find More from the Records menu. Then type the Or criteria for the field in the new find request.  
Do not click OK, click the Enter icon, or press ENTER until you're finished creating the entire set of find requests.



For example, to find all employees who work in the Finance department or live in San Francisco, enter **Finance** in the Department field of one find request and **San Francisco** in the City field of a second find request.



## Finding text with wildcards



Approach can find text that matches a string of characters, a word, or a phrase in a text field. You can include asterisk (\*) and question mark (?) wildcards in a text search.

### To find text:

- Type the characters in a text field.

If you want the match to be exact, precede the characters with an equal sign (click the Find Equal icon).



For example, the search text **Payroll** finds "Payroll," "Payroll Dept.," and any other text that begins with the search text. The text **=Payroll** finds only "Payroll."

### To match any number of characters in a field:

- Include an asterisk (\*) in the search text.

You can type an asterisk or click the Asterisk icon.



For example, the search text **\*past\*** finds records that contain the text "past" anywhere in the search field. The text **\*san** can find "San Francisco" and "Santa Rosa." The text **\*r\*** can find "red" and "green" but not "blue." The text **\*o** can find "solo" and "trio" but not "dot." The text **g\*s** can find "grants" and "goods" but not "green."

### To match a single character in a field:



Include a question mark (?) in the search text.

You can type a question mark or click the Question Mark icon.



For example, the search text **to?** can find "toy" and "tom" but not "today." The text **?an** can find "ran" and "pan" but not "plan." The text **to???y** can find "today" and "Tommy" but not "toy" and "tom." The text **?o?** can find "Tom" and "son" but not "today" and "Troy."

## Finding case-sensitive text



You can limit a specific search to be case-sensitive even in a database that is not normally case-sensitive in its searches.



Precede the search text with an exclamation mark (!).

You can type an exclamation mark or click the Find Case Sensitive icon.



For example, in a database that is not case-sensitive, the search 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).

## Finding a word that sounds like another



Approach can locate words that sound like other words. This is particularly useful when you know how a name or other proper noun sounds, but aren't sure how to spell it.



Precede the search text with a tilde (~).

You can type a tilde or click the Find Sounds Like icon.



For example, the search text **~Philip** finds "Philip," "Filip," "Philippe," and similar-sounding words.

## Finding numbers, dates, and times



You can find a value in a numeric, Boolean, date, or time field or in a calculated field that returns a number, Boolean value, date, or time.

### To find 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.

### To find a Boolean value:



Type **0** or **1** in a Boolean or calculated field.

### To find 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 date for the current month and year.

Type one, two, three, or four digits for the year. One-digit and two-digit years are assumed to mean 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.

### To find a time:



Type the time as numbers in a time or calculated field.

Separate the numbers with colons (:). Type a single number to enter only an hour.

You can 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.

## Finding values in a range



Approach can look for values that fall within an inclusive range in a text, numeric, date, or time field or in a calculated field that returns a number, date, or time.



Enter an ellipsis (...) between the beginning value and the ending value of the range.

You can type an ellipsis or click the Find Range icon.



For example, the search string **H...J** in a text field finds all text strings that begin with H, I, or J. The string **7...9** in a numeric field finds the values 7, 8, and 9. The string **5-1-94...5-31-94** finds all dates in the month of May 1994.

## Finding today's date



You can find the current date in a date field or in a calculated field that returns a date.



Enter a comparison operator and **@Today()** in a date or calculated field.

The operators you can use are =, <>, <, <=, >=, and >. You can type operators or click the appropriate icons.



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.

For example, **=@Today()** specifies that you want an exact match with the system date.

## Finding radio button and checkbox settings



You can look for all records that have a particular combination of radio button and checkbox settings.



Turn on the radio buttons and checkboxes in the find request to specify the combination you want to find.

If you want to specify a No value for a checkbox, such as "payment not received," click the checkbox to turn it on and then click it again to turn it off. A checkbox is Null until it is clicked at least once.

## 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 fields that are not blank.

### To find blank fields:



Enter an equal sign (=) by itself in a field.

You can type an equal sign or click the Find Equal icon.



### To find nonblank fields:



Enter a not-equal sign (<>) by itself in a field.

You can type a not-equal sign or click the Find Not Equal icon.





## Using an If statement 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.



Type an If statement in an unused field in a find request.

The statement can include field references, constants, and any of the other search operators. Enclose text, date, and time constants in single quotation marks. You can put the statement in any field in the request; it does not have to be one of the fields referred to in the statement.

For example, this statement finds records that have a higher value in the ActualCost field than in the Budget field:

If(ActualCost>Budget)

## Details: Using an If statement to find data



### Field names

Enclose a field name in double quotation marks if it begins with a number, or if it contains a space, a period, a comma, or one of the following characters:

/, #, +, -, <, >, (, )

### Joined databases

If a field reference refers to a field in a joined database, include the name of the database in the reference. The database name must be in all capital letters. Separate the database name and the field name with a period. For example,

If(ORDERS.Quantity>SUPPLY.Quantity)

### Combining expressions

You can combine expressions in an If statement with the And and Or operators. This is a more concise way to specify complex criteria than using multiple fields.

For example,

If((Department='Finance')And(City='San Francisco'))

If((Amount>200)Or(Date<'4/30/94'))

If((Today()-InvoiceDate<=90)And(BalanceDue>0))

To compare If statements to a search using multiple fields, see [Finding records with multiple criteria \(And\)](#) and [Finding records with one of several criteria \(Or\)](#).

## Repeating a search



Approach keeps track of your most recent search so that you can easily repeat it, as long as you are still in a view based on the same database and you have not used the Show All command.

1. Choose Find Again from the Browse menu.  
In a worksheet or crosstab, Find Again appears on the Worksheet Find or Crosstab Find submenu.
2. Click OK in the find request, click the Enter icon, or press ENTER.



## About finding special records

In addition to searching for specific information, you can also find all records that have either the same value in a field or a unique value. With this type of find, Approach searches in the current found set (not the entire database) either for duplicates of any value or for each occurrence of a unique value.

### Finding duplicate values



Finding records with duplicate values can help you check for errors in data entry or remove redundant records from your database. You can find all duplicate records, or just the extra duplicates.

### Finding unique values



Finding records with distinct values lets you weed out duplicate values to see what your unique value set is. For example, when you have multiple customer records for a company that has several locations, finding distinct records lets you see how many unique companies are in your customer database.

## Finding duplicate values



Finding records with duplicate values can help you check for errors in data entry or remove redundant records from your database. You can find all duplicate records, or just the extra duplicates. Approach searches for duplicate values only in the current found set (not the entire database).

1. Find the records in which you want to look for duplicate values, or show all records in the database.
2. Choose Find Special from the Browse menu.  
In a worksheet or crosstab, Find Special appears in the Worksheet Find or Crosstab Find submenu.
3. Select "Find duplicate records."
4. To find only the extra duplicate records, turn on "Exclude the first duplicate record."  
If this setting is off, Approach finds all records with duplicate values.
5. Move the fields you want to check from the Database Fields list to the Fields to Search list.
6. Click OK.

If you want to cancel a find while Approach is still searching, press ESC.

### See also

[Finding unique values](#)

## Details: Finding duplicate values



### Joined databases

In an Approach file with joined databases, you can find duplicate records only in the current view's main database.

### Moving fields to another list

To move a field to the Fields to Search list, select the field name and click Add, or double-click the field name.

To move a field back to the Database Fields list, select the field name and click Remove, or double-click the field name. To move all the fields back, click Clear.

## Finding unique values



Finding records with unique values lets you weed out duplicate values and see what your unique value set is. Approach searches for unique values only in the current found set (not the entire database).

1. Find the records in which you want to look for distinct values, or show all records in the database.
2. Choose Find Special from the Browse menu.  
In a worksheet or crosstab, Find Special appears in the Worksheet Find or Crosstab Find submenu.
3. Select "Find unique or distinct records."
4. Move the fields you want to check from the Database Fields list to the Fields to Search list.
5. Click OK.

If you want to cancel a find while Approach is still searching, press ESC.

### See also

[Finding duplicate values](#)

## Details: Finding unique values



### Joined databases

In an Approach file with joined databases, you can find distinct records only in the current view's main database.

### Moving fields to another list

To move a field to the Fields to Search list, select the field name and click Add, or double-click the field name.

To move a field back to the Database Fields list, select the field name and click Remove, or double-click the field name. To move all the fields back, click Clear.



## Showing all records



When you're finished working with a found set, you can go back to seeing all the records in the database. This also returns records to their original sort order.



Click the Show All icon or choose Show All from the Browse menu.

In a worksheet or cross-tab report, Show All appears in the Worksheet or Crosstab Find submenu.



## About sorting records by data in fields

You can sort a database to rearrange records according to data in a field or a set of fields. Sorting only temporarily changes the order of records.

### Sorting records by a field in a view



You can quickly sort the records in the found set using the contents of any field that appears in a view.

### Specifying a sort order



You need to tell Approach which field or fields to use for sorting and whether the sort in each field should be ascending or descending. A sort field can be a text, numeric, Boolean, date, time, or calculated field.

### Changing the sort order



The Sort dialog box stores the instructions you specified the last time you sorted. If you want to sort records a different way, you can open the dialog box again and make changes to it.

### Showing records in their original order



When you're finished working with records in a sort order, you can go back to seeing the records in their original order. The original order is either the order the records were created or a default sort order.

### See also

[Setting a default order for records](#)

## Sorting records by a field in a view



You can quickly sort the records in the found set using the contents of any field that appears in a view.

1. Click a field to select it.
2. Click the Ascending Sort or Descending Sort icon.



## Specifying a sort order



You need to tell Approach which field or fields to use for sorting and whether the sort in each field should be ascending or descending. A sort applies only to the current found set (not the entire database).

1. Find the records you want to sort, or show all records in the database.
2. Choose Define from the Browse Sort submenu.  
In a worksheet, Sort appears in the Worksheet Sort submenu.
3. Move the primary sort field from the Database Fields list to the Fields to Sort On list.
4. Select Ascending or Descending for the primary sort field.
5. If necessary, specify additional sort fields in the same way.
6. To include summary fields in the sort, click Summaries, move any summary fields you want to sort on to the Fields to Sort On list, select a Summarized On option (if necessary), and click OK.
7. Click OK.

## Details: Specifying a sort order



### Approach SmartIndex

Approach automatically creates an index the first time you find or sort on a field. This makes any subsequent finds or sorts on that field go faster.

### Sort fields

A sort field can be a text, numeric, Boolean, date, or time field, or a calculated field that returns text or a number, Boolean value, date, or time. You can 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. You can also 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.

### Moving fields to another list

To move a field to the Fields to Sort On list, select the field name and click Add, or double-click the field name.

To move a field back to the Database Fields list, select the field name and click Remove, or double-click the field name. To move all the fields back, click Clear.

The Database Fields list shows the names of fields for the database selected in the Database Fields drop-down list (just above the list). If a field you want is in a different database joined to the current Approach file, select the name of the database in the drop-down list.

### Ascending or descending order

Ascending sorts text from A to Z, numbers from lowest to highest, and dates and times from earliest to latest. If a text field has numbers and text, the sorting is 0 to 9 and then A to Z. Leading spaces are sorted before numbers and text.

Descending sorts data in the opposite direction. If a text field has numbers and text, the sorting is Z to A and then 9 to 0. Leading spaces are sorted at the end.

## Changing the sort order



The Sort dialog box stores the instructions you specified the last time you sorted. If you want to sort records a different way, you can open the dialog box again and make changes to it.

### To add another field to the end of the sort order:



Select the field name in the Database Fields list and click Add, or double-click the field name.

### To remove a field from the sort order:



Select the field name in the Fields to Sort On list and click Remove, or double-click the field name.

### To remove all the fields from the sort order:



Click Clear.

### To change the direction in which a field is sorted:



Select the field name and select Ascending or Descending.

## Showing records in their original order



When you're finished working with records in a sort order, you can go back to seeing the records in their original order. The original order is either the order the records were created or a default sort order.



Click the Show All icon or choose Show All from the Browse menu.

In a worksheet or crosstab, Show All appears in the Worksheet or Crosstab Find submenu.



## Creating a find request



## Repeating a search

## Finding duplicate values

## Finding unique values

Showing all records

## Specifying a sort order

## Changing the sort order

**Showing records in their original order**

**Finding records with multiple criteria (And)**



**Finding records with one of several criteria (Or)**

## Finding text with wildcards

## Finding case-sensitive text

**Finding a word that sounds like another**

**Finding numbers, dates, and times**

## Finding values in a range

**Finding today's date**

## Finding radio button and checkbox settings



## Finding nonblank fields

**Using an If statement to find data**

**Sorting records by a field in a view**

## Functions

Functions are predefined routines that perform specific operations. Approach provides functions for many common tasks you may need in your work. Rather than defining a routine yourself, you can use one of these functions to tell Approach what to do.

You can use a function by itself or combine it with operators, operands, and other functions to build a more complex formula.

A function has a name, a pair of parentheses, and usually a set of values called parameters for the function to evaluate.

Click a function for more information about it:

<a href="#"><u>Abs (Absolute value)</u></a>	<a href="#"><u>Pi</u></a>
<a href="#"><u>Acos (Arc cosine)</u></a>	<a href="#"><u>PMT (Payment)</u></a>
<a href="#"><u>Asc (ASCII)</u></a>	<a href="#"><u>Position</u></a>
<a href="#"><u>Asin (Arc sine)</u></a>	<a href="#"><u>Pow (Power)</u></a>
<a href="#"><u>Atan (Arc tangent)</u></a>	<a href="#"><u>Prefix</u></a>
<a href="#"><u>Atan2 (Arc tangent 2)</u></a>	<a href="#"><u>Proper</u></a>
<a href="#"><u>Avg (Average)</u></a>	<a href="#"><u>PV (Present value)</u></a>
<a href="#"><u>Blank</u></a>	<a href="#"><u>Radian</u></a>
<a href="#"><u>Chr (Character)</u></a>	<a href="#"><u>Random</u></a>
<a href="#"><u>Combine</u></a>	<a href="#"><u>Replace</u></a>
<a href="#"><u>Cos (Cosine)</u></a>	<a href="#"><u>Right</u></a>
<a href="#"><u>CurrTime (Current time)</u></a>	<a href="#"><u>Round</u></a>
<a href="#"><u>Date</u></a>	<a href="#"><u>SAverage (Summary average)</u></a>
<a href="#"><u>DateToText</u></a>	<a href="#"><u>SCount (Summary count)</u></a>
<a href="#"><u>Day</u></a>	<a href="#"><u>Second</u></a>
<a href="#"><u>DayName</u></a>	<a href="#"><u>Sign</u></a>
<a href="#"><u>DayOfWeek</u></a>	<a href="#"><u>Sin (Sine)</u></a>
<a href="#"><u>DayOfYear</u></a>	<a href="#"><u>SLN (Straight-line depreciation)</u></a>
<a href="#"><u>Degree</u></a>	<a href="#"><u>SMax (Summary maximum)</u></a>
<a href="#"><u>Exact</u></a>	<a href="#"><u>SMin (Summary minimum)</u></a>
<a href="#"><u>Exp (Exponentiation)</u></a>	<a href="#"><u>SNPV (Summary net present value)</u></a>
<a href="#"><u>Factorial</u></a>	<a href="#"><u>Soundlike</u></a>
<a href="#"><u>Fill</u></a>	<a href="#"><u>Span</u></a>
<a href="#"><u>FV (Future value)</u></a>	<a href="#"><u>SpanUntil</u></a>
<a href="#"><u>Hour</u></a>	<a href="#"><u>Sqrt (Square root)</u></a>
<a href="#"><u>Hundredth</u></a>	<a href="#"><u>SSTD (Summary standard deviation)</u></a>
<a href="#"><u>If</u></a>	<a href="#"><u>SSum (Summary sum)</u></a>
<a href="#"><u>IsBlank</u></a>	<a href="#"><u>STD (Standard</u></a>

<a href="#"><u>IsLastRecord</u></a>	<a href="#"><u>deviation)</u></a>
<a href="#"><u>Left</u></a>	<a href="#"><u>SVAR (Summary variance)</u></a>
<a href="#"><u>Length</u></a>	<a href="#"><u>Tan (Tangent)</u></a>
<a href="#"><u>Like</u></a>	<a href="#"><u>TextToBool (Text to Boolean)</u></a>
<a href="#"><u>Ln (Natural logarithm)</u></a>	<a href="#"><u>TextToDate</u></a>
<a href="#"><u>Log (Logarithm)</u></a>	<a href="#"><u>TextToTime</u></a>
<a href="#"><u>Lower (Lowercase)</u></a>	<a href="#"><u>Time</u></a>
<a href="#"><u>Middle</u></a>	<a href="#"><u>Today</u></a>
<a href="#"><u>Minute</u></a>	<a href="#"><u>Translate</u></a>
<a href="#"><u>Mod</u></a>	<a href="#"><u>Trim</u></a>
<a href="#"><u>Month</u></a>	<a href="#"><u>Trunc (Truncate)</u></a>
<a href="#"><u>MonthName</u></a>	<a href="#"><u>Upper (Uppercase)</u></a>
<a href="#"><u>NPeriods (Number of periods)</u></a>	<a href="#"><u>Var (Variance)</u></a>
<a href="#"><u>NumToText (Number to text)</u></a>	<a href="#"><u>WeekOfYear</u></a>
	<a href="#"><u>Year</u></a>

### See also

[Setting up a formula for a calculated field](#)

## Abs (Absolute value)



Returns the absolute value of a number. The absolute value is the positive equivalent of the number.

**Format** Abs(number)

### Examples

Abs(6.8) equals 6.8

Abs(0) equals 0

Abs(Total) equals 10, where the Total field contains -10

## Acos (Arc cosine)



Returns the trigonometric arc cosine of a number between -1 and 1. The arc cosine is expressed in radians in the range 0 to pi.

**Format** Acos(number)

### Example

Acos(0.75) equals 0.7227342478134

## Asc (ASCII)



Returns the ASCII numeric value of a character. If a string is entered as a parameter, Asc returns a value only for the first character in the string.

**Format** Asc(character)

### Examples

Asc('a') equals 97

Asc('Aqua') equals 65



## Asin (Arc sine)



Returns the trigonometric arc sine of a number between -1 and 1. The arc sine is expressed in radians in the range  $-\pi/2$  to  $\pi/2$ .

**Format** Asin(number)

### Example

Asin(0.5) equals 0.5235987755983

## Atan (Arc tangent)



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

**Format** Atan(number)

### Example

Atan(-1.25) equals -0.8960553845713

## Atan2 (Arc tangent 2)



Returns the arc tangent of number1/number2. The arc tangent is expressed in radians in the range -pi to pi.

**Format** Atan2(number1,number2)

### Example

Atan2(0.75,-1.25) equals 2.6011731533192

## Avg (Average)



Calculates the average of values in a number list within a record. If any fields in the number list are blank, those fields are not included in the average.

**Format** Avg(number list)

### Examples

Avg(2.8,-5.6,14,5.9) equals 4.275

Avg(Score1,Score2,Score3) equals 4, where the Score1 field contains 3, Score2 contains 8, and Score3 contains 1

Avg(Score1,Score2,Score3) equals 5.5, where the Score1 field contains 3, Score2 contains 8, and Score3 is blank

## Blank



Returns a value if the field is blank; otherwise, returns the value in the field.

**Format** Blank(field,value)

### Examples

Blank(Cost,2.75) equals 3.95, where the Cost field contains 3.95

Blank(Cost,Minimum) equals 2.5, where the Cost field is blank and Minimum contains 2.5

## Chr (Character)



Returns the ASCII character for a number.

**Format** Chr(number)

### Examples

Chr(97) equals a

Chr(65) equals A

## Combine



Concatenates all text strings in a list to form one text string.

**Format** Combine(list)

### Examples

Combine('Monthly ','Expenses') equals Monthly Expenses

Combine(FirstName,' ',LastName) equals Mary Jones, where the FirstName field contains Mary and LastName contains Jones (The second parameter is a space.)

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

Combine(Company,Chr(10),Chr(13)) equals Blue Moon followed by a return and a new line, where the Company field contains Blue Moon

## Cos (Cosine)



Returns the trigonometric cosine of an angle. The angle must be expressed in radians. The result is always between -1 and 1.

**Format** Cos(angle)

### Example

Cos(1.243) equals 0.3219574751143



## CurrTime (Current time)



Returns the current time on the system clock. This function does not use any parameters.

**Format** CurrTime()

### Example

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

## Date



Returns a date corresponding to numbers in the month, day, and year parameters.

**Format** Date(month,day,year)

### Example

Date(10,31,1993) equals October 31, 1993

## DateToText



Converts a date to a text string, for use with formulas involving text or text-oriented functions or for display or export. The format of the string is determined by the format parameter.

**Format** DateToText(date,format)

### Example

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

## Day



Returns a number from 1 to 31 representing the day of the month for a date.

**Format** Day(date)

### Examples

Day('10/31/93') equals 31

Day(Date) equals 25, where the Date field contains the date 3/25/94

## DayName



Returns the name of the day corresponding to a number or a date. The number must be from 1 to 7, with 1 being Sunday.

**Format** DayName(number) or DayName(date)

### Examples

DayName(5) equals Thursday

DayName('1/1/94') equals Saturday

DayName(Date) equals Sunday, where the Date field contains the date 1/2/94

## DayOfWeek



Returns a number representing the day of the week in a date. The number is from 1 to 7, with 1 being Sunday.

**Format** DayOfWeek(date)

### Examples

DayOfWeek('1/1/94') equals 7

DayOfWeek(Date) equals 7, where the Date field contains the date 1/1/94

## DayOfYear



Returns a number representing the number of days since January 1 of the year in a date.

**Format** DayOfYear(date)

### Example

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

## Degree



Converts a number from radians to degrees. Radians are the result of all trigonometric functions.

**Format** Degree(radians)

### Example

Degree(2) equals 114.5915590261646



## Exact



Performs a case-sensitive comparison of text1 and text2. If the two strings match exactly, the function returns Yes; if they do not match, the function returns No.

**Format** Exact(text1,text2)

### Examples

Exact('receipts','receipts') equals Yes

Exact ('ORDER','Order') equals No

## Exp (Exponentiation)



Calculates the constant e to the power of a number. The constant e is the base of the natural logarithm, equal to 2.718281828545904.

**Format** Exp(number)

### Example

Exp(5) equals 148.413159102657660

## Factorial



Returns the factorial of a number.

**Format**    Factorial(number)

### Example

Factorial(4) equals  $4*3*2*1$  equals 24

## Fill



Returns a text result containing repeated instances of text. The text is repeated the number of times specified by a number.

**Format** Fill(text,number)

### Example

Fill('Baden',2) equals BadenBaden

## FV (Future value)



Calculates the future value of an investment given a payment, a periodic interest rate, and a number of periods.

**Format** FV(payment,rate,periods)

### 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) equals 3975.90 (The second parameter specifies the rate as 11% over 12 months.)

## Hour



Returns a number representing the hours in a time.

**Format** Hour(time)

### Examples

Hour('10:12:19') equals 10

Hour(Time) equals 9, where the Time field contains the time 9:12:19

## Hundredth



Returns a number representing the hundredths of a second in a time.

**Format** Hundredth(time)

### Examples

Hundredth('12:15:23.34') equals 34

Hundredth(Time) equals 14, where the Time field contains the time 8:15:30.14

## If



Evaluates a condition for true or false, and returns a true value or a false value.

You can nest an If function inside the main If function to evaluate a true value or false value.

**Format** If(condition,true value,false value)

### Examples

If(State='CA','Yes','No') equals No, where the State field contains the text AZ

If(Total>=1000,50,0) equals 50, where the Total field contains a value greater than or equal to 1000

If(Amount<1000,0,If(Amount<2000,50,100))

equals 0, where the Amount field contains a value less than 1000

equals 50, where the Amount field contains a value greater than 1000 and less than 2000

equals 100, where the Amount field contains a value greater than 2000

If(Amount>1000 AND Type='B',200,100)

equals 200, where the Amount field contains a value greater than 1000 and the Type field contains B

equals 100, where the Amount field contains a value less than 1000 or the Type field does not contain B



## IsBlank



Returns Yes if a field is blank; otherwise, returns No.

**Format** IsBlank(field)

### Examples

IsBlank(Customer) equals No, where the Customer field contains a value

If(IsBlank(Quantity),0,100)

equals 0, where the Quantity field is blank

equals 100, where the Quantity field contains a value

## IsLastRecord



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

**Format** IsLastRecord()

## Left



Returns a text result containing the specified number of characters in text, counting from the left.

**Format** Left(text,number)

### Examples

Left('Mississippi',2) equals Mi

Left(State,2) equals Ca, where the State field contains California

Combine(Alpha1,Left(Alpha2,3)) equals ABCDEF, where the Alpha1 field contains ABC and the Alpha2 field contains DEFG

## Length



Returns the number of characters in a text string, including all spaces, numbers, and special characters.

**Format** Length(text)

### Examples

Length('Customer No.') equals 12

Length(SalesRep) equals 5, where the SalesRep field contains Jerry

Length(Combine(Item1,Item2)) equals 11, where the Item1 field contains Orange and the Item2 field contains Lemon

## Like



Performs a case-insensitive comparison of text1 and text2. If the two strings match (without considering case), the function returns Yes; if they do not match, the function returns No.

You can use a wildcard in text2. An asterisk (\*) represents any number of characters including zero or no characters, and a question mark (?) represents one character.

**Format** Like(text1,text2)

### Examples

Like('Cola','cola') equals Yes

Like ('their','th\*r') equals Yes

Like('their','th?r') equals No

Like(Color1,Color2) equals Yes, where the Color1 field contains red and Color2 contains R?D

Like(SalesRep,Combine("\*\*",Contact,"\*\*"))

    equals Yes, where the SalesRep field contains Jerry and Contact contains er

    equals No, where the SalesRep field contains Jerry and Contact contains H

If(Like(SalesRep,Contact),'Match','No Match')

    equals Match, where the SalesRep field contains Jerry and Contact contains Jerry

    equals No Match, where the SalesRep field contains Jerry and Contact contains Keng

## Ln (Natural logarithm)



Returns the natural logarithm of a positive number. This is the logarithm to the base e.

**Format** Ln(number)

### Example

Ln(10) equals 2.302851

## Log (Logarithm)



Calculates the logarithm of a number to the base 10 (decimal logarithm). The value calculated is the power to which 10 is raised to produce the number.

**Format** Log(number)

### Example

Log(1000) equals 3

## Lower (Lowercase)



Converts all letters in text to lowercase.

**Format** Lower(text)

### Examples

Lower('Gourmet Emporium') equals gourmet emporium

Lower(Country) equals usa, where the Country field contains USA



## Middle



Extracts characters from text, beginning at the start position and containing the number of characters specified by size.

**Format** Middle(text,start,size)

### Examples

Middle('Germany',4,3) equals man

Middle(Product,2,4) equals ppro, where the Product field contains Approach

## Minute



Returns a number representing the minutes in a time.

**Format** Minute(time)

### Examples

Minute('12:10:05') equals 10

Minute(Time) equals 11, where the Time field contains the time 12:11:05

## Mod



Divides number1 by number2 and returns the remainder. The result is the modulus.

**Format** Mod(number1,number2)

### Examples

Mod(12,5) equals 2

Mod(Order,3) equals 1, where the Order field contains 16

Mod(Order,Stock) equals 3, where the Order field contains 8 and Stock contains 5

If(Mod(Total,2)=0,'Even','Odd')

equals Even, where the Total field contains 8

equals Odd, where the Total field contains 3

## Month



Returns a number representing the month in a date.

**Format** Month(date)

### Examples

Month('10/20/93') equals 10

Month(Date) equals 12, where the Date field contains the date 12/05/94

## MonthName



Returns the name of the month corresponding to a number or a date. The number must be from 1 to 12, with 1 being January.

**Format** MonthName(number) or MonthName(date)

### Examples

MonthName(9) equals September

MonthName('10/20/93') equals October

MonthName(Date) equals March, where the Date field contains the date 3/29/94

Combine('Sales for ',MonthName(Date),' ',Year(Date)) equals Sales for July 1994, where the Date field contains the date 7/6/94

## NPeriods (Number of periods)



Calculates the number of periods necessary to pay off a principal with a periodic payment at a given periodic interest rate.

**Format** NPeriods(rate,principal,payment)

### Example

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

NPeriods(.01,1000,100) equals 11

## NumToText (Number to text)



Converts a number to a text string, for use with formulas involving text or text-oriented functions or for display or export.

The format of the string is determined by the format parameter. A zero (0) in the parameter specifies a required digit, and a number sign (#) specifies a non-required digit.

**Format** NumToText(number,format)

### Examples

NumToText(200,'##0.00') equals the text string 200.00

NumToText(5694.08,'###,##0.00') equals the text string \$5,694.08

## Pi



Returns the constant 3.14159. This function does not use any parameters.

**Format** Pi()

### Example

Pi() 15 equals 47.124



## PMT (Payment)



Calculates the payment required to pay off a loan given a principal, a periodic interest rate, and a number of periods.

**Format** PMT(principal,rate,periods)

### 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:

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

## Position



Beginning at the start position, scans text for the first occurrence of a search 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.

**Format** Position(text,search string,start)

### Examples

Position('Mississippi','iss',3) equals 5

Position(City,' ',1) equals 7, where the City field contains Mexico City (The space is the search string.)

Left(Region,Position(Region,' ',1),-1) equals West, where the Region field contains West Central

## Pow (Power)



Returns the value of number1 raised to the power of number2.

**Format** Pow(number1,number2)

### Examples

Pow(2,3) equals 8

Pow(30,8) equals 656,100,000,000

## Prefix



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

**Format** Prefix(text1,text2)

### Example

Prefix('quo','quantity') equals No

Prefix(Item1,Item2) equals Yes, where the Item1 field contains Aqua and the Item2 field contains Aqua Spring Water

## Proper



Converts the first letter of each word in text to uppercase and all other letters to lowercase.

**Format** Proper(text)

### Examples

Proper('SOS') equals Sos

Proper('europe') equals Europe

Proper(Region) equals Asia, where the Region field contains asia

## PV (Present value)



Calculates the present value of an ordinary annuity given a payment, a periodic interest rate, and a 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.

**Format** PV(payment,rate,periods)

### 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) equals 902.996438 (This means that the present value of the annuity is \$903.)

## Radian



Converts a number from degrees to radians.

**Format** Radian(degrees)

### Examples

Radian(90) equals 1.5708

Radian(30) equals 0.5236

## Random



Returns a random number between 0 and 1. This function does not use any parameters.

**Format** Random()

### Examples

Random() equals a random number between 0 and 1

Trunc(Random()\*10)+1 equals a random number between 1 and 10



## Replace



Beginning at the start position, substitutes the series of characters in original text with others in replacement text. The size parameter specifies the number of characters to replace in the original text. The replacement text can be longer or shorter than the number specified in size, resulting in a new character string of a different length.

**Format** Replace(original text,start,size,replacement text)

### Example

Replace('Alan',3,1,'le') equals Allen

## Right



Returns a text result containing the specified number of characters in text, counting from the right.

**Format** Right(text,number)

### Examples

Right('sideview',4) equals view

Right(Region,4) equals Asia, where the Region field contains Southeast Asia

Right(Item,Length(Item) - Position(Item,' ',1)) equals Cola, where the Item field contains Diet Cola (This returns the text to the right of the space in Item, as specified by the Position function.)

Combine(Alpha1,Right(Alpha2,3)) equals ABCGHI, where the Alpha1 field contains ABC and the Alpha2 field contains DEFGHI

## Round



Rounds a number to the number of decimal places specified by precision. If the precision is zero or not specified, Approach rounds the number to the nearest integer.

**Format** Round(number,precision)

### Examples

Round(23.789) equals 24

Round(Amount,1) equals 23.8, where the Amount field contains 23.789

## SAverage (Summary average)



Returns the average of the values in a 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.

**Format** SAverage(number field)

### Example

SAverage(Amount) equals 3, where the Amount field contains 2, 3, 1, and 6 in a summary range of records

SAverage(Amount) equals 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 (Summary count)



Returns the number of nonblank occurrences in a field for a summary range of records. Fields with blank values are not counted.

**Format** SCount(field)

### Example

SCount(Paid) equals 2, where the Paid field contains a value in two records in a summary range

## Second



Returns a number representing the number of seconds in a time.

**Format** Second(time)

### Examples

Second('10:35:18') equals 18

Second(Time) equals 20, where the Time field contains the time 8:45:20

## Sign



Returns -1, 0, or 1, representing whether a number is negative, zero, or positive.

**Format** Sign(number)

### Examples

Sign(21) equals 1

Sign(-21) equals -1

## Sin (Sine)



Returns the trigonometric sine of an angle. The angle must be expressed in radians.

**Format** Sin(angle)

### Example

Sin(1.243) equals 0.946754131



## SLN (Straight-line depreciation)



Calculates the straight-line depreciation of an asset for a single period, given a cost, salvage, and life.

**Format** SLN(cost,salvage,life)

### Example

SLN(7500,3000,10) equals 450

## SMax (Summary maximum)



Returns the largest number or latest date or time in a field for a summary range of records. The field can be a number, date, or time field.

**Format** SMax(field)

### Example

SMax(Amount) equals 200, where the Amount field contains 25, 40, 200, and 75 in a summary range of records

## SMin (Summary minimum)



Returns the smallest number or earliest date or time in a field for a summary range of records. The field can be a number, date, or time field..

**Format** SMin(field)

### Example

SMin(Amount) equals 25, where the Amount field contains 25, 40, 200, and 75 in a summary range of records

## SNPV (Summary net present value)



Calculates the net present value of an investment based on a series of periodic cash flows (value) and a 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).

**Format** SNPV(value,discount rate)

### Example

Suppose that if you invested \$12,000 one year from today, the investment would generate 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) equals -1286.78, where the Payment field contains the values -12000, 1500, 4000, 3500, and 4100.

## Soundslike



Returns Yes if text1 sounds phonetically like text2.

**Format** Soundslike(text1,text2)

### Example

Soundslike('fill','Phil') equals Yes

## Span



Returns the number of characters in text1 that also exist in text2 until a character is found that is not in text2.

**Format** Span(text1,text2)

### Examples

Span('automobile','muato') equals 6

Span(OrderNo,PartNo) equals 0, where the OrderNo field contains 23241 and the PartNo field contains 413

## SpanUntil



Returns the number of characters in text1 that are not in text2 until a character is found that is also in text2.

**Format** SpanUntil(text1,text2)

### Example

SpanUntil('radio','eiu') equals 3

## Sqrt (Square root)



Returns the square root of a number.

**Format** Sqrt(number)

### Examples

Sqrt(13.69) equals 3.7

Sqrt(100) equals 10



## SSTD (Summary standard deviation)



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).

**Format** SSTD(number field)

### Example

SSTD(Score) equals 1.87, where the Score field contains 2, 3, 1, and 6 in a summary

## SSum (Summary sum)



Returns the sum of all the values in a number field for a summary range of records.

**Format** SSum(number field)

### Example

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

## STD (Standard deviation)



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).

**Format** STD(number list)

### Example

STD(4,5,9,2) equals 2.549510

## SVAR (Summary variance)



Calculates the variance of a population given the entire population as a summary range of records.

**Format** SVAR(number field)

### Example

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

## Tan (Tangent)



Returns the trigonometric tangent of an angle. The angle must be expressed in radians.

**Format** Tan(angle)

### Example

Tan(1) equals 1.557407725

## TextToBool (Text to Boolean)



Returns No if the first character in text is F, f, N, n, or zero; otherwise, returns Yes.

**Format** TextToBool(text)

### Example

TextToBool(False) equals No

## TextToDate



Converts text to a date value, for use with formulas involving dates or date-oriented functions.

The date string must be in the format MM/DD/YY (or whatever date format is specified in the Windows International Control Panel).

**Format** TextToDate(text)

### Example

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

## TextToTime



Converts text to a time value, for use with formulas involving times or time-oriented 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 than the colon. Use whatever time separator is specified in the Windows International Control Panel.)

**Format** TextToTime(text)

### Example

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



## Time



Returns a time corresponding to numbers in the hours, minutes, seconds, and hundredths parameters.

**Format** Time(hours,minutes,seconds,hundredths)

### Example

Time(2,15,30,0) equals 2:15:30

## Today



Returns the current system date. This function does not use any parameters.

**Format** Today()

### Example

Today() equals 2/14/94, where the system date is February 14, 1994

## Translate



Replaces all occurrences of character1 with character2 in text.

**Format** Translate(text,character1,character2)

### Example

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

## Trim



Returns a text string without its leading and trailing spaces.

**Format** Trim(text)

### Examples

Trim('New York ') equals New York

Trim(City) equals Paris, where the City field contains ' Paris '

## Trunc (Truncate)



Truncates a number to the number of decimal places specified by precision. If the precision is zero or not specified, Approach truncates the number to an integer.

**Format** Trunc(number,precision)

### Examples

Trunc(13.1374,2) equals 13.13

Trunc(13.1374) equals 13

## Upper (Uppercase)



Converts all letters in text to uppercase.

**Format** Upper(text)

### Examples

Upper('Ca') equals CA

Upper(Country) equals KENYA, where the Country field contains Kenya

## Var (Variance)



Returns the variance of a population given the entire population as parameters.

**Format** Var(number list)

### Example

Var(1,4,7) equals 6

## WeekOfYear



Returns a number representing the number of weeks since January 1 of the year in a date.

**Format** WeekOfYear(date)

### Example

WeekOfYear('11/15/1993') equals 47



## Year



Returns a number representing the year within which a date occurs.

**Format** Year(date)

### Examples

Year('10/21/93') equals 1993

Year(Date) equals 1994, where the Date field contains the date 1/1/94

**alias**

A "copy" of a database file, for use in special types of joins. An alias is not an actual duplicate of a database, but another listing of it for the purposes of joining. Most often, you use an alias to join a database to itself.

**Approach file**

A file that stores forms, reports, and other views. The Approach file does not store any data, but provides a "window" into data in associated database files. When you create a database file, Approach automatically creates an Approach file for it.

**Approach file password**

A text string a user must enter to be able to create views, join databases, or go to Design in an Approach file. You can give your Approach files a password to keep other users from making design changes to them.

**area chart**

A chart that shows trends in data over time by emphasizing the area under the curve created by each data series.

**arithmetic expression**

An expression that performs a basic calculation on two numeric, date, or time values.

**ascending order**

A sort order that sorts records from A to Z for text (case-insensitive), lowest to highest for numbers, and earliest to latest for dates and times.

**bar chart**

A chart that shows individual values represented by bars.



**body**

The part of a report that shows data from records. A body appears between a header and footer.

**Boolean field**

A field that stores a value of True or False.

**Browse**

The environment in Approach that you use to work with information in a database. You can enter and edit data, find and sort records, and print views in Browse.

**calculated field**

A field that stores the result of a formula. You enter the formula as part of the field's definition, and Approach calculates the result and displays it in the field. A calculated field is stored in an Approach file.

**checkbox**

A type of field object that has a Checked value and an Unchecked value. You turn the checkbox on or off in Browse to enter the value in the field. Usually, a field has only one checkbox.

**client**

A computer used to get access to files or applications on a network.

**column gutter**

The area near the top of worksheets and crosstabs. You drag fields into the column gutter to add them to a worksheet or crosstab.

**comparison expression**

An expression that compares two values and returns a result of Yes or No.



**compound document**

A document that contains a linked or embedded OLE object. If you have an OLE object from another application in an Approach file, the Approach file is a compound document.

**constant**

A literal value in a formula. When calculating a formula, Approach uses the constant in every record.

**container application**

An application that contains an OLE object. If you have an OLE object from another application in an Approach file, Approach is the container application.

**context-sensitive menu (Browse)**

A menu in Browse that changes depending on the current selection or view. This menu can be called Browse, PicturePlus, Worksheet, or Crosstab and provides commands appropriate for that type of element.

**context-sensitive menu (Design)**

A menu in Design that changes depending on the current selection or view. This menu can be called Form, Report, Letter, Mailing Label, Worksheet, Crosstab, Chart, Object, Text, or Panel and provides commands appropriate for that type of element.

**crosstab**

A view used for organizing and summarizing data from many records into categories and groups. A crosstab shows summaries of underlying database records that are grouped by any database field.

**current record**

The active record in a view in Browse. You can enter and edit data in the current record.

**data entry order**

The order in which you move through the fields in a view when you press TAB. (You can also press ENTER to move through fields if your preferences are set this way.) Sometimes referred to as *tab order* in other applications.



**data object**

An OLE object you can create in Approach from a range of worksheet or crosstab cells.

**database**

A collection of data organized into fields and records.

**database file**

A file that stores data. The data you see and work with in an Approach file is stored in one or more database files.

**database password**

A text string a user must enter to be able to open an Approach file. The password grants the user read-only access or read/write access to data associated with the file.

**date field**

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

**default style**

A named style that you define to be the preset style for new views. When you create a view using an Assistant, you can apply the default style or one of the SmartMaster styles to the view.

**descending order**

A sort order that sorts records from Z to A for text (case-insensitive), highest to lowest for numbers, and latest to earliest for dates and times.

**delimited text file**

A text file that uses separators such as commas, spaces, or tabs to break up the text into discrete units. If you open a delimited text file as a database in Approach, the units of text become fields.



**Design**

The environment in Approach that you use for laying out forms, reports, form letters, and mailing labels.

**design object**

A graphic element that you can move, resize, and modify as a whole in Design. Fields, lines, rectangles, and macro buttons are examples of design objects.

**detail database**

A joined database that provides secondary information in a view. For example, a detail database for an invoice form might provide customer names and addresses. A view can have one main database and many detail databases.

**drop-down list**

A predefined list of values from which you select in Browse to enter data in a field. The drop-down list appears when you click in or tab to the field.

**embed**

To insert an OLE object in Approach. You can embed an object in a PicturePlus field or in the background of a view.

**expression**

A combination of operators, operands, and functions that yields a single result. A formula can consist of one or more expressions.

**field**

A category of information in a database. For example, in an invoice database the fields might be for invoice number, date, name, and amount due.

**field box**

An editable area in a view that holds a field value. You can type in the field box in Browse to enter data in the 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 data entry settings. Every field in a database must have a definition.

**field label**

The text used to identify a field in a view. A field label often corresponds to the field name.

**field mapping**

The relationship between fields in two databases (when importing data) and between fields in an Approach file and a database file.

**field name**

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

**field reference**

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

**field type**

A specification for the type of data you can enter in a field. The possible field types are Boolean, calculated, date, memo, numeric, PicturePlus, text, time, and variable.

**file type**

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

**find**

To search for and display a set of records based on data in one or more fields.



**Find**

The environment in Approach that you use to search for data in records. You specify search criteria in Find; when Approach finds records that match the criteria, it returns you to Browse and displays only those records.

**find request**

A blank view used for entering search criteria.

**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 fixed-length fields.

**font**

A set of characters in one design, size, and style.

**footer**

A design element that repeats at the bottom of each page in a previewed or printed report, worksheet, or crosstab.

**form**

A view typically used for entering data. When working with a form, you see one record at a time.

**form letter**

A letter view that usually combines names and addresses from a database record with typed text.

**found set**

A group of records that match your search criteria. When Approach finds records that match the criteria, it displays them as the found set.



**full record locking**

A method of network data-sharing in which only one user at a time can edit a record.

**function**

A predefined formula you can use in a calculated field. Approach provides functions for conversion, date, financial, logical, mathematical, statistical, summary, text, time, and trigonometric operations.

**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**

Squares at the edges of a selected design object. You can drag a handle to resize the object.

**header**

A design element that repeats at the top of each page in a previewed or printed report, worksheet, or crosstab.

**icon bar**

A bar at the top of the Approach work area that has SmartIcons you can click to apply a command. Approach provides default icon bars, and you can create custom icon bars of your own.

**index**

A compilation of all the values in a field. Finds and sorts on a field go faster if the field has an index. Approach can compile the index as you enter data or when you first find or sort.

**InfoBox**

A window that stores object properties, such as lines and colors, text attributes, and macro settings. Every design object in a view has an InfoBox with properties. You can keep the InfoBox open as you work, and use it to edit objects.



**join**

To link two databases on a common field. When multiple databases are joined in an Approach file, the file can have views that use data from all the joined databases.

**join field**

The linked field in two joined databases. Often, a join field is an ID field created specifically for joining.

**key field**

A field or group of fields with a value that uniquely identifies each record (for example, an invoice number). Paradox database files in Approach require a key field.

**line chart**

A chart that shows each value in a data series as a data point connected by a line.

**link**

To place a copy of an OLE object in Approach, with a connection to the original object in the source application. If the original object changes, the copy also changes in Approach. You can link an OLE object in a PicturePlus field or in the background of a view.

**logical expression**

An expression that compares or changes the result of comparison expressions and returns a result of Yes or No. A logical expression allows you to define more complex conditions than you can with comparison expressions alone.

**lookup**

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

**macro**

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



**macro button**

An object that you can add to a form, report, or other view. When you click a button, it executes an attached macro.

**mailing label**

A view that displays database fields and text you type in a mailing address format.

**main database**

A joined database that provides the basis for a view. For example, an invoice view would use an invoice database as its main database. A view shows all of the records from the main database.

**many-to-many**

A relationship in which two or more records in one database are 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.

**many-to-one**

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

**map**

To associate fields in an Approach file with fields in a database file. You need to map fields when importing data or an Approach file. You may also need to map fields when opening an Approach file if you have made changes to a database file without saving them in the Approach file.

**memo field**

A field that corresponds to a memo file. Because the data is stored in a separate file, you can store much more data in a memo field than you can in other types of fields.

**named style**

A set of InfoBox properties that you name and save as a group. You can apply a named style to an object, rather than applying individual properties to it using the InfoBox.



**numeric field**

A field that can hold numbers and numeric symbols (such as a decimal point and a currency sign). You can perform arithmetic calculations on data in a numeric field.

**OLE (Object Linking and Embedding)**

A method for transferring and sharing objects between applications.

**OLE object**

An object you embed or link in Approach through OLE. You can double-click an OLE object to edit it using the tools from the source application without leaving Approach. Charts, sound files, and data ranges are examples of OLE objects.

**one-to-many**

A relationship in which a record in one database is 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 to be operated on in a formula. Operands can be either constants or field references.

**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. When the second user tries to enter changes, Approach warns that they will overwrite those of the first user.



**page margins**

When printing a view, the area between the printable part of the view and the edge of the paper.

**parameter**

A value to be operated on in a function. Parameters are enclosed in parentheses after the function name and can be either constants or field references.

**PicturePlus field**

A field that can contain graphics and OLE objects. You can also allow drawing in a PicturePlus field.

**pie chart**

A chart that shows each value in a data series as a slice of a pie.

**point**

A typographic unit of measure; about 1/72 inch.

**Preview**

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

**query file**

A text file that contains log-on information and a Select statement for a SQL table. Query files allow you to quickly connect to a server and get access to specific information in a table.

**radio button**

A field object that can have a Clicked value. You usually use a set of two or more radio buttons for a field; you turn on one button in the set in Browse to enter its value in the field.



**read-only access**

Permission to read data in a database but not to modify it. You can assign a database password to your files to grant read-only permissions to users who know the password.

**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 permissions to users who know the password.

**record**

One set of related information in a database. For example, in an invoice database each invoice 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.

**repeating panel**

A design element that displays the "many" side of a one-to-many relationship. You use a repeating panel in a form to show data from multiple records in a detail database. For example, a repeating panel in a department form might list all the department's employees.

**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 page (or on a series of pages).

**row gutter**

The area at the left side of a worksheet or crosstab that holds row headers. You drag a column header from a worksheet and drop it in the row gutter to convert a worksheet to a crosstab.

**search criteria**

A set of data to look for in a database, such as Tokyo in the City field. When Approach finds records that match the search criteria, it displays only those records.



**server**

A central computer that stores files and applications to which users have access across a network.

**server application**

An application used to create an OLE object.

**SmartIcon**

An icon in a bar at the top of the Approach work area. Each SmartIcon corresponds to a menu command; you can click an icon to apply the command more quickly than choosing from a menu.

**SmartMaster layout**

A predefined layout of fields on a view. You select a SmartMaster layout when you create a new view.

**SmartMaster style**

A predefined set of InfoBox properties for a view. You can select a SmartMaster style when you create a new view.

**snap**

To align objects automatically to increments on a grid in Design. The grid does not have to be showing for objects to "snap" to it.

**sort**

To organize records alphabetically, numerically, or chronologically by data in a field.

**sort field**

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



**status bar**

A bar at the bottom of the Approach work area. The status bar has pop-up menus for changing the view, the environment, and the icon bar. It also provides information such as the number of records and the point size of text.

**summary function**

A function that applies to a range 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 containing a calculated field that summarizes data.

**summary report**

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

**template**

A predefined set of field definitions. Approach comes with templates already set up for several common business applications, such as a customer database and an employee database. You can use a template to create a new database rather than defining all of your fields from scratch.

**text field**

A field that can hold any characters you can type, including letters, numbers, and symbols. 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 and sorts on times in a time field.

**Tools palette**

A set of tools in Design for drawing and editing design objects. You can drag the title bar of the Tools palette to move the palette around in the work area.



**variable field**

A field that temporarily stores a value used in calculations and macros. A variable field is part of an Approach file.

**view**

A form, report, form letter, set of mailing labels, worksheet, crosstab, or chart. Views are stored in an Approach file. Approach provides a standard form and worksheet in each Approach file, and you can also design as many custom views as you need.

**view object**

An OLE object you can create in Approach from a single view or an entire Approach file. You can also include data in a view object.

**view tabs**

"Folder" tabs that appear at the top of the window for each view in the Approach file. You can click a tab to go to that view.

**worksheet**

A view used for organizing, summarizing, and presenting data from many records in a grid of columns and rows. A worksheet shows all the records in the database or the current found set on one page (or on a series of pages). Each record occupies a single row in the worksheet.

**x-axis**

The horizontal axis in an area, bar, or line chart. An x-axis usually shows categories that represent information from the database, such as years or geographic areas.

**y-axis**

The vertical axis in an area, bar, or line chart. A y-axis defines the scale of values plotted in the chart.

**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.



## **Keyboard shortcuts**

Click one of these topics for information:

[Using the keyboard](#)

[Abbreviations](#)

[Commands \(Alphabetical\)](#)

[Direction keys](#)

[Selection keys](#)

## Using the keyboard



You can use the CONTROL key or ALT key, in combination with other keys, to open menus, choose commands, and select options presented in dialog boxes.

In a dialog box:



Press TAB to move from one group of options to another.

Press ALT with the appropriate letter keys to select options.

## Abbreviations



Abbreviation	Key
ALT	Alt
BKSP	Backspace
CTRL	Control
DEL	Delete
DOWN	Down arrow
END	End
HOME	Home
INS	Insert
LEFT	Left arrow
PGDN	Page Down
PGUP	Page Up
RIGHT	Right arrow
SH	Shift
UP	Up arrow

## Commands (alphabetical)



Command	Shortcut
Actual Size (100%)	CTRL+ 1
Alignment	CTRL+ I
Browse	CTRL+ B
Browse menu (open)	ALT + B
Chart menu (open)	ALT + R
Copy	CTRL+ INS or CTRL+ C
Create menu (open)	ALT + C
Crosstab menu (open)	ALT + R
Cut	SH + DEL or CTRL+ X
Delete Record	CTRL+ DEL
Design	CTRL+ D
Edit menu (open)	ALT + E
Fast Format	CTRL+ M
File menu (open)	ALT + F
Find	CTRL+ F
First Record	CTRL+ HOME
Go To Record	CTRL+ W
Group	CTRL+ G
Help menu (open)	ALT + H
Hide Record	CTRL+ H
Insert Current Time	CTRL+ SH + T
Insert Previous Value	CTRL+ SH + P
Insert Today's Date	CTRL+ SH + D
Last Record	CTRL+ END
Letter menu (open)	ALT + L
Mailing Label menu (open)	ALT + M
New Record	CTRL+ N

Next Record	PGDN
Next View	CTRL + PGUP
Object menu (open)	ALT + O
Open	CTRL+ O
Paste	SH + INS or CTRL+ V
Preview	CTRL+ SH + B
Previous Record	PGUP
Previous View	CTRL + PGDN
Print	CTRL+ P
Refresh	CTRL+ R
Report menu (open)	ALT + R
Save Approach File	CTRL+ S
Show All	CTRL+ A
Show Drawing Tools	CTRL+ L
Show Ruler	CTRL+ J
Snap to Grid	CTRL+ Y
Sort	CTRL+ T
Spell Check	CTRL+ K
Style & Properties (InfoBox)	CTRL+ E
Text menu (open)	ALT + X
Tools menu (open)	ALT + T
Undo	ALT + BKSP or CTRL+ Z
Ungroup	CTRL+ U
Window menu (open)	ALT + W
Worksheet menu (open)	ALT + O

## Direction keys



To	Press
Move down one line	DOWN
Move left one character	LEFT
Move left one word	CTRL+ LEFT
Move right one character	RIGHT
Move right one word	CTRL+ RIGHT
Move to start of line	HOME
Move to end of line	END
Move to next record	PGUP
Move to previous record	PGDN
Move up one line	UP

## Selection keys



To	Press
Select down one line	SH-DOWN
Select left one character	SH-LEFT
Select left one word	CTRL+ SH + LEFT
Select right one character	SH + RIGHT
Select right one word	CTRL+ SH + RIGHT
Select up one line	SH + UP

## Basics

Click one of these topics for information:

[Files in Approach](#)

[Views of your data](#)

[Types of fields](#)

[Joined databases](#)

[Basic steps for setting up a database](#)

[Glossary](#)

## See also

[Work Area](#)



## Approach files and database files



### Approach files and database files

You work with two kinds of files in Approach: Approach files and database files.

An Approach file stores forms, reports, worksheets, and other views. 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.

### Joining database files

You can work with data from more than one database file in an Approach file. To do this, you [join](#) the database files in the Approach file. A view can show data from any database file joined in that Approach file.

### Filename extensions

Approach files have the filename extension .APR. The filename extension for dBASE and FoxPro database files is .DBF; for Paradox files is .DB; for Lotus Notes files is .NSF, and for Microsoft Access files is .MDB. SLQ tables do not have an extension.

For other extensions, see [Filename extensions](#).

### See also

[File types](#)

[Joined databases](#)

[About creating and opening files](#)

## Views of your data



You can work with data in Approach in a variety of different views. Views are stored in an Approach file, and can use data from all of the databases joined in that Approach file.

Click a type of view for information about it:

[Forms](#)

[Mailing labels](#)

[Repeating  
panels \(on a  
form\)](#)

[Worksheets and  
crosstabs](#)

[Reports](#)

[Charts](#)

[Form letters](#)

When you create a new Approach file, it has a form and worksheet already set up. You can modify these views and add as many other views as you need.

Approach provides a rich set of predefined field layouts and color and style combinations called SmartMasters for creating custom views quickly and easily. You can also use Approach's design tools to modify views. In any view, you can put fields wherever you want them, import graphics and OLE objects, draw objects such as lines and rectangles, and customize the design in other ways.

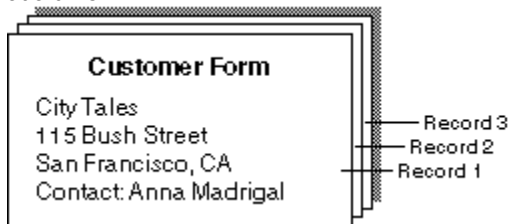
## Forms



A form shows data about one record at a time. You can page through the database to see other records in the form. Forms are usually used for entering and editing data about a record.

### An example

You might use a form to maintain data about customers. Each copy of the form shows data for one customer record at a time:



### Main and detail databases

If you're using only one database in the current Approach file, you see a copy of the form for each record from that database.

If you have joined databases in the Approach file, the form must have a [main database](#). You see a copy of the form for each record in the main database. The form can also have fields from [detail databases](#) for additional, related information.

To show data from a [one-to-many](#) join in a form, add a repeating panel to the form. The repeating panel's main database is one of the detail databases for the form.

### See also

[Repeating panels](#)

[Main and detail databases in a view](#)

[Creating a form](#)

## Repeating panels



You can add a repeating panel to a form to show data from a one-to-many join.

In a one-to-many join, one record in a database is related to two or more records in a joined database. The repeating panel shows the "many" records that are related to the form's one main record.

### An 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 based on the department database and 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
Renaut	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. Each line in a repeating panel displays a record from its main database. The panel in the example above uses the employee database as the main database.

A repeating panel can also have fields from [detail databases](#) for additional, related information.

### See also

[Forms](#)

[Main and detail databases in a view](#)

[Creating a form](#)

[Adding a repeating panel to an existing form](#)

## Reports



Reports let you organize and analyze information from multiple records in powerful ways. You can sort the records that are showing, calculate summary information for them using a [summary function](#), and lay out and arrange record data however you need to.

Reports can show data from database fields, summary information calculated from field data, or a combination of the two. Database fields appear in the body of the report; you can edit the fields in Browse. Summary information appears in [summary panels](#); you can view a summary in Preview (and in Design if Show Data is on), but you cannot edit it.

If a report uses data from joined databases, you see all the records from the [main database](#) as line items in the report's body.

### A report with fields only

For example, you might design a report for quick data entry of sales records in a columnar format. This type of report shows only database fields:

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

### A report with fields and totals

A second report might group and summarize the sales records by product, showing a combination of database records and totals:

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

### A report with totals only

A third report might show only subtotals and a grand total for the same sales report:

Product	Amount
90 Merlot	3,500
90 Zinfandel	2,200
Grand Total	10,900

**See also**

[Main and detail databases in a view](#)

[Creating a standard report](#)

## Form letters

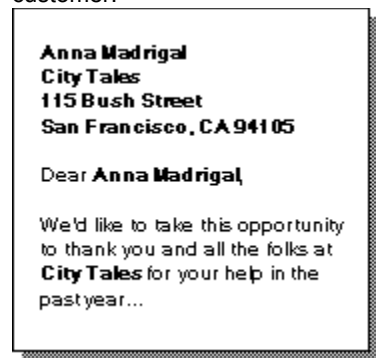


A form letter displays a combination of database fields and text you type in a business letter format. Approach creates a copy of the letter for each record in the current found set, adding the name and address information from the records to the standard text you provide.

A typical form letter consists of database fields for the recipient's name and address plus a salutation, closing, and your return address. You can use all of these elements, or just select the ones that are appropriate.

### An example

You might want to send a year-end letter to each customer you've done business with in the past year. Using the name and address stored in your customer database, you can have Approach create a personalized letter for each customer:



### Spacing around fields

Because database fields might 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 Preview, and in Design if Show Data is on.

### See also

[Creating a form letter](#)

## Mailing labels



A mailing label is a collection of database fields from one record, normally with name and address information.

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. You can choose from more than 50 standard Avery mailing label formats or create other formats of your own.

### An example

You might use a customer database to prepare a mailing label for all the customers who will receive a year-end letter. Each label has data from one record:

Anna Madrigal City Tales 115 Bush Street San Francisco, CA	##### ##### ##### #####
##### ##### ##### #####	##### ##### ##### #####

### Spacing around fields

Approach automatically positions the database fields to match the mailing label format and adjusts the spacing around fields. You see the adjusted spacing in Preview, and in Design if Show Data is on.

### See also

[Creating a mailing label](#)



## Worksheets and crosstabs



### 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:

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

Worksheets are often the most efficient and flexible type of view for displaying data.

### Crosstabs

A cross-tabulation worksheet, or crosstab, expands on the worksheet model, allowing you to categorize and summarize database records. Instead of rows containing individual records, a crosstab shows cells that summarize underlying records grouped or categorized by any fields you select.

You can create a simple crosstab that counts or summarizes data for groups of records, or you can create a more complex, multiple-level crosstab that summarizes data for groups of records by database fields. This crosstab summarizes sales by product and 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

### See also

[Creating a worksheet](#)

[Creating a crosstab](#)

## Charts



A chart is a graphic representation of data. Charts can make complex data easier to understand and are often the best way to communicate and analyze data. You can create bar, line, area, and pie charts in Approach, in two or three dimensions and in color.

All charts except pie charts plot data against a horizontal x-axis and a vertical y-axis. The x-axis can include a scale or categories such as years, geographic areas, or age ranges. The y-axis defines the scales of values plotted in the chart. 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.

You can create a chart in Approach using the Chart Assistant or a data from a crosstab. If you use the Chart Assistant, you can specify the type of chart as you create it. If you create a chart from a crosstab, Approach uses the preset chart type (initially set to bar chart). After creating a chart, you can change it to one of the 20 chart types supported by Lotus Chart using the Chart InfoBox. You can also use the InfoBox to add, modify, or delete other elements in the chart.

For examples of charts and information about editing them using the Chart InfoBox, see [Lotus Chart Help](#).

### See also

[Creating a chart using the Chart Assistant](#)

[Creating an instant chart from a crosstab](#)

## Types of fields



When you define a field, you give it a name and a type, and in some cases a formula or data entry options. A field's type determines what kind of data you can store in the field. The type may also affect how you can use the field for finding and sorting records and whether its data can be used in calculations.

These are the field types you can use in Approach:

**Text** A text field can contain any characters you can type, including letters, numbers, and symbols. You can 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).

**Numeric** Numeric fields are for storing numeric data that you need to use in calculations or find or sort arithmetically. You can sort records by a numeric field in either ascending order (lowest to highest) or descending order (highest to lowest).

**Memo** Like text fields, memo fields can store any characters you can type. You can perform a search on a memo field, but you cannot sort records by data in a memo field or use a memo field in a formula.

**Boolean** A Boolean field contains a value of Yes, No, Y, N, 1, or 0. Define a Boolean field for information that requires a

simple yes or no, such as whether a payment has been received.

**Date**

A date field holds a single date. You can find and sort records on a date field, and you can 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).

**Time**

A time field holds a single time. You can find and sort records on a time field, and you can 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).

**PicturePlus**

A PicturePlus field can hold a graphic or an object that comes from a Windows application that supports OLE (Object Linking and Embedding). Some common OLE objects are charts, sound files, and data ranges. You paste or import the graphic or object into the field in a record.

**Calculated**

A calculated field stores the result of a formula. you set up the formula when you define the field, and Approach calculates the result and enters it in the field. The result can be a text string, a number, a date or time, or a Boolean value. You cannot

edit a result in a calculated field.

**Variable** A variable field is a temporary storage area. Any data in a variable field is stored in memory, not on disk. A variable field is accessible whenever the Approach file in which it's defined is open. You usually use variable fields to store data for a macro.

Calculated and variable fields are part of an Approach file rather than a database file because they do not contain stored data.

**See also**

[About adding, editing, and deleting database fields](#)

## Joined databases



It's often most efficient to split up data into separate, manageable database files -- such as one for orders, one for customer data, and one for product specifications. 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 groups data judiciously from the start can help you avoid problems later.

Approach is a relational database application, which means that you can bring together data from separate database files and use it as if it were all stored in one place. To do this, you join the databases in the Approach file that uses their data. The forms, reports, and other views in the Approach file can use data from any of the databases joined in that file.

Click one of these topics for more information:

[How databases are joined](#)

[Main and detail databases in a view](#)

[One-to-many, many-to-one, and one-to-one relationships](#)

[Many-to-many relationships](#)

[Alias joins](#)

### See also

[About joining and unjoining](#)

## How databases are joined

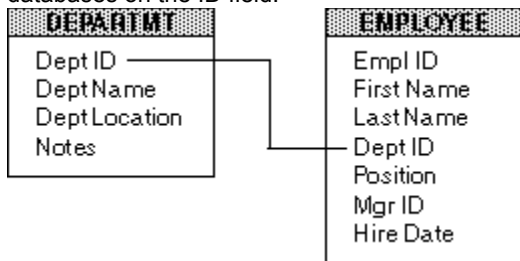


To join two databases, you establish a link between one or more fields the databases have in common. These are called the join fields. It's usually best to define one field in each database specifically to be a join field and then enter an ID value in that field in each record.

When a record in one database has the same join value as a record in a joined database, the two records are "related."

### An example

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. Then join the databases on the ID field:



### Multiple join fields

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. The fields must together uniquely identify records in one of the databases, such as first name, last name, and phone number.

## Main and detail databases in a view

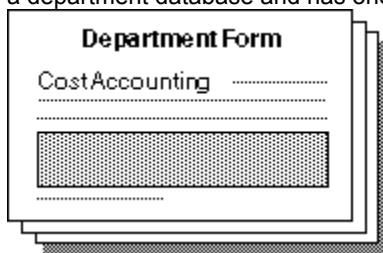


Each form, report, or other view that uses joined databases has one main database and one or more detail databases. The main database provides the basic information for that view; each record from the main database appears in it. A view is said to be "based on" its main database. The other joined databases 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.

### Forms

In a form, each page of the view corresponds to one record in the main database. For example, this form is based on a department database and has one copy of the form for each department:



**Department Form**

CostAccounting .....

.....

[Shaded Repeating Panel]

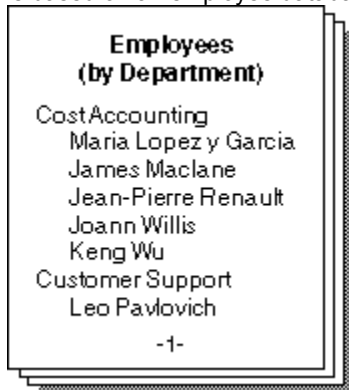
.....

The employee database is used as a detail database in the department form.

A [repeating panel](#) in a form is always based on one of the form's detail databases. The panel shows all the records from the detail database that match the value in the main database's join field.

### Reports

In a report, you see all the records from the main database as line items in the report's body. For example, this report is based on an employee database and lists every employee in the company grouped by department:



**Employees  
(by Department)**

CostAccounting

Maria Lopez y Garcia

James MacLlane

Jean-Pierre Renault

Joann Willis

Keng Wu

Customer Support

Leo Pavlovich

-1-



## One-to-many, many-to-one, and one-to-one relationships



Most often, the relationship between records in two joined databases is 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. For example, one department can have several employees -- or in other words, one 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 that 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. For more information, see [Repeating panels](#).

### Many-to-one

A many-to-one relationship is the reverse of one-to-many. For example, several employees can be in the same department -- or in other words, 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 all 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.

## 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

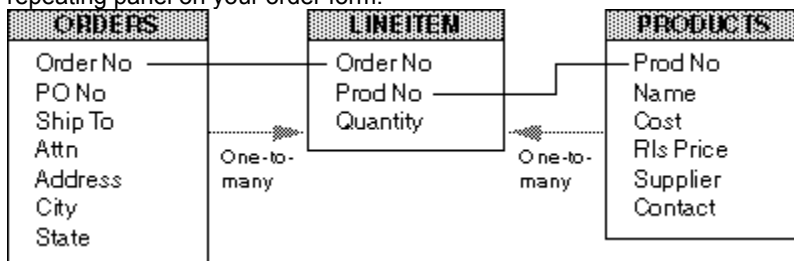
You cannot set up a many-to-many relationship directly between two databases. For example, if you join an orders database and a products database directly on an order number, each product can appear on only one order (because the order number becomes part of the product's record).

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 might 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.

## Alias joins



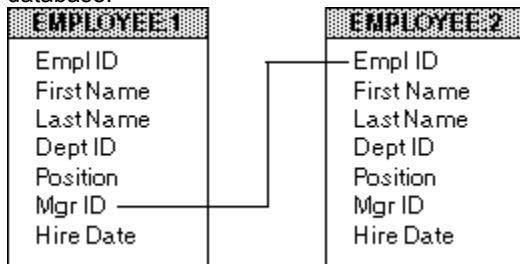
It's sometimes useful to join a database to itself. For example, suppose you want to keep track of which employees in your company are managers and who they are responsible for. The employee database can have employee IDs to identify each employee uniquely and manager IDs to identify each person's manager by employee ID.

This 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 database to express the join relationships properly.

### 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. Once you've created the alias, you can set up a join between the database and its alias as you do between any two databases.

For example, you can join the manager ID in an employee database to the employee ID in an alias "manager" database:



The manager database has a one-to-many relationship with the employee database. You can display the results of this self-join using a repeating panel on a form based on the manager database.

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.

### Names of aliased databases

When you alias a database, the name of the database is appended with a 1, and the alias has the same name as the database, plus a 2 (or a 3 and so on); for example, EMPLOYEE:1 and EMPLOYEE:2.

These names appear only in the Approach file with the joins, and they do not affect the name of the database file itself or the name of the database in any other Approach file.

## Basic steps for setting up a database



These are the basic steps for setting up a new database in Approach:

1. Create a new database file.  
You can create an empty database file (without data) or start with an existing database, spreadsheet, or text file from another application. Approach automatically creates an Approach file for the database file. See [About creating and opening files](#).
2. Define the fields of the new database file.  
A field definition specifies a name and type for the field, and in some cases additional information such as a length or formula. When you create a new database file, you can select a template that has fields already defined. You can edit existing fields and add new fields to a database at any time. See [About adding, editing, and deleting database fields](#).
3. If you want to use data from other databases in your new Approach file, join the other databases to the new database file.  
You can join two databases on any field they have in common. See [About joining and unjoining](#).
4. If you want to use custom views, design the views for the new Approach file.  
Approach supplies a standard form and worksheet for a new Approach file. You can also design custom views of your own. See [About forms and repeating panels](#), [About reports](#), [About form letters](#), [About mailing labels](#), [About worksheets](#), or [About crosstabs](#).
5. Enter data in the records.  
Either type in data yourself or import it from another file. You can enter the data in the standard form or worksheet that Approach provides or in a custom view that you design. See [About entering data in fields](#) or [About importing data](#).

## Glossary



Click a term to see a definition of it:

<a href="#">alias</a>	<a href="#">join field</a>
<a href="#">Approach file</a>	<a href="#">key field</a>
<a href="#">Approach file password</a>	<a href="#">line chart</a>
<a href="#">area chart</a>	<a href="#">link</a>
<a href="#">arithmetic expression</a>	<a href="#">logical expression</a>
<a href="#">ascending order</a>	<a href="#">lookup</a>
<a href="#">bar chart</a>	<a href="#">macro</a>
<a href="#">body</a>	<a href="#">macro button</a>
<a href="#">Boolean field</a>	<a href="#">mailing label</a>
<a href="#">Browse</a>	<a href="#">main database</a>
<a href="#">calculated field</a>	<a href="#">many-to-many</a>
<a href="#">checkbox</a>	<a href="#">many-to-one</a>
<a href="#">client</a>	<a href="#">map</a>
<a href="#">column gutter</a>	<a href="#">memo field</a>
<a href="#">comparison expression</a>	<a href="#">named style</a>
<a href="#">compound document</a>	<a href="#">numeric field</a>
<a href="#">constant</a>	<a href="#">(OLE) Object Linking and Embedding</a>
<a href="#">container application</a>	<a href="#">OLE object</a>
<a href="#">context-sensitive menu (Browse)</a>	<a href="#">one-to-many</a>
<a href="#">context-sensitive menu (Design)</a>	<a href="#">one-to-one</a>
<a href="#">crosstab</a>	<a href="#">operand</a>
<a href="#">current record</a>	<a href="#">operator</a>
<a href="#">data entry order</a>	<a href="#">optimistic record locking</a>
<a href="#">data object</a>	<a href="#">page margins</a>
<a href="#">database</a>	<a href="#">parameter</a>
<a href="#">database file</a>	<a href="#">PicturePlus field</a>
<a href="#">database password</a>	<a href="#">pie chart</a>
<a href="#">date field</a>	<a href="#">point</a>
<a href="#">default style</a>	<a href="#">Preview</a>
<a href="#">delimited text file</a>	<a href="#">query file</a>

<a href="#">descending order</a>	<a href="#">radio button</a>
<a href="#">Design</a>	<a href="#">read-only access</a>
<a href="#">design object</a>	<a href="#">read/write access</a>
<a href="#">detail database</a>	<a href="#">record</a>
<a href="#">drop-down list</a>	<a href="#">relational database application</a>
<a href="#">embed</a>	<a href="#">repeating panel</a>
<a href="#">expression</a>	<a href="#">report</a>
<a href="#">field</a>	<a href="#">row gutter</a>
<a href="#">field box</a>	<a href="#">search criteria</a>
<a href="#">field definition</a>	<a href="#">server</a>
<a href="#">field label</a>	<a href="#">server application</a>
<a href="#">field mapping</a>	<a href="#">SmartIcon</a>
<a href="#">field name</a>	<a href="#">SmartMaster layout</a>
<a href="#">field reference</a>	<a href="#">SmartMaster style</a>
<a href="#">field type</a>	<a href="#">snap</a>
<a href="#">file type</a>	<a href="#">sort</a>
<a href="#">find</a>	<a href="#">sort field</a>
<a href="#">Find</a>	<a href="#">status bar</a>
<a href="#">find request</a>	<a href="#">summary function</a>
<a href="#">fixed-length text</a>	<a href="#">summary panel</a>
<a href="#">file</a>	
<a href="#">font</a>	<a href="#">summary report</a>
<a href="#">footer</a>	<a href="#">template</a>
<a href="#">form</a>	<a href="#">text field</a>
<a href="#">form letter</a>	<a href="#">time field</a>
<a href="#">found set</a>	<a href="#">Tools palette</a>
<a href="#">full record locking</a>	<a href="#">variable field</a>
<a href="#">function</a>	<a href="#">view</a>
<a href="#">grid</a>	<a href="#">view object</a>
<a href="#">handles</a>	<a href="#">view tabs</a>
<a href="#">header</a>	<a href="#">worksheet</a>
<a href="#">icon bar</a>	<a href="#">x-axis</a>
<a href="#">index</a>	<a href="#">y-axis</a>
<a href="#">InfoBox</a>	<a href="#">zoom</a>
<a href="#">join</a>	

## Work Area

Click one of these topics for information:

[Elements of the Approach work area](#)

[Design](#)

[Browse](#)

[Find](#)

[Preview](#)

## Elements of the Approach work area



The Approach work area contains file windows, menu commands, SmartIcons, view tabs, and a status bar. Some of these elements change depending on which environment you're in (Design, Browse, Find, or Preview).

### Menu commands

All of the Approach commands appear in menus along the top of the work area. To choose a command, click the menu name to open the menu and then click the command.

To see a brief description of a menu command, move the pointer over a command in its menu. The description appears in the window's title bar.

In Design and Browse, one of the menus is context-sensitive; it changes as appropriate for the current selection or current view. For details, see [Design menus](#) or [Browse menus](#).

### SmartIcons

The SmartIcons are a subset of the menu commands; they appear in an icon bar (initially set to appear just below the menu bar). To apply a SmartIcon command, click the icon.



Approach comes with a default icon bar for Browse, Find, and Preview and for worksheets and crosstabs. For Design, Approach provides three default icon bars and a floating palette of icons. You can also prepare custom icon bars of your own.

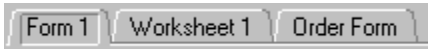
To see a brief description of an icon, move the pointer over the icon. (Or if your icon options are set this way, click the icon with the right mouse button.) The description appears in a "bubble."

To show or hide the icon bar, choose Show SmartIcons from the View menu.

For descriptions of all the icons, see [SmartIcons](#). For information about creating icon bars or changing the icon options, see [Customizing the SmartIcon bar](#).

### View tabs

The names of views in an Approach file appear in view tabs at the top of the file's window. To go another view, click its view tab.



To rename a view while in Design, double-click its view tab and type in the tab.

To rearrange views in the work area while in Design, drag the tabs to move them.

To show or hide the view tabs, choose Show View Tabs from the View menu.

### Status bar

The status bar at the bottom of the work area has pop-up menus for changing the view, the environment, and the icon bar. The rest of the information in the status bar varies depending on which environment you're in. For details, see [Design status bar](#) or [Browse status bar](#).

To show or hide the status bar, choose Show Status Bar from the View menu.

### See also

[Design](#)

[Browse](#)

[Find](#)

[Preview](#)



## Design



In Design, you edit the layout of forms, reports, form letters, and mailing labels. You do not work with actual data in Design, but you can see data and plan the arrangement of it.

### To go to Design:



Click the Design icon, or choose Design from the View menu or from the environment pop-up menu in the status bar.



### Icon bars and Tools palette

Approach provides three default icon bars in Design for manipulating [design objects](#), text, and reports, and a floating Tools palette for drawing new objects. The Worksheet and Crosstab icon bars are also available in Design. The icon bar that is preset to appear depends on the type of the current view.

The Tools palette opens automatically when you go to Design. To move the palette, drag it by the title bar.

Click a topic for descriptions of icons:

[Design icon bar](#)

[Tools palette](#)

[Report icon bar](#)

[Worksheet icon bar](#)

[Text icon bar](#)

[Crosstab icon bar](#)

### Other window elements

Click a topic for information about other window elements in Design:

[InfoBox](#)

[Design status bar](#)

[Design menus](#)

### Data or field names

When you're in Design, you can show data in fields as it appears in Browse or show the names of fields and databases. To toggle between the two settings, choose Show Data from the View menu.

When you show data, you see data from the first record (in a form or form letter) or from the first page of records (in other views). If a view has any fields that summarize data from multiple records, Approach calculates the summary in Design and shows the results. If a view has fields or other objects that slide up or left, the fields slide into position.

### See also

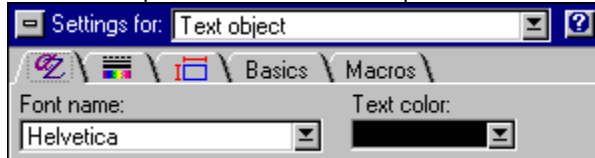
[About customizing the Design work area](#)

## InfoBox



Every [design object](#) has a set of properties, such as dimensions, text attributes, line and fill colors, and attached macros. The settings for an object are stored in an InfoBox. You can keep the InfoBox open on the screen as you work and use it to edit objects.

This is the top of the InfoBox. Click a part of it to see a description:



### To open the InfoBox in Design:



Click the Show Info icon, choose Style & Properties from the [context-sensitive menu](#), or double-click an object or in the background of a view.

If a text object is not selected, you can double-click it to open the InfoBox. But if a text object is selected, double-clicking it puts an insertion point in the object.



### Panels of settings

The InfoBox shows panels of settings for the selected object. If no object is selected, it shows settings for the current view.

To go to another panel of settings, click the tab for that panel in the InfoBox.

### Manipulating the InfoBox

To collapse the InfoBox to its title bar and panel tabs, double-click the title bar. To return the InfoBox to full size, double-click the title bar again.

To move the InfoBox, drag it by the title bar.

To close the InfoBox, double-click its close box.

### Named styles

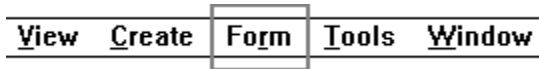
You can save a set of InfoBox properties in a [named style](#) and then apply the style to objects or to a view. This allows you to apply properties consistently without having to set them manually again and again in the InfoBox. For more information, see [Defining and saving a named style](#).

## Design menus



### Context-sensitive menu

In the Design menu bar, one of the menus is context-sensitive; it changes depending on the current selection or the current view.



If an object is selected or if you've clicked in text, in a repeating panel, or in a summary panel, the menu is called Object, Text, or Panel and has commands for working with that type of element.

If you have no selection, the menu is called Form, Report, Letter, Mailing Label, Worksheet, Crosstab, or Chart and provides commands for working with the current type of view.

### Pop-up menu

When you're in Design, you can quickly open a pop-up menu with some of the most commonly used design commands. These commands are a subset of the ones in the main menus.

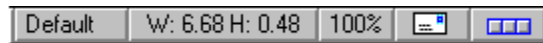
To choose from the pop-up menu, click an object or the border of a view with the right mouse button to open the menu and then drag to the command you want.

## Design status bar



The status bar in Design gives information about the current view and the text and objects in it. Most parts of the status bar are pop-up menus or buttons you can use to change the selection or the work area.

Click a part of the status bar to see a description:



### Pop-up menus and buttons

The parts of the status bar that show view name, environment name, font, font size, named style, and zoom setting are pop-up menus; the icon bar symbol is also a pop-up menu, with icon bars available in the current view. To choose from a pop-up menu, click the menu name to open the menu and then drag to the item you want.

To change the text attributes of selected text or a selected text object, click the Boldface, Italic, or Underline button.

### Dimensions area

The dimensions area of the status bar shows either the width and height of the selected object or the top and left coordinates of the selected object. If no object is selected, the dimensions area always shows the location of the pointer.

To toggle between showing dimensions and coordinates, click in the dimensions area.

### E-mail notifier

The e-mail notifier appears when you have new mail on Lotus Notes, cc:Mail, or another VIM or MAPI mail system.

## Browse



In Browse, you work with the information in a database. You can enter and edit data, add and delete records, find and sort records, and print views. You can also create views (but you need to go to Design to modify the design of forms, reports, form letters, and mailing labels).

### To go to Browse:



Click the Browse icon, or choose Browse from the View menu or from the environment pop-up menu in the status bar.



### Icon bars

The default Browse icon bar has SmartIcons for many of the most commonly used commands for working with data and records. If the current view is a worksheet or crosstab, the Worksheet or Crosstab icon bar appears and provides commands specific to that type of view.

Click a topic for descriptions of icons:

[Browse Icon bar](#)

[Crosstab icon  
bar.](#)

[Worksheet icon  
bar](#)

### Other window elements

Click a topic for information about other window elements in Design:

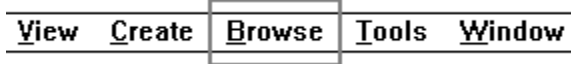
[Browse menus](#)

[Browse status  
bar](#)

## Browse menus



In the Browse menu bar, one of the menus is context-sensitive; it changes depending on the current selection or the current view.



Most often, this menu is named Browse and provides standard commands for finding, sorting, and editing records. But if a PicturePlus field is selected or if the current view is a worksheet or crosstab, the menu is called PicturePlus, Worksheet, or Crosstab and has commands for working with that type of element.

## Browse status bar



The status bar in Browse gives information about the current Approach file. Most parts of the status bar are pop-up menus or other options you can use to navigate in the file or to modify your work area. (Find and Preview also use this status bar; in Preview, it has an additional pop-up menu for zooming.)

Click a part of the status bar to see a description:



## Pop-up menus

The parts of the status bar that show view name and environment name are pop-up menus; the icon bar symbol is also a pop-up menu. To choose from a pop-up menu, click the menu name to open the menu and then drag to the item you want.

## Record number

The record number shows the position of the current record in the sort order of the found set. This number is not permanently associated with the record. (The numbering of records can change if you find, sort, add, or delete records.)

To go to the previous or next record, click the previous or next arrow in the status bar.

To go to another record by number, click the record number in the status bar and fill in the dialog box that appears.

## E-mail notifier

The e-mail notifier appears when you have new mail on Lotus Notes, cc:Mail, or other VIM or MAPI mail systems.

## Find



In Find, you fill out a [find request](#) to isolate records that meet certain criteria. When you first go to Find, you see a new find request for the current view.

### To go to Find:



Click the Find icon, or choose Find from the Browse menu or from the environment pop-up menu in the status bar.



### Window elements

The default Find icon bar has SmartIcons you can click to insert operators in search criteria. For descriptions of the icons, see [Find icon bar](#).

Under the icon bar is the Find button bar. Click a button for a description of it:



The status bar in Find is the same as it is in Browse. For details, see [Browse status bar](#).

### Search criteria

You enter search criteria in the fields you want to search on in the find request. (For example, to find all employees who were hired after July 1, 1994 in an employee form, type >7/1/94 in the form's Date Hired field.)

When you finish filling out the request, Approach returns you to Browse and displays only the records that match the search criteria you specified. This subset of records is the found set.

### See also

[About finding records](#)



## Preview



The Preview environment shows what the current view will look like when printed. This gives you a chance to correct errors or make design changes before committing a view to paper.

### To go to Preview:



Click the Preview icon, or choose Preview from the File menu or from the environment pop-up menu in the status bar.



### Window elements

The default Preview icon bar has SmartIcons for moving through records, finding and sorting records, and printing. For descriptions of the icons, see [Preview icon bar](#).

The status bar in Preview is the same as it is in Browse, except that it also has a pop-up menu with zoom settings. For details, see [Browse status bar](#).

### Data, summaries, and objects

All of the data from Browse also appears in Preview. You can move through records in Preview as you can in Browse, but you cannot click in fields or edit data.

If a view has any fields that summarize data from multiple records, Approach calculates the summary in Preview and shows the results. If a view has fields or other objects that slide up or left, the fields slide into position.

### Zoom settings

When you first go to Preview, you see the current view reduced to 75 percent. You can change to other zoom settings. (The possible settings are 25, 50, 75, 100, and 200 percent.) For more information, see [Previewing a view](#).

### See also

[About previewing and printing](#)

**Close box**

Click the close box to close the InfoBox.

**Title bar**

Drag the title bar to move the InfoBox.

**Panel tabs**

Click a panel tab to display another panel of settings.

**Panels of settings**

The InfoBox shows panels of settings for the selected object or current view.

**View pop-up menu**

Shows the name of the current view.

**Environment pop-up menu**

Shows the name of the current environment.

**Font pop-up menu**

Shows the font of selected text or the selected text object.



**Size pop-up menu**

Shows the font size of selected text or the selected text object.

### **Boldface, Italic, and Underline buttons**

Click a button to change the attributes of selected text or the selected text object.

**Named style pop-up menu**

Shows the named style of the selected object or the current view.

**Dimensions or location**

Shows the dimensions or location of the selected object or the location of the pointer.

**Zoom setting pop-up menu**

Shows the zoom setting for the current view

**E-mail notifier**

Appears when you have new mail.

### **Icon bar pop-up menu**

Choose from this pop-up menu to display another icon bar.

**Record number**

Shows the number of the current record in the found set.



**Previous Record button**

Click to go to the previous record.

**Next Record button**

Click to go to the next record.

**Number of records**

Shows the number of records in the found set in relation to the entire database.

**OK button**

Begins the search.

**Cancel button**

Cancels the search and returns to Browse.

**Clear Find button**

Removes search criteria from the find request.

**Find More button**

Creates an additional find request (so that you can specify Or criteria for a field).

## SmartIcons

Click a topic for information about a SmartIcon bar.

[Browse icon bar](#)

[Crosstab icon bar](#)

[Design icon bar](#)

[Find icon bar](#)

[Preview icon bar](#)

[Report icon bar](#)

[Text icon bar](#)

[Worksheet icon bar](#)

[Tools palette](#)

[Other available icons](#)



## Browse icon bar



This is the default Browse icon bar (divided into sections for easier viewing). It appears in forms, reports, mailing labels, charts, and form letters.

Click an icon to see a description of the action it performs.



## Design icon bar



This is the default Design icon bar (divided into sections for easier viewing). It appears in forms, charts, and mailing labels.

Click an icon to see a description of the action it performs.

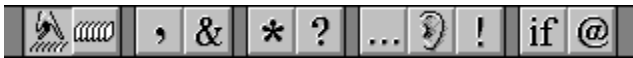




## Find icon bar



This is the default Find icon bar (divided into sections for easier viewing). It appears when a find request is active. Click an icon to see a description of the action it performs.



## Report icon bar



This is the default Design icon bar for reports (divided into sections for easier viewing).  
Click an icon to see a description of the action it performs.



## Text icon bar



This is the default Design icon bar for form letters (divided into sections for easier viewing).  
Click an icon to see a description of the action it performs.



### Worksheet icon bar



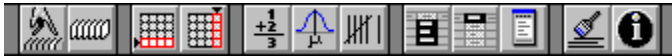
This is the default icon bar for worksheets for both Browse and Design (divided into sections for easier viewing). Click an icon to see a description of the action it performs.



## Crosstab icon bar



This is the default icon bar for crosstabs for both Browse and Design (divided into sections for easier viewing). Click an icon to see a description of the action it performs.





## Tools palette



This is the Tools palette that appears when you're in Design for forms, reports, charts, and mailing labels. Click an icon to see a description of the action it performs.



## Other available icons



In addition to the icons that appear in the default icon bars, Approach also has additional icons that you can include in your own custom icon bars.

Click an icon to see a description of the action it performs.

## File commands



## Edit and text commands



## View commands



## Create commands



## Browse commands



### Object commands



### Function icons



### Other miscellaneous commands



**Open File**

Displays the Open File dialog box, where you can select a file to be opened.

**Save File**

Saves the current Approach file.

**Send Mail**

Sends the current view using your e-mail application.

**Print**

Prints the current view.

## **Preview**

Goes to Preview.



**First Record**

Displays the first record in the found set.

**Previous Record**

Displays the previous record in the found set.

**Next Record**

Displays the next record in the found set.

**Last Record**

Displays the last record in the found set.

## **Design**

Goes to Design.

## **Browse**

Goes to Browse.

**Find**

Finds a set of records.

**Show All**

Displays all records in the database.



**Ascending Sort**

Sorts records in ascending order according to the current field.

**Descending Sort**

Sorts records in descending order according to the current field.

**New Record**

Creates a new record.

**Delete Record**

Deletes the current record.

**Duplicate Record**

Duplicates the current record.

**Date**

Inserts the date.

**Time**

Inserts the time.

**Duplicate Data**

Duplicates data from the previous record.



**Spell Check**

Checks spelling.

**Enter**

Performs a find or accepts the record.

**Undo**

Undoes the last change.

**Cut**

Cuts the current selection to the Clipboard.

**Copy**

Copies the current selection to the Clipboard.

**Paste**

Pastes the contents of the Clipboard.

**Fast Format**

Applies the format of the current selection.

**Show Info**

Opens the InfoBox so that you can change the style and properties of the current view or selected object.



**Bring Forward**

Brings the selected object forward one layer.

**Send Backward**

Sends the selected object back one layer.

**Group**

Groups the selected objects.

**Ungroup**

Ungroups the selected grouped object.

**Show Grid**

Displays drawing grid lines.

**Show Ruler**

Displays rulers at the top and left side of the window.

**Show Tools**

Displays the Tools palette.

## **Zoom In**

Zooms in for a closer look.



**Zoom Out**

Zooms out so that you can see more.

**Next Icon Bar**

Displays the next SmartIcon bar available.

**Sort**

Opens the Sort dialog box so that you can specify how to sort records in the found set.

**Show Data**

Displays data in Design.

## Chart

Charts the current crosstab data.

**Add Row**

Adds a summary row to the crosstab.

**Add Column**

Adds a summary column to the crosstab.

**Sum**

Calculates a total.



**Average**

Calculates an average.

**Count**

Calculates a count.

**Select Column**

Selects only the column (and not the header) for the current column.

**Column Header**

Selects only the header (and not the rest of the column) for the current column.

**Add Field**

Opens the Add Field dialog so that you can add a field to the view.

**Insert Column**

Inserts a blank column into a worksheet.

**Equal**

Matches items that are the same.

**Not Equal**

Matches items that are not the same.



**Less Than**

Matches items that are less than a value you enter.

**Less Than or Equal**

Matches items that are less than or equal to a value you enter.

**Greater Than or Equal**

Matches items that are greater than or equal to a value you enter.

**Greater Than**

Matches items that are greater than a value you enter.

**And**

Finds records that match either criteria.

**Or**

Finds records that match both criteria.

**Multiple Character Wildcard**

Matches any string.

**Single Character Wildcard**

Matches any character.



**Range**

Finds a range of values.

**Sounds Like**

Finds words that sound alike but may be spelled differently.

**Case-Sensitive**

Matches case in text when finding records.

**Expression**

Finds records based on the value returned by an If statement.

**Formula**

Finds records that match the result of a formula.

**Left Align**

Left-aligns text.

**Center**

Centers text.

**Right Align**

Right-aligns text.



**Single Space**

Single-spaces text.

**Double Space**

Double-spaces text.

### **Trailing Summary**

Adds a trailing summary panel to a report.

**Leading Summary**

Adds a leading summary panel to a report.

**Panel Labels**

Displays labels for report panels.

**Insert Field**

Inserts a field you select into the form letter.

**Pointer**

Gives you a pointer for selecting objects.

**Text**

Gives you a tool for creating text.



**Rectangle**

Gives you a tool for drawing rectangles or squares (press SHIFT while dragging for squares).

**Ellipse**

Gives you a tool for drawing ovals or circles (press SHIFT while dragging for circles).

### **Rounded Rectangle**

Gives you a tool for drawing rounded rectangles.

**Line**

Gives you a tool for drawing lines.

**Field**

Gives you a tool for drawing fields.

**Checkbox**

Gives you a tool for drawing checkboxes.

**Radio Button**

Gives you a tool for drawing radio buttons.

**Macro Button**

Gives you a tool for drawing macro buttons.



**PicturePlus**

Gives you a tool for drawing PicturePlus fields.

**New File**

Creates a new Approach file.

**Import**

Opens the Import dialog box so that you can import into Approach.

**Export**

Opens the Export dialog box so that you can export from Approach.

**Print Form**

Prints the current form.

**Print Setup**

Opens the Print Setup dialog box.

**Exit**

Exits Approach.

## **Bold**

Makes selected text bold.



**Italic**

Makes selected text italic.

**Justify**

Justifies text.

**Paste Special**

Opens the Paste Special dialog box.

**Style Definition**

Allows you to define a text style.

**Underline**

Makes selected text underlined.

**Column Mode**

Allows you to work with entire report columns.

**Show Tabs**

Displays a view tab for each view.

**New Chart**

Opens the Chart Assistant so that you can create a new chart.



**New Form**

Opens the Form Assistant so that you can create a new form.

**New Label**

Opens the Mailing Label Assistant so that you can create a new mailing label.

**New Letter**

Opens the Form Letter Assistant so that you can create a new form letter.

**New Report**

Opens the Report Assistant so that you can create a new report.

**New Worksheet**

Opens the Worksheet Assistant so that you can create a new worksheet.

**New Crosstab**

Opens the Crosstab Assistant so that you can create a new crosstab.

**Find Duplicate**

Opens the Find Special dialog box so that you can find duplicate records.

**Find Special**

Opens the Find Special dialog box so that you can find duplicate or unique records.



**Align**

Aligns selected objects.

**Select All**

Selects all objects in a view.

**Maximum**

Calculates a maximum value for a range of records.

**Minimum**

Calculates a minimum value for a range of records.

**Standard Deviation**

Calculates a standard deviation.

**Variance**

Calculates a variance.

**1-2-3**

Opens Lotus 1-2-3 if it's available.

**AmiPro**

Opens AmiPro if it's available.



**CC:Mail**

Opens CC:Mail if it's available.

**Freelance**

Opens Freelance Graphics if it's available.

**Improv**

Opens Lotus Improv if it's available.

**Notes**

Opens Lotus Notes if it's available.

**Organizer**

Opens Lotus Organizer if it's available.

**SmartPics**

Opens Lotus SmartPics if it's available.

**Page Number**

Inserts a page number.

**Customize SmartIcons**

Opens the SmartIcons dialog box so that you customize SmartIcons.



**Help**

Opens the Approach online Help.

**Snap Grid**

Turns on the snap grid for aligning objects.

**Send To Back**

Sends the selected object to the back layer.

**Send To Front**

Sends the selected object to the front layer.

## About creating and opening files

When you create a new database file, or open an existing database from another application, Approach automatically creates and opens a new Approach file so that you can begin entering data. When you want to work with an existing database, you open an Approach file for it rather than the database file.

### Creating a new database file



If you're setting up a database from scratch, begin by creating a database file. You can give the file predefined fields from a template or define fields of your own after creating the file.

### Opening an Approach file



If you want to work with a database that already has an Approach file, open the Approach file rather than the database file. Approach files have the filename extension .APR. If more than one database is joined in an Approach file, the Approach file gives you access to all of those databases.

### Mapping fields in an Approach file



If you make structural changes to fields and do not save the Approach file, or if you make structural changes through another Approach file, the next time you open an Approach file you'll need to map the changed fields. This can happen if you have changed the name or type of a field or have deleted a field from the database file.

### Opening a database created in another application



You can open a database that was created in another application. Approach creates a new Approach file for it, and you can work with the database as if it had been created in Approach.

### Opening a table created in Microsoft Access



You can use Approach to open a database table created in Microsoft Access. You need to see the contents of the database first and then select the table you want. Approach creates and opens a new Approach file.

### Creating a database from a spreadsheet



You can open a spreadsheet in a Lotus 1-2-3 or Excel format. Approach creates an Approach file and a database file with a copy of the spreadsheet's data.

### Creating a database from a delimited text file



If you open an ASCII text file with delimited text, Approach creates an Approach file and a database file with a copy of the text file's data. The delimiters mark where one field ends and the next one begins.

### Creating a database from a fixed-length text file



If you open an ASCII text file with fixed-length text, Approach creates an Approach file and a database file with a copy of the text file's data. The text is divided into fixed-length fields.

### See also

[About database files](#)

## Creating a new database file



If you're setting up a database from scratch, begin by creating a database file. You can give the file predefined fields from a template or define fields of your own after creating the file.

1. Click the New File icon or choose New from the File menu. Or if the Welcome dialog box is on the screen, select "Create a new file," select a template if you want, and click OK.



2. Type a name for the database file in the File Name text box.
3. Select a database file type in the List Files of Type drop-down list.
4. Click OK.

### See also

[About defining fields for a database](#)

## Details: Creating a new database file



### Templates

Approach comes with templates that provide predefined fields for common types of databases. When you create a database from the Welcome dialog box, you can specify one of these templates.

If you create a database using a template, the database is a copy of the template; you can modify its fields for your particular needs. If you create a database without using a template, the database is empty, with no fields; you define the fields yourself in the Field Definition dialog box.

### File types

The List Files of Type drop-down list shows the file types you can use for a new database. The standard file types in the list are dBASE IV, dBASE III+, FoxPro 2.1, and Paradox. You do not need to have a dBASE, FoxPro, or Paradox application to use these file types in Approach.

If the ReadOnly line in your APPROACH.INI file is set to 0, the list also shows the types Access, Oracle, SQL Server, DB2, DB2-MDI, Lotus Notes, and any ODBC drivers you have installed. For more information about these types, see [File types](#).

### Saving the Approach file

Make sure you save your new Approach file. Approach does not automatically save an Approach file for a new database (though it saves any data you enter in the database file).

## Opening an Approach file



If you want to work with a database that already has an Approach file, open the Approach file rather than the database file. Approach files have the filename extension .APR.

### To open any Approach file:

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.



2. Select the name of the Approach file in the File Name list.
3. To open the Approach file only for viewing, turn on Read-only.
4. Click OK.

### To open one of the last five Approach files used:



Select the name of the file in the bottom of the File menu, or press ALT-F and the number (1 through 5) that appears for the file in the menu. Or if the Welcome dialog box is on the screen, select the name of the file in the Open drop-down list and click OK.



## Details: Opening an Approach file



### Read-only setting

If you turn on this setting, you will not be able to edit data or save design changes in the Approach file. This setting applies only to your current session with the file and does not make it permanently read-only.

### Field mapping

If the Approach file has fields that need to be mapped to fields in a database file, the Field Mapping dialog box appears when you try to open the file. See [Mapping fields in an Approach file](#).

### Database file passwords

If a database requires a password, Approach asks you to provide the password when you try to open an Approach file that uses that database. A database can have a read/write password or both a read/write and a read-only password. The Approach file opens if you type the password correctly.

## Mapping fields in an Approach file



If you make structural changes to fields and do not save the Approach file, or if you make structural changes through another Approach file, the next time you open an Approach file you'll need to map the changed fields.

### To map fields in an Approach file:

1. Open the Approach file.
2. Click Yes in the alert box.  
The alert box appears if the file has fields that need to be mapped.
3. In the Field Mapping dialog box, map an unmapped Approach file field in the list on the left to the database field right across from it by clicking between the two fields.  
An arrow appears between the fields when you click. You can drag a database field up or down to move it across from the Approach file field to map.
4. Continue mapping unmapped fields in the same manner.
5. Click OK.

### To remove all the mapping in an Approach file:



Click Clear in the Field Mapping dialog box.

### To restore an Approach file to its original mapping:



Click Automatically Line Up Fields in the Field Mapping dialog box.

### See also

[Opening an Approach file](#)

## Details: Mapping fields in an Approach file



### Field lists in the dialog box

The fields on the left side of the Field Mapping dialog box are in the Approach file; the fields on the right side are in the database files. An arrow between two fields means they are mapped. Fields with the same name are mapped automatically (unless you have changed the type of a field).

### Suggestions for mapping

Follow these suggestions for mapping a field:

If you have	Do this
Changed the name of a field in the database file	Map the Approach file field to the new field name in the database.
Changed the type of the field in the database file	Map the Approach file field to its same name in the database, or map it to a different name to replace it with a different field.
Deleted the field from the database file	Map the Approach file field to a different field name in the database.

### Unmapped fields

If you leave any fields unmapped, they will not show data in the Approach file. In Design, the unmapped fields will have NO\_FIELD\_REFERENCE in them. In Browse, if you click in an unmapped field you get an error telling you that you cannot edit the field and must assign a database field to it.

## Opening a database created in another application



You can open a database that was created in another application. Approach creates and opens a new Approach file, and you can work with the database as if it had been created in Approach.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.



2. Select a database file type in the List Files of Type drop-down list.
3. Select the name of the database in the File Name list.
4. To open the new Approach file only for viewing, turn on Read-only.
5. Click OK.

### See also

[About working together with Lotus Notes](#)

[About working with ODBC data sources](#)

[Opening a table created in Microsoft Access](#)

## Details: Opening a database created in another application



### Read-only setting

If you turn on this setting, you will not be able to edit data or save design changes in the new Approach file. This setting applies only to your current session with the file and does not make it permanently read-only.

### SQL tables

If you select Oracle, SQL Server, or DB2-MDI and are not already connected to a SQL server, a dialog box appears that lets you connect. See [About working with SQL tables](#).

### Key fields for a Paradox database

If you try to open a Paradox database and Approach cannot find a key field, the Choose Key Field dialog box appears so that you can select a field to use as the key field. If the database does not have a unique field or a combination of fields you can use for this, click Add Key Field in the dialog box. 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 in another file type. For example, if you open a database that's on a mainframe computer, you may want to save a copy of the database in dBASE IV to make it more suitable for use on your own computer.

## Opening a table created in Microsoft Access



You can use Approach to open a database table that was created in Microsoft Access. Approach creates and opens a new Approach file.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.



2. Select Access in the List Files of Type drop-down list.  
The names of Access databases appear in the Directories list, with a filecard icon in front of them.
3. Double-click the name of the database in the Directories list.  
The names of tables in the database appear in the File Name list.
4. Select the name of the table in the File Name list.
5. Click OK.
6. If an alert box appears, click OK to open the table.  
The alert box appears if your preferences are set for displaying SQL and ODBC databases read-only.

### See also

[Microsoft Access](#)

## Creating a database from a spreadsheet



You can open a spreadsheet in a Lotus 1-2-3 or Excel format. Approach creates an Approach file and a database file with a copy of the spreadsheet's data.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.



2. Select Lotus 1-2-3 or Excel in the List Files of Type drop-down list.
3. Select the name of the spreadsheet in the File Name list and click OK.
4. To use the text in the first row of the spreadsheet as field names, turn on "First row contains field names" in the Select Range dialog box (for Lotus 1-2-3) or the Field Names dialog box (for Excel).
5. If you're creating a database from a Lotus 1-2-3 spreadsheet, select a sheet or named range with the data you want to use in the database.
6. Click OK.
7. In the Convert To dialog box, type a name for the database file in the File Name text box.
8. Select a database file type in the List Files of Type drop-down list.
9. Click OK.

### See also

[Opening a named range from a Lotus 1-2-3 spreadsheet](#)

## Details: Creating a database from a spreadsheet



### 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.

The fields are initially named A, B, C, and so on, but you can rename them in the Field Definition dialog box. 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), you can use this row to provide the field names.

### Data from the spreadsheet

If you create a database from an Excel spreadsheet, all of the data from the spreadsheet is copied into the database.

If you create a database from a Lotus 1-2-3 spreadsheet, you can specify a sheet or named range of data to use.

When you select a Lotus 1-2-3 spreadsheet in the Open dialog box, the Select Range dialog box appears, showing the names of sheets and ranges from the spreadsheet file. The range names are in all capital letters.



## Creating a database from a delimited text file



If you open an ASCII text file with delimited text, Approach creates an Approach file and a database file with a copy of the text file's data. The delimiters mark where one field ends and the next one begins.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.



2. Select Text - Delimited in the List Files of Type drop-down list.
3. Select the name of the text file in the File Name list and click OK.
4. In the Text File Options dialog box, select the separator used in the text file in the Separate Fields With area. If the separator you want does not appear in the list, select Other and type the character in the text box.
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, turn on "First row contains field names."
7. Click OK.
8. In the Convert To dialog box, type a name for the database file in the File Name text box.
9. Select a database file type in the List Files of Type drop-down list.
10. Click OK.

### See also

[Creating a database from a fixed-length text file](#)

## Details: Creating a database from a delimited text file



### 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. You specify the delimiter used when you open the text file in Approach. A paragraph return marks where one record ends and the next one begins.

### Field names

When you create a database from a delimited text file, the fields are initially named A, B, C, and so on, but you can rename them in the Field Definition dialog box. If the first row of the text file has text that identifies the rest of the file's contents (such as Name, Address, and City), you can use this first row to provide the field names.

## Creating a database from a fixed-length text file



If you open an ASCII text file with fixed-length text, Approach creates an Approach file and a database file with a copy of the text file's data. The text is divided into fixed-length fields.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.



2. Select Text - Fixed-Length in the List Files of Type drop-down list.
3. Select the name of the text file in the File Name list and click OK.
4. In the Fixed Length Text File Setup dialog box, select the character set used in the text file.
5. Type a name for the first field in the Field Name text box, or turn on "First row contains field names" to use the text in the first row of the file as field names.
6. Select a data type for the first field in the Data Type drop-down list.
7. Type the starting position for the first field in the Start text box.
8. Type the number of characters for the first field in the Width text box.
9. For the rest of the fields, type a field name (unless "First row contains field names" is on), select a data type, and type a width.  
You don't need to provide the starting position for fields after the first one.
10. Click OK.
11. In the Convert To dialog box, type a name for the database file in the File Name text box.
12. Select a database file type in the List Files of Type drop-down list.
13. Click OK.

### See also

[Creating a database from a delimited text file](#)

## Details: Creating a database from a fixed-length text file



### How text is divided

In a fixed-length text file, the text on each line is broken into blocks of text 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, you need to 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 block; you need to know the contents of the text file to define the blocks correctly.

### Field names

You can name the fields when you create a database from a fixed-length text file. Or if the first row of the file has text that identifies the rest of the file's 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 the name for the database file type. See [About database files](#).

## About saving, closing, and deleting files

Approach automatically saves changes to your data 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 changes to views or join database files.

### Saving an Approach file



The first time you save an Approach file, you give the file a name and specify a location. You should also save periodically when you make design or join changes to the file.

### Saving a copy of an Approach file and a database file



You can save a copy of an Approach file and its associated database file(s), either to back up a database or to prepare a template for other databases.

### Saving a copy of an Approach file only



You can also save a copy of an Approach file that uses the same set of data as the original file. This allows you to quickly set up multiple Approach files for a single set of data.

### Closing an Approach file



When you close an Approach file, Approach saves any unsaved changes to data. If you've made design or join changes you haven't saved, an alert box asks if you want to save those changes.

### Deleting a file



You can delete an Approach file or a database file from within Approach. When you delete a database file, all related files such as indexes are deleted along with it.

## Saving an Approach file



The first time you save an Approach file, you give the file a name and specify a location. You should also save periodically when you make design or join changes to the file.

### To save a new Approach file:

1. Click the Save Approach File icon or choose Save Approach File from the File menu.



2. Type a name for the file in the File Name text box.
3. To give the Approach file a password, turn on "Set Approach file password" and type the password in the text box.
4. Click OK.

### To save changes to an existing Approach file:



Click the Save Approach File icon or choose Save Approach File from the File menu.

## Details: Saving an Approach file



### Approach file passwords

If you give an Approach file a password, a user must enter the password before creating views, joining databases, or going to Design in the file.

### Saving a default view

When you open an Approach file, the file opens to the view you were using the last time you last saved. Before saving an Approach file, change to the view you want to appear when the file is opened or create an Open macro that automatically changes to the view you want. For information about macros, see [Defining a macro](#).

## Saving a copy of an Approach file and a database file



You can save a copy of an Approach file and its associated database file(s), either to back up a database or to prepare a template for other databases.

1. Choose Save As from the File menu.
2. Type a different name or specify a different location for the copy of the Approach file.
3. To give the copy a password, turn on "Set Approach file password" and type the password in the text box.
4. Select "Exact copy" or "Blank copy" in the Databases area.
5. Click OK.
6. Type a different name or specify a different location for the copy of the database file.
7. To change the file type for the copy, select another type in the List Files of Type drop-down list.
8. Click OK.
9. For each additional database, specify a different name or location, select a file type (if necessary), and click OK. The Save Database As dialog box appears for each database file joined in the Approach file.

### See also

[Saving a copy of an Approach file only](#)



## Details: Saving a copy of an Approach file and a database file



### "Exact copy" setting

"Exact copy" makes an exact copy of the database, with all of its data. Use this setting to create a backup of a database. The copy will be an exact duplicate of the original Approach file and database file.

### "Blank copy" setting

"Blank copy" makes a copy of the database with everything except for the data. Use this setting to create a template for other databases. The copy will have the same field definitions, views, macros, and setup options as the original, but no data.

### Approach file passwords

If an Approach file has a password, a user must enter the password before creating views, joining databases, or going to Design in the file.

### Key fields for a Paradox database

If you use the Paradox file type for a database file, the Choose Key Field dialog box appears so that you can select a field to use as the key field. If the database does not have a unique field or a combination of fields you can use for this, click Add Key Field in the dialog box. Approach adds a new field to the copy of the database, with a unique number for each record.

## Saving a copy of an Approach file only



You can also save a copy of an Approach file that uses the same set of data as the original file. This allows you to quickly set up multiple Approach files for a single set of data.

1. Choose Save As from the File menu.
2. Type a different name or specify a different location for the copy of the Approach file.
3. To give the copy a password, turn on "Set Approach file password" and type the password in the text box.
4. Select ".APR file only" in the Databases area.  
This specifies that you want the new Approach file to use the data associated with the original Approach file.
5. Click OK.

### See also

[Saving a copy of an Approach file and a database file](#)

## Closing an Approach file



When you close an Approach file, Approach saves any unsaved changes to data. If you've made design or join changes you haven't saved, an alert box asks if you want to save those changes.



Click the Close File icon or choose Close from the File menu.



## Deleting a file



You can delete an Approach file or a database file from within Approach. When you delete a database file, all related files such as indexes are deleted along with it.

1. Choose Delete File from the File menu.
2. To delete a database file, select the database file type in the List Files of Type drop-down list. To delete an Approach file, leave the drop-down list set to Approach Files.
3. Select the name of the file you want to delete in the File Name list.
4. Click OK.
5. In each alert box that appears, click Yes to delete the file or click No to keep the file. Approach displays an alert box for every database file you're deleting.

## Details: Deleting a file



When you delete a database file, all related files such as indexes are deleted along with it.

When you delete an Approach file, Approach can delete the associated database files (and their related files) for you. If you delete an Approach file that is based on more than one database file, Approach gives you a chance to delete or keep each joined database file.

**Note:** Be especially careful when deleting database files from an Approach file. Other Approach files may also be based on them.

You can also delete files in the Windows File Manager, but you cannot delete an Approach file and its database files all in one step. If you want to be sure you're deleting a set of associated files, delete the files in Approach.

Approach files and database files must be closed before you can delete them.

## About working with SQL tables

Approach allows you to view and work with SQL data right at your desktop. The data can be stored in Oracle SQL, Microsoft/Sybase SQL Server, or IBM DB2 tables. If you have other SQL tables that can be opened through an ODBC driver, you also have access to those tables in Approach.

When you use Approach with SQL tables, you work in the same intuitive Approach interface you use with any other type of database. Rather than having to build report and query definitions in SQL, you can use Approach as a quick tool for all your reporting and querying.

You can be connected to more than one server at a time.

### Connecting to an Oracle server



You can connect to an Oracle server in Approach. If you're not already connected to one when you select Oracle in a List Files of Type drop-down list, Approach opens a dialog box that lets you connect.

### Connecting to Oracle on your local drive



You can connect to an Oracle table on your local drive. To do this, you must be running Windows 3.1a or later in Standard mode.

### Connecting to a server in SQL Server



You can connect to SQL Server in Approach. If you're not already connected to a server when you select SQL Server in a List Files of Type drop-down list, Approach opens a dialog box that lets you connect.

### Connecting to an IBM DB2 or SQL/DS server through ODBC



You can connect to an IBM DB2 or SQL/DS server directly in Approach through ODBC or via the IBM Distributed Database Connection Services (DDCS).

### Connecting to an IBM DB2 server through MDI



You can connect to an IBM DB2 server in Approach through the Micro Decisionware Database Gateway (MDI). If you're not already connected to a DB2-MDI server when you select DB2-MDI in a List Files of Type drop-down list, Approach opens a dialog box that lets you connect.

### Creating a query file in Approach



If you have a SQL table open in Approach, you can create a query file for it by saving or exporting.

### Opening a query file in Approach



When you open a query file, you automatically connect to a server using the log-on information in the file. Then the Select statement executes a find or sort and returns data to a read-only file on your local drive.

### Saving or exporting data from a query



A query file's Select statement returns data to a temporary read-only data file on your local drive. You can keep this data by either saving it in a database file or exporting it to a database file.

### See also

[About SQL tables](#)

[Setting database options for SQL, Access, ODBC, and Lotus Notes tables](#)

## Connecting to an Oracle server



You can connect to an Oracle server in Approach. If you're not already connected to one when you select Oracle in a List Files of Type drop-down list, Approach opens a dialog box that lets you connect.

1. Open the New, Open, Save Database As, Import Data, or Export Data dialog box.
2. Select Oracle in the List Files of Type drop-down list.  
If you are already connected to a server but want to connect to an additional one, click Connect after selecting Oracle.
3. Type a letter identifying the protocol you want in the Network text box.  
If you leave this blank, Approach defaults to the Local protocol setting in your CONFIG.ORA or ORACLE.INI file.  
For example, Local=X:ORASRV automatically sets the protocol to X.
4. Type the name of the server in the Server Name text box.  
If you leave this blank, Approach defaults to the Local server setting in your CONFIG.ORA or ORACLE.INI file.  
For example, Local=X:ORASRV automatically sets the server to ORASRV.
5. Type your user name in the User Name text box.
6. Type your password in the Password text box.
7. Click OK.

### See also

[Oracle SQL](#)

[Troubleshooting Oracle SQL on a server](#)

## Details: Connecting to an Oracle server



### Prior Connection drop-down list

The Prior Connection drop-down list shows the last eight SQL servers you connected to. If you're connecting to one of these servers again, you can select the connection from the list rather than typing the protocol, server name, and user name.

### Protocols

Check with your system administrator to find out which protocol you should use. These are some of the most common ones:

For this protocol	Type
Named Pipes	P
SPX	X
NetBIOS	B
TCP/IP	T
DECnet	D
ORACLE Async	A

### SQL\*Net drivers

Before connecting to an Oracle server, you must have SQL\*Net drivers installed for the type of server and client you're using. For more information, see [Troubleshooting Oracle SQL on a server](#).

### Disconnecting from a SQL server

When you quit Approach, you are disconnected from any SQL servers you connected to in that session. You can also use the Open dialog box to disconnect from a particular server. Select the connection name in the Server drop-down list and click Disconnect.



## Connecting to Oracle on your local drive



You can connect to an Oracle table on your local drive. To do this, you must be running Windows 3.1a or later in Standard mode.

1. Type commands in DOS to start Oracle and Windows.  
See the Details topics for the commands.
2. In Approach, open the New, Open, Save Database As, Import Data, or Export Data dialog box.
3. Select Oracle in the List Files of Type drop-down list.  
If you are already connected to a server but want to connect to an additional one, click Connect after selecting Oracle.
4. Type your user name in the User Name text box.
5. Type your password in the Password text box.  
Leave the Network and Server Name text boxes blank.
6. Click OK.

### See also

[Oracle SQL](#)

[Troubleshooting Oracle SQL on your local drive](#)

## Details: Connecting to Oracle on your local drive



Before connecting to a local Oracle table in Approach, type the following commands in DOS to start Oracle and Windows. Replace c with the letter of your drive that contains the Oracle table.

```
c:\>sqlpme (loads the Oracle memory manager)
c:\>oracle6 or c:\>oracle7 (starts the Oracle application)
c:\>sqldb (starts SQL for Oracle)
c:\>startup (starts the Oracle database)
c:\>exit (exits the SQL command mode)
c:\>win/s (starts Windows in Standard mode)
```

## Connecting to a server in SQL Server



You can connect to SQL Server in Approach. If you're not already connected to a server when you select SQL Server in a List Files of Type drop-down list, Approach opens a dialog box that lets you connect.

1. Open the New, Open, Save Database As, Import Data, or Export Data dialog box.
2. Select SQL Server in the List Files of Type drop-down list.  
If you are already connected to a server but want to connect to an additional one, click Connect after selecting SQL Server.
3. Type the name of the server in the Server Name text box.
4. Type your user name in the User Name text box.
5. Type your password in the Password text box.
6. Click OK.

### See also

[SQL Server](#)

[Troubleshooting Microsoft SQL Server](#)

[Troubleshooting Sybase SQL Server](#)

## Details: Connecting to a server in SQL Server



### Prior Connection drop-down list

The Prior Connection drop-down list shows the last eight SQL servers you connected to. If you're connecting to one of these servers again, you can select the connection from the list rather than typing the protocol, server name, and user name.

### Disconnecting from a SQL server

When you quit Approach, you are disconnected from any SQL servers you connected to in that session. You can also use the Open dialog box to disconnect from a particular server. Select the connection name in the Server drop-down list and click Disconnect.

## Connecting to an IBM DB2 or SQL/DS server through ODBC



You can connect to an IBM DB2 or SQL/DS server directly in Approach through ODBC or via the IBM Distributed Database Connection Services (DDCS).

1. Open the New, Open, Save Database As, Import Data, or Export Data dialog box.
2. Select DB2 in the List Files of Type drop-down list.  
The Drives drop-down list changes to Server and shows the names of DB2 servers you can connect to.
3. Select a server in the Server drop-down list.  
The names of owners on the server appear in the Directories list.
4. If a Setup dialog box appears, fill it in and click OK.  
The dialog box appears if your ODBC.INI file does not have setup information for DB2.
5. Double-click the name of the owner in the Directories list.  
The tables in the database appear in the File Name list.
6. Select the name of the table in the File Name list.
7. Click OK.
8. If an alert box appears, click OK to open the table.  
The alert box appears if your preferences are set for displaying SQL and ODBC tables read-only.

### See also

[IBM DB2](#)

[Connecting to an IBM DB2 server through MDI](#)

## Details: Connecting to an IBM DB2 or SQL/DS server through ODBC



### DB2 types available through ODBC

You can open IBM DB2/2, DB2/6000, and DB2/HP-UX tables directly in Approach through ODBC support, and IBM DB2, DB2/400, and SQL/DS tables via IBM Distributed Database Connection Services (DDCS) through ODBC support.

### Disconnecting from a SQL server

When you quit Approach, you are disconnected from any SQL servers you connected to in that session. You can also use the Open dialog box to disconnect from a particular server. Select the connection name in the Server drop-down list and click Disconnect.

## Connecting to an IBM DB2 server through MDI



You can connect to an IBM DB2 server in Approach through the Micro Decisionware Database Gateway (MDI).

1. Open the New, Open, Save Database As, Import Data, or Export Data dialog box.
2. Select DB2-MDI in the List Files of Type drop-down list.  
If you are already connected to a server but want to connect to an additional one, click Connect after selecting DB2-MDI.
3. Type the name of the server in the Server Name text box.
4. Type your authorization ID in the Authorization ID text box.
5. Type your password in the Password text box.
6. Click OK.

### See also

[IBM DB2](#)

[Troubleshooting IBM DB2-MDI](#)

[Connecting to an IBM DB2 or SQL/DS server through ODBC](#)

## Details: Connecting to an IBM DB2 server through MDI



### Prior Connection drop-down list

The Prior Connection drop-down list shows the last eight SQL servers you connected to. If you're connecting to one of these servers again, you can select the connection from the list rather than typing the protocol, server name, and user name.

### Options for DB2-MDI connections

You may need to set some table options when connecting to a DB2 server through MDI. To do this, click Options in Connect to DB2-MDI, type the information in the Connect Options dialog box, and click OK.

System Catalog is the ID of the account that owns the views of system tables. Normally, the tables are owned by SYSIBM. If you do not have access to SYSIBM, the system administrator should create a view of the tables in another account. Type the authorization ID for that account here.

Tablespace is the name of the database that stores new tables. Tables are normally created in the DSNDB04 database. If you receive errors when creating or modifying tables, you may not have permission to create tables in DSNDB04. For more information about where to store new tables, read about the Create Table statement in the reference manual for your DB2 system.

### Disconnecting from a SQL server

When you quit Approach, you are disconnected from any SQL servers you connected to in that session. You can also use the Open dialog box to disconnect from a particular server. Select the connection name in the Server drop-down list and click Disconnect.



## Creating a query file in Approach



If you have a SQL table open in Approach, you can create a query file for it by saving or exporting.

### To create a query file by saving:

1. With a SQL table active, choose Save As from the File menu.
2. In the Save Approach File As dialog box, specify a name and location for the Approach file.
3. Select "Exact copy" in the Databases area and click OK.
4. In the Save Database As dialog box, select Query in the List Files of Type drop-down list.
5. Specify a name and location for the query file and click OK.

### To create a query file by exporting:

1. With a SQL table active, choose Export Data from the File menu.
2. Select Query in the List Files of Type drop-down list.
3. Specify a name and location for the query file.
4. In the Database Fields list, select the fields you want returned when the Select statement is executed.  
To select a field, click the field name and click Add, or double-click the name.
5. Click OK.

### See also

[Query files](#)

## Details: Creating a query file in Approach



### Contents of a query file

If you create a query file in Approach, the file stores the log-on information you used when you connected to the current table's server. And if you have executed a find or sort in the table, the search and sort conditions are stored in the query file as the Select statement (if they can be translated into SQL).

If you create a query file using a text editor, you can specify the log-on information and Select statement. For more information, see [Query files](#).

### Saving vs. exporting

If you create a query file by saving, the file has an Approach file. You'll be able to open the query file by opening its Approach file.

If you create a query file by exporting, the exported data does not have an Approach file. You can create an Approach file for it by using the Save As command.

When exporting data, you can specify the particular fields you want stored for the Select statement. This way, the query file will open faster because it won't have to find or sort every field in the table.

## Opening a query file in Approach



When you open a query file, you automatically connect to a server using the log-on information in the file. Then the Select statement executes a find or sort and returns data to a read-only file on your local drive.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.



2. Select Query in the List Files of Type drop-down list.  
If the query file you want has an Approach file, you can leave this as Approach Files.
3. Select the file you want to open in the File Name list and click OK.
4. If a Connect dialog box appears, fill in the information.  
The dialog box appears if you are not already connected to the appropriate SQL server.

### See also

[Query files](#)

[Connecting to an Oracle server](#)

[Connecting to a server in SQL Server](#)

[Connecting to an IBM DB2 server through MDI](#)

## Saving or exporting data from a query



A query file's Select statement returns data to a temporary read-only data file on your local drive. You can keep this data by either saving it in a database file or exporting it to a database file.

### To save data from a query:

1. With the temporary data file active, choose Save As from the File menu.
2. In the Save Approach File dialog box, specify a name and location for the Approach file.
3. Select "Exact copy" in the Databases area and click OK.
4. In the Save Database As dialog box, select a database file type in the List Files of Type drop-down list.
5. Specify a name and location for the database file and click OK.

### To export data from a query:

1. With the temporary data file active, choose Export Data from the File menu.
2. Specify a name and location for the database file.
3. Select a database file type in the List Files of Type drop-down list.
4. In the Database Fields list, select the fields you want to export.  
To select a field, click the field name and click Add, or double-click the name.
5. Click OK.

### See also

[Query files](#)

## Details: Saving or exporting data from a query



If you save data from a query in a database file, the data has an Approach file. You'll be able to view and edit the data by opening its Approach file.

If you export data from a query to a database file, the exported data does not have an Approach file. You can create an Approach file for it by using the Save As command.

When exporting data, you can specify the particular fields you want stored.

## About working with ODBC data sources

Approach is fully compatible with the Open Database Connectivity standard (ODBC). If you have databases in applications that have an ODBC driver, you can work with those databases in Approach.

An ODBC driver installed on your system appears in the List Files of Type drop-down list in the Open dialog boxes. In most cases, the name of the driver appears just like other names in the list; for example, Access. But if the application is also available as a PowerKey in Approach, the name is prefixed with "ODBC"; for example, ODBC:Oracle.

The procedure for opening an ODBC data source varies slightly depending on the type of the data source. Some sources are database files like .DBF files. In these cases, you can open the files just as you open a dBASE, Paradox, or FoxPro file: After selecting the ODBC driver in the List Files of Type drop-down list, you find and select the file in the Open dialog box. For more information, see [Opening a database created in another application](#).

ODBC data sources can also be database tables, tables in server applications, and data sources you have set up on your system.

### Opening a database table through ODBC



You can use ODBC to get access to data organized in database tables. You need to see the contents of the database first and then select the table in it you want.

### Opening a database table on a server through ODBC



You can use ODBC to open a database table on a server. You may be prompted to connect to a server if Approach cannot find the server information in your ODBC.INI file. You can be connected to more than one server at a time.

### Opening an ODBC data source set up on your system



If you have an ODBC data source already set up on your system, you can open it quickly with very little navigating through the Open dialog box.

### Installing an ODBC driver



If ODBC is installed on your computer, you can usually install an ODBC driver using the Windows Control Panel. Some vendors of ODBC drivers have a different procedure for installing. In those cases, see the documentation that came with the driver.

### Setting up an ODBC data source



After installing an ODBC driver, you can set up data sources for the driver. This stores information about the data's location in your ODBC.INI file and tells Approach where to find the data when you try to open it.

### See also

[ODBC data sources](#)

[Setting database options for all SQL tables](#)

## Opening a database table through ODBC



You can use ODBC to get access to data that is organized in database tables. You need to see the contents of the database first and then select the table in it you want.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.



2. Select an ODBC driver for a database table application in the List Files of Type drop-down list.  
The databases in the application appear in the Directories list with a filecard icon in front of them.
3. Double-click the name of the database in the Directories list.
4. Select the name of the table in the File Name list.
5. Click OK.
6. If an alert box appears, click OK to open the table.  
The alert box appears if your preferences are set for displaying SQL and ODBC tables read-only.

## Opening a database table on a server through ODBC



You can use ODBC to open a database table on a server. You may be prompted to connect to a server if Approach cannot find the server information in your ODBC.INI file.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.



2. Select an ODBC driver for a server application in the List Files of Type drop-down list.  
The Drives drop-down list changes to Server and shows the names of servers you can connect to through the ODBC driver.
3. Select a server in the Server drop-down list.  
The names of databases, qualifiers, or owners on the server appear in the Directories list.
4. If a Setup dialog box appears, fill it in and click OK.  
The dialog box appears if your ODBC.INI file does not have setup information for the driver. See the documentation that came with the driver for details.
5. Double-click the name of the database, qualifier, or owner in the Directories list.  
The tables in the database appear in the File Name list.
6. Select the name of the table in the File Name list.
7. Click OK.
8. If an alert box appears, click OK to open the table.  
The alert box appears if your preferences are set for displaying SQL and ODBC tables read-only.



## Details: Opening a database table on a server through ODBC



### Information in the Open dialog box

When you select an ODBC driver for a server application in the List Files of Type drop-down list, the information that appears in the Open dialog box varies depending on the driver:



If an ODBC driver supports qualifiers for table names, the names of the qualifiers appear in the Directories list. If the driver also supports ownership, the names of owners and the names of tables appear in the File Name list (such as DBA.EMPLOYEE); if the driver does not support ownership, only the names of tables appear in File Name.



If an ODBC driver supports ownership but not qualifiers, the names of owners appear in the Directories list and the names of tables appear in the File Name list.



If an ODBC driver supports neither qualifiers nor ownership, the names of servers appear in the Directories list and the names of tables appear in the File Name list.

### "Quick connecting" to an ODBC server

Once you specify the name of a server and database in the Open dialog box, Approach keeps track of that connection for your current work session. The next time you open the dialog box and select the ODBC driver, the name of the connection you used for it before will appear in the Server drop-down list; for example, Joann Willis @ Accounting.

If you select the connection name in the Server drop-down list, the File Name list shows the tables you used before on that server. This way, you don't need to establish a connection and select in the Directories list.

### Disconnecting from an ODBC server

When you quit Approach, you are disconnected from any ODBC servers you connected to in that session. You can also use the Open dialog box to disconnect from a particular server. Select the connection name in the Server drop-down list and click Disconnect.

## Opening an ODBC data source set up on your system



If you have an ODBC data source already set up on your system, you can open it quickly with very little navigating through the Open dialog box.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.



2. Select ODBC Data Sources in the List Files of Type drop-down list.  
The names of the data sources you have set up appear in the Directories list.
3. Double-click the name of a data source in the Directories list.  
The tables in the data source appear in the File Name list.
4. If a Setup dialog box appears, fill it in and click OK.  
The dialog box appears if your ODBC.INI file does not have all of the required information about the data source for the driver.
5. Select the name of the table in the File Name list.
6. Click OK.
7. If an alert box appears, click OK to open the table.  
The alert box appears if your preferences are set for displaying SQL and ODBC tables read-only.

### See also

[Setting up a data source for an ODBC driver](#)

## Installing an ODBC driver



If ODBC is installed on your computer, you can usually install an ODBC driver in the Windows Control Panel following these instructions.

1. In the Main group in the Windows Program Manager, double-click the Control Panel icon to open the Control Panel.
2. Double-click the ODBC icon.
3. In the Data Sources dialog box, click Drivers.
4. In the Drivers dialog box, click Add.
5. In the Add Driver dialog 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.
6. Click OK.
7. In the Install Drivers dialog box, select the driver you want to install in the Available ODBC Drivers list.
8. Click OK.

### See also

[Setting up a data source for an ODBC driver](#)

## Setting up a data source for an ODBC driver



After installing an ODBC driver, you can set up data sources for the driver. This stores information about the data's location in your ODBC.INI file and tells Approach where to find the data when you try to open it.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.



2. Select the ODBC driver for the data source in the List Files of Type drop-down list.
3. Click Setup.
4. Fill in the Setup dialog box and click OK.  
The Setup dialog box varies depending on the driver. See the documentation that came with the driver for details.
5. Click OK.

### See also

[Installing an ODBC driver](#)

**Creating a new database file**

## Opening an Approach file

## Mapping fields in an Approach file

**Opening a database created in another application**



## Opening a table created in Microsoft Access

## Creating a database from a spreadsheet

## Creating a database from a delimited text file

## Creating a database from a fixed-length text file

## **Saving an Approach file**

**Saving a copy of an Approach file and a database file**

**Saving a copy of an Approach file only**

## **Closing an Approach file**



## Deleting a file

## Connecting to an Oracle server

## Connecting to Oracle on your local drive

**Connecting to a server in SQL Server**

**Connecting to an IBM DB2 or SQL/DS server through ODBC**

**Connecting to an IBM DB2 server through MDI**

## Creating a query file in Approach

## Opening a query file in Approach



## **Saving or exporting data from a query**

## Opening a database table through ODBC

## Opening a server database through ODBC

**Opening an ODBC data source set up on your system**

## Installing an ODBC driver

## Setting up an ODBC data source

## About adding, editing, and deleting database fields

If you create a database file using a template, the new database has fields already defined; if you create a database file without a template, you define the fields yourself in the Field Definition dialog box. You can also add more fields to a database and edit and delete existing fields.

### Adding fields to a database



For each field you define, you need to assign a name, specify the type of data the field can store, and in some cases set a maximum length. If a field is calculated, you also need to set up a formula.

If you add fields to an existing database, they do not automatically appear in any views. You can add fields to views by dragging them from the Add Field dialog box or by drawing them with the Field tool.

### Setting up a formula for a calculated field



When you add a calculated field to a database, you need to set up a formula for the field. Approach calculates the result of the formula and displays the result in the field. The result can be a text string, a number, a date or time, or a Boolean value.

### Setting up a formula for a summary calculated field



If a formula applies to a range of records, you need to use a function defined specifically for summaries and specify the set of records to summarize.

### Editing a field



You can edit the name, type, length, or formula of any existing field. The change applies to the field throughout the database -- even if the field already has data in any of the records.

### Specifying a key field for a Paradox database



A key field is a field or a combination of fields that uniquely identifies each record, such as an invoice number or a first name and last name together. Using a key field ensures that there are no duplicate records in a database. The Paradox database file type requires a key field in Approach.

### Deleting a field



When you delete a field, Approach removes the field and its data from every record in the database.

### See also

[About creating and opening files](#)

[About customizing a field for data entry](#)

## Adding fields to a database



For each field you define, you need to assign a name, specify the type of data the field can store, and in some cases set a maximum length. If a field is calculated, you also need to set up a formula.

1. Choose Field Definition from the Create menu, or create a new database file without using a template.
2. If you created the database file without using a template and want to use predefined fields, select a template in the Template drop-down list.
3. For the first field you want to add, type a name for the field in the Field Name text box in an empty line. If necessary, first click Insert to place a new empty line above the line with the insertion point or go to the empty line at the bottom of the field list.
4. Select a type for the field in the Data Type drop-down list.
5. If necessary, type a length for the field in the Size text box.
6. Continue defining and adding fields in the same manner.
7. To change the order of the fields in the Field Definition dialog box, select an order in the View Fields By drop-down list.
8. To print a copy of the field definitions, click Print and use the Print dialog box to print the list of definitions.
9. Click OK.

### See also

[Setting up a formula for a calculated field](#)

[About displaying fields on a view](#)



## Details: Adding fields to a database



### Field Definition dialog box

If you create a database file without using a template, the Field Definition dialog box appears automatically so that you can add fields to the database. "Creating New Database" and the name of the file appear in the title bar of the dialog box.

You can also open the Field Definition dialog box at any time to add more fields to an existing database file.

### Field names

In a dBASE or FoxPro database created in Approach, the names of fields can be up to 32 characters long. You can use any characters in a field name, including letters, whole numbers, spaces, commas, periods, and arithmetic signs.

In a Paradox database created in Approach, the names of text, numeric, and date fields can be up to 25 characters long; the names of time, memo, Boolean, and PicturePlus fields can be up to 18 characters long. These characters can include letters, whole numbers, spaces, commas, periods, and arithmetic signs.

In an Access table created in Approach, the names of text, numeric, memo, and Boolean fields can be up to 32 characters long; the names of date, time, and PicturePlus fields can be up to 26 characters long. The first character must be a letter, but after that, a name can have letters and whole numbers.

The field names stored in a database file may be different from the field names you use with that file through Approach. For details about field names, see [File types](#).

### Field types

The possible field types are Boolean, calculated, date, memo, numeric, PicturePlus, text, time, and variable.

If you select the calculated, PicturePlus, or variable type, the bottom of the Field Definition dialog box shows a panel for entering a formula or for setting options.

### Field lengths

You need to enter a maximum length for text fields in all types of databases and for numeric fields in some types of databases.

For a text field, type the number of characters you want allowed in the field. In dBASE, FoxPro, or DB2, a text field can have up to 254 characters; in Paradox, Access, Oracle SQL, or SQL Server, it can have up to 255 characters. (In Oracle SQL 7 a text field can be up to 2000 characters, but Approach treats any text field over 255 characters as a memo field.)

dBASE and FoxPro databases require a length for numeric fields. Type the number of digits you want to the left and to the right of the decimal point. 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.

### Field order

All the fields except for calculated and variable ones appear in the Field Definition dialog box in the order you add them. Calculated and variable fields are at the end of the list because they are part of the Approach file and not part of the database.

The possible field orders are Default Order, Field Name (alphabetical), Data Type (grouped by type), and Custom Order. If you select Custom Order, you can drag the fields up and down in the list to rearrange them.

The field order affects only how fields appear in the dialog box. In a database, fields are stored in the order they were created.

### Key fields for a Paradox database

If you're defining fields for a new Paradox database, the Choose Key Field dialog box appears so that you can select

a field to use as the key field. If the database does not have a unique field or a combination of fields you can use for this, click Add Key Field in the dialog box. Approach creates a copy of the database file and adds the new field to it, with a unique number for each record.

### **Displaying fields on a view**

When you add fields to a database, they do not automatically appear on any views. You can add fields to views by dragging them from the Add Field dialog box or by drawing them with the Field tool.

If "Show the Add Field dialog" is on in Preferences, when you close Field Definition you go to Design and the Add Field dialog box opens. For more information about this setting, [Setting general working preferences](#).

## Setting up a formula for a calculated field



When you add a calculated field to a database, you need to set up a formula for the field. Approach calculates the result of the formula and displays the result in the field.

1. Choose Field Definition from the Create menu, or create a new database file without using a template.
2. Type the name of the calculated field and select Calculated in the Data Type drop-down list. The bottom part of the Field Definition dialog box shows the options for setting up a formula.
3. In the Define Formula panel, build the formula by clicking the elements you want or by typing in the Formula text box.
4. Click OK.

### See also

[Setting up a formula for a summary calculated field](#)

[Adding fields to a database](#)

## Details: Setting up a formula for a calculated field



### Formula text box

When you select a field name, a function name, or an operator in one of the lists in the Define Formula panel, Approach copies it into the Formula text box. You can also type these elements directly into the text box, and you can type constants in the box. To move the insertion point in the Formula text box, click where you want it to go or press the left or right arrow key.

### Field names

The Fields list shows the fields defined for the database except for PicturePlus and memo fields. Calculated and variable fields are in italics. To see the fields in a different joined database, select the database you want in the Fields drop-down list.

Field names with spaces or other special characters such as hyphens must be enclosed in double quotation marks. If you click a field name in the Fields list, Approach provides the quotation marks for you.

### Constants

Enclose text, date, and time constants in single quotation marks.

### Order of evaluation

To change the order of evaluation, use parentheses to enclose the expressions you want evaluated first.

### Syntax flag

When a formula's syntax is complete and correct, the flag in the Define Formula panel is no longer crossed out.

## Setting up a formula for a summary calculated field



If a formula applies to a range of records, you need to use a function defined specifically for summaries and specify the set of records to summarize.

1. Choose Field Definition from the Create menu, or create a new database file without using a template.
2. Type the name of the summary calculated field and select Calculated in the Data Type drop-down list. The bottom part of the Field Definition dialog box shows the options for setting up a formula.
3. Select a summary function (such as SSum or SCount) in the Functions drop-down list and supply a field reference as the function's parameter.  
You can supply the parameter and other parts of the formula by clicking elements in lists or by typing in the Formula text box.
4. Click the Define Summary tab.
5. Select which records the formula should apply to in the Summarize On drop-down list.  
See the Details topic for options.
6. If you want Approach to maintain a running total for this formula in a view, turn on Make calculation a running summary.  
This is not available for the where-placed option.
7. Click OK.

### See also

[Setting up a formula for a calculated field](#)

[Adding fields to a database](#)

Details: Setting up a formula for a summary calculated field



To apply a formula to	Select
A set of records as defined by the summary panel with the calculated field.	"Summary panels where this field is placed"
Every record in the current found set of a database	Summary of all records in <i>database</i> , where <i>database</i> is the name of the database you want (This option appears for every database joined in the Approach file.)
Every record in the current found set of all databases joined in the Approach file	"Summary of all records in all databases"
A set of records as defined by a summary panel of a specific grouping	An option for a type of summary panel, such as "Left leading summaries of all records in <i>database</i> " (These options appear for every summary panel in the Approach file.)

## Editing a field



You can edit the name, type, length, or formula of any existing field. The change applies to the field throughout the database, even if the field already has data in any of the records.

1. Choose Field Definition from the Create menu.
2. If you need to edit a field in a different joined database, select the name of the database in the Database drop-down list.
3. Select the part of the definition you want to edit and make the change.  
You can type a new name or length or select a new data type. For a calculated field, you can also edit the formula.
4. If an alert box appears, click OK to confirm the changes.  
An alert box appears if you change a field type or decrease a length.
5. Click OK.

### See also

[Adding fields to a database](#)

## Details: Editing a field



These are the effects of editing a field definition:



If you change the name of a field, the new name appears wherever the name is used. This includes field references in formulas.



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 its OK to delete the data.

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 fields calculated result. If you change any other type of field, Approach warns you that data will be deleted and asks if its OK to delete the data.



If you decrease the length of a field that already contains data, the data is truncated after the new length.



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. (Some summary calculations are not updated until you preview or print.)



## Specifying a key field for a Paradox database



When you create or save a database file in the Paradox file type, the Choose Key Field dialog box appears automatically so that you can specify a key field.

1. In the Choose Key Field dialog box, click Add Key Field to have Approach add a key field, or select the name of the field or fields you want to be the key.  
To select more than one field, CONTROL-click the fields.
2. Click OK.

## Details: Specifying a key field for a Paradox database



The list in the Choose Key Field dialog box shows all the text, numeric, date, and time fields defined for the database.

If you click Add Key Field, Approach inserts a numeric field named Key Field at the beginning of each record. The key field value is a serial number starting at 1, and it increments by 1 from one record to the next.

If you want to change the key field in an existing Paradox database, you can either export the database in the Paradox type or save the database as dBASE and then save it again as Paradox. The Choose Key Field dialog box appears when you export or save as Paradox. See [Saving a copy of an Approach file and a database file](#) or [Exporting data from Approach](#).

## Deleting a field



When you delete a field, Approach removes the field and its data from every record in the database.

1. If the field you want to delete is used in a join, unjoin the field.  
Choose Join from the Create menu, select the join line, click Unjoin, close the unjoined database, and click OK.
2. Choose Field Definition from the Create menu.
3. Select the field you want to delete in the list of field definitions.  
If the field is in a different database joined in the Approach file, select the name of the database in the Database drop-down list.
4. Click Delete.
5. Click OK in the alert box to delete the field.

## Details: Deleting a field



If you delete a field used in a formula, the formula will return a blank result. In views and in the Define Formula panel of the Field Definition dialog box, Approach replaces the deleted field name with NO\_FIELD\_REFERENCE. Edit the formula so that it no longer uses that field. See [Setting up a formula for a calculated field](#).

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.

## About customizing a field for data entry

Approach provides several ways to customize the entry of data in fields.

You can set the data entry options when you create a field or anytime later. If you change an option for an existing field, it does not affect any data already in the field. (Approach checks data as you enter it, and not any data already in the fields.)

### Entering data automatically



For a text, numeric, date, time, or Boolean field, you can have Approach enter data automatically. This makes filling out records as quick, easy, and accurate as possible. For example, you might have Approach date revisions or number invoices for you.

### Verifying the accuracy of entered data



For a text, numeric, date, time, or Boolean field, you can have Approach verify that the data in a field is valid for that field. For example, Approach can check to see that a customer name in the current record is unique in the database or that a numeric value falls within a certain range.

### Setting OLE options for a PicturePlus field



For a PicturePlus field, you can specify whether to allow OLE objects and which application to use as a default OLE server.

### Setting data options for a variable field



For a variable field, you can specify the type of data allowed and set an initial value.

### See also

[About adding, editing, and deleting database fields](#)

[About formatting data in fields](#)

## Entering data automatically



For a text, numeric, date, time, or Boolean field, you can have Approach enter data automatically. For example, you might have Approach date revisions or number invoices for you.

1. Choose Field Definition from the Create menu.
2. Add a new text, numeric, date, time, or Boolean field, or select an existing one.
3. If the bottom part of the dialog box is not open, click Options.
4. Set the option for the value you want entered automatically in the current field.  
See the Details topic for options.
5. Click OK.

## Details: Entering data automatically



Approach can enter a date, a time, fixed data you specify, data from the previous record, a serial number that increases or decreases from one record to the next, or the result of a formula.

To	Do this
Remove a previously set option (in any field)	Click Nothing.
Enter the data from the same field in the last record added (in any field)	Click "Previous record."
Enter the date or time the record was created (in a date, time, or text field)	Click "Creation date" or "Creation time."
Enter the date or time the record was last modified (in a date, time, or text field)	Click "Modification date" or "Modification time."
Enter the same data in the field in each record (in any field)	Click Data and type the data you want in the text box.
Enter a unique number in the field in each record (in a numeric or text field)	Click "Serial number" and type a value for the first record in "starting at" and an increment value in "incremented by." The increment value can be positive (to increase the number) or negative (to decrease the number).
Enter the result of a formula when you create the record (in any field)	Click "Creation formula." Then click Formula and set up the formula in the Formula dialog box.
Enter the result of a formula when you create the record and update	Click "Modification formula." Then click Formula and set up the formula in the

the result  
whenever you  
modify the record  
(in any field)

Formula dialog box.



## Verifying the accuracy of entered data



For a text, numeric, date, time, or Boolean field, you can have Approach verify that the data in a field is valid for that field. For example, Approach can check that a numeric value falls within a range.

1. Choose Field Definition from the Create menu.
2. Add a new text, numeric, date, time, or Boolean field, or select an existing one.
3. If the bottom part of the dialog box is not open, click Options.
4. Click the Validation tab.
5. Set the options for verifying data in the field.  
See the Details topic for options.
6. Click OK.

## Details: Verifying the accuracy of entered data



Approach can verify the accuracy of data as you enter it. If you try to enter data that Approach determines to be invalid, an alert box appears describing the problem.

To verify that	Do this
The field in each record has a unique value.	Turn on Unique.
The value is within an alphabetical, numerical, or chronological range.	Turn on From/to and type values for the beginning and end of the range (inclusive) in the text boxes.
The field contains a value in each record.	Turn on "Filled in."
The value matches one of the values in a set.	Turn on "One of." Then for each value you want in the set, type the value in the text box and click Add. To remove a value from the set, select it and click Remove.
A formula evaluates to True when the value is used as an operand.	Turn on "Formula is true." Then click Formula and set up the formula in the Formula dialog box. For example, the formula >100 accepts only values greater than 100.
The value matches a value in another field in this database or in a database joined to it.	Turn on "In field" and select the other field in the list. If the other field is in a different database, select the database in the drop-down list.

## Setting OLE options for a PicturePlus field



For a PicturePlus field, you can specify whether to allow OLE objects and which application to use as a default OLE server.

1. Choose Field Definition from the Create menu.
2. Add a new PicturePlus field or select an existing one.
3. To allow OLE objects in the field, turn on "Allow OLE objects."
4. Select a default server application in the Default Object Type list.
5. Click OK.

### See also

[About embedding OLE objects](#)

[About linking OLE objects from other applications](#)

## Details: Setting OLE options for a PicturePlus field



### 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, and if the original object changes, the copy in the PicturePlus field is updated automatically to match it. When you embed an OLE object, the object is stored in the field.

### Default OLE servers

If you have a default OLE server application, that application starts when you double-click an empty PicturePlus field or when you press the space bar with an empty PicturePlus field selected. You can then create an object, and it will be embedded in the field.

## Setting data options for a variable field



For a variable field, you can specify the type of data allowed and set an initial value.

1. Choose Field Definition from the Create menu.
2. Add a new variable field or select an existing one.
3. Select a data type in the Field Type drop-down list.  
A variable field can store a text, numeric, date, time, or Boolean value.
4. To give the field an initial value, type the value in the Default Value text box.  
The initial value will appear in the variable field every time you open this Approach file.
5. Click OK.

## **Adding fields to a database**

## Setting up a formula for a calculated field

## Setting up a formula for a summary calculated field



## Editing a field

**Specifying a key field for a Paradox database**

## Deleting a field

**Entering data automatically**

**Verifying the accuracy of entered data**

## Setting OLE options for a PicturePlus field

## Setting data options for a variable field

## About displaying fields on a view

You can add a field to a form, report, form letter, or mailing label as a field box, a drop-down list, a checkbox, or a set of radio buttons. You must be in Design to add a field to a view, and the field must be defined in a database used in your Approach file.

If a field appears in a view as a field box, a user can type a value in the box in Browse. This gives a user the most flexibility in what to enter as data.

If a field appears as a drop-down list, as a checkbox, or as radio buttons, a user selects a value to enter in Browse. This limits the values a user can enter in the field, and it can make entering data much easier and more accurate.

### Adding a field as a field box



You can add a field as a field box using either the Add Field dialog box or the Field tool. The field box has the border width, text attributes, and other properties of the named style for the view.

### Displaying a field as a drop-down list



A field can appear as a drop-down list or as a combination of a drop-down list and a field box. When you set up a drop-down list, you can type custom values to appear in it or use values from a database field. You can also show values from another field as descriptions rather than as data to enter.

### Displaying a subset of data in a drop-down list



When you set up a drop-down list, you can use existing values from a database field. You can define a set of conditions to display only a subset of data from the field.

### Displaying a field as a checkbox



A field can appear as one or more checkboxes. A checkbox has two values: a checked value, which is entered in the field when the checkbox is on; and an unchecked value, which is entered when the checkbox is off. You click a checkbox in Browse to turn it on or off.

You can add a field to a view as a checkbox or change a field already on a view to a checkbox. Checkboxes can have custom values you provide or values from the current database field.

### Displaying a field as radio buttons



A field can appear as a set of radio buttons. Each radio button has a value. You click a radio button in Browse to enter its value in the field.

You can add a field to a view as radio buttons or change a field already on a view to radio buttons. Radio buttons can have custom values you provide or values from the current database field.

### See also

[About adding, editing, and deleting database fields](#)

[Adding a field to a worksheet](#)



## Adding a field as a field box



You can add a field as a field box using either the Add Field dialog box or the Field tool. The field box has the border width, text attributes, and other properties of the named style for the view.

### To add a field as a field box using the Add Field dialog box:

1. In Design, click the Add Field icon or choose Add Field from the Form, Report, Letter, or Mailing Label menu.



2. If you need to define a new field, click Field Definition in the Add Field dialog box and use the dialog box that appears.
3. If the field you want is in a different joined database, select the database in the drop-down list in Add Field.
4. Drag the database field you want from Add Field to the view.

### To add a field as a field box using the Field tool:

1. In Design, click the Field icon or choose Field from the Create Drawing submenu.  
To draw more than one field, double-click the icon. It will stay selected until you select a different icon.



2. Drag diagonally to draw the field box.
3. In the Basics panel of the field's InfoBox, select the database field you want.

## Details: Adding a field as a field box



### Adding a field right after defining it

Normally, the Add Field dialog box shows all the fields defined for databases used in the current Approach file. But if your preferences are set this way, right after you define new fields the Add Field dialog box appears automatically and you go to Design.

When this happens, Add Field shows only the fields you just defined and has a Show All Fields button at the bottom. You can click Show All Fields if you want to list all the fields in the dialog box.

For information about this setting, see [Setting general working preferences](#).

### Another way to add a field to a form letter

In a form letter, you can also add a field by typing the field name where you want the field to appear. Enclose the field name in double angle brackets, and if the Approach file uses joined databases, include the name of the database. For example, <<ORDERS.DATE>>.

## Displaying a field as a drop-down list



When you set up a drop-down list, you can type custom values to appear in it or use values from a database field. You can also show values from another field as descriptions rather than as data to enter.

1. In Design, select the field you want to display as a list.
2. In the Basics panel of the field's InfoBox, select Drop-Down List Only or Field Box and List in the Data Entry Type drop-down list.
3. To use custom values in the drop-down list, select "Type in list items" and type the values you want in the value list.  
If you want to put a new line between two existing values, click Insert to add a line right above the one with the insertion point.
4. To use values from a database field, select "Create list automatically from field data."  
Approach finds the unique values for the current field and displays them in the value list.
5. To show an arrow button with the drop-down list, turn on "Show drop-down arrow."
6. To set options for the values in the drop-down list, click Options.  
The bottom part of the dialog box opens.
7. To use values from a database field other than the current field, select the field you want in the field list on the left.  
If the field is in a different joined database, select the database in the drop-down list. Approach finds the unique values for the selected field and displays them in the value list.
8. To show values from another field as descriptions rather than as actual data to enter, turn on "Show description field" and select a field in the description field list.
9. Click OK.

### See also

[Displaying a subset of data in a drop-down list](#)

## Details: Displaying a field as a drop-down list



The values you display in a drop-down list do not have to be the data that will actually be entered in the field. You can show data simply as "descriptions" of what to enter.

For example, suppose a field with a drop-down list stores an employee ID. To make it easier to enter employee IDs in the field, you could display the employees' last names in the list rather than their IDs. Then when you select a name in the list in Browse, the ID corresponding to that name is entered into the field. To set this up, you select the employee ID field in the field list on the left in the Drop-Down List dialog box, turn on "Show description field," and select the employee name field in the description field list.

## Displaying a subset of data in a drop-down list



When you set up a drop-down list, you can use existing values from a database field. You can define a set of conditions to display only a subset of data from the field.

1. Display a field on a view as a drop-down list.
2. In the Define Drop-Down List dialog box, click "Create list automatically from field data."
3. Click the Options button.
4. Turn on "Filter the list based on another field."
5. Select the field or fields with the value you want to match.  
In Browse, the drop-down list will show only values from records that have the same data in the match field as the current record.
6. Click OK.
7. Click OK in the Define Drop-Down List dialog box.

### See also

[Displaying a field as a drop-down list](#)

## Details: Displaying a subset of data in a drop-down list



### One database

If the current Approach file uses one database file, the Define Filter dialog box shows the fields in that database. Select a field to be the match field.

For example, suppose a database stores information about all of your employees. If you'd like to limit a drop-down list to only the names of employees with the same job title as the current employee record, you select the field with the job titles.

### Joined databases

If the current Approach file uses joined database files, the Define Filter dialog box shows fields from all of the databases. Select a field to match between the current database on the left (with the drop-down list) and a joined database on the right.

For example, suppose you have three joined databases: one for orders, one for line items in orders, and one for product data. In a repeating panel for entering products on an order form, you might use a drop-down list of product names for filling out the form. If in particular countries only some of the products are available, you can add a Country field to the product and order databases. Then in the Define Filter dialog box, select the Country field in the two databases.

## Displaying a field as a checkbox



You can add a field to a view as a checkbox or change a field already on a view to a checkbox. Checkboxes can have custom values you provide or values from the current database field.

### To add a field to a view as a checkbox:

1. In Design, click the Checkbox icon or choose Checkbox from the Create Drawing submenu.  
To add more than one field as a checkbox, double-click the icon. It will stay selected until you select a different icon.



2. Drag diagonally to draw an area for the checkbox.
3. In the Define Checkbox dialog box, select a database field for the checkbox in the field list.  
If the field you want is in a different joined database, select the database in the drop-down list.
4. To use custom values for the checkbox, type a Checked value, an Unchecked value, and a checkbox label.  
If you want to put a new line between two existing checkboxes, click Insert to add a line right above the one with the insertion point.
5. To use values from the database field, click Create Checkboxes from Field Data.  
Approach finds all the unique values for the selected field and displays them as Checked values and labels. You need to provide the Unchecked values.
6. Click OK.

### To change a field already on a view to a checkbox:

1. In Design, select the field you want to display as a checkbox.
2. In the Basics panel of the field's InfoBox, select Checkboxes in the Data Entry Type drop-down list.
3. To use custom values for the checkbox, type a Checked value, an Unchecked value, and a checkbox label.
4. To use values from the database field, click Create Checkboxes from Field Data.  
Approach finds all the unique values for the current field and displays them as Checked values and labels. You need to provide the Unchecked values.
5. Click OK.

### See also

[Displaying a field as radio buttons](#)

## Details: Displaying a field as a checkbox



Because each checkbox has two values, you should typically set up only one checkbox for a field. When you click the checkbox, you go back and forth between its Checked and Unchecked values. (If you want a set of clickable options in which one option is always on, use radio buttons instead of checkboxes.)

If you never click a checkbox, its value is Null. You must click a checkbox to turn it on and then click it again to turn it off to enter its Unchecked value.

If a field has more than one checkbox, only one checkbox can be on at a time (but it is possible for no checkbox to be on). When you turn on a checkbox, any box already on in the set is turned off. You can turn off a checkbox to enter its unchecked value in the field.



## Displaying a field as radio buttons



You can add a field to a view as radio buttons or change a field already on a view to radio buttons. Radio buttons can have custom values you provide or values from the current database field.

### To add a field to a view as radio buttons:

1. In Design, click the Radio Button icon or choose Radio Button from the Create Drawing submenu.  
To add more than one field as radio buttons, double-click the icon. It will stay selected until you select a different icon.



2. Drag diagonally to draw an area for the radio buttons.
3. In the Define Radio Button dialog box, select a database field for the radio buttons in the field list.  
If the field you want is in a different joined database, select the database in the database drop-down list.
4. To use custom values for the radio buttons, type the Clicked values and button labels.  
If you want to put a new line between two existing buttons, click Insert to add a line right above the one with the insertion point.
5. To use values from the database field, click Create Buttons from Field Data.  
Approach finds all the unique values for the selected field and displays them as Clicked values and button labels.
6. Click OK.

### To change a field already on a view to radio buttons:

1. In Design, select the field you want to display as radio buttons.
2. In the Basics panel of the field's InfoBox, select Radio Buttons in the Data Entry Type drop-down list.
3. To use custom values, type the Clicked values and button labels.
4. To use values from the database field, click Create Buttons from Field Data.  
Approach finds all the unique values for the current field and displays them as Clicked values and button labels in the list.
5. Click OK.

### See also

[Displaying a field as a checkbox](#)

## Details: Displaying a field as radio buttons



### Entering a value with a radio button

Because each radio button has only one value, you should normally use a set of two or more radio buttons for a single field. You click a radio button to enter that value in the field. If you never click one of the radio buttons in a set, the field's value is Null.

In a set of radio buttons, only one button can be on at a time. When you turn on a radio button, any button that is currently on in the set is turned off.

### Rearranging a set of radio buttons

A set of radio buttons is initially one grouped object. If you want to rearrange the buttons, ungroup the buttons and then drag the buttons to move them. When you're finished, group the buttons again. For more information, see [Grouping and ungrouping objects](#).

## About formatting data in fields

Approach provides predefined formats for displaying and printing date, time, numeric, and text data in a field. You must be in Design to set a format for a field.

When you enter data in a field with a format, you enter only the data itself. Approach automatically provides formatting characters, such as currency symbols or thousands separators. You see the data in its format when you move out of the field.

If "Show data entry format" is on for a date, time, or numeric field, formatting characters appear in the field when you click in it to enter data, and underlines show the maximum number of characters; you can press the space bar to move past a separator. A format affects only how data appears in a view and not how it is stored in the database.

If "Show data entry format" is on for a text field, you see the data in its capitalization style as you type, and the data is stored in the database in its format.

### Setting a standard date format



A standard date format can display the day of a week, a month, a date, and a year. You identify which of these elements you want to include and in what order you want the month, date, and year to appear.

The format can spell out the day or use an abbreviation; spell out the month, use an abbreviation, or use a numeral; use a fixed two-digit date or a flexible one- or two-digit date; and use a four-digit year or a two-digit year.

### Setting a special date format for periods of a year



A special date format can display a quarter, a trimester, or a semiannual period, along with a year. You can use a predefined format or create a custom format of your own.

### Setting a time format



A time format can display hours and minutes (HH:MM); hours, minutes, and seconds (HH:MM:SS); or hours, minutes, seconds, and hundredths of a second (HH:MM:SS.00). Approach is preset to use a colon as the separator between hours, minutes, and seconds, but you can change the separator to another character.

You can use either a 12-hour system or a 24-hour system for numbering hours. If you use 12-hour numbering, Approach displays an AM or PM suffix with the time.

### Setting a numeric format



A numeric format specifies the number of digits, a thousands separator, and other numeric properties. You can use a predefined numeric format or create a custom numeric format of your own.

### Setting a text format



A text format can display all capital letters, all lowercase letters, or capital letters for the first letter in each word.

See also

[InfoBox](#)

## Setting a standard date format



A standard date format can display the day of a week, a month, a date, and a year. You identify which of these elements you want to include and can specify the display of the elements in several ways.

1. Select the field in Design.
2. Open the InfoBox.



3. Click the Format tab.
4. Select Date in the Format Type drop-down list.
5. Set the options in the Format panel.  
See the Details topic for options.

### See also

[Setting a special date format for periods of a year](#)

## Details: Setting a standard date format



### To

Change to another order for month, day, and year

Change the spelling of days (spelled out or abbreviated) or turn off the display of days

Change the spelling of months (spelled out, abbreviated, or numeral) or turn off the display of months

Change the number of digits for dates (fixed two digits or flexible one or two digits) or turn off the display of dates

Change the number of digits for years (four or two) or turn off the display of years

Change a separator between days, months, and years

Show a data entry format in a field when you click in it in Browse

### Do this

Select an order in the Current Format drop-down list.

Select an option in the Day drop-down list. Select the blank option to turn off the display.

Select an option in the Month drop-down list. Select the blank option to turn off the display.

Select an option in the Date drop-down list. Select the blank option to turn off the display.

Select an option in the Year drop-down list. Select the blank option to turn off the display.

Edit the character in a text box right after the element

Turn on "Show data entry format."

## Setting a special date format for periods of a year



A special date format can display a quarter, a trimester, or a semiannual period, along with a year. You can use a predefined format or create a custom format of your own.

1. Select the field in Design.
2. Open the InfoBox.



3. Click the Format tab.
4. Select Date in the Format Type drop-down list.
5. Select Other in the Custom Format drop-down list.
6. Set the options in the Format panel.  
See the Details topic for options.

### See also

[Setting a standard date format](#)

## Details: Setting a special date format for periods of a year



### Options in the Format panel

To	Do this
Change to another predefined format for a quarter, trimester, or semiannual period	Select a format in the Predefined Format Codes list.
Create a custom format	Edit the format's syntax in the Format Code text box.
Show a data entry format in a field when you click in it in Browse	Turn on "Show data entry format."

### Syntax for special date formats

A numeral in a special date format represents the period displayed: 4 means a quarter, 3 means a trimester, 2 means a semiannual period, and 1 means an entire year.

The number of times the numeral appears in the format specifies how the numeral is displayed in the field: one numeral means a cardinal number (1, 2, and so on), two numerals means an ordinal number (1st, 2nd, and so on), and three numerals means spelled out (First, Second, and so on).

If a special date format includes the year, YYYY specifies all four digits of the year (such as 1994) and YY specifies the last two digits (such as 94).

A format can also include literal text (such as "Quarter"). If the literal text includes the character D, M, Y, 2, 3, or 4, enclose the text in double quotation marks.

These are some of the predefined special date formats:

Format	With the date 5/1/94
Q4	Q2
YYQ4	94Q2
44 Qtr. YY	2nd Qtr. 94
444 Quarter, YYYY	Second Quarter 1994

## Setting a time format



A time format can display hours and minutes (HH:MM); hours, minutes, and seconds (HH:MM:SS); or hours, minutes, seconds, and hundredths of a second (HH:MM:SS.00). You can use a 12-hour or 24-hour system.

1. Select the field in Design.
2. Open the InfoBox.



3. Click the Format tab.
4. Select Time in the Format Type drop-down list.
5. Set the options in the Format panel.  
See the Details topic for options.



**Details: Setting a time format**



To	Do this
Change to another predefined format	Select a format in the Current Format drop-down list.
Change to 12-hour or 24-hour numbering for hours	Select an option in the Time drop-down list.
Change the AM or PM suffix that appears with 12-hour numbering	Type a suffix in one of the text boxes in the Time Suffix area.
Change the separator between hours, minutes, and seconds	Edit the text in the Time Separator text box.
Show a data entry format in a field when you click in it in Browse	Turn on "Show data entry format."

## Setting a numeric format



A numeric format specifies the number of digits, a thousands separator, and other numeric properties. You can use a predefined numeric format or create a custom numeric format of your own.

1. Select the field in Design.
2. Open the InfoBox.



3. Click the Format tab.
4. Select Numeric in the Format Type drop-down list.
5. Set the options in the Format panel.  
See the Details topic for options.

## Details: Setting a numeric format



### Options in the Format panel

To	Do this
Change to another predefined format	Select a format in the Current Format drop-down list.
Create a custom format	Edit the format's syntax in the Format Code text box.
Show a data entry format in a field when you click in it in Browse	Turn on "Show data entry format."

### Syntax for numeric formats

Zeroes (0) in a numeric format represent required digits, number signs (#) represent optional digits, and a period (.) specifies the position of the decimal point. If a comma is surrounded by zeroes or number signs, it acts as a thousands separator.

Dollar signs (\$), minus signs (-), plus signs (+), colons (:), and parentheses are literal characters. Other literal characters must be enclosed in double quotation marks (") in the format.

A percentage sign (%) converts a number to a percentage.

If a format has two parts divided by a semicolon (;), the part to the left of the semicolon is a format for positive numbers, and the part to the right is a format for negative numbers.

If a format begins with an integer and an equal sign (=), greater than sign (>), or less than sign (<), the format applies only to data that has the number of digits specified by the integer and sign. A format line can have more than one of these conditional formats together, with each format separated by a vertical or sign (|). 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 12345, the data appears as x1234.

These are some of the predefined numeric formats:

Format	With 8000	With -8	With .8
Integer #,##0;(##0)	8,000	(8)	1
General #,##0.00; (#,##0.00)	8,000.00	(8.00)	0.80
Currency \$#,##0;(\$#,##0)	\$8,000	(\$8)	\$1
Currency Decimal \$#,##0.00; (\$#,##0.00)	\$8,000.00	(\$8.00)	\$0.80
Percent	800000%	-800%	80%

0%

Percent Decimal	800000.00%	-800.00%	80.00%
	0.00%		

Scientific	8.00e+03	-8.00e+0	8.00e-01
	0.00e+00		

The other predefined formats provide a required number of digits for several types of numeric information:



Telephone: >7 (###)" "000-0000|=7 000-0000

This format is for a U.S. telephone number. If a field has seven digits, no area code appears (###) and all the numerals appear in the 000-0000 part of the format. If a field has more than seven digits, the numerals begin with the area code.



Social Security: 000-00-0000

This format is for a U.S. social security number.



Zip Code: >5 00000-0000|=5 00000

This format is for a U.S. zip code. If a field has more than five digits, the code includes the -0000 extension.

## Setting a text format



A text format can display all capital letters, all lowercase letters, or capital letters for the first letter in each word.

1. Select the field in Design.
2. Open the InfoBox.



3. Click the Format tab.
4. Select Text in the Format Type drop-down list.
5. To change to another predefined format, select a format in the Current Format drop-down list.
6. To show a data entry format when you click in the field in Browse, turn on "Show data entry format."  
This also stores the formatted data in the database.

## About editing fields

You can edit fields on views in several ways. You must be in Design to edit fields.

In addition to the changes described in this section, you can move, cut, copy, paste, and delete fields as you can other types of design objects. For more information, see [About editing objects and text](#).

### Changing the basic properties of a field



A field's basic properties are the field definition, the data entry type, the named style, and whether the field is read-only or non-printing.

### Changing text attributes of data



You can change the font, size, color, text style, text relief, and alignment of data in a field.

### Changing line or color settings for a field



You can set a fill color for a field's interior, a width and color for the borders, and a color for a drop shadow. You can also turn on only the borders you want and add a dotted line as a baseline for data.

A field can also have a raised or indented frame for a three-dimensional look. If you give a field a frame, all four borders are automatically turned on.

### Changing the wording, text attributes, or position of a label



A field label initially has the same wording as the field name, but you can edit the label to use any text you want. You can also change the text attributes of a label and move a label to any side of its field.

### Sliding or resizing a field when you print



Because data in fields can vary in length, you may end up with too much blank space in a view. You can slide fields and reduce their boundaries to eliminate some of the extra space.

Approach slides fields or resizes their boundaries when you preview or print, and in Design if you are showing data.

### Changing the data entry orders for fields



Approach initially sets the data entry order to be the order in which fields and macro buttons were added to a view, but you can change the order to whatever you want. You can either change the current data entry order or create a new order.

Radio buttons and checkboxes each have a separate position in the data entry order.

### See also

[InfoBox](#)

[Attaching a macro to a field](#)

## Changing the basic properties of a field



A field's basic properties are the field definition, the data entry type, the named style, and whether the field is read-only or non-printing.

1. Select the field in Design.
2. Open the InfoBox.



3. Click the Basics tab.
4. Set the options in the Basics panel.  
See the Details topic for options.

### See also

[Displaying a field as a drop-down list](#)

[Displaying a field as a checkbox](#)

[Displaying a field as radio buttons](#)

## Details: Changing the basic properties of a field



### To

Change the definition of a database field

Change to another data entry type, such as a drop-down list or a set of radio buttons

Change the values used in a drop-down list or a set of checkboxes or radio buttons

Make a field read-only in the current view

Make a field non-printing in the current view

Show a non-printing field in Preview

Apply a named style with width, color, and text properties already defined

### Do this

Click Field Definition and edit the definition in the dialog box.

Select the data type in the Data Entry Type drop-down list. If a dialog box appears, specify the values.

Click Define List or Define Buttons and edit the values in the dialog box.

Turn on Read-only.

Turn on Non-printing.

Turn on Show in Preview. (This is available only if Non-printing is on.)

Select a style in the Named Style drop-down list.



## Changing text attributes of data



You can change the font, size, color, text style, text relief, and alignment of data in a field.

1. Select the field in Design.
2. Open the InfoBox.



3. Click the Text tab.
4. Set the options in the Text panel.  
See the Details topic for options.

## Details: Changing text attributes of data



### To

Change the font of data

Apply boldface, italics, underlining, or strikethrough to data

Change the font size of data

Apply a color to data

Apply a raised or indented look to data

Change the alignment of data to left, center, or right

### Do this

Select a font in the Font Name drop-down list.

Select one or more styles in the Style/Effect list.

Select a size in the Size drop-down list.

Select a color in the Text Color drop-down list.

Select a relief in the Text Relief drop-down list.

Select an option in the Alignment area.

## Changing line or color settings for a field



You can set a fill color for a field's interior, a width and color for the borders, and a color for a drop shadow. You can also turn on only the borders you want and give a field a raised or indented frame.

1. Select the field in Design.
2. Open the InfoBox.



3. Click the Lines and Colors tab.
4. Set the options in the Lines and Colors panel.  
See the Details topic for options.

## Details: Changing line or color settings for a field



### To

Change the width of the borders of a field

Change the color of the borders of a field

Change the fill color of the interior of a field

Give a field a drop shadow

Give a field a raised or indented frame

Show borders or a baseline for a field

Include the field label inside borders

### Do this

Select a width in the Border Width drop-down list.

Select a color in the Border Color drop-down palette. Select T for transparent.

Select a color in the Fill Color drop-down palette. Select T for transparent.

Select a color in the Shadow Color drop-down palette. Select T for no shadow.

Select a frame style in the Frame drop-down list.

Turn on options in the Borders area.

Turn on "Borders enclose label."

## Changing the wording, attributes, or position of a label



A field label initially has the same wording as the field name, but you can edit the label to use any text you want. You can also change the text attributes of a label and move a label to any side of its field.

1. Select the field in Design.
2. Open the InfoBox.



3. Click the Label tab.
4. Set the options in the Label panel.  
See the Details topic for options.

## Details: Changing the wording, attributes, or position of a label



To	Do this
Change the font of a label	Select a font in the Font Name drop-down list.
Apply boldface, italics, underlining, or strikethrough to a label	Select one or more styles in the Style/Effect list.
Change the font size of a label	Select a size in the Size drop-down list.
Change the alignment of a label to left, center, or right	Select an option in the Alignment area.
Change the wording of a label	Edit the text in the Label Text box.
Change the position of a label relative to the data	Select a position in the Label Position drop-down list.
Hide a label	Select "No label" in the Label Position drop-down list.
Apply a color to a label	Select a color in the Text Color drop-down list.
Apply a raised or indented look to a label	Select a relief in the Text Relief drop-down list.

## Sliding or resizing a field when you print



Because data in fields can vary in length, you may end up with too much blank space in a view. You can slide fields and reduce their boundaries to eliminate some of the extra space.

1. Select the field in Design.
2. Open the InfoBox.



3. Click the Dimensions tab.
4. To slide the field to the left or up over a field with reduced boundaries, turn on Left or Up in the When Printing, Slide area.
5. To reduce or expand the field's boundaries to the size of the data, turn on Reduce or Expand in the When Printing, Boundaries area.

### See also

[Sliding an object when you print](#)

## Details: Sliding or resizing a field when you print



Approach slides fields or resizes their boundaries when you preview or print, and in Design if you are showing data.

### Sliding a field

If you have two fields next to each other and don't want a gap between the data in them, you can mark the fields to slide left. This moves one field to the left to fill the blank space in the other field. For sliding left to work, you must mark both fields to slide left, and the two fields must be aligned along their bottom sides.

When sliding a field left, you may want to turn off the two fields' borders or show only the bottom border.

You can also slide a field up to fill blank space left by a field above it. Usually, the field on the top is a memo field with a variable amount of data in it. You must mark both fields to slide up.

### Resizing a field

Reducing a field's boundaries makes the field smaller so that is just large enough for the data in it. (When you slide fields left, Approach automatically reduces the boundaries of the field on the left.)

If a field has more data than it can display, you can also expand the field's boundaries just enough to show the data. If any other fields are below the expanded field, they slide down to make room.



## Changing the data entry order for fields



Approach initially sets the data entry order to be the order in which fields and macro buttons were added to a view, but you can change the order. Radio buttons and checkboxes each have a separate position in the order.

### To change the data entry order of a few items:

1. In Design, choose Show Data Entry Order from the View menu.  
Numbered squares show the tab position of each field, radio button, checkbox, and macro button.
2. Edit numbers in the squares to change the order.  
When you edit the number in one square, Approach rennumbers the rest of the squares as soon as you click in another square.

### To change the data entry order of all items:

1. In Design, choose Show Data Entry Order from the View menu.
2. Move the I-beam cursor over the border of a numbered square and double-click.  
The numbers are deleted from all of the squares.
3. Click in the squares in the order you want to tab through fields.  
Numbers appear in the squares as you click in them.

## About working with PicturePlus fields

You can add a PicturePlus field to a form, report, form letter, or mailing label to hold a picture, an OLE object, or an image you draw with the mouse in Browse. The graphic appears only in the PicturePlus field in that record. It is part of the record's data, not part of the design of a view.

You must be in Design to add and edit a PicturePlus field.

### Adding a PicturePlus field to a view



You can add a PicturePlus field to a view using either the Add Field dialog box or the PicturePlus tool. If you use Add Field, the PicturePlus field is a predefined size and shape. If you use the PicturePlus tool, you drag to define the area for the field. You can resize a PicturePlus field as you can other types of objects.

### Changing the basic properties of a PicturePlus field



The basic properties of a PicturePlus field are the named style, whether the field is read-only or non-printing, and whether you can draw in the field.

### Changing display options for a PicturePlus field



A PicturePlus field is a fixed size. When you insert a graphic that is too large for the field, Approach can either crop the graphic or shrink it. When you insert a graphic that is too small, Approach can either leave the graphic as it is or stretch it to fill the field.

### See also

[About editing objects and text](#)

[Pasting a picture](#)

[InfoBox](#)

## Adding a PicturePlus field to a view



You can add a PicturePlus field to a view using either the Add Field dialog box or the PicturePlus tool.

### To add a PicturePlus field using the Add Field dialog box:

1. In Design, click the Add Field icon or choose Add Field from the Form, Report, Letter, or Mailing Label menu.



2. If you need to define a new PicturePlus field, click Field Definition in the Add Field dialog box and use the dialog box that appears.
3. If the PicturePlus field you want is in a different joined database, select the database in the drop-down list in Add Field.
4. Drag the PicturePlus field you want from Add Field to the view.  
The field appears in a predefined size.
5. If necessary, resize the PicturePlus field by dragging one of its handles.

### To add a PicturePlus field using the PicturePlus tool:

1. In Design, click the PicturePlus icon or choose PicturePlus from the Create Drawing submenu.  
To draw more than one field, double-click the icon. It will stay selected until you select a different icon.



2. Drag diagonally to draw the PicturePlus field.
3. In the InfoBox, select the PicturePlus field you want in the field list.

## Changing the basic properties of a PicturePlus field



The basic properties of a PicturePlus field are the named style, whether the field is read-only or non-printing, and whether you can draw in the field.

1. Select the PicturePlus field in Design.
2. Open the InfoBox.



3. Click the Basics tab.
4. Set the options in the Basics panel.  
See the Details topic for options.

**Details: Changing the basic properties of a PicturePlus field**



To	Do this
Make a field read-only in the current view	Turn on Read-only.
Allow drawing with the mouse in a field in Browse	Turn on "Allow drawing." (This is available only if Read-only is off.)
Make a field non-printing in the current view	Turn on Non-printing.
Show a non-printing field in Preview	Turn on Show in Preview. (This is available only if Non-printing is on.)
Apply a named style with width, color, and PicturePlus properties already defined	Select a style in the Named Style drop-down list.

## Changing display options for a PicturePlus field



When you insert a graphic that is too large for a PicturePlus field, Approach can crop the graphic or shrink it. When you insert a graphic that is too small, Approach can leave the graphic as it is or stretch it.

1. Select the PicturePlus field in Design.
2. Open the InfoBox.



3. Click the Options tab.
4. Set the options in the Options panel.  
See the Details topic for options.

## Details: Changing display options for a PicturePlus field



### To

Change the position of a graphic in a field

Crop or shrink a graphic that is too large for a field

Stretch a graphic that is too small for a field

### Do this

Drag the image in the PicturePlus Data Position area.

Select "Crop it" or "Shrink it."

Turn on "Stretch if too small."

**Adding a field as a field box**



## Displaying a field as a drop-down list

**Displaying a subset of data in a drop-down list**

## Displaying a field as a checkbox

## Displaying a field as radio buttons

## Setting a standard date format

**Setting a special date format for periods of a year**

## Setting a time format

## Setting a numeric format



## Setting a text format

**Changing the basic properties of a field**

## Changing text attributes of data

**Changing line or color settings for a field**

**Changing the wording, text attributes, or position of a label**

**Sliding or resizing a field when you print**

## **Changing the data entry order for fields**

## Adding a PicturePlus field to a view



## Changing the basic properties of a PicturePlus field

## Changing display options for a PicturePlus field

## About joining and unjoining database files

An Approach file can have up to 50 joined databases (if the underlying database file type can support this capability). The forms, reports, and other views in an Approach file can use data from any of the databases joined in that file.

You need to save an Approach file after joining or unjoining database files in it or after setting join options. Approach does not save these changes automatically.

### Joining database files



You join two databases by establishing a link on one or more fields common to both databases. Often, a join field is an ID field used specifically for joining the databases.

### Setting options for a join



You can have Approach automatically insert or delete related records from a joined database.

### Unjoining database files



When you no longer need a relationship between data in two databases, you can unjoin the databases. If you unjoin and close a database in the Join dialog box, Approach deletes all the forms, reports, form letters, mailing labels, and repeating panels that are based on that database.

### See also

[Joined databases](#)

## Joining database files



You join two databases by establishing a link on one or more fields common to both databases.

1. Choose Join from the Create menu.
2. In the Join dialog box, click Open to open another database or click Alias to create an alias of the current database.  
If you click Open, the Open dialog box appears; use this to select a database to join.
3. Link the two databases on one or more join fields.  
For each field you want to join on, click the field in the list for one database and then drag to the field in the other database.
4. To join more databases in the Approach file, continue opening files and joining them in the same manner.
5. To print a copy of the database fields and their join relationships, click Print and use the Print dialog box.
6. If you have opened a database you've decided not to join, click in its list of fields and click Close.
7. Click OK.

### See also

[Setting options for a join](#)

[Unjoining database files](#)

## Details: Joining database files



### Join fields

A join field can be any field that is common to the two databases. Most often, you link databases on a single field with ID numbers. If you do not have an ID field you can use for this, link the databases on other fields that together uniquely identify records in one of the databases, such as first name, last name, and phone extension.

A join field does not need to have the same name in the two databases, but it should usually be of the same type.

A single database can be joined to one or more other databases. You can use the same join field in all of its joins or different fields for different joins.

### Valid 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 into a single set, and the join relationships cannot be circular.

The OK button is dimmed if any joins in the dialog box are invalid. When you correct the errors, you'll be able to click OK.

### Alias databases

You can join a field to an alias "copy" of itself just as you can to any other database you open in the Join dialog box. An alias is not an actual copy of a database, but just another listing of it for the purposes of joining. For more information, see [Alias joins](#).

If you click Alias, a copy of the current database appears in the Join dialog box. The name of the database is appended with a 1, and the copy has the same name as the original, plus a 2 (or a 3 and so on); for example, EMPLOYEE:1 and EMPLOYEE:2.

### Joins on calculated fields

If "Show calculated fields in the Join dialog" is on in the General panel of Preferences, you can join databases on a calculated field. For information about setting this option, see [Setting general working preferences](#).

The names of calculated fields appear italicized at the bottom of the field lists, after the database fields. A field list shows only the calculated fields that refer to fields in the listed database, and it does not include summary fields.

If you want calculated fields to appear in a field list for a secondary database (one you display in the Join dialog box using the Open button), first join the database using a database field. Then create a calculated field in the Field Definition dialog box, using a formula that refers to a field in the secondary database. When you open the Join dialog box again, you'll see the calculated field in the database's field list.

## Setting options for a join



You can have Approach automatically insert or delete related records from a joined database.

1. Choose Join from the Create menu.
2. Double-click the join line.
3. To have Approach insert related records automatically for the selected join, turn on an Insert option.
4. To have Approach delete related records automatically for the selected join, turn on a Delete option.
5. Click OK in the Relational Options dialog box.
6. Click OK in the Join dialog box.

## Details: Setting options for a join



The join options apply to a particular join, and you can set them differently for each join in an Approach file. 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 on, Approach inserts a new record in this case:



**If:** You type in a blank field for a detail database on a view, and the record for that field does not match a join value in the main database.



**Then:** Approach inserts a new record in the detail database.

For example, suppose you turn on "Insert: If no records match the DEPARTMNT record, typing into a blank EMPLOYEE field inserts a new record." If you type on a new line in an employee repeating panel on a department form, Approach inserts a record for the new line in the employee database.

### Delete options

With a Delete option on, Approach deletes records in this case:



**If:** You delete a record from the database listed first in the Delete option.



**Then:** In the database listed second in the Delete option, Approach deletes all records that have a join value matching the record you deleted.

For example, suppose you turn on "Delete: Deleting a record from DEPARTMNT 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 you have a one-to-many join on a calculated field and the calculated field is based on fields in a repeating panel, Approach cannot insert new records in the panel, even if you have the option on for inserting records automatically. But if a calculated field used in a one-to-many join is based on fields in the form's main database, Approach can insert records in the repeating panel.

## 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.

1. Choose Join from the Create menu.
2. Click the join line connecting the databases you want to unjoin.
3. Click Unjoin.
4. To unjoin more databases in the Approach file, continue unjoining in the same manner.
5. For each database left without a join, click in its list of fields and click Close.
6. If an alert box appears, click Yes to unjoin the database.  
Approach displays an alert box for each database you close that is the main database for any views or repeating panels.
7. Click OK.

### See also

[Joining database files](#)



## Joining database files

## Setting options for a join

## Unjoining database files

## About setting up your network environment

You can store any Approach file and any database file supported by Approach on a network. Users who work on the network can create, open, and save files and work with data just as if the files were stored on their own local drives.

Before sharing dBASE and Paradox files on a network, you need to specify several network settings. (You can open FoxPro files on a network, but you cannot share them concurrently with other users in Approach.)

The network settings are saved in your APPROACH.INI file. Once you've made the settings, they'll stay in effect from one work session to another unless you change them.

### Setting file-sharing options for dBASE files



For dBASE files, you can specify whether other users can open network files you have open, whether your local files are available to other users, and whether to optimize performance for Approach-only files.

### Specifying a locking protocol for shared dBASE files



If you're sharing dBASE files with other users, you and the other users must all specify Approach, dBASE IV, or dBASE III+ as the locking protocol for the files. The default protocol is Approach.

### 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.

## Setting file-sharing options for dBASE files



For dBASE files, you can specify whether other users can open network files you have open, whether your local files are available to other users, and whether to optimize performance for Approach-only files.

1. Open the New, Open, Save Database As, Import Data, or Export Data dialog box, and select dBASE IV or dBASE III+ in the List Files of Type drop-down list.
2. Click Connect.
3. To allow other users to work with files you have open, turn on "Database sharing."
4. To make open files on your local drive available to other users, turn on "Local databases are shared."
5. To optimize performance for files used only with Approach, turn on "Sharing data only with other Approach users."
6. Click OK.
7. Click OK in the New, Open, or other file dialog box.
8. Close and reopen any dBASE files for the changes to affect them.

## Details: Setting file-sharing options for dBASE files



You can have any Approach file active when you open the New, Open, or other file dialog box. The dBASE options affect all dBASE files you open.

### Database sharing

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 will be able to open the file until you close it.

If this setting is on, make sure everyone you work with on a network uses the same protocol for dBASE files. For more information about this, see [Specifying a locking protocol for shared dBASE files](#).

### Local databases are shared

If you're using a peer-to-peer network system such as LANtastic and the system is set up for sharing local files, this setting allows other users to open dBASE files on your local drive that you already have open.

If this setting is off, other users will be able to open a dBASE file on your local drive only if you do not already have the file open. This is true even 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 used only in Approach. Turn this setting off if you or other network users plan to use dBASE files with other applications.

## Specifying a locking protocol for shared dBASE files



If you're sharing dBASE files with other users, you and the other users must all specify Approach, dBASE IV, or dBASE III+ as the locking protocol for the files. The default protocol is Approach.

1. Use a text editor to open the APPROACH.INI file in your Windows directory.
2. Set the sdBASEFileSharingMethod line to Approach, dBASE4, or dBASE3.  
For example, sdBASEFileSharingMethod=dBASE4.
3. Save and close the APPROACH.INI file.
4. Restart Approach for the change to take effect.

## Details: Specifying a locking protocol for shared dBASE files



To maintain the integrity of data, all users who share dBASE files should specify the same locking protocol.

If all users are working with the dBASE files only through Approach, leave the locking protocol as Approach. This will usually give you the best performance.

If any of the users are working through a dBASE IV application, change the protocol to dBASE4. If any users are working through a dBASE III+ application, change the protocol to dBASE3.



## 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.

1. Open the New, Open, Save Database As, Import Data, or Export Data dialog box, and select Paradox in the List Files of Type drop-down list.
2. Click Connect.
3. To change the type of networking, select "Use Paradox 3.5 networking" or "Use Paradox 4.x networking." Paradox 4.x networking includes Paradox for Windows.
4. Type your user name in the User Name text box.
5. Type the directory location for the control files in the Network Control File Path text box.  
Do not include a control file's name in the pathname. For example, if the files are in the SHARE directory on the f drive, type f:\SHARE.
6. Click OK.
7. Click OK in the New, Open, or other file dialog box.
8. Close and reopen any Paradox files for the changes to affect them.

## Details: Setting file-sharing options for Paradox files



You can have any Approach file active when you open the New, Open, or other file dialog box. The Paradox options affect all Paradox files you open.

### Types of networking

If "Use Paradox 3.5 networking" is selected, 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 "Use Paradox 4.x networking" is selected, 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.

Users of Paradox 4 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.

In Paradox 4.x (including Paradox for Windows), the network control file is called PDOXUSRS.NET; in 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, you will open Paradox databases on a network as a single user.

## About working on a network

In most ways, you can create, open, and save databases and import and export data on a network just as you can on your local drive. Use the same dialog boxes you use with your local files, and provide the location of the network drive and directory.

As you work with a database on a network, the original database remains in its network location. What you see on the screen is a copy of those records in your computer's memory. If you have read/write access to the database, you can make changes to the data and the changes are saved in the original database on the network.

### Changing your status to single user



There may be times when you want to open a network database as a single user -- for example, to make structural changes to the database or to do a lot of previewing and printing. You can temporarily change your network environment to let you open databases as a single user.

### Entering a password



Files on a network often have one or more passwords so that only some users can read or edit the files. In Approach, both database files and Approach files can have passwords.

### Refreshing the network data on your screen



Approach refreshes the data from a network database when you edit, find, or sort data, when you preview or print, and when you change what you see on the screen (such as move to another record or go to Design). You can also refresh the data yourself.

### Saving changes to a shared record



If you have optimistic record locking set for your network environment, other users will be able to edit a record at the same time you do. Approach helps you make careful use of this feature.

## Changing the status to single-user



You can temporarily change your network environment to let you open network databases as a single user.

### To change your status to single-user for a dBASE database:



Turn off "Database sharing" in the dBASE Network Connection dialog box.

### To change your status to single-user for a Paradox database:



Delete the text in the User Name and Network Control File Path text boxes in the Paradox Network Connection dialog box.

### See also

[Setting file-sharing options for dBASE files](#)

[Setting file-sharing options for Paradox files](#)

## Entering a password



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, except that a password is case-insensitive.
2. Click OK.

### See also

[Defining a password for a file](#)

## Details: Entering a password



### Database file passwords

A database file can have two types of passwords: a read/write password that gives you complete access to the file, and a read-only password that allows you to read data but not modify it. A database can have a read/write password 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 an Approach file that uses the database.

### Approach file passwords

An Approach file can have one password. In this case, the password gives you the ability to modify the design of the file.

If an Approach file has a password, the Enter Approach File Password dialog box appears when you try to change to Design, join database files, or create a view.

## Refreshing the network data on your screen



Approach refreshes the data from a network database when you edit, find, or sort data, when you preview or print, and when you change what you see on the screen. You can also refresh the data yourself.



Choose Refresh from the Browse, PicturePlus, Worksheet, or Crosstab menu.

## Details: Refreshing the network data on your screen



The Refresh command updates the data on your screen to match the database on the network. If you've made any changes you haven't entered, this command also enters those changes. If you're working with a found set or with sorted data, Refresh inserts any new records into the found set or the sort order as appropriate.

### Why refresh data?

As you work in a network database, Approach places a copy of the data you see on the screen in your computer's memory. If other users are working in the database at the same time you are and make changes to its data, their changes do not always appear instantly in the image on your screen. Refresh data periodically to be sure you're seeing the current version of it.

### Downloading data in Preview

When you print data from a network, Approach normally refreshes the data from the network database. If you preview data before printing and other users make changes to the database after you preview, the data you print may not be the same as the data you previewed.

You can have Approach download a copy of the current set of network data to your hard disk whenever you change to Preview to "freeze" the data you see on the screen. This way, you can be sure you're looking at what will actually be printed. Downloading is especially helpful when you preview a report that uses a summary or any data set that many users are working on.

For information about setting this option, see [Setting general working preferences](#).



## Saving changes to a shared record



If you have optimistic record locking set for your network environment, other users will be able to edit a record at the same time you do. When you try to edit a shared record, an alert box appears

### To save changes to a shared record:



Click Yes to save your changes and overwrite changes made by other users.

This overwrites all changes made to the record since your view of it was last refreshed.

### To cancel your changes and refresh your copy:



Click No.

This lets you see changes made to the record by other users. You can then make your changes on top of theirs.

### See also

[Setting general working preferences](#)

## Details: Saving changes to a shared record



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 enter his or her changes, an alert box warns that the changes may overwrite those made by the first user.

If you don't want other users to edit a record at the same time as you, you can turn off optimistic record locking. This way, once you've clicked in a record, other network users can view the record but not make changes to it until you go to another record.

## Setting file-sharing options for dBASE files

**Specifying a locking protocol for shared dBASE files**

## Setting file-sharing options for Paradox files

**Changing your status to single user**

**Entering a password**

**Refreshing the network data on your screen**



**Saving changes to a shared record**

## About previewing and printing

When you print a view in Approach, the data and design objects appear in the printed copy as they do on screen in Preview. If you have any objects you don't want to appear in printed copy (such as buttons to click to run a macro), you can define those objects as non-printing using their InfoBox in Design.

### Specifying the printer, paper, and orientation



Before printing a view, you need to select a printer and specify other print setup options. The printer, paper size, and page orientation together determine the printable area on a page.

### Previewing a view



The Preview environment shows what a view will look like when it's printed.

### Printing a view



When you're ready to print, you specify the view, the range of records, and the number of copies you want.

### See also

[Preview](#)

## Specifying the printer, paper, and orientation



Before printing a view, you need to select a printer and specify other print setup options. The printer, paper size, and page orientation together determine the printable area on a page.

1. Choose Print Setup from the File menu.
2. Select a printer in the Printer area.
3. Select a page orientation in the Orientation area.
4. Select a paper size and a source in the drop-down lists in the Paper area.
5. Click OK.

## Details: Specifying the printer, paper, and orientation



When you start Approach, the default printer is the one selected in the Windows Control Panel. If you are working on a network, you may also have other printers available.

### Printer selections

Default Printer uses the printer selected in the Windows Control Panel.

If you want a different printer, select Specific Printer and select the name of the printer in the drop-down list. The list shows up to eight printers set up for use with your computer.

### Orientation

Portrait places the view on the page vertically, and Landscape places the view on the page horizontally.

### Additional settings

The Options button in Printer Setup displays an Options dialog box with more settings specific to your printer. For information about these settings, click the Help button in the Options dialog box.

## Previewing a view



The Preview environment shows what a view will look like when it's printed.



Click the Preview icon or choose Preview from the File menu or from the environment pop-up menu in the status bar.



## Details: Previewing a view



### Before you preview...

Make sure you've already selected a printer, paper size, and orientation so that the preview will be accurate. For more information, see [Specifying the printer, paper, and orientation](#).

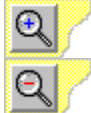
### Zooming in and out

When you first go to Preview, you see your current view reduced to 75 percent of its normal size. The pointer turns into a zoom cursor in Preview.

You can change to another zoom setting in several ways:



To zoom in or out one setting, click the left mouse button or right mouse button, click the Zoom In or Zoom Out icon, choose Zoom In or Zoom Out from the View menu, or press CONTROL and the up or down arrow key.



To change to a particular zoom setting, click the percentage in the status bar to open the zoom pop-up menu and choose a setting.



To change to 100 percent in one step, choose Actual Size from the View menu or 100% from the zoom pop-up menu.

The possible zoom settings in Preview are 25, 50, 75, 100, and 200 percent.

### Non-printing objects

You can make a non-printing object appear in Preview by setting the Non-printing option in the Basics panel of the object's InfoBox. If a macro button appears in Preview, the zoom cursor turns into a pointer when you move over the button so that you can click it to run a macro.

### Summaries and objects

If a view has any fields that summarize data from multiple records, Approach calculates the summary in Preview and shows the results. If a view has fields or other objects that need to slide up or left, the fields slide into position in Preview.

## Printing a view



When you're ready to print, you specify the view, the range of records, and the number of copies you want.

1. If necessary, specify the printer and print setup options.
2. Browse the records you want to print.
3. Change to the view you want to print.
4. If necessary, sort the records.
5. Preview the view and make any corrections you need.
6. Click the Print icon or choose Print from the File menu.



7. In the Print dialog box, specify a range of records in the Print Range area.
8. Select a print quality in the Print Quality drop-down list.
9. Type the number of copies you want in the Copies text box.
10. If necessary, turn on printing options.
11. Click OK.

To cancel a print job, press ESC or click Cancel in the print alert box.

## Details: Printing a view



### Before you print...

Approach prints from the set of records you're currently using with the current sort order. Before you print, either show all the records in a database or use a find request to show only a found set of records.

Previewing shows how the view will look when printed. For more information, see [Previewing a view](#).

### Print range

All prints all the records you're currently browsing. Current form prints the current record (this is available only when you're using a form).

Pages prints a range of pages. Type the number of the first page of the range in From and the number of the last page in To.

### Options

Print to file sends the print copies to a file rather than to a printer. If you turn this setting on, the Print to File dialog box appears when you click OK in the Print dialog box. Specify a name and location for the print file.

Collate copies prints an entire copy before printing the next copy. Otherwise, Approach prints all copies of page 1, then all copies of page 2, and so on.

### Printing reports, worksheets, and crosstabs

When you print a report, worksheet, or crosstab that has a header or footer, the header or footer appears on every printed page. The area between a header and footer is the body of the view. Approach prints as many records on a page as will fit in the body.

If a report, worksheet, or crosstab has a title page, Approach prints a copy of the page at the beginning of the view. A title page can have its own header and footer.

### Printing a view with summary calculations

If a view has any summary calculations that apply to a range of records, in most cases Approach calculates the summaries only when you preview or print. (The exception is a summary for line items in a repeating panel, which is summarized in Browse and in Design if you're showing data.) A summary panel in a report can appear before or after the records it summarizes.

### Sliding objects when you print

If a views has fields or other objects that need to slide up or left, the objects slide when you preview or print. For more information, see [Sliding an object when you print](#).



**Specifying the printer, paper, and orientation**

**Previewing a view**

**Printing a view**

## About charts

Approach gives you two ways to create a chart: using the Chart Assistant or directly from a crosstab.

### Creating a bar, line, or area chart



Bar, line, and area charts display information along the x-axis and y-axis. You use the Chart Assistant to name the chart, select a style and layout, and specify the data you want to chart.

### Creating a pie chart



Pie charts show the relationships of various parts to the whole. You use the Approach Chart Assistant to select the field for each pie wedge, a calculation, and the field to be calculated.

### Creating an instant chart from a crosstab



You can create a chart directly from a crosstab by clicking the Chart icon. 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 with crosstab groups (from columns) as the series.

### Charting a different data set



Once you've created a chart, you can change the set of data it displays by specifying a new data source. If you use the Find command to create a found set of records, Approach automatically charts the found set.

### See also

[Lotus Chart Help](#)  
[Charts](#)

## Creating a bar, line, or area chart



Bar, line, and area charts display information along the x-axis and y-axis. You use the Chart Assistant to name the chart, select a style and layout, and specify the data you want to chart.

1. Choose Chart from the Create menu.
2. Type a name for the chart in the Name text box.
3. Select a style for the chart in the SmartMaster Style drop-down list.
4. Select a layout (chart type) in the SmartMaster Layout list.  
See the Details topic for chart types.
5. Click the X-axis tab and select a field for the x-axis of the chart.
6. Click the Y-axis tab and define the calculation for the y-axis.
7. To include a series in the chart, click the Series tab and select a field for the series.
8. Click Done.
9. If the Define Main Database dialog box appears, select the database you want to be the main database for the report and click OK.  
This dialog box appears if the chart uses fields from more than one joined database. The first database you selected in the Fields panel is preselected as the main database.

## Creating a pie chart



Pie charts show the relationships of various parts to the whole. You use the Approach Chart Assistant to select the field for each pie wedge, a calculation, and the field to be calculated.

1. Choose Chart form the Create menu.
2. Type a name for the chart in the View Name & Title text box.
3. Select a style for the chart in the SmartMaster Style drop-down list.
4. Select Pie Chart in the SmartMaster Layout list.
5. Click the Pie Fields tab, select a field for each pie wedge, select a calculation, and select a field to be calculated.
6. Click Done.
7. If the Define Main Database dialog box appears, select the database you want to be the main database for the report and click OK.

This dialog box appears if the chart uses fields from more than one joined database. The first database you selected in the Fields panel is preselected as the main database.

## Creating an instant chart from a crosstab



When you create a chart directly from a crosstab, the values in the crosstab body are plotted as the chart bars. The crosstab rows are charted along the x-axis, and crosstab groups (from columns) are the series.

1. Make sure that the crosstab contains the data you want to chart.
2. Click the Chart icon.



**Creating a bar, line, or area chart**



## Creating an instant chart from a crosstab

## Creating a pie chart

## Details: Creating a bar, line, or area chart



### Chart types

The Chart Assistant lists four types of charts you can create:



Bar charts are the most common type of business chart. The SmartMaster bar chart layout is a standard vertical bar chart, where each bar represents a single value in a series. The height of each bar shows a value at a point in time. The left-to-right orientation gives the viewer a sense of movement with time.



Line charts trace the changes in sets of data over time. Each point along a line represents a value at a particular time period or point in time, and each line represents a category of data.



Area charts show trends in data over time by emphasizing the area under the curve created by each data series. Like line charts, area charts downplay individual values and emphasize trends and totals.

### Y-axis calculations

To define the y-axis calculation, first select the calculation you want to use. Next, select the field you want to calculate. If you want to calculate a field from a different joined database, select the database in the drop-down list.

## Charting a different data set



You can change the set of data a chart displays by specifying a new data source. If you use the Find command to create a found set of records, Approach automatically charts the found set.

1. Choose Chart Data Source from the Chart menu.
2. Select a field to appear on the x-axis.
3. Click the Y-axis tab and define the calculation for the y-axis.
4. Click the Series tab and select a field for the series.
5. Click Done.
6. If the Define Main Database dialog box appears, select the database you want to be the main database for the report and click OK.

This dialog box appears if the chart uses fields from more than one joined database. The first database you selected in the Fields panel is preselected as the main database.

## Charting a different data set

## About setting Approach preferences

You can customize many aspects of your work area in Approach using the Preferences dialog box.

When you finish setting options, click OK or Save Default in the Preferences dialog box. If you click OK, the options are saved only for your current session with Approach. If you click Save Default, the options become the new defaults.

### Setting display defaults



The display defaults determine the window elements that appear in the Approach work area (such as icon bars, view tabs, and status bar), the default style available in Assistants (for creating views), the design elements that appear in Design, and settings for the design grid.

### Setting a default order for records



Approach stores records in a database in the order you add them. But for each Approach file, you can set a particular order for the records and then move through them in that order in Browse. The order of records in an Approach file does not affect the order of records in the actual database. A database still stores records in their creation order.

### Defining a password for a file



You can define passwords for database files and Approach files. This allows you to share data and views with other users, without compromising the security of your data and the design of your views.

### Setting dialing preferences



The Approach dialing preferences let you define standard modem settings to be used whenever you have Approach dial a telephone number. Modem settings include the name of the serial port the modem is connected to, the modem's baud rate (speed), the type of dialing service to use.

### Setting database options for a dBASE or FoxPro file



For a dBASE or FoxPro database file, you can make the file read-only in the current Approach file, change to another character set, and compress the file for more efficient storage.

### Setting database options for a Paradox file



For a Paradox database file, you can make the file read-only in the current Approach file, change to another character set, and (for Paradox 4.0) change case sensitivity for searches.

Searches in Paradox 3.5 files are always case-sensitive. In Paradox 4.0 files searches are initially case-insensitive, but you can change them to case-sensitive in Approach.

### Setting database options for SQL, Access, ODBC, and Lotus Notes tables



For SQL, Microsoft Access, ODBC, and Lotus Notes tables, you can specify read-only access, display SQL system tables in the lists of filenames in dialog boxes, and cache the names of tables. The read-only setting also applies to Lotus Notes tables.

The options for SQL, Microsoft Access, ODBC, and Lotus Notes affect all of these tables you create or open in Approach, not just the table selected in the Preferences dialog box.

### Maintaining external indexes for a dBASE or FoxPro database



In dBASE and FoxPro database files, Approach uses and maintains its own indexes to keep track of records. If you have any indexes created in dBASE or FoxPro that you want Approach to maintain, you can associate those indexes with your database file.

Approach does not use the external indexes but maintains them for the other applications.

### Creating secondary indexes for a Paradox database



In a Paradox database file, a primary index is built on the key field specified when the file is created. You can create additional, secondary indexes for the file in Approach.

Approach automatically uses and maintains all indexes for Paradox database files.

### **Setting general working preferences**



Approach provides several options that make working with data as efficient as possible. You can make the ENTER key work in Browse just like the TAB key, open the Add Field dialog box automatically right after you define a field, show a Cancel Macro dialog box whenever you run a macro, allow joins on calculated fields, download the current data set whenever you go to Preview, and allow two network users to edit a record at the same time using optimistic record locking.

## Setting display defaults



The display defaults determine the window elements that appear in the Approach work area, the default style available in Assistants, the design elements that appear in Design, and settings for the design grid.

1. Choose Preferences from the Tools menu.
2. Click the Display tab.
3. Turn on the window elements you want to display in the Show area.  
See the Details topic for options.
4. Click Edit Default Style and define a default style to be available in the Assistants when you create views.
5. Turn on the design elements you want to display in the Show in Design area.
6. Set the grid options in the Grid area.
7. Click OK or Save Default.

### See also

[Defining and saving a named style](#)



## Details: Setting display defaults



### Window elements

This option	Displays
SmartIcons	An icon bar (preset to appear at the top of the Approach window)
Status bar	A status bar at the bottom of the Approach window
View tabs	Tabs with view names at the top of the Approach window
Title bar help	Command descriptions in the title bar, whenever you point on a menu command or right-click an icon
Welcome dialog	A dialog box for opening and creating files, whenever you start Approach or close a file
Find bar	A bar with buttons for finding records, whenever you go to Find

### Styles

A style specifies design properties such as colors and text attributes for all new objects and for the background of new views. When you create a new view, you can use the default style or select a predefined SmartMaster style in the Assistant.

### Design elements

This option	Displays
Data	Data from the first record or page of records in Design (Otherwise, field names appear.)
Rulers	Rulers along the top and left sides of the Design work area
Add Field dialog	Add Field dialog box in Design
Drawing tools	A floating palette of drawing tools in Design

## **Grid settings**

<b>This option</b>	<b>Does this</b>
Show grid	Show a design grid behind objects in the Design work area
Snap to grid	Make objects align with increments on the grid, when you draw, move, or resize the objects
Grid units	Specify a unit of measure (inches or centimeters) for increments on the grid
Grid width	Specify a width for the increments on the grid (First select a grid unit to see a list of widths here.)

## Setting a default order for records



Approach stores records in a database in the order you add them. But for each Approach file, you can set a particular order for the records and then move through them in that order in Browse.

1. Choose Preferences from the Tools menu.
2. Click the Order tab.
3. If necessary, change to another database by selecting from the Maintain Default Sort For drop-down list.
4. Add the primary sort field to the Fields to Sort On list.  
To add a field to Fields to Sort On, select the field name in Database Fields and click Add, or double-click the field name. To move a field back to Database Fields, select the field name and click Remove, or double-click the field name. To move all the fields back, click Clear.
5. Select Ascending or Descending for the primary sort field.
6. If necessary, specify additional sort fields in the same way.
7. Click OK or Save Default.

### See also

[Specifying a sort order](#)

## Details: Setting a default order for records



When you specify an order for records, this becomes the new default order in that Approach file (replacing the creation order). The order of records in an Approach file does not affect the order of records in the database file. A database file still stores records in their creation order.

### Sort fields

You specify one or more sort fields for reordering records. The first field is the primary sort field. Approach sorts the records by the contents of that field. You can also 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 the primary sort field and First Name as an additional sort field.

### Ascending or descending sorts

Each sort field sorts in either ascending or descending order.

Ascending sorts text from A to Z, numbers from lowest to highest, and dates and times from earliest to latest. If a text field has numbers and text, the sorting is 0 to 9 and then A to Z. Leading spaces are sorted before numbers and text.

Descending sorts data in the opposite direction. If a text field has numbers and text, the sorting is Z to A and then 9 to 0. Leading spaces are sorted at the end.

## Defining a password for a file



You can define passwords for database files and Approach files. This allows you to share data and views with other users, without compromising the security of your data and the design of your views.

1. Choose Preferences from the Tools menu.
2. Click the Password tab.
3. To define a password for the current Approach file, type the password in the Password for This Approach File text box.  
When the Confirm Password dialog box appears, type the password a second time and click OK.
4. To define passwords for a database file, type the passwords in the Read/Write Password and Read-Only Password text boxes.  
If necessary, change to another database by selecting from the Database Name drop-down list. When the Confirm Password dialog box appears, type the password a second time and click OK.
5. Click OK or Save Default.

### See also

[Entering a password](#)

## Details: Defining a password for a file



### Typing passwords

Passwords are case-insensitive and can have up to 16 characters. Asterisks appear in the text box as you type the characters of the password.

### Approach file passwords

An Approach file password protects the design of Approach files. If a user enters this password correctly, he or she will be able to join database create new views, redesign existing views, and join databases in the file.

### Database passwords

A database file can have a read/write password or both a read/write and a read-only password. The file needs the read/write password because at least one user should have write access to it.

## Setting dialing preferences



The Approach dialing preferences include the name of the serial port the modem is connected to, the modem's baud rate (speed), and the type of dialing service to use.

1. Choose Preferences from the Tools menu.
2. Click the Dialer tab.
3. Set the options you want to be used whenever Approach dials a telephone number.
4. Click OK or Save Default.

## Details: Setting dialing preferences



These are the options you can set. If you need more information, see your modem documentation.

Use this setting	To set
Modem Port	The communications port where your modem is connected
Baud Rate	The speed of the modem
Dial Prefix/Suffix	The command string for both before (Prefix) and after (Suffix) you dial
Hangup	The command string you use to hang up
Initialize	The command string that initializes your modem
Access Code	Any numbers you might need to dial to get access to an exchange or phone company system, and (if necessary) a comma for a pause (For example, to dial 9 for an outside line, type 9 and a comma; the comma inserts a pause to wait for the outside line.)
Do Not Dial	Any numbers to omit while dialing (Use this option to remove the area code or international dialing code from the beginning of a phone number.)
Dial Type	Whether your modem line is tone or pulse (Most telephones use tone dialing.)



## Setting database options for a dBASE or FoxPro file



For a dBASE or FoxPro database file, you can make the file read-only in the current Approach file, change to another character set, and compress the file for more efficient storage.

1. Choose Preferences from the Tools menu.
2. Click the Database tab.
3. If necessary, change to another database by selecting from the Database Name drop-down list.
4. To make the database read-only in the current Approach file, turn on "Make all fields in database read-only."
5. To change the character set for the database, select an option under Character Set.
6. To compress the database, click Compress.
7. Click OK or Save Default.

## Setting database options for a Paradox file



For a Paradox database file, you can make the file read-only in the current Approach file, change to another character set, and (for Paradox 4.0) change case sensitivity for searches.

1. Choose Preferences from the Tools menu.
2. Click the Database tab.
3. If necessary, change to another database by selecting from the Database Name drop-down list.
4. To make the database read-only in the current Approach file, turn on "Make all fields in database read-only."
5. To change the character set for the database, select an option under Character Set.
6. To change the case sensitivity for searches in the database, select an option under Paradox Case Sensitivity. This is not available for Paradox 3.5 files; searches in Paradox 3.5 are always case-sensitive. In Paradox 4.0 files searches are initially case-insensitive, but you can make them case-sensitive in Approach.
7. Click OK or Save Default.

## Setting database options for SQL, Access, ODBC, and Lotus Notes tables



The database options for SQL, Microsoft Access, ODBC, and Lotus Notes affect all of these tables you create or open in Approach, not just the table selected in Preferences.

1. Choose Preferences from the Tools menu.
2. Click the Database tab.
3. If necessary, change to a SQL, Access, ODBC, or Notes table by selecting from the Database Name drop-down list.
4. To display SQL system tables in the list of filenames in Approach dialog boxes, turn on "Show system tables in Open dialog."
5. To cache a table name the first time you open a SQL, Access, or ODBC table, turn on "Cache table names for use in Open dialog."
6. To make SQL, Access, ODBC, and Notes tables read-only through Approach, turn on "Open all SQL tables as read-only."
7. Click OK or Save Default.

## Maintaining external indexes for a dBASE or FoxPro database



If you have any indexes created in dBASE or FoxPro that you want Approach to maintain, you can associate those indexes with your database file. Approach does not use the external indexes but maintains them for the other applications.

1. Choose Preferences from the Tools menu.
2. Click the Index tab.
3. If necessary, change to another database by selecting from the Database Name drop-down list.
4. To add an external index to the database so that it will be maintained for other applications, click Add Index, select the index in the dialog box that appears, and click OK.
5. To close an external index so that it will no longer be maintained, select the index in the list of indexes and click Close Index.
6. Click OK or Save Default.

## Creating secondary indexes for a Paradox database



In a Paradox database file, a primary index is built on the key field specified when the file is created. You can create additional, secondary indexes for the file in Approach. Approach automatically uses and maintains all indexes for Paradox database files.

1. Choose Preferences from the Tools menu.
2. Click the Index tab.
3. If necessary, change to another database by selecting from the Database Name drop-down list.
4. To add a secondary index to the database, click Add Index, type the name in the Paradox Secondary Index text box, and add the index fields to the Fields to Index list.
5. To delete a secondary index from the database, select the index in the Paradox Secondary Index drop-down list and click Delete Index.
6. Click OK or Save Default.

## Setting general working preferences



Approach provides several options that making working with data as efficient as possible.

1. Choose Preferences from the Tools menu.
2. Click the General tab.
3. To make the ENTER key work in Browse just like the TAB key, turn on "Use Enter key to move or tab between fields in Browse."
4. To open the Add Field dialog box automatically whenever you define new fields or edit existing ones, turn on "Show the Add Field dialog after creating new fields."
5. To show a Cancel Macro dialog box whenever you run a macro in Approach, turn on "Show the Cancel Macro dialog when running macros."
6. To allow joins on calculated fields in the current Approach file, turn on Show calculated fields in the Join dialog.
7. To have Approach download a copy of the current data set to your hard disk whenever you preview, turn on "Download data before previewing."
8. To allow two network users to edit a record at the same time, turn on "Lock records using optimistic record locking."
9. Click OK or Save Default.

## Details: Setting general working preferences



### Tabbing with the ENTER key

Whenever you press ENTER in Browse, any new data in the current field is entered and you move to the next field in the data entry order.

If this setting is off, pressing ENTER enters the data but does not move you to the next field.

### Showing the Add Field dialog box

When you close the Field Definition dialog box, Add Field appears in the work area so that you can easily add the fields to a view. In this case, Add Field shows only the fields you just defined or edited; it has an additional Show All Fields button that you can click to list all the fields.

For information about using Add Field this way, see [Adding a field as a field box](#).

### Joining on calculated fields

If this setting is on, calculated fields appear italicized in field lists in the Join dialog box, after other fields in the database. You can join on calculated fields as you do with other types of fields. For more information, see [Joining database files](#).

### Downloading data before previewing

If you download data, the data set you print will be the version on your hard disk rather than the one in the network database. This way, when you preview you can be sure you're looking at what will actually be printed.

### Optimistic record locking

With optimistic record locking, 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 if he or she wants to save the changes and overwrite those of the first user, or cancel the changes.

If this setting is off, two users can view a record at the same time, but only the first user to go to the record can edit it. This is sometimes called full record locking.

For information about working with optimistic record locking, see [Saving changes to a shared record](#).

## About customizing SmartIcons and menus

You can customize the set of SmartIcons that appears in the Approach work area and the menus that appear with a particular view.

### Customizing the SmartIcons



Approach comes with a default set of SmartIcons for Browse, Find, and Preview. For Design, it provides three default sets of icons for the icon bar and a floating palette of icons that are used for drawing objects.

You can add or remove icons in any of the default sets or create your own sets of icons. You can also change the location of the icon bar and change the size of icons in the icon bar.

### Creating a custom menu bar



When you create a menu bar, each menu can have as many or as few commands as you want. For a data entry form, for example, you might create a menu that contains only commands for entering data.

You can base a custom menu bar on the default Approach menu bar, a default set of short menus, or any other menu bar you've already created. In most cases, unless the menu you want to create is very short, creating a menu based on another is more efficient than creating a new one.

A custom menu bar can appear only in Browse.

### Editing or deleting a custom menu bar



Once you've created a custom menu bar, you can easily edit it or delete it. If you delete a menu bar that is attached to a view, Approach substitutes the default menu bar for the view.



## Customizing the SmartIcons



You can add or remove icons in any default set of SmartIcons or create your own sets of icons. You can also change the location of the icon bar and change the size of icons in the icon bar.

1. Go to Browse, Design, Find, or Preview, and choose SmartIcons from the Tools menu.
2. If you need to change to a different set of icons, select a set in the drop-down list at the top of the SmartIcons dialog box.
3. Add, remove, and arrange icons in the order you want them in the current set (the list on the right).  
You can add icons by dragging them from the Available Icons list to the current set, remove icons by dragging them to the Available Icons list, or move icons by dragging them up or down in the current set.
4. To save changes you made to the current set as a new icon bar, click Save Set, specify a name and file location in the Save Set of SmartIcons dialog box, and click OK.
5. To remove a set of icons, click Delete Set, select the set of icons in the Delete Sets dialog box, and click OK.
6. To change the size of all icons in the icon bar, click Icon Size, select a different size in the Icon Size dialog box, and click OK.
7. To change the location of the icon bar, select an option in the Position drop-down list.
8. To see descriptions of icons when you move the pointer over them in the icon bar, turn on "Show icon descriptions."  
If this setting is off, you can still see the descriptions by right-clicking the icons.
9. Click OK.

## Creating a custom menu bar



You can base a custom menu bar on the default Approach menu bar, a default set of short menus, or any other menu bar you've already created. A custom menu bar appears only in Browse.

1. In Design, choose Customize Menus from the Tools menu.
2. Click New or select an existing menu bar and click Copy.
3. Type a name for the menu bar.
4. For the first menu in the menu bar, select a type in the Menu Type drop-down list and enter a name in the Menu Name text box.
5. For each item in the menu, select an action in the Item Action drop-down list and enter a name in the Item Name text box.  
For items after the first one, click Add Item to add a line.  
To remove an item, select the item by clicking in the cell to the left of it and click Delete Item. To move an item, select the item and drag it up or down. You can SHIFT-select more than one item to move.
6. For each additional menu, click Add Menu, specify a type and name, and define items.  
To remove a menu, select the menu by clicking in the cell to the left of it and click Delete Menu. To move a menu, select the menu and drag it up or down. You can SHIFT-select more than one menu to move.
7. Click OK.
8. Attach the menu bar to a view using the Basics panel of the view's InfoBox.

## Details: Creating a custom menu bar



### Copy vs. New

If you select a menu bar and click Copy, the Define Custom Menu Bar dialog box shows the menus and items for the menu bar. If you click New, the dialog box does not initially have any menu information.

### Menu bar names

The name of the menu bar appears in the list of menu bars in the Basics panel of the InfoBox for views. You use this list to attach a custom menu bar to a view.

### Menu types

This type	Displays
Standard	A list of commands
Menu + Files	A list of commands, followed by the filenames of the last four Approach files used
Window Menu	A list of commands, followed by the pathname of the current Approach file
Macro List	A list of macros
View List	A list of views

The type Context Menu in the Menu Type drop-down list is used by Approach for menus that appear only in certain environments or only with certain types of views. It is not an editable menu type for custom menu bars.

### Menu names

To underline a letter in a menu name, type an ampersand (&) right before the letter in the name; for example, &File underlines the letter F. You can open the menu in Browse by pressing ALT and the underlined letter.

### Menu items

The Item Action drop-down list shows all the commands you can use, the names of the main sections in the online Help, the names of all views and macros in the Approach file, a blank line, and a menu divider (with a line of hyphens). You can also type keyboard shortcuts for items along with their names.

To underline a letter in an item name, type an ampersand (&) right before the letter in the name; for example, Save &As underlines the letter A. You can choose the item in Browse by pressing ALT and the underlined letter for the menu and then pressing the underlined letter for the item.

## Editing or deleting a custom menu bar



Once you've created a custom menu bar, you can easily edit it or delete it. If you delete a menu bar that is attached to a view, Approach substitutes the default menu bar for the view.

1. In Design, choose Customize Menus from the Tools menu.
2. Select the name of the menu bar you want to edit or delete.
3. To redefine the menu bar, click Edit and change the menus or items in the Define Custom Menu Bar dialog box.
4. To remove the menu bar, click Delete.  
When an alert box appears, click OK to confirm that you want to delete the menu bar.
5. Click Done.

### See also

[Creating a custom menu bar](#)

## Setting display defaults

## Setting a default order for records

**Defining a password for a file**

## Setting dialing preferences



## **Setting database options for a dBASE or FoxPro file**

## Setting database options for a Paradox file

**Setting database options for all SQL tables**

## **Maintaining external indexes for a dBASE or FoxPro database**

## **Creating secondary indexes for a Paradox database**

## Setting general working preferences

## Customizing the SmartIcons

## Creating a custom menu bar



**Editing or deleting a custom menu bar**

## About form letters

A form letter is a view that displays a combination of the date, fields from a database, and text you type in any of several business and personal letter formats

### Creating a form letter



You use the Form Letter Assistant to give a new form letter a name and select a style and layout. You also select the fields that appear on the form letter, and add a return address, salutation, and closing if you want to use them.

### Typing text in a form letter



The text you add around fields is the standard part of the form letter that changes only when you edit it. Because a form letter is a single large text object, you can easily add text or edit text just as you would in any other text object.

### Adding a field to a form letter



After you create a form letter, you can add fields to any part of the letter. One way to add a field is to simply type the database and field names in this format: <<DATABASE.FIELD>>. The other way is to use the Insert Field dialog box.

### Moving or deleting a form letter field



You can easily move or remove fields from a form letter. Because the fields you see in a form letter are just placeholders, you can use standard text editing commands (Cut and Paste) to move them. You can also add or delete text and space to position the fields where you want them.

### See also

[Form letters](#)

## Creating a form letter



You use the Form Letter Assistant to give a new form letter a name, select a style and layout, select the fields that appear on the form letter, and add other letter elements if you want.

1. Choose Form Letter from the Create menu.
2. Type a name for the form letter in the Name text box.
3. Select a style for the form letter in the SmartMaster Style drop-down list.
4. Select a layout for the form letter in the SmartMaster Layout list.
5. Click the Return Address tab and type a return address if you want to use one.
6. Click the Inside Address tab, select an address layout in the Address Layout list, and add the fields for the address section of the letter.
7. Click the Salutation tab and specify the salutation.
8. Click the Close tab and type a closing.
9. Click Done.
10. If the Define Main Database dialog box appears, select the database you want to be the main database for the report and click OK.  
This dialog box appears if the form letter uses fields from more than one joined database. The first database you selected in the Fields panel is preselected as the main database.

## Typing text in a form letter



Because a form letter is a single large text object, you can easily add text or edit text just as you would in any other text object.

1. Double-click anywhere in the form letter to get the Text tool and click where you want to add text.
2. Type the text.

### See also

[Changing text attributes](#)

## Adding a field to a form letter



One way to add a field is to simply type the database and field names in this format: <<DATABASE.FIELD>>. The other way is to use the Insert Field dialog box.

1. In Design, click where you want the field to appear.
2. Click the Insert Field icon or choose Field from the Letter Insert submenu.



3. Click a field in the list and click OK to add it to the form letter.

## Moving or deleting a form letter field



You can easily move or remove fields from a form letter. Because the fields you see in a form letter are just placeholders, you can use standard text editing commands (Cut and Paste) to move them.

### To move a field in a form letter:

1. Select the field you want to move and choose Cut from the Edit menu.
2. Click where you want to place the field and choose Paste from the Edit menu.  
You cannot move a field in a form letter by dragging it.

### To delete a field in a form letter:



Select the field and choose Cut or press BACKSPACE or DELETE.

## Details: Creating a form letter



### Form letter name

A new form letter automatically has the name Form Letter and a number; you can edit this to any name you want up to 30 characters. The name you use will appear on the form letter's view tab.

### SmartMaster layout

Approach displays a sample form letter in the lower-right corner of the dialog box so that you can see what the layout looks like.

This SmartMaster layout	Displays
Block	The return address, date, inside address, salutation, closing, and body of the letter all in left-aligned blocks
Modified Block	The inside address, salutation, and body of the letter in left-aligned blocks (The return address, date, and closing appear on the right.)
Personal	The date, salutation, and body of the letter in left-aligned blocks (The closing appears on the right.)

### SmartMaster Address layout

The SmartMaster Address layout determines the number of lines in the inside address area. To add a field to a box in the Fields for the Address layout, select a box, select the field name in the Database Fields list, and click Add, or double-click the name. If you want to add a field from a different joined database, select the database in the drop-down list.

### Field names in a form letter

The form letter appears on your screen as a text object. The field names appear between angle brackets in this format: <<DATABASE.FIELD>>.

## About mailing labels

A mailing label is a view that displays database fields and text you type in a typical mailing address format.

### Creating a mailing label



Approach provides a Mailing Label Assistant to help you create either standard-sized or custom mailing labels. When you create a mailing label, you select the SmartMaster layout you want to use, the fields to be included on the mailing label, and the mailing label format. You can use one of the predefined Avery label formats or create custom label formats of your own.

### Creating a custom mailing label format



If your mailing labels do not match any of the more than 50 standard Avery label formats, you can create your own custom mailing label format -- with a label size, margins, gaps between labels, and other options -- and use it whenever you want.

### Moving or resizing mailing label fields



Approach automatically slides fields over or up to eliminate any empty space between them. This works both for fields that don't contain any data and for fields where the data doesn't fill all of the space allocated to it. You can adjust the space between fields manually by dragging a field to a different location. You can also resize a field by dragging one of its handles.

### Typing on a mailing label



In addition to the database fields that appear on a mailing label, you can also add text, such as a comma between address fields or a general message, to each label. Working in Design, you create text objects and type your text in them.

### Setting a field to slide



When you create mailing labels, Approach automatically slides fields up and to the left to remove any extra space. However, if you add a field to a mailing label after the labels have been created, you'll need to set the field to slide.

### Changing or deleting a mailing label layout



When you create mailing labels, you can either select an Avery label layout or create a customized layout of your own. Thereafter, you can change the size and arrangement of labels on a page using the InfoBox.

### Printing an envelope



You can use Approach to print names and addresses directly onto an envelope. Use a form to lay out the fields in the size and shape you need.

### See also

[Mailing labels](#)



## Creating a mailing label



When you create a mailing label, you select the SmartMaster layout you want to use, the fields to be included on the mailing label, and the mailing label format.

1. Choose Mailing Labels from the Create menu.
2. Type a name for the mailing labels in the Mailing Label Name box.
3. Select a layout in the SmartMaster Layout list.
4. If necessary, select the main database in the Database Fields drop-down list.
5. Move fields from the Database Fields list to the boxes in the Fields to Place on Label area.
6. Select a label code in the Label Type drop-down list.
7. To create your own custom labels, click the Options tab and set options in the Options panel.
8. Click OK.
9. If the Define Main Database dialog box appears, select the database you want to be the main database for the report and click OK.

This dialog box appears if the mailing label uses fields from more than one joined database. The first database you selected in the Fields panel is preselected as the main database.

### See also

[Creating a custom mailing label format](#)

## Creating a custom mailing label format



If your mailing labels do not match any of the more than 50 standard Avery label formats, you can create your own custom mailing label format and use it whenever you want.

1. Choose Mailing Labels from the Create menu, type a name for the mailing labels, select a SmartMaster layout, and assign fields to the Fields to Place on Label boxes.
2. Click the Options tab.
3. Type a name for the custom labels in the Custom Label text box.
4. Type new values for margin, label size, and gap dimensions.
5. Specify the number of labels on each page.
6. Select a printing order.
7. If you're using continuous feed labels, turn on Tractor feed.
8. Click Add to add a new custom label layout.
9. Click OK.
10. If the Define Main Database dialog box appears, select the database you want to be the main database for the report and click OK.

This dialog box appears if the report uses fields from more than one joined database. The first database you selected in the Fields panel is preselected as the main database.

### See also

[Creating a mailing label](#)

## Moving or resizing mailing label fields



You can adjust the space between fields manually by dragging a field to a different location. You can also resize a field by dragging one of its handles.

### To move a mailing label field:



Drag the field to the location you want.

You can also use the arrow keys to move a field. Make sure the whole field fits inside the label boundaries so that all of its contents will be printed.

### To resize a mailing label field:



Drag a field handle to the size you want.

## Typing on a mailing label



In addition to the database fields that appear on a mailing label, you can also add text, such as a comma between address fields or a general message, to each label.

1. In Design, create a text object on the label.
2. Type in the object.

### See also

[Entering text in a text object](#)

## Setting a field to slide



Approach automatically slides mailing label fields up and to the left to remove any extra space. If you add a field to a mailing label after the labels have been created, you'll need to set the field to slide.

1. In Design, select a field and open its InfoBox.



2. Click the Dimensions tab.
3. In the When Printing, Slide area, turn on Up and Left.

## Changing or deleting a mailing label layout



You can change the size and arrangement of labels on a page using the InfoBox.

### To change a mailing label layout:

1. In Design, click the Show Info icon to open the InfoBox for mailing labels.



2. Click Edit Label Settings in the Basics panel.
3. Select the label layout you want to change in the Custom Label drop-down list.
4. Change the settings for the label as necessary.
5. Click Add to add a new label definition, or click Change to apply your changes to the current label definition.
6. Click OK.

### To delete a mailing label layout:



Select the layout in the Custom Label drop-down list and click DELETE.

### See also

[Creating a custom mailing label format](#)

## Details: Creating a mailing label



### Mailing label name

A new mailing label automatically has the name Mailing Label and a number; you can edit this to any name you want up to 30 characters. The name you use will appear on the mailing label's view tab.

### SmartMaster layout

The SmartMaster layout determines how many lines of text appear on the labels. You can select from 3-line, 4-line, or 5-line formats.

### Moving fields

To add a field to a mailing label box, click the box to select it and then either double-click the field name or select the field name and click Add. The focus arrow automatically moves to the next box.

### Label Type list

The list includes more than 50 different label formats. If you've defined any custom label formats, they can also appear in the list.

## Details: Creating a custom mailing label format



Approach automatically displays the names of all custom label formats in the Mailing Label Assistant Label Code list.

### Margin, label size, and gap dimensions

This setting	Controls
Top Margin	The space between the top of the page and the first label
Left Margin	The space between the left edge of the page and the left column of labels
Height and Width	The size of the mailing label
Vert. Gap	The space between each label and the one below it
Horiz. Gap	The space between each label and the one beside it

As you change these values, the Sample Preview shows how the labels will appear on a page.

### Number of labels

The Across value sets the number of columns and the Down number sets the number of rows.

### Printing order

Left to right prints labels across the page. Top to bottom prints labels in columns.

### Tractor feed

Approach disables the Top Margin and Down settings for continuous feed labels. You may also want to adjust printer settings for the correct paper size.



## Printing an envelope



You can use Approach to print names and addresses directly onto an envelope. Use a form to lay out the fields in the size and shape you need.

1. Choose Form from the Create menu and use the Form Assistant to create a form for the envelope.
2. In Design, use the zoom pop-up menu in the status bar to change the zoom setting to 75 percent. This will let you see the whole envelope layout.
3. SHIFT-click all the fields on the form to select them.
4. Click the Show Info icon to open the InfoBox for the selected fields.



5. In the Lines and Colors panel of the InfoBox, turn off the borders and colors for the fields.
6. In the Label panel, turn off the field labels.
7. In the Dimensions panel, mark the fields to slide left and up when printing.
8. Choose Print Setup from the File menu.
9. Choose an Envelope setting from the Paper Size drop-down list, select Landscape in the Orientation area, and click OK.  
If no Envelope settings appear in the Paper Size drop-down list, the current printer does not support envelope printing.
10. In Browse, choose Print from the File menu and use the dialog box that appears to print the envelope.

### See also

[Creating a form](#)

[About editing fields](#)

[Printing a view](#)

## Creating a form letter

**Typing text in a form letter**

**Adding a field to a form letter**

## **Moving or deleting a form letter field**

## Creating a mailing label

## Creating a custom mailing label format

## **Moving or resizing mailing label fields**



**Typing on a mailing label**

## Setting a field to slide

## Changing the mailing label layout

## Printing an envelope

## About customizing the Design work area

Approach provides several ways to customize your Design work area.

### Showing the design grid



You can show a design grid behind objects in the work area. The grid appears as dotted lines. The design grid is only for working with objects in Design; it disappears when you go to Browse, and it does not print.

### Snapping objects to the grid



When you draw, move, or resize objects, you can have the objects "snap" to the increments on the design grid. The objects snap to the grid whether or not the grid is showing. This makes it easier to align objects precisely.

### Showing rulers



Approach can display rulers along the top and left sides of the Design work area. Rulers are only for working with objects in Design; they disappear when you go to Browse.

### Showing the Tools palette



You can show a floating Tools palette in Design, with SmartIcons for drawing objects. The Tools palette appears only in Design; it disappears when you go to Browse. You can drag the palette by its title bar to move it around in the work area.

### Showing data or field names



You can show either actual data or field names in field objects in Design. Work with data showing if you prefer to see how a view will look in Browse or when printed.

### Zooming in and out



As you work in Design, you can zoom in for a closer look at your view or zoom out for the big picture. The possible zoom settings are 25, 50, 75, 100, and 200 percent. Zoom settings affect only how a view appears on the screen and not how it is printed.

### See also

[Design](#)

## Showing the design grid



You can show a design grid behind objects in the work area. The grid appears as dotted lines. The design grid is only for working with objects in Design; it disappears when you go to Browse, and it does not print.



Click the Show Grid icon or choose Show Grid from the View menu. To hide the grid, click the icon or choose Show Grid again.



### See also

[Snapping objects to the grid](#)

## Snapping objects to the grid



When you draw, move, or resize objects, you can have the objects "snap" to the increments on the design grid. The objects snap to the grid whether or not the grid is showing.



Click the Snap to Grid icon or choose Snap to Grid from the View menu. To remove the snap, click the icon or choose Snap to Grid again.



### See also

[Showing the design grid](#)

[Setting display defaults](#)

## Showing rulers



Approach can display rulers along the top and left sides of the Design work area. Rulers are only for working with objects in Design; they disappear when you go to Browse.



Click the Show Ruler icon or choose Show Ruler from the View menu. To hide the rulers, click the icon or choose Show Ruler again.



### See also

[Setting display defaults](#)



## Details: Showing rulers



The Approach rulers are not drawn to scale on the screen, but 1 inch or 1 centimeter on a ruler is equal to 1 inch or 1 centimeter on a printed page.

As you move the pointer in the work area, lines in the rulers identify the pointers position. If an object is selected, the lines show the dimensions of the object.

If you have the insertion point in a text object (including the main part of a form letter), the top ruler also shows the left and right margins and any tab stops in the object.

## Showing the Tools palette



You can show a floating Tools palette in Design, with SmartIcons for drawing objects. The Tools palette appears only in Design; it disappears when you go to Browse.



Click the Show Tools icon or choose Show Drawing Tools from the View menu. To hide the palette, click the icon or choose Show Drawing Tools again.



## See also

[Tools palette](#)

## Showing data or field names



You can show either actual data or field names in field objects in Design. Work with data showing if you prefer to see how a view will look in Browse or when printed.



Click the Show Data icon or choose Show Data from the View menu.

This toggles back and forth between showing data and field names.



## Details: Showing data or field names



### Data

When you show data in field objects in Design, in a form or form letter the data you see is from the first record in the current sort order of the found set. In other types of views, you see data from the records at the beginning of the found set that can fit on one page.

### Field names

When you show field names in Design, the object borders also appear in the work area. If the Approach file has joined databases, the database names appear along with the field names; for example, EMPLOYEE.ADDRESS.

## Zooming in and out



As you work in Design, you can zoom in for a closer look at your view or zoom out for the big picture. The possible zoom settings are 25, 50, 75, 100, and 200 percent.

### To change to a particular zoom setting:



Click the percentage in the status bar to open the zoom pop-up menu and choose a setting.

### To zoom in or out one setting:



Click the Zoom In or Zoom Out icon, choose Zoom In or Zoom Out from the View menu, or press CONTROL and the up arrow or down arrow key.



### To return to 100 percent in one step:



Choose Actual Size from the View menu or 100% from the zoom pop-up menu in the status bar.

## About adding objects to the background of a view

You can add geometric objects, pictures, text objects, and macro buttons to the "background" of a view in Design. When you go to Browse, the objects will look exactly the same on every page of the view. (By contrast, data in fields changes from record to record in Browse.)

Approach gives a new object the pen width, fill color, text attributes, and other properties of the default named style for the view. You can change any of these properties after creating the object.

### Drawing a geometric object



You can draw straight lines, rectangles and squares, rounded rectangles and squares, and ellipses and circles on a view. You can use these shapes to emphasize, separate, or "tie together" data, or just to enhance the appearance of the view.

### Pasting a picture



You can paste a picture created in a graphics application, either directly from the picture file or through the Clipboard. For example, you may want to show a graphic of an icon the user needs to click or have a company logo appear on a view in every record.

### Entering text in a text object



You can include text in a view, such as a name for the view or instructions for entering data. You first draw a text object and then type in the object. If you need to edit the text, click where you want to add text or select text you want to replace or delete.

### Adding a macro button



You can add a button to a view and attach a macro to the button. In Browse, Approach will run the macro whenever you click, tab into, or tab out of the button (depending on how you set up the macro).

### See also

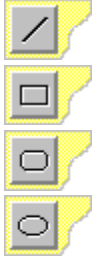
[About editing objects and text](#)

## Drawing a geometric object



You can draw straight lines, rectangles and squares, rounded rectangles and squares, and ellipses and circles on a view.

1. In Design, click the Line, Rectangle, Rounded Rectangle, or Ellipse icon, or choose Line, Rectangle, Rounded Rectangle, or Ellipse from the Create Drawing submenu.  
To draw more than one object of a type, double-click the icon. It will stay selected until you select a different icon.



2. Drag to draw the object.  
You can press SHIFT while dragging to constrain a line to 0, 45, or 90 degrees; a rectangle to a square; a rounded rectangle to a rounded square; or an ellipse to a circle.

## Pasting a picture



You can paste a picture created in a graphics application, either directly from the picture file or through the Clipboard. For example, you may want to have a company logo appear on a view in every record.

### To paste a picture from a file:

1. In Design, click where you want the upper-left corner of the picture.  
If you don't click anywhere, the picture will be pasted in the upper-left corner of the view.
2. Choose Paste from File from the Edit menu.
3. Select the file you want in the File Name list.  
If you don't know the file type, or want to display all the filenames, select All Files in the drop-down list.
4. Click OK.

### To paste a picture from the Clipboard:

1. Select the picture in the picture's source application.
2. Choose Copy from the Edit menu.
3. In Approach, go to Design and click where you want the upper-left corner of the picture.  
If you don't click anywhere, the picture will be pasted in the upper-left corner of the view.
4. Click the Paste icon or choose Paste from the Edit menu.



### See also

[About embedding OLE objects](#)

[About linking OLE objects from other applications](#)



## Details: Pasting a picture



These are the graphic file types you can paste in Approach:

Graphic file type	Filename extension
Encapsulated Postscript	.EPS
Graphics interchange	.GIF
Targa	.TGA
TIFF (Tagged Image File Format)	.TIF
Windows bitmap	.BMP
Windows metafile	.WMF
Windows Paintbrush	.PCX

## Entering text in a text object



You can include text in a view, such as a name for the view or instructions for entering data. You first draw a text object and then type in the object.

1. In Design, click the Text icon or choose Text from the Create Drawing submenu.  
To draw more than one text object, double-click the icon. It will stay selected until you select a different icon.



2. Click where you want the text to begin or drag to define an area for the text object.
3. Enter the text.  
To paste text from the Clipboard, click the Paste icon or choose Paste from the Edit menu. To insert a date or time, click the Date or Time icon or choose Date or Time from the Insert submenu in the context-sensitive view menu (such as Form or Report).



### See also

[Changing text attributes](#)

## Details: Entering text in a text object



### Typing text

The text you type appears at the insertion point. You don't need to press RETURN as you type; the text wraps automatically from line to line to fit in the text object.

### Inserting a date or time

If you insert a date or time, Approach will update it to the current date or time whenever you open, preview, or print the Approach file.

## Adding a macro button



You can add a button to a view and attach a macro to the button. In Browse, Approach will run the macro whenever you click, tab into, or tab out of the button (depending on how you set up the macro).

1. In Design, click the Macro Button icon or choose Macro Button from the Create Drawing submenu.  
To draw more than one macro button, double-click the icon. It will stay selected until you select a different icon.



2. Drag to draw the button.
3. In the Macros panel of the button's InfoBox, select one or more macros for the button in the drop-down lists in the Attached Macros area.
4. If you need to define a macro, click Define Macro and use the dialog box that appears.
5. Click the Basics tab in the InfoBox.
6. Type a label for the button in the Button Text box.
7. If you're working with data showing, turn on Show in Preview to see the macro button in Design.

### See also

[Defining a macro](#)

## About selecting in Design

Before making design changes to a view, you need to select the object or text you're editing.

The Pointer and Text icons are in the Tools palette.

### Selecting objects



A selected object has handles around it. You can drag one of these handles to resize the object. If you select more than one object, you can move, cut, copy, delete, and apply properties (such as a fill color) to the selected objects all at once.

### Selecting text



You can select particular text in a text object or the entire object. If you select an entire text object, any attribute you use applies to all text in the object. Text is highlighted when it is selected.

## Selecting objects in Design



A selected object has handles around it. You can drag one of these handles to resize the object.

### To select an object:



Click the Pointer icon and then click inside the object or on its border.



### To select more than one object:



Click the Pointer icon and then SHIFT-click the objects. Or drag diagonally to draw a selection rectangle around the objects.

### To select all the objects on a view:



Choose Select All from the Edit menu.

### To deselect an object from several selected objects:



Click the Pointer icon and then SHIFT-click the object.

### To cancel a selection:



Click in another part of the view.

## Selecting text in Design



You can select particular text in a text object or the entire object. If you select an entire text object, any attribute you use applies to all text in the object. Text is highlighted when it is selected.

### To select a range of text:



Click the Text icon or double-click the text object. Then drag through the text.

### To select a word:



Click the Text icon or double-click the text object. Then double-click the word.

### To select a text object:



Click the Pointer icon and then click the object.

### To enter an insertion point in text:



Click the Text icon and click in the text, or click the Pointer icon and double-click a selected text object.

### To cancel a selection:



Click in another part of the view.

## About editing objects and text

You can edit objects and text in several ways. You must be in Design to make these changes.

### Changing the basic properties of an object



An object's basic properties are its named style and whether the object is non-printing and appears in Preview.

### Changing line or color settings for an object



You can set a line width, color, and frame for an object's border, a fill color for an object's interior, and a color for a drop shadow.

### Resizing an object



You can change the size and shape of any existing design object, either with the mouse or with the InfoBox. You can also reshape ellipses into circles, circles into ellipses, rectangles into squares, and squares into rectangles without redrawing.

### Moving an object



You can move any object to another part of a view using the mouse, the keyboard, or the InfoBox.

### Sliding an object when you print



The data in a field can vary in length, so the distance between field data and an object to the right of it or below it can also vary from record to record. If you want an object to be a consistent distance from a field's data in every record, you can have Approach slide the object to the left or up to fill blank space.

### Changing text attributes



You can change the font, size, color, and text style of all text in a text object or of text in a selected range. You can also change the alignment and line spacing of all text in a text object.

### Cutting or copying an object or text



You can cut or copy an object or a range of text and paste it elsewhere on the view or on another view.

### Deleting an object or text



You can permanently delete any object or range of text from a view. If you delete a field, the field is not deleted from the database but only from the current view.

### Applying properties from another object



You can copy the line and color settings and text attributes from one object and apply them to another object with a click of the mouse.

### See also

[InfoBox](#)

[About selecting in Design](#)

[About editing views](#)

[Attaching a macro to a button or object](#)



## Changing the basic properties of an object



An object's basic properties are its named style and whether the object is non-printing and appears in Preview.

1. Select the object in Design.
2. Open the InfoBox.



3. Click the Basics tab.
4. Set the options in the Basics panel.  
See the Details topic for options.

## Details: Changing the basic properties of an object



### To

Make an object non-printing

Show a non-printing object in Preview

Apply a named style with line, color, and text properties already defined

### Do this

Turn on Non-printing.

Turn on Show in Preview. (This is available only if Non-printing is on.)

Select a style in the Named Style drop-down list.

## Changing line or color settings for an object



You can set a line width, color, and frame for an object's border, a fill color for an object's interior, and a color for a drop shadow.

1. Select the object in Design.
2. Open the InfoBox.



3. Click the Lines and Colors tab.
4. Set the options in the Lines and Colors panel.  
See the Details topic for options.

## Details: Changing line or color settings for an object



To	Do this
Change the width of a line or of the border of another object	Select a width in the Border Width drop-down list.
Change the color of a line or of the border of another object	Select a color in the Border Color drop-down palette. Select T for transparent.
Change the fill color of the interior of an object	Select a color in the Fill Color drop-down palette. Select T for transparent. (This is not available for lines.)
Give an object a drop shadow	Select a color in the Shadow Color drop-down palette. Select T for no shadow.
Give an object a raised or indented frame	Select a frame style in the Frame drop-down list.

## Resizing an object



You can change the size and shape of any existing design object, either with the mouse or with the InfoBox.

### To resize an object using the mouse:



In Design, select the object and drag one of its handles.

You can press SHIFT while dragging to resize a rectangle, rounded rectangle, or ellipse to the shape of a square, rounded square, or circle.

### To resize an object using the InfoBox:

1. Select the object in Design.
2. Open the InfoBox.



3. Click the Dimensions tab.
4. Type values in the Width and Height text boxes.

### See also

[Moving an object](#)

## Moving an object



You can move any object to another part of a view using the mouse, the keyboard, or the InfoBox.

### To move an object using the mouse:



In Design, select the object and drag it by the border.

### To "nudge" an object using the keyboard:



In Design, select the object and press an arrow key.

At the 100-percent zoom setting, the object moves 1 pixel each time you press the key. (Nudging an object takes the object off the snap grid.)

### To move an object using the InfoBox:

1. Select the object in Design.
2. Open the InfoBox.



3. Click the Dimensions tab.
4. Type values in the Top and Left text boxes.

### See also

[Resizing an object](#)

## Sliding an object when you print



If you want an object to be a consistent distance from a field's data in every record, you can have Approach slide the object to the left or up to fill blank space.

1. Select the object in Design.
2. Open the InfoBox.



3. Click the Dimensions tab.
4. Turn on Left or Up in the When Printing, Slide area.

### See also

[Sliding or resizing a field when you print](#)

## Details: Sliding an object when you print



For sliding to work, you must have Reduce on (in the Dimensions panel of the InfoBox) for the field with the variable data. Approach resizes the field so that it is just large enough for the data in it, and then it slides the object to fill the space left by the reduced boundaries.

For example, if you have a memo field with a variable amount of data in it and a line beneath the memo field, you can slide the line up to be just below the data in every record. (The memo field must have Reduce on.)

Approach slides an object when you preview or print, and in Design if you're showing data.



## Changing text attributes



You can change the font, size, color, and text style of all text in a text object or of text in a selected range. You can also change the alignment and line spacing of all text in a text object.

1. Select the text or text object in Design.
2. Open the InfoBox.



3. Click the Text tab.
4. Set the options in the Text panel.  
See the Details topic for options.

## Details: Changing text attributes



### To

Change the font of text

Apply boldface, italics, underlining, or strikethrough to text

Change the font size of text

Apply a color to text

Change line spacing to single space, one and a half space, or double space

Change alignment to left, center, right, or justified

### Do this

Select a font in the Font Name drop-down list.

Select one or more styles in the Style/Effect list.

Select a size in the Size drop-down list.

Select a color in the Text Color drop-down list.

Select an option in the Line Spacing area.

Select an option in the Alignment area.

## Cutting or copying an object or text



You can cut or copy an object or a range of text and paste it elsewhere on the view or on another view.

1. Select the object or text in Design.
2. Click the Cut or Copy icon or choose Cut or Copy from the Edit menu.



3. Click where you want to paste the selection.
4. Click the Paste icon or choose Paste from the Edit menu.



### See also

[Deleting an object or text](#)

## Details: Cutting or copying an object or text



### Cut and Copy commands

The Cut command 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're pasting an object, you can click where you want the object to go. If you don't specify a location, the object will be pasted on top of the original object. If you paste into another view, the object will be pasted at the same location as in the original view.

If you're pasting text, you must click in a text object. The text will be pasted at the insertion point.

## Deleting an object or text



You can permanently delete any object or range of text from a view. If you delete a field, the field is not deleted from the database but only from the current view.

1. Select the object or text in Design.
2. Choose Clear from the Edit menu or press DELETE or BACKSPACE.

### See also

[Cutting or copying an object or text](#)

## Applying properties from another object



You can copy the line and color settings and text attributes from one object and apply them to another object with a click of the mouse.

1. In Design, select the object with the properties you want to use.
2. Click the Fast Format icon or choose Fast Format from the context-sensitive view menu.



3. Click the objects you want to apply properties to.  
Each object you click takes the line and color settings and text attributes of the selected object.
4. When you're finished, click the Fast Format icon, choose Fast Format, or press ESC.

## About working with named styles

You can apply a named style to any object and define a style to be the default for new views. A named style can include these properties:



Line and color settings for all objects, and border and baseline settings for fields



Text attributes for field data and for text in text objects



Text attributes for field labels



Picture settings such as cropping and shrinking for PicturePlus fields



Width and color settings for the background of a view

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.

When you create a view using an Assistant, you can apply your default style to the view or apply one of the SmartMaster styles. Approach uses the style properties for the background of the view and for all objects you add to the view. You can change the style of a view or object using the Named Style drop-down list in the Basics panel of the InfoBox.

When you apply a named style to an object, only the appropriate properties apply. For example, if you apply a style to a rectangle, only the width, color, and frame settings apply even though the style may also have text attributes and picture settings.

### Defining and saving a named style



When you define a named style, you can either create a new style from scratch or make a copy of an existing style and then modify it.

### Editing or deleting a named style



If you edit a style, in general any existing objects that use the style are updated automatically. But if you have changed any properties for an object using its InfoBox, those particular properties are not updated for that object.

Deleting a style does not affect the properties of any existing objects that use the style. You can delete styles you've created but not the predefined styles that come with Approach.

### See also

[Setting display defaults](#)

## Defining and saving a named style



When you define a named style, you can either create a new style from scratch or make a copy of an existing style and then modify it.

1. Choose Named Styles from the Tools menu.
2. In the Named Styles dialog box, click New or select an existing style and click Copy.
3. In the Define Style dialog box, type a name for the new style in the Style Name text box.
4. If you want to base the style on an existing one, select the existing style in the Based On drop-down list.
5. To define text attributes for data in fields and for text in text objects, click the Font tab and set options in the Font panel.
6. To define properties for widths, colors, frames, and field borders, click Lines & Colors and set options in the Lines and Colors panel.
7. To define text attributes for field labels, click the Label tab and set options in the Label panel.
8. To define properties for PicturePlus fields, click the Picture tab and set options in the Picture panel.
9. To define properties for the background of views, click the Background tab and set options in the Background panel.
10. Click OK.
11. To apply the new style to the current selection, click Apply.  
This is available only if at least one object is selected in a view.
12. Click Done.

### See also

[Changing text attributes](#)

[Changing line or color settings for an object](#)

[Changing display options for a PicturePlus field](#)

[Changing line or color settings for a view](#)



## Details: Defining and saving a named style



### New vs. Copy

If you click New, the Define Style dialog box shows properties in their default neutral settings.

If you select a style and click Copy, the selected styles properties appear in the panels of the dialog box. The Style Name text box shows the name of the copied style, plus a number (for example, Corporate2). You can edit this name and the settings in the panels.

### Based On drop-down list

If you select an existing style in the Based On drop-down list, the base styles properties appear in the panels of the dialog box. You can edit any of these settings.

The new style maintains a relationship with the base style. For any property you keep from the base style, if you later change that property in the base style, the change is also made in the new style.

## Editing or deleting a named style



You can edit any named style, and you can delete the named styles you've created.

1. Choose Named Styles from the Tools menu.
2. Select the name of the style you want to edit or delete.  
You can delete only styles you've created.
3. To redefine the style, click Edit and change the settings in the Define Style dialog box.  
Objects that use the style are updated automatically, except for any properties you've changed in their InfoBox.
4. To remove the style, click Delete and click OK in the alert box.  
This does not affect the properties of existing objects that use the style.
5. Click Done.

### See also

[Changing text attributes](#)

[Changing line or color settings for an object](#)

[Changing display options for a PicturePlus field](#)

[Changing line or color settings for a view](#)

## About working with more than one object at a time

Approach makes it easy to quickly change more than one object at a time. After you select the objects you want to change, you can cut, copy, paste, or move the objects or change their properties just as you can with an individual object.

A few commands work only with multiple objects.

### Grouping and ungrouping objects



You can combine two or more objects so that they act as a single object. When you select a grouped object, one set of handles appears around the entire group, and the object name in the InfoBox is Grouped Object.

You cannot edit text in a text object that is part of a group. You must first ungroup the text object from the other objects.

### Changing the stacking order of an object



Each time you create a new object, it is placed "in front of" any other objects already on the view. You can change this stacking order, moving any object closer to the front or farther to the back.

### Aligning and distributing objects



Approach lets you align objects along their tops, bottoms, sides, or centers. The objects can align to the position of one object or to the nearest point on the grid.

You can also distribute objects vertically or horizontally. This places an equal amount of space between the objects.

### See also

[About editing objects and text](#)

## Grouping and ungrouping objects



You can combine two or more objects so that they act as a single object. One set of handles appears around the entire group, and the object name in the InfoBox is Grouped Object.

### To group objects:

1. Select the objects in Design.
2. Click the Group icon or choose Group from the Object menu.



### To ungroup a grouped object:

1. Select the object in Design.
2. Click the Ungroup icon or choose Ungroup from the Object menu.



### See also

[Selecting objects in Design](#)

## Changing the stacking order of an object



Each time you create a new object, it is placed "in front of" any other objects already on the view. You can change this stacking order, moving any object closer to the front or farther to the back.

1. Select the object in Design.
2. Click the Bring to Front, Send to Back, Bring Forward, or Send Backward icon or choose one of these commands from the Object Arrange submenu.



### See also

[Selecting objects in Design](#)

## Aligning and distributing objects



Approach lets you align objects along their tops, bottoms, sides, or centers. You can also distribute objects vertically or horizontally to place an equal amount of space between them.

1. Select two or more objects in Design.
2. Click the Align icon or choose Align from the Object menu.



3. Select whether to align the objects to each other or to the grid in the Align Objects area.
4. Select the alignment and distribution setting you want in the Vertical Alignment and Horizontal Alignment areas.
5. Click OK.

### See also

[Selecting objects in Design](#)

## About editing views

In addition to editing individual objects on a view, you can make changes that affect the view as a whole. You must be in Design to make these changes.

### Changing the basic properties of a view



A view's basic properties are its name, the main database if the view uses joined data, the named style for its background, the set of menus, and whether the view appears in Browse.

A report does not have named styles in its basic properties. Instead, the panels in the report each have a named style.

### Adding a date or time to a view



You can put a date or time on the background of a view. Approach will update it to the current date or time whenever you open, preview, or print the Approach file.

When you first insert a date or time, Approach places it in a new text object in the upper-left corner of the view. You can move, resize, and otherwise edit the text object.

### Resizing page margins



When you create a new view, Approach automatically sets page margins appropriate for the current printer. You can change any of the margins to make the printable area larger or smaller, up to the maximum area allowed by the printer.

### Changing line or color settings for a view



In a form, form letter, or mailing label, you can change the color or width of the page margins and the fill color of the page background. Objects such as fields and rectangles on the view are not affected by the view's background color (unless the objects are transparent).

In a report, you change the line and color settings in InfoBoxes for the individual panels.

### Duplicating a view



If you want to create a form, report, form letter, mailing label, worksheet, crosstab, or chart that is similar to one you already have, you can make a duplicate and then modify it. Approach names a duplicate view Form 2, Report 2, and so on; you can rename the view in the Basics panel of its InfoBox.

### Deleting a view



You can delete a form, report, form letter, mailing label, worksheet, crosstab, or chart.

### See also

[InfoBox](#)

[About editing objects and text](#)

[Attaching a macro to a view](#)

## Changing the basic properties of a view



A view's basic properties are its name, the main database if the view uses joined data, the named style for its background, the set of menus, and whether the view appears in Browse.

1. Click in the background of the view in Design.
2. Open the InfoBox.



3. Click the Basics tab.
4. Set the options in the Basics panel.  
See the Details topic for options.



## Details: Changing the basic properties of a view



### Options in the Basics panel

To	Do this
Change the name of a view	Edit the name in the View Name text box.
Change to a different main database	Select a database in the Main Database drop-down list.
Apply a named style with line and color properties already defined	Select a style in the Named Style drop-down list. (This is not available for reports.)
Change the menus for a view	Select a set of menus in the Attached Menu Bar drop-down list.
Hide a view in Browse	Turn on "Hide view."
Hide a views page margins in Browse	Turn on "Hide page margins." (This is available for forms and form letters, and only if "Hide view" is off.)

### Another way to rename a view

You can also rename a view in Design by double-clicking a view tab and then typing in the tab.

### Menu bars for a view

If you attach a set of menus to a view, the menus are available whenever you go to the view in Browse. You can attach the default menus, the Approach short menus, or any custom menus of your own.

The short menus are a subset of the default menus; they do not include commands for modifying the file. For example, the short menus do not have the Create Form and Define Macro commands.

For information about setting up custom menus, see [Customizing menus](#).

## Adding a date or time to a view



You can put a date or time on the background of a view. Approach will update it to the current date or time whenever you open, preview, or print the Approach file.

1. In Design, click the Date or Time icon or choose Date or Time from the Insert submenu in the context-sensitive menu.



2. Drag the date or time to move it where you want it on the view.  
Approach initially places the date or time in the upper-left corner of the view.

### See also

[Adding a header or footer](#)

## Resizing page margins



When you create a new view, Approach automatically sets page margins appropriate for the current printer. You can change any of the margins, up to the maximum area allowed by the printer.

1. In Design, click the border of the view.  
The border is highlighted when you click it.
2. Drag a border to resize the margin.

## Changing line or color settings for a view



In a form, form letter, or mailing label, you can change the color or width of the page margins and the fill color of the page background.

1. Click in the background of the form, form letter, or mailing label in Design.
2. Open the InfoBox.



3. Click the Lines and Colors tab.
4. Set the options in the Lines and Colors panel.  
See the Details topic for options.

### See also

[Changing line or color settings for a report panel](#)

## Details: Changing line or color settings for a view



### To

Change the width of the page margins of a view

Change the color of the page margins of a view

Change the fill color of the background of a view

### Do this

Select a width in the Border Width drop-down list.

Select a color in the Border Color drop-down palette.  
Select T for transparent.

Select a color in the Fill Color drop-down palette.  
Select T for transparent.

## Duplicating a view



If you want to create a form, report, form letter, mailing label, worksheet, crosstab, or chart that is similar to one you already have, you can make a duplicate and then modify it.

1. In Design, change to the view you want to duplicate.
2. Choose the Duplicate command from the Edit menu.  
The name of the command changes depending on the type of the current view; for example, Duplicate Form.

## Deleting a view



You can delete a form, report, form letter, mailing label, worksheet, crosstab, or chart.

1. In Design, change to the view you want to delete.
2. Choose the Delete command from the Edit menu.  
The name of the command changes depending on the type of the current view; for example, Delete Form.
3. Click Yes in the alert box to delete the view.

Showing a design grid



**Snapping objects to the grid**

**Showing rulers**

**Showing the Tools palette**

**Showing data or field names**

## Zooming in and out

**Drawing a geometric object**

**Pasting a picture**

**Entering text in a text object**



## Adding a macro button

## Selecting objects in Design

## Selecting text in Design

**Changing the basic properties of an object**

**Changing line or color settings for an object**

## Resizing an object

## Moving an object

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## Changing text attributes

**Cutting or copying an object or text**

**Deleting an object or text**

**Applying properties from another object**

## Defining and saving a named style

## **Editing or deleting a named style**

## **Grouping and ungrouping objects**

**Changing the stacking order of an object**



## **Aligning and distributing objects**

## **Changing the basic properties of a view**

**Adding a date or time to a view**

## Resizing page margins

**Changing line or color settings for a view**

## Duplicating a view

## Deleting a view

## About forms and repeating panels

A form is a view that shows one record at a time. If an Approach file uses data from joined databases, you can put a repeating panel on a form to show data from detail records related to the form's main record.

### Creating a form



The Approach Form Assistant guides you as you create new forms. You use the Assistant to apply styles and layouts called SmartMasters to a new form and to specify which fields go on the form. If the form has a repeating panel, you also use the Assistant to add fields for the panel.

### Adding a repeating panel to an existing form



In addition to creating a repeating panel with the Form Assistant, you can add a panel to a form after creating the form. When you add a panel to an existing form, you can specify the number of lines in the panel, an alternating background color for lines, and a sort order for records in the panel.

### See also

[Forms](#)

[Repeating panels](#)

[About modifying repeating panels](#)



## Creating a form



You use the Form Assistant to apply SmartMasters to a new form and to specify which fields go on the form. If the form has a repeating panel, you also use the Assistant to add fields for the panel.

1. Choose Form from the Create menu.
2. In the Form Assistant, type a name for the form in the Name text box.
3. Select a style for the form in the SmartMaster Style drop-down list.
4. Select a field layout for the form in the SmartMaster Layout list.
5. Click the Fields tab and add the fields you want to show in the form.
6. If you're creating a form with a repeating panel, click the Panel tab and add the fields you want for the panel.
7. Click Done.
8. If the Define Main Database dialog box appears, select the database you want to be the main database for the report and click OK.

This dialog box appears if the form uses fields from more than one joined database. The first database you selected in the Fields panel is preselected as the main database.

## Details: Creating a form



### Form name

A new form automatically has the name Form and a number; you can edit this to any name you want up to 30 characters. The name you use will appear at the top of the form and on the form's view tab.

### Styles

The styles set properties such as background color for the form and text attributes for data and field labels.

You can select your default style or one of the predefined SmartMaster styles. The default style is specified in the Display panel of the Preferences dialog box.

### Field layouts

A new form can have a standard or columnar layout, or it can be blank. If the Approach file uses joined databases, a form can also be standard with a repeating panel.

### Adding fields to a form or repeating panel

To add a field to the Fields to Place on View or Fields to Place in Panel list, select the field name in the Database Fields list and click Add, or double-click the name. If you want to add a field from a different joined database, select the database in the drop-down list. Approach will display the fields in the form or panel in the order they appear in the Assistant.

To remove a field from the Fields to Place on View or Fields to Place in Panel list, select the field name in the list and click Remove, or double-click the name.

## Adding a repeating panel to an existing form



When you add a repeating panel to an existing form, you can specify the number of lines in the panel, an alternating background color for lines, and a sort order for records in the panel.

1. In Design, click where you want to place the upper-left corner of the repeating panel on the form.
2. Choose Repeating Panel from the Create menu.
3. Add the fields you want in the repeating panel to the Fields to Place in Panel list.
4. To use a background color in every other line of the panel, turn on "Alternate color with" and select a color in the drop-down palette.
5. To set a sort order for the records in the panel, turn on "Sort the values in the panel," click Define Sort, specify the order in the dialog box that appears, and click OK.
6. Type the number of lines for the panel in the Number of Lines text box.
7. Click OK.

### See also

[About modifying repeating panels](#)

[About sorting records by data in fields](#)

## Details: Adding a repeating panel to an existing form



### Adding fields to a repeating panel

To add a field to the Fields to Place in Panel list, select the field name in the Database Fields list and click Add, or double-click the name. If you want to add a field from a different joined database, select the database in the drop-down list. Approach will display the fields in the panel in the order they appear in the Assistant.

To remove a field from the Fields to Place in Panel list, select the field name in the list and click Remove, or double-click the name.

The first database you add a field from will be the default main database for the repeating panel. The panel cannot have the same main database as the form.

### Number of lines

Type the number of matching records you want displayed at one time, up to 30 lines. You don't need to show as many lines as you have records; Approach adds a scroll bar if necessary.

### Alternating colors

Alternating colors can make it easier to distinguish lines in a repeating panel. The lines without the color are transparent and appear in the background color of the form.

## About modifying a repeating panel

You can change the appearance of repeating panels in several ways. You must be in Design to modify a repeating panel.

In addition to the changes described in this section, you can move, cut, copy, paste, and delete both panels and the fields in them as you can other types of design objects. For more information, see [About editing objects and text](#).

### Selecting a repeating panel



Before modifying a repeating panel, you sometimes need to select the panel in Design. A repeating panel has a dark border around it when it is selected.

### Adding labels to a repeating panel



When you create a repeating panel, the new panel does not have any field labels. You may want to add labels to make it easier to enter and identify data in the panel in Browse.

### Changing the basic properties of a repeating panel



The basic properties of a repeating panel are its main database, a sort order for records, the named style, and the number of lines that display.

### Changing line or color settings for a repeating panel



You can set a line width and color for the borders between lines and around the outside of a repeating panel, and a fill color for the background of the interior. You can also apply a three-dimensional frame to each line and a drop shadow to the entire panel. The sets of colors include several patterns for each color.

### Resizing a repeating panel



You can resize a repeating panel horizontally or vertically. When resizing a panel, you select and drag only the top line of the panel. (The line has a border around it when selected.) Dragging the entire panel moves the panel rather than resizing it.

### Adding a field to a repeating panel



You can add more fields to a repeating panel. A new field must be entirely inside the borders of the panel and in the top line along with the other fields.

A new field takes the field style properties associated with the repeating panel. For example, a field is usually transparent, with its label and borders hidden.

### Rearranging fields in a repeating panel



A repeating panel is initially laid out with the fields for each record all in a row. You can rearrange the fields to stack or stagger them any way you want inside their line in the panel. This sometimes makes each line look like a small record.

### Summarizing data for records in a repeating panel



You can add a calculated field to a form to show a total, average, count, or other summary on data in a repeating panel. A summary on data in a repeating panel is calculated in Browse and Preview, and in Design if you're showing data.

## Selecting a repeating panel



Before modifying a repeating panel, you sometimes need to select the panel in Design. A repeating panel has a dark border around it when it is selected.



In Design, click in any part of the panel except for the top line.

If you click in the top line, you select a field rather than the entire panel.

## Adding labels to a repeating panel



When you create a repeating panel, the new panel does not have any field labels. You may want to add labels to make it easier to enter and identify data in the panel in Browse.

1. In Design, use the Text tool to type the labels above the fields and outside the borders of the panel.



2. Select the labels and align them along the bottoms.



3. Group the labels.



### See also

[About working with more than one object at a time](#)

## Changing the basic properties of a repeating panel



The basic properties of a repeating panel are its main database, a sort order for records, the named style, and the number of lines that display.

1. Select the repeating panel in Design.
2. Open the InfoBox.



3. Click the Basics tab.
4. Set the options in the Basics panel.  
See the Details topic for options.



## Details: Changing the basic properties of a repeating panel



### To

Change to a different main database

Apply a sort order to records in a panel

Apply a named style with line and color properties already defined

Change the number of visible lines in a panel

### Do this

Select a database in the Main Database drop-down list.

Turn on "Sort panel values," click Define Sort, and specify the sort order in the dialog box.

Select a style in the Named Style drop-down list.

Edit the number in the Number of Lines text box.

## Changing line or color settings for a repeating panel



You can set a line width and color for the borders in a repeating panel, and a fill color for the interior. You can also apply a three-dimensional frame to each line and a drop shadow to the panel.

1. Select the repeating panel in Design.
2. Open the InfoBox.



3. Click the Lines and Colors tab.
4. Set the options in the Lines and Colors panel.  
See the Details topic for options.

## Details: Changing line or color settings for a repeating panel



### To

Change the width of borders in a panel

Change the color of borders in a panel

Change the fill color of the interior of a panel

Give a panel a drop shadow

Give the lines in a panel a raised or indented frame

Show outside borders around a panel

Show the current fill color in every other line of a panel

### Do this

Select a width in the Border Width drop-down list.

Select a color in the Border Color drop-down palette. Select T for transparent.

Select a color in the Fill Color drop-down palette. Select T for transparent.

Select a color in the Shadow Color drop-down palette. Select T for transparent.

Select a frame style in the Frame drop-down list.

Turn on options in the Borders area.

Turn on "Alternating color."

## Resizing a repeating panel



You can resize a repeating panel horizontally or vertically. When resizing a panel, you select and drag only the top line of the panel.

1. In Design, select the panel by clicking in any part of it except for the top line.
2. Drag the gray border of the top line in the panel.  
If you drag the black border of the main part of the panel rather than the gray line border, you move the panel rather than resizing it.

## Details: Resizing a repeating panel



### Horizontal resizing

Resizing a repeating panel horizontally changes the width of only the panel and not the fields in it. If you're making a panel more narrow, be sure that the fields are still inside the borders of the panel.

### Vertical resizing

Resizing a panel vertically changes the height of lines in the panel. This does not change the number of lines and does not affect the size of the fields or the data in them. If you want to change the number of lines, use the Basics panel in the InfoBox.

## Adding a field to a repeating panel



You can add more fields to a repeating panel. A new field must be entirely inside the borders of the panel and in the top line along with the other fields.

1. In Design, click the Add Field icon or choose Add Field from the Panel or Form menu.



2. Drag the database field you want from the Add Field dialog box to the repeating panel.
3. If necessary, move and resize the new field or the repeating panel.  
The field should fit inside the borders of the repeating panel and in the top row of the panel.

### See also

[Moving an object](#)

[Resizing an object](#)

[Resizing a repeating panel](#)

## Rearranging fields in a repeating panel



A repeating panel is initially laid out with the fields for each record all in a row. You can rearrange the fields to stack or stagger them any way you want inside their line in the panel.

1. In Design, resize the panel to make the lines tall enough and wide enough to accommodate the fields.
2. If you want field labels to appear inside the lines of the panel, use the Label panel in the InfoBox to show the label for each field.
3. Drag the fields to the layout you want.

### See also

[Resizing a repeating panel](#)

## Summarizing data for records in a repeating panel



You can add a calculated field to a form to show a summary on data in a repeating panel. A summary for a repeating panel is calculated in Browse and Preview, and in Design if you're showing data.

1. Define a calculated field with a summary function for the repeating panel.
2. Add the calculated field to the form with the repeating panel.  
Place the field outside the panel, on the form.

### See also

[Setting up a formula for a calculated field](#)

[Adding a field as a field box](#)



## Details: Summarizing data for records in a repeating panel



### Define Formula panel

In the Define Formula panel of the Field Definition dialog box, enter a summary function and use a field from the repeating panel as the parameter; for example, SSum(Invoice\_Number).

### Define Summary panel

In the Define Summary panel, select "Summary of all records in *database*," where *database* is the name of the main database for the panel; for example, "Summary of all records in CUSTOMER."

## Creating a form

## **Adding a repeating panel to an existing form**

## Adding labels to a repeating panel

**Selecting a repeating panel**

## Changing the basic properties of a repeating panel

**Changing line or color settings for a repeating panel**

## Resizing a repeating panel



## **Adding a field to a repeating panel**

## Rearranging fields in a repeating panel

**Summarizing data for records in a repeating panel**

## About reports

A report is a view that shows data from multiple records on a single page. Reports can display field data, summary information, or a combination of the two. You can include fields from single database or from joined databases.

### Creating a standard or columnar report



A standard or columnar report contains database field information only. When you create one, you give it a name and select a style and layout. You also select the fields that appear on the report.

### Creating a report with summaries



A report with summaries can contain a combination of field data and summaries. When you create one, you select the fields that appear on the report and define the summaries.

### Creating a repeating panel report



A repeating panel report is the report equivalent to a form with a repeating panel. It contains a combination of database fields from joined databases. When you create this type of report, you select the databases and fields that appear on the report and define the summaries.

### See also

[Reports](#)

## About modifying reports

You can modify reports in a number of ways to change their appearance and their arrangement of data.

### Selecting a report panel



A report can be composed of several different panels, including a body panel, a header, a footer, and one or more summary panels.

### Changing line or color settings for a report panel



Each type of report panel has its own InfoBox that you can use for changing the appearance of the panel. The settings in the InfoBox apply to all panels of a type.

### Changing the alignment or position of a summary panel



You can align a summary panel to the main body of a report and position the panel above or below its group of records.

### Adding a header or footer



Approach automatically adds a header and footer when you create a report. If you're working with a report that doesn't already contain a header or footer, you can easily add one.

### Adding a date, time, or page number to a report...



You can add the date, time, or a page number to the header or footer of a report. Approach inserts the placeholder <<DATE>>, <<TIME>>, or <<#>>.

### Adding a title page



A title page is a special first page that you can add to a report. It contains all of the information that appears on the rest of the report, as well as a unique header and footer. In Preview, the window's title bar displays "Title Page."

### Changing the number of columns in a report



Approach is preset to place fields in a single column that runs the length on each page. If it's appropriate for your report, you can increase the number of columns and reduce the number of pages.

### Keeping records together



If your data spans more than one page in a standard report, you might want to keep records together and prevent them from starting on one page and ending on another. You might also want to keep the fields in a record together in one column if you have multiple columns on a page.

### Working with whole report columns



Approach lets you work in Design with whole report columns or with individual fields. When you work with whole columns, you can move or resize both the column and its header at the same time. Otherwise, the column fields and the column header behave like separate objects that you can resize or move independently.

## Creating a standard or columnar report



A standard or columnar report contains field data only. When you create one, you give it a name and select a style and layout. You also select the fields that appear on the report.

1. Choose Report from the Create menu.
2. Type a name for the report in the Name text box.
3. Select a style for the report in the SmartMaster Style drop-down list.
4. Select Standard or Columnar in the SmartMaster Layout list.  
See the Details topic for descriptions of the layouts.
5. Click the Fields tab and add the fields you want to show in the report.
6. Click Done.
7. If the Define Main Database dialog box appears, select the database you want to be the main database for the report and click OK.

This dialog box appears if the report uses fields from more than one joined database. The first database you selected in the Fields panel is preselected as the main database.

## Creating a report with summaries



A report with summaries can contain a combination of field data and summaries. When you create one, you select the fields that appear on the report and define the summaries.

1. Choose Report from the Create menu.
2. Type a name for the report in the Name text box.
3. Select a style for the report in the SmartMaster Style drop-down list.
4. Select one of the summary report layouts in the SmartMaster Layout list.  
See the Details topic for descriptions of the layouts.
5. Click the Fields tab and add the fields you want to show in the report.
6. Click the Summary tab and define the summary.
7. Click Done.
8. If the Define Main Database dialog box appears, select the database you want to be the main database for the report and click OK.

This dialog box appears if the report uses fields from more than one joined database. The first database you selected in the Fields panel is preselected as the main database.

### See also

[About PowerClick reporting](#)

## Creating a repeating panel report



A repeating panel report is the report equivalent to a form with a repeating panel. It contains a combination of database fields from joined databases. When you create this type of report, you select the databases and fields that appear on the report and define the summaries.

1. Choose Report from the Create menu.
2. Type a name for the report in the Name text box.
3. Select a style for the report in the SmartMaster Style drop-down list.
4. Select Repeating Panel Report in the SmartMaster Layout list.  
See the Details topic for descriptions of the layouts.
5. Click the Fields tab, select a database, and add the field you want to show in the main section of the report (the "one" side of the "one-to-many" relationship).
6. Click the Repeating Fields tab, select a database, and add the fields you want for the repeating section of the report (the "many" side of a "one-to-many" relationship).
7. Click the Trailing Summary tab and define the summary.
8. Click Done.



## Details: Creating a report



### Report name

A new report automatically has the name Report and a number; you can edit this to any name you want up to 30 characters. The name you use will appear on the report's view tab and as a default on printed reports.

### Styles

A style gives a report a set of InfoBox properties, such as background color, text attributes, and specifications for field borders and frames. You can apply a default style defined in Preferences or use one of the predefined SmartMaster styles.

### SmartMaster layouts

This layout	Displays
Standard	Database fields you select in one continuous column, with each field in its own row
Columnar	Database fields you select in columns, with each record in its own row
Leading Grouped Summary	A columnar report sorted and summarized by the field you select with the sort field in a leading summary panel and the summary in a trailing summary panel
Trailing Grouped Summary	A columnar report sorted and summarized by the field you select with the sort field and the summary in a trailing summary panel
Columnar with Grand Summary	A columnar report with a summary at the end
Summary Only	Summaries of records grouped by the field you select, with a grand summary
Repeating Panel Report	Database fields from joined databases grouped and summarized by the field you select.

The new report can also be blank.

### Adding fields to a report

To add a field to the Fields to Place on View list, select the field name in the Database Fields list and click Add, or double-click the name. If you want to add a field from a different joined database, select the database in the drop-down list. Approach will display the fields in the report in the order they appear in the Assistant.

### Defining a summary

To define a summary, first select the field you want to group records in the summary by. Next, select the calculation you want to use. Finally, select the field you want to calculate.

Be sure to select different fields for grouping and calculating. For example, if you want to see a subtotal of amounts by product, select Product as the field to group by, Amount as the field to calculate, and SSum as the calculation.

If you want to group on or calculate a field from a different joined database, select the database in the drop-down list.

## Selecting a report panel



A report can be composed of several different panels, including a body panel, a header, a footer, and one or more summary panels.



Click a border of the panel, CONTROL-click anywhere in the panel, or click the panel label.

## Changing line or color settings for a report panel



Each type of report panel has its own InfoBox that you can use for changing the appearance of the panel. The settings in the InfoBox apply to all panels of a type.

1. Select the panel in Design.
2. Click the Show Info icon to open the panel's InfoBox.



3. Click the Lines and Colors tab.
4. Set the options in the Lines and Colors panel.  
See the Details topic for options.

## Changing the alignment or location of a summary panel



You can align a summary panel to the main body of a report and position the panel above or below its group of records.

1. Select the summary panel in Design.
2. Click the Show Info icon to open the panel's InfoBox.



3. Click the Display tab.
4. Set the alignment and location options in the Display panel.

**Details: Changing line or color settings for a report panel**



To	Do this
Change the width of borders in a panel	Select a width in the Border Width drop-down list.
Change the color of borders in a panel	Select a color in the Border Color drop-down palette. Select T for transparent.
Change the fill color of the interior of a panel	Select a color in the Fill Color drop-down palette. Select T for transparent.
Give the lines in a panel a raised or indented frame	Select a frame style in the Frame drop-down list.
Show outside borders around a panel	Turn on options in the Borders area.

**Adding a header or footer**



Approach automatically adds a header and footer when you create a report. If you're working with a report that doesn't already contain a header or footer, you can easily add one.



Choose Insert Header or Insert Footer from the Report menu.

## Adding a date, time, or page number to a report



You can add the date, time, or a page number to the header or footer of a report. Approach inserts the placeholder <<DATE>>, <<TIME>>, or <<#>>.



Draw a text block and then, with the cursor still active in the text block, choose Date, Time, or Page# from the Report Insert submenu.

## Adding a title page



A title page is a special first page that you can add to a report. It contains all of the information that appears on the rest of the report, as well as a unique header and footer.

### To add a title page:



Choose Add Title Page from the Report menu.

### To remove a title page:



Choose Add Title Page from the Report menu again.

### To view the title page of a report:



Choose Show Title Page from the Report menu.

### To return to the standard page of your report:



Choose Show Title Page from the Report menu again.



## Changing the number of columns in a report



If it's appropriate for your report, you can increase the number of columns and reduce the number of pages.

1. Click the Show Info icon to open the InfoBox for the report.



2. Click the Basics tab.
3. Change the number in the Number of Columns text box.

## Keeping records together



Keeping records together prevents them from being split across two pages or columns.

1. Click the Show Info icon to open the InfoBox for the report.



2. Click the Basics tab.
3. Turn on "Keep records together" in the Basics panel.

## Working with whole report columns



When you work in Design with whole columns, you can move or resize both the column and its header at the same time.

### To turn on columns:



Choose Turn On Columns from the Report menu or click the Column Mode icon (if it appears in an icon bar).



### To resize a column:



Click the column to select it and drag its right edge to a new position with the column sizer.



### To move a column:



Click the column to select it and drag it to another position.

## About summarizing data in a report

When you summarize data in a report, you can include subtotals, grand totals, and running totals, averages, counts, and many other types of calculations. You can summarize data from records in a single database or data from records in joined databases.

### Adding a summary panel to a report



You use the Summary dialog box to specify how you want records to be summarized, the location and alignment of the summary panel, and whether you want a page break after the summary panel.

### Moving or deleting a summary panel



You can easily move a summary panel elsewhere on a report or delete it.

### Adding a calculated field to a summary panel



A summary calculated field in a summary panel can show a subtotal, total, average, count, or other summary on data. You can define a new summary calculated field for each summary panel, or you can use a field that has already been defined.

## Adding a summary panel to a report



You use the Summary dialog box to specify how you want records to be summarized, the location and alignment of the summary panel, and whether you want a page break after the summary panel.

1. Choose Summary from the Create menu.
2. Select a summarize option.  
See the Details topic for options.
3. Specify an alignment for the summary panel.
4. Specify a location for the summary panel.
5. To display one summary per page, turn on "Insert page break after each summary group."
6. Click OK.

### See also

[Adding a calculated field to a summary panel](#)

## Details: Adding a summary panel to a report



### Summarize options

The summarize option affects the way Approach sorts records and summarizes data in the summary panel. For example, if you define a summary panel that summarizes groups of records grouped by product, Approach sorts records by product -- even if you don't actually calculate a summary for the records.

#### To insert a summary

#### Do this

After a specified number of records

Select "Every n records" and type the number of records you want summarized.

For an entire group of records

Select "All records."

After unique values in a sorted group of records

Select "Records grouped by" and select a field to use when sorting for the summary. Select the database carefully to be sure you are sorting on the correct field in the database you want.

### Summary panel alignment

You can place the summary panel to the left of the report body, to the right of the report body, or centered above or below the report body.

### Summary panel location

The Leading Location setting places the summary panel before its group of records. The Trailing Location setting places the summary after its group of records.

## Moving or deleting a summary panel



You can easily move a summary panel elsewhere on a report or delete it.

### To move a summary panel:



CONTROL-click the panel and drag it into position.

### To delete a summary panel:



CONTROL-click the panel and press DELETE.

## Adding a calculated field to a summary panel



A calculated field in a summary panel is calculated when you preview the report or when you view the report in Design with data showing.



If you're using a field that has already been defined, choose Add Field from the Panel menu and drag the field entirely within the borders of the summary panel.



If you're creating a new field, use the Field Definition dialog box to name the field, define the formula the field uses, and specify how the field summarizes records.

### See also

[Setting up a formula for a calculated field](#)



## About PowerClick reporting

PowerClick reporting lets you organize data and summarize it in reports with just a few clicks.

### Adding a grand total to a report



You can add a grand summary to any columnar report. Approach places a summary panel at the end of the report and adds a calculated field that sums the values in the field you select.

### Grouping records and adding subtotals to a report



You can group and subtotal records on any field that appears in a report with just a few clicks. Approach adds a calculated field, in either a leading or a trailing summary, that sums values in the field you select .

## Adding a grand total to a report



You can add a grand summary to any columnar report. Approach places a summary panel at the end of the report and adds a calculated field that sums the values in the field you select.

1. Use the Report Assistant to create a columnar report.
2. In Design, with Show Data turned on, click the column that contains the values you want to total.



3. Click the Sum, Count, or Average icon.



### See also

[Adding a calculated field to a summary panel](#)

[Adding a summary panel to a report](#)

[Creating a report](#)

## Grouping records and adding subtotals to a report



You can group and subtotal records on any field that appears in a report with just a few clicks. Approach adds a calculated field, in either a leading or a trailing summary, that sums values in the field you select .

1. Starting with a columnar report in Design with Show Data turned on, click the column you want to group on.



2. Click the Trailing Summary icon.



3. Click the column that contains the values you want to summarize.

4. Click the Sum, Count, or Average icon.



5. To display the grouping field only once per group, click the column you first used for sorting and click the Leading Summary icon.



6. Choose Turn on Columns from the Object menu to turn columns off.
7. Select the first group item and move it into the leading summary panel you just created.

### See also

[Adding a calculated field to a summary panel](#)

## Creating a standard or columnar report

**Selecting a report panel**

## Changing line or color settings for a report panel

**Adding a header or footer**

**Adding a title page**



## Changing the number of columns in a report

## Keeping records together

## Working with whole report columns

## **Adding a summary panel to a report**

## Moving or deleting a summary panel

**Adding a grand total to a report**

## Grouping records and adding subtotals to a report

**Adding a date, time, or page number to a report**



## **Changing the alignment or location of a summary panel**

## **Creating a report with summaries**

## Creating a repeating panel report

## About crosstabs

An Approach crosstab allows you to categorize and summarize database records. Crosstab cells summarize underlying records grouped or categorized by any fields you select. You can create a simple crosstab that either counts or summarizes data for groups of records, or a multiple-level crosstab that summarizes data for different groups of records by categories.

### Creating a crosstab



The Crosstab Assistant lets you select the fields displayed in the crosstab rows, the fields displayed in the crosstab columns, the field summarized in the body of the crosstab, and the formula used to calculate body cells.

### Turning a worksheet into a crosstab



Because worksheets and crosstabs are so similar, you can easily convert a worksheet into a simple crosstab by dragging a worksheet field into a summarizing position in the row gutter at the left side of the worksheet. Approach displays counts for text fields and sums for numeric fields. Then, you can turn a simple crosstab into a multiple-level one by dragging other fields into grouping positions in the row gutter or in the column gutter at the top of the worksheet.

### Adding a summary column or row to a crosstab



Approach lets you add special summary columns or rows to a crosstab. A summary row can use any formula you choose. A summary column uses the same formula as the other body cells in the crosstab. When you have nested fields in a crosstab, Approach adds a summary column or row to each group.

### Editing a crosstab formula



Approach uses a single summary formula to calculate summary columns and the body cells in a crosstab. In addition, Approach can use a different summary formula to calculate summary rows. If you want to perform a different set of calculations, either for all body cells and summary columns or for a summary row, you can change the formula at any time.

### Working with crosstabs



You can work with crosstabs in much the same way as with worksheets -- by adding database fields, moving columns, removing columns, resizing columns or rows, editing and formatting column header text, or adding background color to columns or rows. When you assign color to a column or row header, all columns or rows nested within that column or row also take the new color.

### See also

[Worksheets and crosstabs](#)

## Creating a crosstab



The Crosstab Assistant lets you select fields for the crosstab columns and rows, and define the summary that appears in the body of the crosstab.

1. Choose Crosstab from the Create menu.
2. Select a different main database if necessary.
3. Add the fields you want to show as crosstab rows to the Fields to Place on View list.
4. Click the Columns tab and add the fields you want to show as crosstab columns to the Fields to Place on View list.  
Add the fields in the order you want them nested, with the first field at the highest level.
5. Click the Values tab.
6. Select a formula in the Calculate list and a field in the Of Field list.
7. Click Done.
8. If the Define Main Database dialog box appears, select the database you want to be the main database for the report and click OK.  
This dialog box appears if the crosstab uses fields from more than one joined database. The first database you selected in the Fields panel is preselected as the main database.

## Details: Creating a crosstab



### Summary columns and rows in crosstabs

In addition to columns and rows for the fields that you select in the Crosstab Assistant, Approach adds a summary row at the bottom of the crosstab, summary subtotals for each group of columns, and a summary total column at the far right. You can remove these summaries if you don't want them.

### Nesting fields in a crosstab

When you select more than one field for either columns or rows, Approach nests the fields in the order you list them, with the first field listed at the highest or outermost level. For example, if you list Country first and then City, Approach groups the cities within the countries.

### Simple crosstabs

If you want to create a simple crosstab (one without any categories), select a field for rows and one for body cell values, but don't select a field for columns. Approach creates a simple crosstab with counts if the Value field is text and summaries if the Value field is numeric.

When you create a simple crosstab, you can drag fields from the Add Field dialog box to create additional columns or to convert the simple crosstab into a multiple-level crosstab.

### Adding and removing fields

To add a field to the Fields to Place on View list, select the field in the Database Fields list and click Add. You can also double-click a field to add it. Approach nests the fields in the order listed, with the first field at the highest level.

To remove a field in the Fields to Place on View list, select the field and click Remove.

### Crosstab formula

This is the formula Approach will use to calculate the values that appear in body cells. The same formula applies to all crosstab cells except for extra summary rows that you add.

## Adding a summary column or row to a crosstab



A summary row can use any formula you choose. A summary column uses the same formula as the other body cells in the crosstab.

### To add a summary column or row using SmartIcons:



Click the Add Row icon (to add a summary row) or the Add Column icon (to add a summary column).



### To add a summary column or row to a crosstab using the wedge tool:

1. Position the pointer at the right edge of a column group or at the bottom of a row group.
2. When the pointer turns into the wedge tool, click.



### To add a summary column or row to a crosstab using Crosstab commands:



Choose Summarize Columns (to add a summary row) or Summarize Rows (to add a summary column) from the Crosstab menu.

### To remove a summary from a crosstab:



Select the column or row and press DELETE.

### See also

[Editing a crosstab formula](#)

## Editing a crosstab formula



You can use the InfoBox to edit the formulas that Approach uses to calculate summary rows or summary columns and body cells.

1. Select a value header or the header for a summary row that contains the formula you want to change.
2. Click the Show Info icon to open the InfoBox for the worksheet.



3. Click the Formula tab.
4. Select a formula in the Formula list in the Formula panel.



## Working with crosstabs



You can work with crosstabs by adding a database field, moving or removing columns, resizing columns or rows, editing and formatting column header text, or adding background color to columns or rows.

### To open the InfoBox for the current crosstab:



Click the Show Info icon.

### To open the InfoBox for a column or row:



Click the column or row header to select the column and click the Show Info icon.

### See also

[Adding a database field to a worksheet or crosstab](#)

[Changing line or color settings for an object](#)

[Dividing a worksheet or crosstab into panes](#)

[Editing worksheet or crosstab column header text](#)

[Moving worksheet or crosstab columns](#)

[Navigating in a worksheet or crosstab](#)

[Removing a database field from a worksheet or crosstab](#)

[Resizing worksheet or crosstab columns and rows](#)

## Turning a worksheet into a crosstab



You can convert a worksheet into a simple crosstab, or a simple crosstab into a multiple-level one, by dragging worksheet fields into summarizing positions in the row or column gutters.

### To turn a worksheet into a simple crosstab:



Drag a field from the column gutter at the top of the worksheet or from the Add Field dialog box to the row gutter on the left side of the worksheet.

### To turn a simple crosstab into a multiple-level one



Drag a field from the Add Field dialog box or from the column or row gutter to a grouping position (in the row gutter or the column gutter).

## Creating a crosstab

## **Adding summaries to a crosstab**

## Editing a crosstab formula

## Working with crosstabs

## Turning a worksheet into a crosstab

## About worksheets

An Approach worksheet is composed of columns that show database fields and rows that show individual records.

### Creating a worksheet



Using the Worksheet Assistant, you select the fields that will initially appear on a worksheet. You can easily add or remove fields after the worksheet has been created.

### Selecting in a worksheet or crosstab



You can select individual cells, a range of cells, one or more contiguous columns, one or more contiguous rows, or one or more column headers. You can also select all column headers and row markers or the entire worksheet.

### Copying a selection to the Clipboard



Once you've selected 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.

### Navigating in a worksheet or crosstab



When you select a range of cells in a worksheet or crosstab, you can use either the TAB key or the ENTER key to move from one cell to the next.

### Dividing a worksheet or crosstab into panes



If a worksheet or crosstab contains a great deal of data, you might not be able to see all of the columns or rows on the screen at the same time. When data you want to view is out of sight, you can divide a worksheet or crosstab horizontally or vertically into independently scrolling panes.

### Formatting a worksheet or crosstab for printing



When you print a worksheet or a crosstab, you can print the view title in a header, the page number (in the lower-right corner), and the current date (in the lower-left corner).

### See also

[Worksheets and crosstabs](#)



## Creating a worksheet



Using the Worksheet Assistant, you select the fields that will initially appear on a worksheet.

1. Choose Worksheet from the Create menu.
2. Select a different main database if necessary.
3. Add the fields you want to show on the worksheet to the Fields to Place on View list.
4. Click Done.
5. If the Define Main Database dialog box appears, select the database you want to be the main database for the report and click OK.  
This dialog box appears if the worksheet uses fields from more than one joined database. The first database you selected in the Fields panel is preselected as the main database.

## Details: Creating a worksheet



### Adding or removing fields



To add fields to the Fields to Place on View list, select the fields in the Database Fields list and click Add. You can also double-click a field to add it. Approach displays the fields in the order listed.

To remove a field in the Fields to Place on View list, select the field and click Remove.

## Selecting in a worksheet or crosstab



In an Approach worksheet or crosstab, you can select individual cells, columns, rows, or column headers; a range of cells; or contiguous columns, rows, or column headers.

To select	Do this
A single cell	Click in the cell. Double-click to select the text in the cell for editing.
A range of cells	Click in 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 icon. 
A worksheet row	Click to the left of the row.
A crosstab row	Click the row header.
The entire worksheet or crosstab	Click in the upper-left corner of the worksheet or crosstab.
All of the worksheet column headers and all rows (but not the data)	Click the upper-left corner of the worksheet a second time.

## Copying a selection to the Clipboard



Once you've selected 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.

### To copy a selection to the Clipboard:



Select the portion of the worksheet or crosstab you want to copy and choose Copy from the Edit menu.

### See also

[Creating an Approach OLE object from another application](#)

[Creating an Approach OLE object in Approach](#)

## Details: Copying a selection to the Clipboard



When you select an entire worksheet or crosstab, Approach places it on the Clipboard as an object that you can embed, as a Windows Metafile format (WMF) object that you can paste as a graphic, and as tab-delimited text (to paste into a spreadsheet, for example).

When you select a range of cells in a worksheet or crosstab, Approach places the range on the Clipboard as a pastable WMF object and as tab-delimited text.

## Navigating in a worksheet or crosstab



When you select a range of cells in a worksheet or crosstab, you can use either the TAB key or the ENTER key to move from one cell to the next.

**To move from left to right in a row before wrapping around to the next row:**



Press TAB.

**To move down in a column before wrapping around to the next column:**



Press ENTER.

## Dividing a worksheet or crosstab into panes



If a worksheet or crosstab doesn't fit on the screen, you can divide it horizontally or vertically into independently scrolling panes.

### To divide a worksheet or crosstab into panes:



Drag the divider boxes (in the upper-right and lower-left corners) to the location you want.

### To adjust the position of the pane divider bars:



Drag the divider bars to a new position.

You can adjust both divider bars at the same time by dragging the point where they intersect.

## Formatting a worksheet or crosstab for printing



When you print a worksheet or a crosstab, you can print the view title, the page number, and the current date.

1. Open the InfoBox for the worksheet or crosstab.



2. Click the Printing tab.
3. Change the settings as necessary.



## About changing the appearance of a worksheet or crosstab

Approach gives you many different ways to change the appearance of a worksheet or crosstab without affecting the data that's displayed. You can work in Browse to alter the appearance of a worksheet or crosstab. However, if there's a password associated with the Approach file, you must work in Design to change the worksheet or crosstab.

### Adding a database field to a worksheet or crosstab



When you first create a worksheet or crosstab, Approach displays the fields you select in the Worksheet or Crosstab Assistant. If you want to display additional fields, you can add them from the Add Field dialog box.

### Removing a field from a worksheet or crosstab



If you no longer want to see a particular database field displayed on a worksheet or crosstab, you can easily remove it from the view.

### Moving worksheet or crosstab columns



When you create a worksheet or crosstab, Approach arranges fields in the order you list them in the Assistant. You can easily move a column from one location to another without affecting your data.

### Resizing worksheet or crosstab columns and rows



Approach initially sizes worksheet or crosstab columns so that they are just large enough to display the field data. Rows are also just large enough to display their data. You can resize columns or rows to improve the appearance of your worksheet or crosstab or to show additional information. You can resize a single column or change multiple columns to the same size.

### Inserting a blank or formula column in a worksheet



In addition to columns that display data from database fields, you can add a blank column to a worksheet and use it for spacing or to display the results of a formula. You might, for example, add a column that summarizes data, one that averages data, or one that shows the variance between two columns of data.

### Changing worksheet or crosstab settings



You can use the InfoBox to change the name of a worksheet or crosstab, attach a macro or custom menu, add colors and borders to headers and cells, and change the appearance of text.

### Editing column header text



Approach is preset to use field names as column headers in worksheets and crosstabs. You can change the header text to be anything you want.

## Adding a database field to a worksheet or crosstab



If you want to display additional fields to a worksheet or crosstab, you can add them from the Add Field dialog box.

1. Click the Add Field icon or choose Add Field from the Worksheet or Crosstab menu.



2. Drag a field from the Add Field dialog box to the worksheet column gutter or to a grouping position on the crosstab.
3. Release the field name where you want the field to appear.  
A dark vertical placement line shows where the field will be located.

## Removing a database field from a worksheet or crosstab



If you no longer want to see a particular database field displayed on a worksheet or crosstab, you can easily remove it from the view.



Click the column header to select the column, and drag the header above the column gutter until the pointer changes to the delete tool (it looks like the header is going into a trashcan).

This removes the entire column.

## Moving worksheet or crosstab columns



You can move one or more columns from one location to another without affecting your data. Approach moves multiple selected columns as a block.

1. Select one or more columns.
2. Drag the columns to the position you want, using the vertical guide to position the columns correctly. The vertical guide shows where the column will be placed when you release it.

## Resizing worksheet or crosstab columns and rows



You can easily resize columns or rows to improve the appearance of your worksheet or crosstab, or to show additional information. If you select more than one column, Approach will make them all the same size.

### To resize columns:

1. Select the columns you want to resize.
2. Place the pointer between column headers to the right of the column you want to resize, and when the pointer becomes a column sizer, drag the column to the size you want.



### To resize a row:



Place the pointer in the row gutter at the bottom border of a row, and when the pointer becomes a row sizer, drag the row to the size you want.



## Inserting a blank or formula column in a worksheet



You can add a blank column to a worksheet and use it for spacing or to display the results of a formula.

### To add a formula column to a worksheet:

1. Position the pointer between the tops of column headers where you want the blank column to appear, and click when the pointer changes to a wedge.



2. In the Formula dialog box, define the formula and click OK.  
You can use any of the Approach functions or define your own formula.

### To add a blank column to a worksheet:

1. Position the pointer between the tops of column headers where you want the blank column to appear, and click when the pointer changes to a wedge.



2. Click Cancel in the Formula dialog box.

### See also

[Setting up a formula for a calculated field](#)

## Changing worksheet settings



You can use the InfoBox to change the name of a worksheet or crosstab, attach a macro or custom menu, add colors and borders to headers and cells, and change the appearance of text.

### To open the InfoBox for the current worksheet:



Click the Show Info icon.

### To open the InfoBox for a column:



Click the column header to select the column and click the Show Info icon.

### See also

[Changing line or color settings for an object](#)

[Formatting a worksheet for printing](#)

## Editing column header text



Approach is preset to use field names as column headers in worksheets and crosstabs. You can change the column header text to be anything you want.

1. Triple-click the column header, or select the column and choose Edit Column Label from the Worksheet or Crosstab menu.
2. Edit the text.



## Creating a worksheet

**Selecting in a worksheet or crosstab**

**Copying a selection to the Clipboard**

## **Navigating in a worksheet or crosstab**

## **Dividing a worksheet or crosstab into panes**

## **Formatting a worksheet or crosstab for printing**

## **Adding a database field to a worksheet or crosstab**

## **Removing a database field from a worksheet or crosstab**



## **Moving worksheet or crosstab columns**

## **Resizing worksheet or crosstab columns and rows**

**Inserting a blank or formula column in a worksheet**

## Changing worksheet settings

**Editing column header text**

## About macros

You can use Approach macros to perform many different types of tasks, from finding a set of records to fully automating your data entry or invoicing process. Your only limit is your imagination.

### Defining a macro



You define a macro using the Define Macro dialog box, in which you list the tasks you want the macro to do in the order you want them performed. Depending on the commands, you can also set appropriate options. For example, if a macro definition includes the Find command, you can specify the search criteria.

### Adding and removing commands in a macro



If you need to add or remove commands in a macro, you can use the Insert and Delete buttons to add a new row in the middle of the Command grid or to remove a selected row.

### Moving a command in a macro



If you need to change the order of the commands you've listed in a macro, you can easily drag a command to a new location.

### Editing a macro



After you define a macro, you can edit it to change any aspect of the macro, including the macro name and the commands it contains. You edit a macro definition the same way you create it, using the Macros and Define Macro dialog boxes.

### Deleting a macro



You can use the Macros dialog box to delete a macro you no longer need. If the macro is attached to a macro button, the button no longer does anything. You may want to delete the button or attach another macro to it.

### Running a macro



Approach gives you many ways to run a macro (depending on the macro definition): from a function key, from a menu command, from the Macros dialog box, or from a button (or other object). If a macro is attached to a field or a view, Approach automatically runs the macro at an appropriate time.

### Saving a find request as part of a macro



Approach lets you save the current find request as part of the definition of a macro.

## Defining a macro



In the Define Macro dialog box, you list the tasks you want the macro to do in the order you want them performed. You can also set appropriate options for the commands you select.

1. Choose Macros from the Tools menu.
2. Click New.
3. Type a name for the macro in the Macro Name box.
4. If you want to execute the macro using a function key, select a key in the Function Key drop-down list.
5. Define the actions you want the macro to perform by adding commands to the Command grid and specifying the appropriate options.
6. When your macro definition is complete, click OK.
7. To display the new macro in the Run Macro menu, select the macro name and click "Show in menu" in the Macros dialog box.
8. Click Done to close the Macros dialog box.

### See also

[About macro commands](#)

## Details: Defining a macro



### Macros and function keys

Defining a function key allows you to run the macro directly from the keyboard. Therefore, the drop-down list shows only the function keys you haven't already used. Leave the Function Key list set to None if you don't want to use a function key.

### Adding commands to the Command grid

To add a command, click in any cell in the Command grid and click the down arrow to display a list of available commands. Click a command to select it.

Each time you add a command, Approach displays the options for that command in the bottom half of the Define Macro dialog box and adds a blank line at the end of the Command grid. To add another command, click in the next blank Command cell and select a command.

Be sure to list commands in the order you want them carried out. For example, if you want Approach to go to the next record before printing, make sure that Records appears before Print in the Command grid.

You can click the Insert button to add a line within the Command grid, or select a command line and click Delete to delete it.



## Adding and removing commands in a macro



If you need to add or remove commands in a macro, you can use the Insert and Delete buttons to add a new row in the middle of the Command grid or to remove a selected row.

### To add a command row to a macro:



Select the row where you want the new command to be inserted (click to the left of the command to select the row) and click Insert.

### To remove a command row from a macro:



Select the command row (click to the left of the command) and click Delete.

## Moving a command in a macro



If you need to change the order of the commands you've listed in a macro, you can easily drag a command to a new location.

1. Select the row that holds the command you want to move.
2. Position the pointer over the selected command.
3. When the pointer changes to a move cursor, drag the command to the new position.

## Editing a macro



After you define a macro, you can edit it to change any aspect of the macro, including the macro name and the commands it contains.

1. Choose Macros from the Tools menu.
2. Select the macro you want to edit and click Edit.
3. Make your changes.
4. Click OK to close the Define Macro dialog box.
5. Click Done.

## Deleting a macro



You can use the Macros dialog box to delete a macro you no longer need. If the macro is attached to a macro button, the button no longer does anything. You may want to delete the button or attach another macro to it.

1. Choose Macros from the Tools menu.
2. Select the macro you want to delete and click Delete.
3. Click Done.

## Running a macro



Approach gives you many ways to run a macro (depending on the macro definition): from a function key, from a menu command, from the Macros dialog box, or from a button (or other object). If a macro is attached to a field or a view, Approach automatically runs the macro at an appropriate time.

### To run a macro from the menu:



Choose Run Macro from the Tools menu and choose the macro you want from the submenu.

If you have more macros than fit in the submenu, choose More Macros. Approach opens a dialog box that lists your macros.

### To run a macro using an assigned function key:



Press the function key.

### To run a macro that's attached to a button or other object:



Click the button or object.

### To run a macro that's attached to a field:



Tab to or from the field or change data in the field.

### To run a macro that's attached to a view:



Switch to or from the view.

### To run any macro:



Choose Macros from the Tools menu, select the macro in the Macros dialog box, and click Run.

## About attaching macros

Approach lets you attach a macro to a macro button or to an object (text or graphic) so that you can run the macro simply by clicking the button or object.

### Attaching a macro to a macro button or an object



You can attach a macro to an Approach macro button or to any other object so that clicking the button or object triggers the macro.

### Creating a button and defining a macro



You can create a button and define the macro it triggers at the same time. Approach creates the macro and adds it to the list of available macros.

### Attaching a macro to a field



You can attach a macro to a field in a view so that tabbing into or out of the field or changing the data in the field triggers the macro.

### Attaching a macro to a view



You can attach a macro to a view so that switching to or from the view triggers the macro.

## Attaching a macro to a macro button or an object



You can attach a macro to an Approach macro button or to any other object so that clicking the button or object triggers the macro.

1. In Design, select the button or object and click the Show Info icon to open the InfoBox.



2. Click the Macros tab.
3. Select a macro name in a list in the Attached Macros area.

### See also

[Adding a macro button](#)

## Details: Attaching a macro to a button or an object



<b>To attach a macro that runs</b>	<b>Select a macro name in</b>
------------------------------------	-------------------------------

When you tab to the button	On tab into
----------------------------	-------------

When you tab out of the button	On tab out of
--------------------------------	---------------

When you click the button	On clicked
---------------------------	------------

If you include a macro button in a view's data entry order, you can have a macro activated when you tab into the button or out of it. In Design, use the Show Data Entry Order command in the View menu to view or change the order for fields and buttons on a view.

### See also

[Changing the data entry order for fields](#)



## Creating a button and defining a macro



You can create a button and define the macro it triggers at the same time. Approach creates the macro and adds it to the list of available macros.

1. In Design, click the Button icon and draw a button.



2. Click the Show Info icon to open the InfoBox.



3. Click the Macros tab in the InfoBox.
4. Click Define Macro and use the Macros and Define Macro dialog boxes to name and define the macro.
5. Click the Basics tab in the InfoBox, type a label for the buttons, and change its appearance if you want.

## Attaching a macro to a field



You can attach a macro to a field in a view so that tabbing into or out of the field or changing the data in the field triggers the macro.

1. In Design, select the field and click the Show Info icon to open the InfoBox.



2. Click the Macros tab.
3. Select the macros you want to run.
4. If you want to define a new macro, click Define Macro and use the Define Macro dialog box to name and define the macro.

## Details: Attaching a macro to a field



### To attach a macro that runs

When you tab or click into the field

When you tab out of the field or click in another field

When the value in the field changes

### Select a macro name in

On tab into

On tab out of

On data change

## Attaching a macro to a view



You can attach a macro to a view so that switching to or from the view triggers the macro.

1. In Design, click in the background of the view and click the Show Info icon to open the InfoBox.



2. To attach a macro that runs when you switch to the view, select a macro name in the "On switch to" list.
3. To attach a macro that runs when you switch to another view, select a macro name in the "On switch out" list.
4. If you want to define a new macro, click Define Macro and use the Define Macro dialog box to name and define the macro.

## About sample macros

A good way to learn about macros (and to get ideas for ways to use them) is to look at some sample macros.

### Creating a looping macro



You can create a macro that loops through all the records in a found set and either ends when it encounters the last record in the found set or continues running. Looping macros use the Records command to go to the next record and the Run command to repeat the same macro.

### Switching to another view with a macro



You can create a macro that simply takes you from the starting view to another view in the same Approach file. You might use a macro like this any time you need to switch from one view to another.

### Finding a set of records with a macro



Approach gives you several ways to find a set of records using a macro. You can restore an existing find (one that was in effect when you created the macro), edit an existing find request, create a new find request, or create a macro that goes to a blank find request and waits for you to supply the criteria while the macro is running. You can also use the Find command to show all records or to refresh the database.

### Saving a find request as part of a macro



Approach lets you save a find request in a macro.

### Setting a value in a field with a macro



You can create a macro that changes the value in a field for all records in a database file, automatically going from one macro to the next and repeating itself until all records are updated. The macro stops running when it reaches the last record in the database file. A macro that repeats itself is called a macro loop. In order to have a macro run itself, you must first create the macro and then edit it to include the self-repeating element.

### Using an If calculation in a macro



You can create a macro that has a conditional formula so that it performs other tasks only if the condition is met. You define the condition by defining a formula in the Formula dialog box.

### Defining a conditional macro



You can create a conditional macro to verify that a certain condition exists in the current record before it either continues with the current macro or runs a second macro. If the condition is not met, you can instruct Approach to run a second macro instead of continuing with the current one. You set up a conditional macro using the Run command, and you define the condition by selecting a field and typing a value or defining a formula.

## Creating a looping macro



You can create a macro that loops through all the records in a found set and either ends when it encounters the last record in the found set or continues running.

### To create a looping macro that ends when it reaches the last record:

1. Choose Macros from the Tools menu.
2. Click New.
3. Type a name for the macro and assign a function key if you want.
4. Add commands to the macro to be performed within the loop.
5. In the Command grid, make Records the first command in the list and use the Next Record setting.
6. In the Command grid, add Run to the list and select the current macro.
7. Click OK to save the new macro and click Done in the Macros dialog box.

### To create a looping macro that continues to run after it reaches the last record:

1. Choose Macros from the Tools menu.
2. Click New.
3. Type a name for the macro and assign a function key if you want.
4. In the Command grid, make Records the first command and use the next record.
5. Select the Run command, click If, and type **IsLastRecord()** in the If formula box.
6. Select "run macro" in the Is True drop-down list and select the macro to be run when the last record is encountered in the drop-down list to the right.
7. In the Command grid, add Run to the list and select the current macro.
8. Click OK to save the new macro and click Done in the Macros dialog box.

## Switching to another view with a macro



You can create a macro that simply takes you from the starting view to another view in the same Approach file. You might use a macro like this any time you need to switch from one view to another.

1. Choose Macros from the Tools menu.
2. Click New.
3. Type a name for the macro and assign a function key if you want.
4. In the Options area, click "Switch the current view to" and select a view in the View list.
5. Click OK to create the macro.
6. Click Done to close the Macros dialog box.

## Finding a set of records with a macro



Approach gives you several different ways to find a set of records using a macro. See the Details topic for a list of the ways.

1. Choose Macros from the Tools menu.
2. Click New.
3. Type a name for the macro and assign a function key if you want.
4. In the Command grid, select Find in the list of commands.
5. In the Options area, select "Perform stored find when macro is run" and click New Find.
6. Complete the find request and click Done.
7. Click OK to create the macro.
8. Click Done to close the Macros dialog box.



## Saving a find request as part of a macro



Approach lets you save a find request in a macro.

1. Choose Macros from the Tools menu.
2. Click New.
3. Type a name for the macro and assign a function key if you want.
4. In the Command grid, select Find in the list of commands.
5. In the Options area, select "Perform stored find when macro is run."
6. Click OK to create the macro.
7. Click Done to close the Macros dialog box.

## Details: Finding a set of records with a macro



### To

Edit an existing find request for the macro

Go to a blank find request while the macro runs and wait for criteria to be entered

Go to a partially filled in find request while the macro runs and wait for additional criteria to be entered

Show all records in the database

Update the database with regard to the found set

### Select

"Perform stored Find when macro is run" and click Edit Find

Go to Find and wait for input

Find Again and wait for input

Show All records

Refresh the found set

## Setting a value in a field with a macro



You can create a macro that changes the value in a field for all records in a database file, automatically going from one macro to the next and repeating itself until all records are updated.

1. Choose Macros from the Tools menu.
2. Click New.
3. Type a name for the macro and assign a function key if you want.
4. In the Command grid, make Set the first command in the list, select a field, and type a value in the To this Value box.
5. In the Command grid, add Records to the list and click Next Record.
6. In the Command grid, add Run to the list and select the current macro.
7. Click OK to save the new macro and click Done in the Macros dialog box.

## Using an If calculation in a macro



You can create a macro that has a conditional formula so that it performs other tasks only if the condition is met. You define the condition with a formula.

1. Choose Macros from the Tools menu.
2. Click New.
3. Type a name for the macro and assign a function key if you want.
4. In the Command grid, make the command you want to perform the first command in the list, select a field, click Formula, and type a value in the formula box.
5. Click OK to save the new macro and click Done in the Macros dialog box.

### **To loop through all the records in the database, add these steps to the macro:**

1. In the Command grid, add Records to the list and click Next Record.
2. In the Command grid, add Run to the list and select the current macro to continue running it until you reach the last record in the found set.

## Defining a conditional macro



You can create a conditional macro to verify that a certain condition exists in the current record before either continuing with the current macro or running a second macro.

1. Choose Macros from the Tools menu.
2. Click New.
3. Type a name for the macro and assign a function key if you want.
4. In the Command grid, make Run the first command in the list of commands. In the Run a Macro area, click If, click Formula, and type the formula in the Formula dialog box.
5. To specify the action to take when the condition is true, select "continue this macro" in the Is True drop-down list.
6. To run a different macro when the condition is false, turn on "else," select "run macro" in the Else drop-down list, and select the macro you want to run.
7. Add the other actions you want Approach to perform if the condition is true.
8. In the Command grid, add Records to the list and click Next Record.
9. In the Command grid, add Run to the list and select the current macro.
10. Click OK to save the new macro and click Done in the Macros dialog box.

## Details: Defining a conditional macro



The Is True drop-down list specifies the action Approach takes when the condition is true. The Else drop-down list specifies the action Approach takes when the condition is false.

To	Select
Run a different macro	Run macro
Run a different macro and return to the current macro	Run & return from macro
Continue running the current macro	Continue this macro
End the macro	End this macro

## Defining a macro

## **Adding and removing commands in a macro**



## **Moving a command in a macro**

## Creating a looping macro

## Editing a macro

## Deleting a macro

## **Attaching a macro to a button or object**

## Creating a button and defining a macro

## Attaching a macro to a field

## Attaching a macro to a view



## Running a macro

**Switching to another view with a macro**

**Finding a set of records with a macro**

**Saving a find request as part of a macro**

**Setting a value in a field with a macro**

**Using an IF calculation in a macro**

## Defining a conditional macro

## About macro commands



There are 27 commands that you can include in an Approach macro, many of which have options you can set. The options affect the way Approach carries out the command.

These are the commands you can select and the options you can set:

Use this command	To
Browse	Go to Browse.
Close	Close the current Approach file. You can set Approach to automatically disconnect from the server while the macro runs.
Delete	Delete the current record, found set, or Approach file. The "Show warning" option opens alert boxes that need to be OK'd while the macro runs.
Dial	Dial the telephone number in the field you select. Approach uses the modem settings you specify in dialer preferences. See <a href="#">Setting dialing preferences</a> .
Edit	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 command is used mostly for putting data on the Clipboard or pasting it.
Enter	Accept the current record (this is the



	same as pressing the ENTER key or clicking the Enter icon).
Exit	Exit Approach.
Export	Set export options now (click Edit Export to select the records and fields to be exported as well as the filename) or set Approach to open the Export Data dialog box and wait for input while the macro runs. See <a href="#">Exporting data from Approach</a> .
Find	Perform a stored find request, show all records in the database file, or refresh the found set. You can also set Approach to open a find request or the Find Again dialog box and wait for input while the macro runs. The stored find request can be one that you define now (click New Find) or one that has already been defined. You can also edit a stored find by clicking Edit Find. If no records are found, you can select another macro for Approach to run. See <a href="#">Finding a set of records with a macro</a> and <a href="#">Creating a find request</a> .
Find Special	Set Find Special options now (click Edit Find Special) or set Approach to open the Find Special dialog box and wait for input while the macro runs. See <a href="#">Finding duplicate values</a> and <a href="#">Finding unique</a> .

Import	<p><a href="#">values.</a></p>
	<p>Set import options now or set Approach to open the Import Data dialog box and wait for input while the macro runs. You can set up a new import (click New Import) or edit an existing import set up (click Edit Import). See <a href="#">Importing a database file.</a></p>
Mail	<p>Set mailing options now (click Edit Send Mail) or set Approach to open the Send Mail dialog box and wait for input while the macro runs. See <a href="#">Sending e-mail from Approach.</a></p>
Menu Switch	<p>Switch to the menu bar you specify. You can also create a custom menu now (click Customize Menus). See <a href="#">Customizing menus.</a></p>
Message	<p>Display a message box that contains the title and the text you enter.</p>
Open	<p>Set file-opening options now (click Files) or set Approach to open the File Open dialog box and wait for input while the macro runs. 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. See <a href="#">Opening an Approach file.</a></p>

Preview	Go to Preview.
Print	Set printing options now (click Edit Print) or set Approach to open the Print dialog box and wait for input while the macro runs. See <a href="#">Printing a view</a> .
Records	Go to a record, hide a record, duplicate a record, or create a new record.
Replicate	Set replication options now (click Edit Replicate) or set Approach to open the Replicate Notes Database dialog box and wait for input while the macro runs. See <a href="#">Replicating a new Notes database</a> .
Run	Run another macro you select (or continue running the current macro) under the conditions you specify in a formula (click Define Formula). You can also select a macro to be run when the condition is false and can return to the current macro after running that macro. See <a href="#">Defining a conditional macro</a> .
Save	Set file-saving options now (click Files) or set Approach to open the Save As dialog box and wait for input while the macro runs. See <a href="#">Saving a copy of an Approach file and a database file</a> .
Set	Set the field you specify to the value you enter or the formula you define (click the Formula button). You can use

	Set for any uncalculated field. See <a href="#">Setting up a formula for a calculated field</a> .
Sort	Set sort criteria now or set Approach to open the Sort dialog box and wait for input while the macro runs. See <a href="#">Specifying a sort order</a> .
Spell check	Check the spelling of data in records and text in memo fields (in Browse) or text in text objects (in Design). See <a href="#">Running the spelling checker</a> .
Tab	Tab forward or backward the number of times you specify. Use the Show Data Entry Order command in Design to view or change the data entry order for fields and buttons in a form. See <a href="#">Changing the data entry order for fields</a> .
View	Go to another view in the Approach file, show a view, or hide a view.
Zoom	Scale the current window by zooming in or out.

## About moving to another record

When entering and editing data, you work with one record at a time (the current record). In a form or form letter, the current record is the one showing; in a report or mailing label, the current record is the one with a solid border; in a worksheet, the current record is the line with the active field.

You can use commands to move through the records of a found set, in their current order in the Approach file. In a report, mailing label, or worksheet, you can also click in a visible record to move to it or tab to the next record from the last field of the current one.

If you have a field selected before you move to another record, the same field is selected in the other record.

### Moving one record at a time



You can move forward or backward through a view one record at a time.

### Moving to the first or last record



You can also move quickly to the first record or the last record in the current order of records.

### Moving to a specific record



Each record has a number in the current order of records in an Approach file (from front to back). If you know the number of the record you want to go to, you can give Approach the number to move directly to that record. This is especially helpful in a large database.

### See also

[Setting a default order for records](#)

## Moving one record at a time



You can move forward or backward through a view one record at a time.

### To move forward one record:



Click the Next Record icon, click the right arrow in the status bar, or press PAGE DOWN.

You can hold down the mouse button on the Next Record icon to "fast forward" through the records.



### To move backward one record:



Click the Previous Record icon, click the left arrow in the status bar, or press PAGE UP.

You can hold down the mouse button on the Previous Record icon to "rewind" through the records.



## Moving to the first or last record



You can move quickly to the first record or the last record in the current order of records.

### To move to the first record in the current order of records:



Click the First Record icon or press CONTROL-HOME.



### To move to the last record in the current order of records:



Click the Last Record icon or press CONTROL-END.



## Moving to a specific record



Each record has a number in the current order of records in an Approach file. If you know the number of the record you want to go to, you can give Approach the number to move directly to that record.

1. Click the record number in the status bar.
2. Type the number of the record you want to move to.
3. Click OK.



## About adding, deleting, and hiding records

You can put another record in a database by either adding a new record or making a duplicate of an existing one. If you have set a default order for the records, after you add data to a new record the record is placed in its proper position in the order. If you have not set an order for the records, a new record remains at the end of the database.

You can delete individual records or a set of records from a database. The records are permanently removed from the database, not just from the Approach file you're browsing. Deleting records also removes them from other Approach files that use the database.

You can also hide records from view to make them unavailable. This does not delete the records from the database, but just temporarily hides them from the group of records you're browsing.

### Adding a new record



When you add a new record to a database, the record is initially blank (except for fields that are defined to have data entered automatically).

### Duplicating a record



You can make a duplicate of any existing record. Approach copies each field from the original record and places them in the duplicate.

### Deleting specific records



You can delete one record at a time in a form and more than one record at a time in a report or a worksheet.

### Deleting a found set of records



If you want to delete records that have certain criteria in common, you first fill out a find request that specifies the criteria. You can delete all records in a database by first finding all the records.

### Hiding records



You can hide one record at a time in a form and more than one record at a time in a report or a worksheet. When a record is hidden, it is not included in sorts and calculations, and it is not printed or exported along with other records.

### Showing hidden records



When you're ready to use hidden records, you can show them again. You can show either all the records in the database or only the records in the found set you used most recently.

### See also

[Setting a default order for records](#)

## Adding a new record



When you add a new record to a database, the record is initially blank (except for fields that are defined to have data entered automatically).



Click the New Record icon or choose New Record from the Browse, PicturePlus, or Worksheet menu.



## Duplicating a record



You can make a duplicate of any existing record. Approach copies each field from the original record and places them in the duplicate.

1. If you're using a form, show the record. In a report, worksheet, repeating panel, or mailing label, click in a field in the record.
2. Click the Duplicate Record icon or choose Duplicate Record from the Browse, PicturePlus, or Worksheet menu.



## Deleting specific records



You can delete one record at a time in a form and more than one record at a time in a report or a worksheet.

1. If you're using a form, show the record. In a report, worksheet, repeating panel, or mailing label, click in a field in the record.

To select more than one record, SHIFT-click or CONTROL-click in the records.

2. Click the Delete Record icon or choose Delete Record from the Browse, PicturePlus, or Worksheet menu.



3. Click Yes in the alert box to delete the records.

## Deleting a found set of records



If you want to delete records that have certain criteria in common, you first fill out a find request that specifies the criteria. You can delete all records in a database by first finding all the records.

1. Use the Find command to isolate the records you want to delete.  
If you want to delete all the records in a database, type an asterisk (\*) in one field of the find request.
2. Choose Delete Found Set from the Browse, PicturePlus, or Worksheet menu.
3. Click Yes in the alert box to delete the records.

### See also

[About finding records](#)

## Hiding records



You can hide one record in a form and more than one record in a report or a worksheet. When a record is hidden, it is not included in sorts and calculations, and it is not printed or exported along with other records.

1. If you're using a form, show the record. In a report, worksheet, repeating panel, or mailing label, click in a field in the record.  
To select more than one record, SHIFT-click or CONTROL-click in the records.
2. Choose Hide Record from the Browse, PicturePlus, or Worksheet menu.

## Showing hidden records



When you're ready to use hidden records, you can show them again. You can show either all the records in the database or only the records in the found set you used most recently.

### To show all the records in the database:



Click the Show All icon or choose Show All from the Browse or PicturePlus menu or the Worksheet Find or Crosstab Find submenu.



### To show the records in the found set you were using before you hid the records:



Choose Find Again from the Browse or PicturePlus menu or the Worksheet Find or Crosstab Find submenu and then press ENTER.

## About entering data in fields

Any data you enter in a field appears at the insertion point or replaces the current selection. Approach saves the data you enter or edit as soon as you click in or tab to another field, move to another record, change to another view, click the Enter icon, or press ENTER. You do not need to save data yourself.

Approach may enter data automatically in a field because of how the field was defined; for example, a date or serial number is often entered this way. You can edit data that was entered automatically (unless the field is read-only or the Approach file has a password). You cannot edit data in a calculated field, however.

In a form, report, worksheet, or other view with specified field boundaries, you see only as much data as fits in a field's boundaries even though the field may contain more data than is visible.

### Selecting a field



You need to select a field before you can enter or edit data in it. You cannot select a calculated field.

### Changing the insertion point or selection



Once a field is selected, you can move the insertion point or select other data in the field.

### Entering text in a text or memo field



You can type letters, numbers, and symbols in a text or memo field.

### Entering a value in a numeric field



You can type numeric data in a numeric field. Approach does not save any text or non-numeric characters (such as \* and ") in a numeric field.

### Entering a value in a Boolean field



A Boolean field holds a value of True or False. If you refer to a Boolean field in a formula, Approach uses 1 for a True value and 0 for a False value to calculate the result.

### Entering a date in a date field



You can type up to 10 characters in a date field to represent one date, or you can use shortcuts to have Approach enter a date for you. Do not mix the date with other kinds of information.

### Entering a time in a time field



You can type up to 12 characters in a time field to represent one time, or you can use shortcuts to have Approach provide a time for you. Do not mix the time with other kinds of information.

### Duplicating a value from the last record modified



You can duplicate a value from the same field in the last record you modified in your current session with Approach. This is a quick way to enter repeating data in a field. You can duplicate data in any type of field and with any type of value.

### Selecting from a drop-down list



A drop-down list shows the possible values for a field. When you move to a field with a drop-down list, the list opens so that you can select a value. In some cases, a list is combined with a field box so that you can either select from the list or type a value.

### Turning on a radio button or a checkbox



A radio button or checkbox assigns an on or off value to a field. You can enter a value in a field by turning on one of its radio buttons or checkboxes.

### Filling a field with a new value





You can have Approach enter the same value in a particular field in every record in the current found set.

**See also**

[Browse](#)

[Types of fields](#)

## Selecting a field



You need to select a field before you can enter or edit data in it. You cannot select a calculated field.



Click in a field, or press TAB to go to the next field in the data entry order or SHIFT-TAB to go to the previous field in the order.

If your preferences are set this way, you can also press ENTER or SHIFT-ENTER to tab to the next or previous field.

### See also

[Changing the insertion point or selection](#)

[Setting general working preferences](#)

### Details: Selecting a field



### Clicking in a field

Clicking in a field selects the field and places an insertion point in it. Any data you enter will appear at the insertion point.

### Tabbing to a field

Tabbing to a field selects the field and its entire contents. Any data you enter will replace the selected contents. If you tab out of the last field in the last record, Approach asks if you want to create a new record. Click OK to create the record.

## Changing the insertion point or selection



Once a field is selected, you can move the insertion point or select other data in the field.

### To change the insertion point:



Click where you want the insertion point to go, or press the left arrow key or right arrow key to move the insertion point one character at a time.

### To change the selection:



Drag to select a range, double-click to select a word, or press SHIFT and the left arrow key or right arrow key to extend a selection by one character.

### See also

[Selecting a field](#)

## Entering text in a text or memo field



You can type letters, numbers, and symbols in a text or memo field.



Type any letters, numbers, or symbols, up to the limit of the text field length or the memo file size.

### See also

[Setting a text format](#)

[About database files](#)

## Details: Entering text in a text or memo field



### Field lengths

In a text field, the text must fit in the length specified in the fields definition. Approach alerts you if you try to type characters beyond the length allowed.

You can type more text in a memo field because the text is stored in a separate memo file. The maximum size of a memo file depends on the file type of the database.

### Dates and times

You can enter todays date or the current time in a text or memo field, but you will not be able to sort the field chronologically on the date or time. Click the Date or Time icon or choose Todays Date or Current Time from the Insert submenu in the Browse or Worksheet menu.



### Text formats

A text format can specify all capitals, all lowercase, or first-letter capitals. If a field has a text format, the text changes to the format when you move out of the field.

If a field has a text format and "Show data entry format" is on for the field, the text is formatted as you type and the formatted text is stored in the database.

## Entering a value in a numeric field



You can type numeric data in a numeric field. Approach does not save any text or non-numeric characters (such as \* and ") in a numeric field.



Type numeric data up to the length specified in the fields definition.

### See also

[Setting a numeric format](#)

## Details: Entering a value in a numeric field



A numeric format can specify currency signs, separators, a fixed number of digits, and other properties. If a field has a 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 signs and commas; let the format provide them.

If a field has a numeric format and "Show data entry format" is on, the fixed characters of the format appear in the field and underlines show the maximum number of characters. You can press the space bar to move the insertion point past the next separator.



## Entering a value in a Boolean field



A Boolean field holds a value of True or False. If you refer to a Boolean field in a formula, Approach uses 1 for a True value and 0 for a False value to calculate the result.



Type Yes, Y, yes, y, or 1 for True. Type No, N, no, n, or 0 for False.

## Entering a date in a date field



You can type up to 10 characters in a date field to represent one date, or you can use shortcuts to have Approach enter a date for you. Do not mix the date with other kinds of information.

### To type a date in a date field:



Type the month, day, and year as numbers separated by non-numeric characters.

### To enter the current date:



Click the Date icon or choose Today's Date from the Insert submenu in the Browse or Worksheet menu.



### To enter another day for the current month and year:



Type a single number.

For example, in June 1994 you can type 15 to enter June 15, 1994.

### See also

[Setting a standard date format](#)

[Setting a special date format for periods of a year](#)

## Details: Entering a date in a date field



### Number of digits in a year

When typing a date, you can type one, two, three, or four digits for the year. One-digit and two-digit years are assumed to mean 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.

### Date formats

A date format can specify the order of the month, day, and year as they appear in views, whether the month appears as a word or a number, and other properties. If a field has a date format, the date changes to the format when you move out of the field. Type the separators along with the numbers for the month, day, and year.

If a field has a date format and "Show data entry format" is on, slashes appear in the field as separators and underlines show the maximum number of characters. You can press the space bar to enter the current month, day, or year and move past the next slash.

### International formats

Your system may require a different order for entering dates (such as day, month, year or month, day, year). Enter the date numbers in the order specified in your Windows International Control Panel.

## Entering a time in a time field



You can type up to 12 characters in a time field to represent one time, or you can use shortcuts to have Approach provide a time for you. Do not mix the time with other kinds of information.

### To type a time in a time field:



Type the time as hours and minutes separated by colons (HH:MM); as hours, minutes, and seconds separated by colons (HH:MM:SS); or as hours, minutes, seconds, and hundredths of a second separated by colons and a decimal (HH:MM:SS.00).

### To enter the current time:



Click the Time icon or choose Current Time from the Insert submenu in the Browse or Worksheet menu.



### To enter only an hour:



Type a single number.

For example, type 8 to enter 8:00.

### See also

[Setting a time format](#)

## Details: Entering a time in a time field



### 12-hour or 24-hour

When typing a time, you can 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.

### Time formats

A time format can specify which separators appear in views, whether seconds and hundredths appear, and other properties. If a field has a time format, the time changes to the format when you move out of the field. Type the separators along with the numbers for the parts of the time.

If a field has a time format and "Show data entry format" is on, colons appear in the field as separators and underlines show the maximum number of characters. You can press the space bar to enter the current hour, minute, or second and move past the next colon.

### International formats

Your system may require a different time separator than the colon for entering times. Use whatever separator is specified in your Windows International Control Panel.

## Duplicating a value from the last record modified



You can duplicate a value from the same field in the last record you modified in your current session with Approach. This is quick way to enter repeating data in a field.



Click the Previous Value icon or choose Previous Value from the Insert submenu in the Browse or Worksheet menu.

If you have not entered or edited any data in the current session, this command does not enter a value.



## Selecting from a drop-down list



When you move to a field with a drop-down list, the list opens so that you can select a value. In some cases, a list is combined with a field box so that you can either select from the list or type a value.



Click the value you want. Or begin typing the value or press the up arrow key or down arrow key until the value is selected and then press TAB or ENTER.

### See also

[Displaying field as a drop-down list](#)

## Turning on a radio button or a checkbox



A radio button or checkbox assigns an on or off value to a field. You can enter a value in a field by turning on one of its radio buttons or checkboxes.



Click the radio button or checkbox. Or tab to the set of radio buttons or the checkbox and then press the space bar.

### See also

[Displaying field as radio buttons](#)

[Displaying field as a checkbox](#)



## Details: Turning on a radio button or a checkbox



### Radio buttons

Radio buttons identify a set of possible values for a field. When you click a radio button, you enter its value in the field.

Only one radio button in a set can be on at a time. When you turn on a radio button, if another button in the set is on it is automatically turned off. (Once you have turned on a radio button, the only way to turn it off is by turning on another button in its set.)

The value in a field with radio buttons is null until you click a button.

### Checkboxes

A checkbox is normally used by itself to define a checked value and an unchecked value for a field. When you click a checkbox for the first time, you enter its checked value in the field; if you click the checkbox a second time, you enter its unchecked value.

The value in a field with a checkbox is null until you click the checkbox.

## Filling a field with a new value



You can have Approach enter the same value in a particular field in every record in the current found set.

1. If you want to fill the field only in a set of records, use the Find command to isolate the records.
2. In one of the records, click in the field you want to fill.  
If a record already has the value you want to use for the fill, click in the field in that record. The value will appear in the Fill Field dialog box.
3. Choose Fill Field from the Browse or Worksheet menu.
4. If necessary, edit the fill value.
5. Click OK.

### See also

[About finding records](#)

## About putting a picture in a field

To use a graphic in a PicturePlus field, you can paste a picture from another application or draw in the field to create your own image. The graphic appears only in the PicturePlus field in the current record. It is part of the records data, not part of the design of a view.

When a pasted picture is too large for a field, the picture is either cropped or reduced, depending on how this option is set for the field. Approach can also enlarge a picture to fit a field.

### Pasting a picture



You can paste a picture directly from its file into a PicturePlus field. You can also paste a picture by copying it to the Clipboard in its source application. The Clipboard stores one item at a time.

### Drawing lines with the pointer



If a PicturePlus field is defined to allow drawing, you can draw freehand lines in it.

## Pasting a picture



You can paste a picture directly from its file into a PicturePlus field. You can also paste a picture by copying it to the Clipboard in its source application. The Clipboard stores one item at a time.

### To paste a picture from a file:

1. In Browse, select the PicturePlus field.
2. Choose Paste from File from the Edit menu.
3. Select a graphic file type or \*.\* in the List Files of Type drop-down list.
4. Select the name of the graphic file you want in the File Name list.  
You can change the directory and disk if you need to look for the file.
5. Click OK.

### To paste a picture from the Clipboard:

1. In the pictures source application, select the picture and choose Copy from the Edit menu.
2. In Approach, select the PicturePlus field in Browse and click the Paste icon or choose Paste from the Edit menu.



## Details: Pasting a picture



### Graphic file types

These are the graphic file types for pictures you can paste in Approach:

File type	Filename extension
Encapsulated Postscript	.EPS
Graphics interchange	.GIF
Targa	.TGA
TIFF (Tagged Image File Format)	.TIF
Windows bitmap	.BMP
Windows metafile	.WMF
Windows Paintbrush	.PCX

### 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. You can choose Paste Special rather than Paste and select the format you want for the pasted picture in the dialog box.

## Drawing lines with the pointer



If a PicturePlus field is defined to allow drawing, you can draw freehand lines in it.

1. In Browse, select the PicturePlus field.
2. While holding down the left mouse button, drag to draw the lines.

### See also

[Changing display options for a PicturePlus field](#)

## About checking spelling

Approach can check the spelling of text in your databases and Approach files. The text it checks depends on which environment you're in:



In Browse, Approach checks the spelling of data in records, including text in memo fields.



In Design, Approach checks the spelling of text in field labels and text objects, including text in the body of form letters.

The spelling checker is not available in Find and Preview.

When you check spelling, Approach compares the text with entries in a main dictionary and a user dictionary. Lotus provides the main dictionary for your language; you cannot edit this dictionary. The user dictionary is for words that are not in the main dictionary, such as proper nouns and technical terms; you can add and delete words in this dictionary at any time.

### Running the spelling checker



You must be in Browse or Design to run the spelling checker.

### Editing the user dictionary



If you click Add To Dictionary for a questioned word when you run the spelling checker, the word is added to your user dictionary. You can also add words directly to the user dictionary, and you can delete words from the dictionary.

### Changing to another main dictionary



Approach comes with a main dictionary for your language. If you have another dictionary you want to use as the main dictionary, you can change to it within Approach.

### Setting options for checking spelling



You can specify options for checking spelling, such as whether you want Approach to find repeated words. The options become a new default for the spelling checker and remain in effect until you change them.

## Running the spelling checker



You must be in Browse or Design to run the spelling checker.

1. If you want to check the spelling in only some text, select the text to check.  
In Browse, you can select any text in a record. In Design, you can select text or an entire text object.
2. Click the Spell Check icon or choose Spell Check from the Tools menu.



3. In the first Spell Check dialog box, select the scope of the text you want to check.
4. Click OK.
5. In the second Spell Check dialog box, specify what to do for each questioned word.  
This dialog box appears only if Approach finds one or more words that are not in its dictionaries.
6. Click OK in the alert box.

### See also

[Setting options for checking spelling](#)



## Details: Running the spelling checker



### Selecting the scope

The Selection option checks the spelling only in the selected text or text object.

"Current record" (in Browse) checks the spelling in all fields of the current record. "Current view" (in Design) checks the text in all text objects in the active view.

"Found set" (in Browse) checks the spelling of all text in all records in the current found set; if a field is selected, it checks only that field in each record. "Selection across found set" (in Browse) checks the selected text or text object in all records in the found set.

### Responding to a questioned word

To replace the word, either edit the text in the Replace With text box or select another word in the Alternatives list, 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.

## Editing the user dictionary



If you click Add To Dictionary when you run the spelling checker, the word is added to your user dictionary. You can also add words directly to the user dictionary, and you can delete words from the dictionary.

1. Click the Spell Check icon or choose Spell Check from the Tools menu.



2. Click Edit Dictionary.
3. To add a word to the dictionary, type the word in the New Word text box and click Add.
4. To delete a word from the dictionary, select the word in the Current Words list and click Delete.  
The list shows symbols first, then numbers, and then words in alphabetical order.
5. Click OK to return to the Spell Check dialog box.
6. Click OK to run the spelling checker or click Cancel to close the Spell Check dialog box.

## Changing to another main dictionary



Approach comes with a main dictionary for your language. If you have another dictionary you want to use as the main dictionary, you can change to it within Approach.

1. Click the Spell Check icon or choose Spell Check from the Tools menu.



2. Click Language Options.
3. Type the pathname of the new main dictionary in the Directory Path text box.
4. If a single dictionary file has more than one language in it, select the language you want in the Language drop-down list.
5. Click OK to return to the Spell Check dialog box.
6. Click OK to run the spelling checker or click Cancel to close the Spell Check dialog box.

## Setting options for checking spelling



You can specify options for checking spelling, such as whether you want Approach to find repeated words. The options become a new default for the spelling checker and remain in effect until you change them.

1. Click the Spell Check icon or choose Spell Check from the Tools menu.



2. Click Options.
3. Turn on the options you want.
4. Click OK to return to the Spell Check dialog box.
5. Click OK to run the spelling checker or click Cancel to close the Spell Check dialog box.

## Details: Setting options for checking spelling



### To

Find words that appear twice in a row, such as "the the"

Check the spelling of words with numerals, such as Invoice2

Check the spelling of words that begin with a capital letter, such as London

Show words from the user dictionary in the Alternatives list during a spell check

### Turn on

Check for repeated words

Check words with numbers

Check words with initial caps

Include user dictionary alternatives

**Moving one record at a time**

**Moving to the first or last record**

**Moving to a specific record**



**Adding a new record**

**Duplicating a record**

## Deleting specific records

**Deleting a found set of records**

## Hiding records

Showing hidden records

**Selecting a field**

**Changing the insertion point or selection**



**Entering text in a text or memo field**

**Entering a value in a numeric field**

**Entering a value in a Boolean field**

**Entering a date in a date field**

**Entering a time in a time field**

**Duplicating a value from the last record modified**

**Selecting from a drop-down list**

**Turning on a radio button or a checkbox**



**Filling a field with a new value**

**Pasting a picture**

**Drawing lines with the pointer**

## Running the spelling checker

## Editing the user dictionary

**Changing to another main dictionary**

## Setting options for checking spelling

## What's new in Approach 3.0

Approach 3.0 has a new look, new power, and dozens of new features that help you work more efficiently and effectively than ever before.

### New usability features



Approach [Assistants](#) make creating views a breeze



[SmartMaster layouts](#) give you an instant palette of form and report layouts



[SmartMaster styles](#) let you create visually appealing views



[PowerClick reporting](#) puts sophisticated reports at your fingertips



[WYSIWYG](#) report design means you can see reports as you design them



Lotus [InfoBox](#) design technology makes formatting simple

### Ground-breaking integration with other products



[Lotus 1-2-3](#) and [Lotus Notes](#) users get instant access to Approach reporting and analysis capabilities



You can now [send mail](#) directly from Approach using your e-mail system

### Increased horsepower



New [speed technology](#), enhanced [database joins](#), and [alias joins](#) give you much more power

### New, easy-to-use graphics tools



[Fast Format](#) helps you format objects instantly



[Named styles](#) let you collect a library of your favorite looks



The [Tools palette](#) lets you keep all the drawing tools together when you work in Design

### Three new views for working with your data



[Worksheets](#), [crosstabs](#), and [charts](#) give you new ways to look at your data

### Customization features and macros for making Approach work your way



Customization features let you create the [custom menus](#) and [SmartIcon](#) bars you need



Easy to use advanced [macro](#) technology helps you automate your work

### New look and new online Help



[SmartIcons](#), [view tabs](#), and [context-sensitive menus](#) change the look of the Approach work area



New [context-sensitive help](#) makes it easy to locate the information you need



## SmartIcons

The SmartIcons are a subset of the menu commands; they appear in an icon bar (initially set to appear just below the menu bar). To apply a SmartIcon command, click the icon.



**View tabs**

View tabs show the name of the view and appear at the top of the Approach window. They make it easy to navigate from one view to another. To go another view, click its view tab.



### Context-sensitive menus

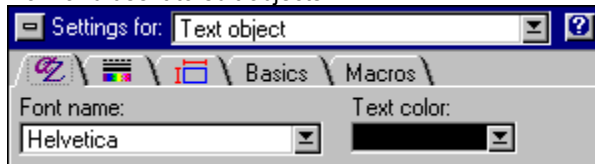
Context-sensitive menus change depending on the current selection or the current view.



## InfoBox

Lotus InfoBox design technology gives you an easy-to-use palette of choices for modifying objects.

Every design object has a set of properties, such as dimensions, text attributes, line and fill colors, and attached macros. The settings for an object are stored in an InfoBox. You can keep the InfoBox open on the screen as you work and use it to edit objects.



## WYSIWYG

WYSIWYG report design lets you see how your printed reports will look while you're designing them.

When you're in Design, you can show data in fields as it appears in Browse or show the names of fields and databases. To toggle between the two settings, click the Show Data icon.



This report with Show Data turned on lets you see what the printed report will look like.

---

**Report 1**

---

Sales Rep	Product
Lancey	30000000
	21000000
	20000000
	40000000
	40000000

Subtotal for Lancey

This is the same report with Show Data turned off for fast formatting.

---

**Report 1**

---

Sales Rep	Product
Lancey	30000000
	21000000
	20000000
	40000000
	40000000

Subtotal for Lancey

## Working with Lotus Notes

Lotus Notes users can extend their reporting, analysis, and advanced forms capabilities.

You can use Approach to open views or forms in a Lotus Notes database and to replicate a Notes database. You can also use the powerful Notes F/X 1.1 feature to share key information between Notes and Approach.

**Working with Lotus 1-2-3**

Lotus 1-2-3 users get instant access to Approach reporting and analysis capabilities from within a 1-2-3 spreadsheet.

Approach and Lotus 1-2-3 can share data in a number of ways. You can open Lotus 1-2-3 spreadsheets in Approach and have Approach create a database file from the spreadsheet. Or you can work with "live" 1-2-3 data in Approach, starting either from 1-2-3 or from Approach.

### Custom menus

Approach lets you create your own custom menu bars that you can attach to selected views in an Approach file. For example, if you design a data entry form, you might also create a custom menu bar that contains only the commands that people entering data will need.

<b><u>F</u>ile</b>	<b><u>E</u>dit</b>	<b><u>V</u>iew</b>	<b><u>N</u>etwork</b>	<b><u>T</u>ools</b>	<b><u>W</u>indow</b>	<b><u>H</u>elp</b>
--------------------	--------------------	--------------------	-----------------------	---------------------	----------------------	--------------------

## Macros

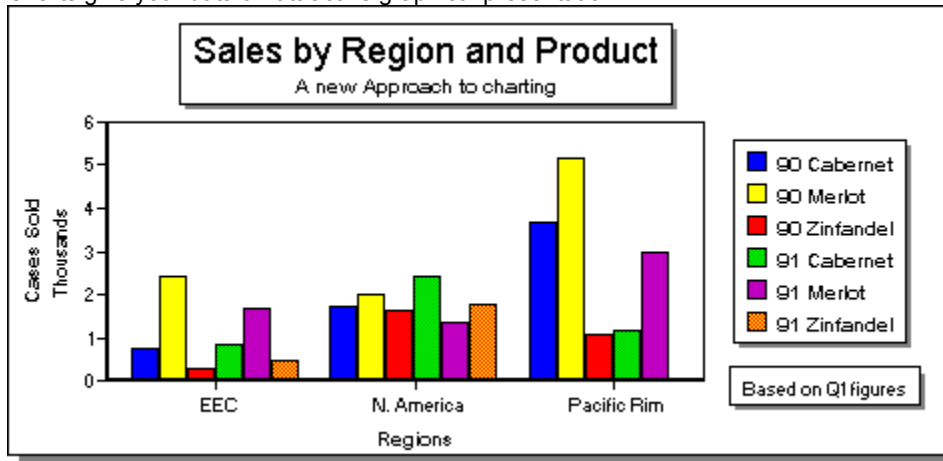
You can use Approach macros to perform many different types of tasks -- from finding a set of records to saving a find request to fully automating your data entry or invoicing process. Your only limit is your imagination.

Command		Options
Set		INVOICES.TAX_RATE=0.0825
Records		Next
▶ Run	⬇	Tax Rate



## Charts

Charts give your data an attractive graphical presentation.



## **Worksheets**

Worksheets present database records in a spreadsheet-like view for easy manipulation.



## Crosstabs

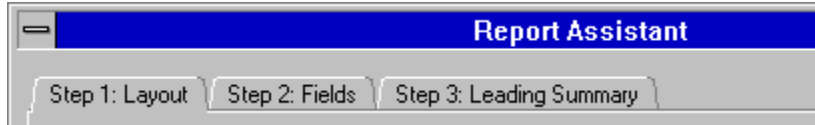
Crosstabs let you categorize and summarize database records in new ways.



## Assistants

Approach Assistants help you to quickly and easily create customized forms, reports, form letters, mailing labels, charts, worksheets, and crosstabs.

Everything you need to select a style, a layout, and the fields that appear in a view are all in one convenient dialog box.



## PowerClick reporting

PowerClick reporting lets you quickly and easily organize data and summarize it in sophisticated reports. You use SmartIcons to sort and summarize (or count or average) report data instantly.

For  
exa  
mpl  
e,  
you  
can  
turn  
this  
rep  
ort..



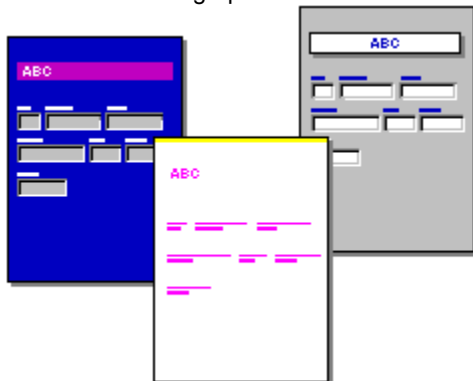
...in  
to  
this  
rep  
ort..



...wi  
th  
just  
a  
few  
clie  
nts.

## SmartMaster styles

SmartMaster styles give you a variety of different looks for your new views. They let you create visually appealing views without -- a graphic artist.



## SmartMaster layouts



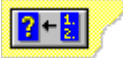

SmartMaster layouts provide an instant palette of layouts for Approach views.



## Help on Help

The new drill-down Approach online Help shows you layers of information. Introductory and detail information appears in the Main window, where you're reading this now. The steps for performing tasks appear in the Steps window, which appears on the right side of the screen. You can leave the Steps window open as you work in Approach.

Icons in both windows make it easy for you to move between windows.

Click this icon	In this window	To
	Main	Display more specific reference information or the steps for a specific task
	Steps	View the details associated with a task
	Main or Steps	Go to the next higher topic or return to the About overview topic
	Main or Steps	Print a topic

## Fast Format

The new Fast Format feature lets you copy the line and color settings and text attributes from one object and apply them to another object with a click of the mouse.



## Named styles

Named styles are sets of InfoBox properties that you can save and apply whenever you want a consistent look. A named style can include these properties:



Line and color settings for all objects, and border and baseline settings for fields



Text attributes for field data and for text in text objects



Text attributes for field labels



Picture settings such as cropping and shrinking for PicturePlus fields



Width and color settings for the background of a view



### Tools palette

The new Tools palette puts all of the tools you need for drawing Design objects in a special floating palette. The Tools palette appears automatically whenever you might possibly need it..



**Send mail**

The new Approach mail features let you send an Approach view (with or without data) to anyone on your e-mail system. You can even route messages to multiple recipients in the sequence you want.

**Speed technology**

X10 speed technology provides superb standalone and client/server database performance. Imagine performing database tasks at 10 times the speed of other leading PC end-user database products.

**Database joins**

You can now join up to 50 database files in a single Approach file (depending on the database file type). You can also ensure data accuracy by using two or more fields as join criteria, including joins on calculated fields.

**Alias joins**

Approach now lets you create aliases to join a database to itself. Alias joins help optimize disk space and give you greater flexibility in using your data.

MY\_END\_OF\_FILE\_FLAG

## **Working Together**

Click one of these topics for more information:

[Working together with Lotus Notes](#)

[Working together with Lotus 1-2-3](#)

## **Working together with Lotus Notes**

[About working together with Lotus Notes](#)

[Opening a view or form from a local Notes database](#)

[Opening a view or form from a server Notes database](#)

["Quick connecting" to a server Notes database](#)

[Replicating a new Notes database](#)

[Replicating a Notes database with a server](#)

[Enabling a variable field for Notes F/X 1.1](#)

## **Working together with Lotus 1-2-3**

[About working together with Lotus 1-2-3](#)

[Creating a database from a Lotus 1-2-3 spreadsheet](#)

[Opening a named range from a Lotus 1-2-3 spreadsheet](#)

[Creating an Approach view in Lotus 1-2-3](#)



## About working together with Lotus Notes

You can use Approach to open views or forms in a Lotus Notes database and to replicate a Notes database. You can also use the powerful Notes F/X 1.1 feature to share key information between Notes and Approach.

### Opening a view or form from a local Notes database



You can open a view or form from a Notes database stored on your local drive. The data from the view or form appears in a standard Approach form.

### Opening a view or form from a server Notes database



You can open a view or form from a database stored on a Notes file server. The data from the view or form appears in a standard Approach form.

### "Quick connecting" to a server Notes database



Once you specify the name of a Notes server and database in the Open dialog box, Approach keeps track of that connection for your current work session. The next time you open the dialog box and select Lotus Notes - Server, the name of the connection you used before will appear in the Server drop-down list.

### Replicating a new Notes database



Replicating a new Notes database creates a new copy of an existing database on your local hard drive.

### Replicating a Notes database with a server



Replicating a Notes database with a server updates both your replica and the server's replica with changes made to either one.

### Enabling a variable field for Notes F/X 1.1



Notes F/X 1.1 is a powerful feature that allows Notes and Approach to share information. From the Approach end, the sharing is accomplished with variable fields that have been enabled for Notes F/X 1.1. When a variable field is enabled, Notes can write to the field and can read its contents without having to open an Approach view.

## Opening a view or form from a local Notes database



You can open a view or form from a Notes database stored on your local drive. The data from the view or form appears in a standard Approach form.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.
2. Select Lotus Notes - Local in the List Files of Type drop-down list.
3. Double-click a Notes database in the Directories list.
4. Select the name of the view or form you want to open in the File Name list and click OK.
5. If an alert box appears, click OK.

## Opening a view or form from a server Notes database



You can open a view or form from a database stored on a Notes file server. The data from the view or form appears in a standard Approach form.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.
2. Select Lotus Notes - Server in the List Files of Type drop-down list.
3. Select a server in the Server drop-down list.
4. If a Setup dialog box appears, fill in the information and click OK.  
The dialog box appears if you are not already connected to the server.
5. Double-click a Notes database in the Directories list, or double-click a Notes subdirectory to see its contents and then double-click a database.
6. Select the name of the view or form you want to open in the File Name list and click OK.
7. If an alert box appears, click OK.

## "Quick connecting" to a server Notes database



Once you specify the name of a Notes server and database in the Open dialog box, Approach keeps track of that connection for your current work session. The next time you open the dialog box and select Lotus Notes - Server, the name of the connection you used before will appear in the Server drop-down list; for example, Accounts Payable @ Accounting.

If you select the connection name in the Server drop-down list, the File Name list shows the views and forms in the Notes database you used before on that server. This way, you don't need to establish a connection and select in the Directories list.

## Replicating a new Notes database



Replicating a new Notes database creates a new copy of an existing database on your local hard drive.

1. Choose the Notes New Replica command from its custom menu.
2. In the New Notes Replica dialog box, select the server where the database you want to copy is stored in the Server drop-down list.
3. Select the database file in the list of files or type the filename in the Filename text box.
4. Type a filename for the new replica in the Filename text box in the New Local Replica area.
5. If you want to replicate only those documents replicated in a specific period of time, turn on "Only replicate documents saved in the last nn days" and type the number of days.
6. Click New to replicate the database.  
If you want to close the New Notes Replica dialog box without replicating a database, click Done instead.

### See also

[Customizing menus](#)

## Replicating a Notes database with a server



Replicating a Notes database with a server updates both your replica and the server's replica with changes made to either one.

1. Choose the Notes Replicate with Server command from its custom menu.
2. In the Replicate with Notes Server dialog box, type the database replica filename in the Filename text box.
3. Select the server where the database you want to copy is stored in the Server drop-down list.
4. Turn on replication options as appropriate.
5. Click OK.

### See also

[Customizing menus](#)

## Enabling a variable field for Notes F/X 1.1



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. Choose Approach File Info from the File menu.
2. In the Approach File Info dialog box, click a variable field to enable it.
3. Click OK.

Details: Replicating a Notes database



Replication commands

The two Approach replication commands are available only when you create a custom menu or a macro that includes them. For more information about creating a custom menu, see [Customizing menus](#).

Replication with server options

Turn on this option	To
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



## About working together with Lotus 1-2-3

Approach and Lotus 1-2-3 can share data in a number of ways. You can open Lotus 1-2-3 spreadsheets in Approach and have Approach create a database file from the spreadsheet. Or, you can work with "live" 1-2-3 data in Approach, starting either from 1-2-3 or from Approach.

### Creating a database from a Lotus 1-2-3 spreadsheet



You can open a Lotus 1-2-3 spreadsheet, and Approach will create a database file with a copy of the spreadsheet's data. Approach also creates a new Approach file for the database.

### Opening a named range from a Lotus 1-2-3 spreadsheet



You can open a "live" named range from a Lotus 1-2-3 spreadsheet in Approach and view or edit the range in an Approach file. This does not convert the range to a database file. If you make any changes to data in the range, the changes are saved in the spreadsheet. Lotus 1-2-3 must be running and the spreadsheet with the range must be open.

### Creating an Approach view in Lotus 1-2-3



When you work in Lotus 1-2-3 (any version later than 4.0), you can create four types of Approach views to display selected worksheet data: reports, forms, dynamic crosstabs, and mailing labels. The Approach views appear as icons embedded in the 1-2-3 worksheet.

## Creating a database from a Lotus 1-2-3 spreadsheet



You can open a Lotus 1-2-3 spreadsheet, and Approach will create a database file with a copy of the spreadsheet's data. Approach also creates a new Approach file for the database.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.
2. Select Lotus 1-2-3 (\*.WK\*) in the List Files of Type drop-down list.
3. Select the name of the spreadsheet in the File Name list and click OK.
4. In the Select Range dialog box, select a sheet or named range with the data you want to use in the new database.
5. To use the text in the first row of the spreadsheet as field names, turn on "First row contains field names."
6. Click OK.
7. In the Convert To dialog box, type a name for the database file in the File Name text box.
8. Select a database file type in the List Files of Type drop-down list.
9. Click OK.

## Opening a named range from a Lotus 1-2-3 spreadsheet



You can open a "live" named range from a Lotus 1-2-3 spreadsheet in Approach and view or edit the range in an Approach file. Lotus 1-2-3 must be running and the spreadsheet with the range must be open.

1. Click the Open File icon or choose Open from the File menu. Or if the Welcome dialog box is on the screen, select "Open an existing file" and click OK.
2. Select 1-2-3 Ranges in the List Files of Type drop-down list.
3. Select the name of the spreadsheet with the range you want in the Directories list.
4. Select the named range in the File Name list.
5. Click OK.

## Creating an Approach view in Lotus 1-2-3



When you work in Lotus 1-2-3 (any version later than 4.0), you can create reports, forms, dynamic crosstabs, or mailing labels to display selected worksheet data.

1. Select the 1-2-3 database table range you want to view in the Approach form. Be sure to include column headings when you select the database table range.
2. Choose Form, Report, Dynamic Crosstab, or Mailing Label from the Tools Database submenu.
3. Click OK. Use the Assistant to create the view.
4. Modify the view if you want.
5. Return to 1-2-3. Choose Exit and Return from the File menu to close Approach, or choose Close and Return from the File menu to leave Approach running in the background.

### See also

[Creating a crosstab](#)

[Creating a form](#)

[Creating a mailing label](#)

[Creating a report](#)

**Opening a view or form from a local Notes database**

**Opening a view or form from a server Notes database**

**"Quick connecting" to a server Notes database**

## **Creating a database from a Lotus 1-2-3 spreadsheet**



**Opening a named range from a Lotus 1-2-3 spreadsheet**

## **Creating an Approach view in Lotus 1-2-3**

## **Replicating a new Notes database**

## Replicating a Notes database with a server

## **Enabling a variable field for Notes F/X 1.1**

## About importing data

You can import data into an existing database file in Browse or you can transfer the views from one Approach file to another in Design. Importing data allows you to add to or update the records in your database without changing the appearance of any of the views in your Approach file. Importing views lets you add the views from another Approach file without affecting your data.

### Importing data into a database



When you import into a database, Approach can:



Update existing records with the data you're importing



Add the data from the import file as new records at the end of the current database file



Do a combination of the two: update existing records using the imported data and add new records for data that doesn't matching existing ones

Because this is essentially a data function, you must be in Browse to import data.

### Importing an Approach file



If you have views in an Approach file that you want to reuse with other databases, you can easily import the Approach file (including all of its forms, reports, worksheets, crosstabs, charts, letters, and mailing labels) and add it to an existing Approach file. Because this is essentially a design function, you must be in Design to import an Approach file.

## Importing data into a database



In Browse, you can update existing records with the data you're importing, add the data from the import file in new records at the end of the current database file, or do a combination of the two.

1. Open the database file you want to import into.
2. In Browse, choose Import Data from the File menu.
3. Select the file type of the import file if necessary in the Import Data dialog box and enter any information that's required for the type of field you select.
4. Type the filename in the File Name text box or select the file to import in the File Name list.
5. Click OK.
6. In the Import Setup dialog box, arrange the fields in the Fields In list so that they align with the corresponding data in the Data From list.
7. Click between the two field names to map the fields in the import file's Data From list with the fields you want to update in the current database file's Fields In list.
8. Select an import option in the Import Options drop-down list.  
See the Details topic for the options.
9. If you're updating matching records, click in the checkmark column to the right of the Fields In column to select the fields you want to match on.
10. Click OK.

## Details: Importing data into a database



Because you're adding data to a database file, you must be in Browse. If you're working with a found set rather than the entire database, Approach updates only the found set.

### Delimited text files

If you select the Text - Delimited file type, Approach opens the Text File Options dialog box. A delimited ASCII text file uses separators (special characters in the text file) to show where one field ends and the next one begins. You may want to refer to the manual for the application that was used to create the delimited text file to see what field separator it uses.

You can also specify which character set is used in the import file. If you're importing 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. Use this dialog box to connect to the server. See [Opening a server database through ODBC](#).

### Arranging the fields in the Fields In list

To move a field, click the field and drag it to a new position. When you release the mouse button, the field you dragged exchanges positions with the field you dropped it on.

### Field mapping

Field mapping tells Approach which imported data matches fields in the current database. To map two fields, click in the mapping column between them to turn on an arrow. To unmap specific fields, click the mapping arrow beside the field name to turn it off. To unmap all fields, click Clear. To remap any fields with matching names, click Map Fields.

If you want to map the import fields to those in a joined database, select the database file in the Fields In drop-down list.

If a field in the import file is not mapped to a field in the current database file, Approach ignores the field. Approach also ignores any fields in the current database that are not mapped. Therefore, if you want to update only specific fields when you import data, be sure that those fields are the only ones mapped (a mapped field has an arrow connecting it to a field in the import file).

### Import options

This option	Does this
Add imported records 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 mapped
Use imported data to update existing records	Updates the data in existing records (only for the fields you map) when the records contain data in the fields you specify that matches the data in the import file
Use imported data to update & add to existing records	Updates the data in records that match the import file and adds new records for the data that does not match existing records

If you select one of the update options, a new column appears on the right side of the Import Setup dialog box. You use this column to select the fields that must have matching data before their records can be updated.

## Importing an Approach file



If you have views in an Approach file that you want to reuse with other databases, you can easily import the Approach file in Design and add it to an existing Approach file.

1. Open the Approach file you want to import into.
2. In Design, choose Import Approach File from the File menu.
3. Select the Approach file you want to import and click OK.
4. Arrange the fields in the current file's Fields In list so that they align with the corresponding fields in the import file's Fields In list.
5. Map the fields in the import file's Fields In list with the fields you want to update in the current Approach file.
6. Click OK.

## Details: Importing an Approach file



### Arranging the fields in the Fields In list

To move a field, click the field and drag it to a new position. When you release the mouse button, the field you dragged exchanges positions with the field you dropped it on.

### Field mapping

Field mapping tells Approach which imported fields match fields in the current Approach file. To map two fields, click in the mapping column between them to turn on an arrow. To unmap specific fields, click the mapping arrow beside the field name to turn it off. To unmap all fields, click Clear. To remap any fields with matching names, click Map Fields.

If you want to map the import fields to those in a joined database, select the database file in the Fields In drop-down list.

If a field in the imported Approach file is not mapped to a field in the current Approach file, Approach displays the message NO\_FIELD\_REFERENCE in Design instead of a name for the field. In Browse, you get an error telling you that you cannot edit the field and must assign a database field to the current field.

## About exporting and sending data

You can export data from an Approach database file, copy a PicturePlus picture to a file, or send data or views from an Approach file via e-mail.

### Exporting data from Approach



When you export an Approach database file, you take selected data and save it in a format that can be used by other applications. You can export all the records in a database or use Find to select a subset to export. You can also export all of the fields in a record or just some of them.

### Copying a PicturePlus picture to a file



You can easily copy a picture in a PicturePlus field to a new file in whatever graphics file type you specify. You can then edit the picture if you want, or use it for another purpose. You must be in Browse to copy a PicturePlus picture to a file.

### Sending e-mail from Approach



If you are connected to a network and have access to an e-mail package (such as Lotus Notes or cc:Mail), you can include Approach views and data in your e-mail messages. Approach lets you e-mail an image of the current view, or save and attach all or part of the current Approach file.

## Exporting data from Approach



Exporting saves selected data in a format that can be used by other applications. Approach creates a new database file that can include all types of fields except variable fields and summary calculated fields.

1. In Browse, open the database file you want to export and select the records to be exported.
2. Choose Export Data from the File menu.
3. Type a name for the file you're exporting to and specify where you want the file to be saved.
4. Select a database file type in the List Files of Type drop-down list.
5. Select "Found set only" or "All records" in the Records to Export area.
6. Move the fields you want to export to the Fields to Export list.
7. Click OK.

## Details: Exporting data from Approach



### Exporting different file types

If you select the Text file type, Approach opens the Text File Options dialog box. You can specify the character used to separate fields in the export file.

If you select Oracle, SQL Server, DB2, or a server-based ODBC application, Approach opens the appropriate Connect dialog box. Use this dialog box to connect to the server. See [Opening a server database through ODBC](#).

### 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.

### Moving fields to the Fields to Export list

To move a field to the Fields to Export list, select the field name in Database Fields and click Add, or double-click the field name. Approach exports fields in the order you list them.

To move a field back to the Database Fields list, select the field name in Fields to Export and click Remove.

## Copying a PicturePlus picture to a file



In Browse, you can easily copy a picture in a PicturePlus field to a new file in whatever graphics file type you specify. You can then edit the picture if you want, or use it for another purpose.

1. In Browse, select the PicturePlus field that contains the image you want to copy.
2. Choose Copy to File from the Edit menu.
3. Type a filename for the file you're creating in the File Name text box.
4. Select the file type you want in the Save File as Type drop-down list.
5. Click OK.

## Sending e-mail from Approach



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. First you select the data, and then you specify the recipient.

1. Open an Approach file and use the Find command to locate the set of records you want to mail.
2. Choose Send Mail from the File menu.
3. Select the amount of information you want to send.  
See the Details topic for the options.
4. Click OK.
5. In the Send dialog box, select "Route to addressees in sequence in the drop-down list.
6. Type the names of the addressees in the order you want them to receive the message in the To text box.
7. Type a subject in the Subject text box and a message in the Message text box if you want.
8. Click Options to set return notification and delivery priority options.
9. Click Send.



Details: Sending e-mail from Approach



You can select either or both of these options.

This option	Sends
Send snapshot of the current view	A Windows Metafile (.WMF) image of the current Approach file view
Attach Approach file with	The current Approach file with either all views or the current view only

If you attach an Approach file, you can include copies of all databases displayed in the Approach file, a blank copy of each database displayed in the Approach file, or no databases.

Use the No Databases option when the person you're sending the Approach file to has access on the same network as you do to the database files that are displayed in the Approach file.

## About creating Approach OLE objects

Object Linking and Embedding (OLE) is a system that allows different Windows applications to share live data freely. You can create Approach objects that consist of either an individual view (such as a report or form) or an entire Approach file. When you insert an Approach OLE object into another application, it generally appears as an Approach icon.

### Creating an Approach OLE object in Approach



When you create an Approach OLE object from within Approach, it becomes available to any other application for linking. You can create two types of Approach objects: a data object or a view object. A data object is a worksheet or crosstab that you CONTROL-drag and drop in a OLE 2 drop target application. A view object can be either a single view, such as a worksheet or chart, or the entire Approach file.

### Creating an Approach OLE object from another application



When you create a new Approach object from within another application, it can contain the entire Approach application or a single view. You begin by selecting the type of object: the Approach application or a view. Next, you select the database you want to use. And finally, you create the view using the appropriate Approach Assistant dialog box.

## Creating an Approach OLE object in Approach



When you create an Approach OLE object from within Approach, it becomes available to any other application for linking. You can create two types of Approach objects: a data object or a view object.

1. Open the Approach file in Browse or Preview and go to a view you want to include in the OLE object.
2. Make sure nothing is selected in the view.
3. Choose Copy View from the Edit menu.
4. Select "Copy current view only" to create an object that consists of only the current view, or select "Copy all views" to create an object that includes all of the views in the current Approach file.
5. To include data in the object, turn on "Include data" and select the amount of data.

## Details: Creating an Approach OLE object 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 local hard drive.

## Creating an Approach OLE object from another application



When you create a new Approach object from within another application, it can contain the Approach application or just a single view that you create using an Approach Assistant.

1. Embed a new OLE object following the instructions provided for the container application.
2. Select the database you want to use.
3. To include a view, select the type of Approach view you want to use in the object, use the Assistant to create the view, and click Done.
4. Close Approach.

### See also

[Creating a form](#)

[Creating a standard or columnar report](#)

[Creating a mailing label](#)

[Creating a form letter](#)

[Creating a worksheet](#)

[Creating a crosstab](#)

## About linking OLE objects from other applications

OLE lets you include different kinds of information in your database -- including graphics, charts, sounds, and text -- limited only by the server applications installed on your computer. You can place a linked object as a design element in every record or in a PicturePlus field on a single record. Depending on the server application, the object appears right in the record or as an icon. Any changes you make to the linked object from within Approach update the original object.

### Inserting a linked object



When you insert a linked object, you begin by creating the object in the server application. You can then either copy the object to the Clipboard and paste it into Approach or create a link to the object's file.

### Editing a linked object



You can easily edit a linked object by double-clicking it.

### Modifying a link



Once a link is inserted, you can specify when the object is updated, manually update an object, activate a linked object, link the object to another source (when you change the name of the source file, for example), or break the link altogether.

## Inserting a linked object



You create the object in the server application and either copy it to the Clipboard and use the Paste Special command or create a link to the object's file.

### To insert a linked object from the Clipboard:

1. In the server application, create the object you want to link to and then use the Copy command to copy it to the Clipboard.
2. Prepare the Approach file to receive the linked object by opening the Approach file and going to the view you want to use.
3. If you plan to paste the OLE object as a design element, go to Design and click where you want the object to appear. Or, if you're placing the linked object in a PicturePlus field, go to Browse, go to the record, and select the field.
4. Choose Paste Special from the Edit menu.
5. In the Paste Special dialog box, click Paste Link and turn on Display As Icon if you want the OLE object to appear as an icon.
6. Click OK.

### To link to an object's file:

1. Prepare the Approach file to receive the linked object by opening the Approach file and going to the view you want to use.
2. If you plan to paste the OLE object as a design element, go to Design and click where you want the object to appear. Or, if you're placing the linked object in a PicturePlus field, go to Browse, go to the record, and select the field.
3. Choose Object from the Create menu.
4. In the Insert Object dialog box, click Create from File.
5. Type the name of the file you want to link to or click Browse and select a file in the Browse dialog box.
6. If you want the OLE object to appear as an icon, turn on Display As Icon.
7. Click OK.

### To delete a linked object:



Select the object and choose Cut or Clear from the Edit menu.

## Editing a linked object



You can easily edit a linked object by double-clicking it.

1. Double-click the object to open the source document.
2. Make your changes to the object.
3. Choose Update from the File menu of the server application.
4. Choose Exit or Exit & Return from the File menu of the server application.



## Modifying a link



Once a link is inserted, you can modify it in a number of ways.

1. Open the Approach file that contains the linked object.
2. If the object is a design element, go to Design. If the object is in a PicturePlus field, go to the record that contains the object and select the PicturePlus field.
3. Choose Links from the Edit menu.
4. In the Links dialog box, select the link you want to modify and make the necessary changes.

## Details: Modifying a link



You can update an 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're making frequent changes to an object, 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.

To	Click
Change when the link is updated	Automatic or Manual in the Update area
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

## About embedding OLE objects

Embedding an OLE object in an Approach file creates a link to the server application the same way linking to an object does. The main difference between linking and embedding is that an embedded object is the only version of the object, whereas a linked object refers back to and can update the original source object.

### Embedding an existing OLE object



When you embed an object, you simply paste it into an Approach view. You can embed an object as a design element, or in a PicturePlus field on a single record.

### Embedding a new OLE object



You can embed an OLE object without actually creating the object first. Instead, you create and embed an object at the same time.

### Editing an embedded object



Once you've embedded an object, you can easily edit the object by double-clicking it.

## Embedding an existing OLE object



When you embed an object, you simply paste it into an Approach view. You can embed an object as a design element, or in a PicturePlus field on a single record.

### To embed an existing object:

1. In the server application, create the object you want to link to and then use the Copy command to copy it to the Clipboard.
2. Prepare the Approach file to receive the embedded object by opening the file and going to the view you want to use.
3. If you plan to paste the OLE object as a design element, go to Design and click where you want the object to appear. If you're placing the linked object in a PicturePlus field, go to Browse, go to the record, and select the field.
4. Choose Paste Special from the Edit menu.
5. In the Paste Special dialog box, click Paste.

### To delete an embedded object:



Select the object and choose Cut or Clear from the Edit menu.

## Embedding a new OLE object



You can embed an OLE object without actually creating the object first. Instead, you create and embed an object at the same time.

1. Prepare the Approach file to receive the embedded object by opening the file and going to the view you want to use.
2. If you plan to paste the OLE object as a design element, go to Design and click where you want the object to appear. If you're placing the linked object in a PicturePlus field, go to Browse, go to the record, and select the field.
3. Choose Object from the Create menu.
4. To create an object from a specific file, click Create from File in the Insert Object dialog box and select a file.
5. To create a completely new object, click Create New and select the type of object you want to create.
6. Click OK.
7. Create the object in the server application window and choose Update from that application's File menu.
8. Close the server application window and return to Approach.

## Editing an embedded object



Once you've embedded an object, you can easily edit the object by double-clicking it.

1. In Design, double-click the object you want to edit.
2. Make the changes you want in the embedded object and choose Update from the server application's File menu.
3. Close the server application window and return to the Approach window.

## Importing data into a database

## Importing an Approach file



## Exporting data from Approach

**Copying a PicturePlus picture to a file**

**Sending e-mail from Approach**

## **Creating an Approach OLE object in Approach**

**Creating an Approach OLE object from another application**

**Inserting a linked object**

## Editing a linked object

## Modifying a link



## **Embedding an existing OLE object**

## Embedding a new OLE object

## Editing an embedded object

## Help on Help





Approach online Help information is divided into several types of topics to make it easy to find just the right amount of information.

<b>This type of topic</b>	<b>Displays</b>
About	A brief overview for a group of related tasks
Steps	The steps for each task in a secondary window on the right side of your screen. You can keep a Steps topic open while you work in Approach
Details	Additional information you might need in order to complete a task
Reference	Descriptive information about SmartIcons, functions, the work area, and other elements of Approach

### Moving around in Help

Approach online Help information appears in one of two windows: the Main window, where you're reading this now, and the Steps window, which appears on the right side of the screen. You can leave the Steps window open as you work in Approach.

Icons in both windows make it easy for you to move between windows.

<b>Click this icon</b>	<b>In this window</b>	<b>To</b>
	Main	Display more specific reference information or the steps for a specific task
	Steps	View the details associated with a task
	Main or Steps	Go to the next higher topic or return to the About overview topic
	Main or Steps	Print a topic

## **File types**

A database in Approach can be a dBASE, Paradox, or FoxPro file, a Microsoft Access table, a SQL table, or an ODBC data source. This allows you to share data with people who use other applications. With any type of database, you work with the data through an Approach file, which is always in the same Approach file type.

Click one of these topics for more information:

[Database files](#)

[SQL tables](#)

[ODBC data sources](#)

## **Database files**

[About database files](#)

[dBASE III+ and dBASE IV](#)

[Paradox 3.5 and Paradox 4.0](#)

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## **SQL tables**

[About SQL tables](#)

[Oracle SQL](#)

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[Troubleshooting Oracle SQL on a server](#)

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[Troubleshooting Microsoft SQL Server](#)

[Troubleshooting Sybase SQL Server](#)

[Troubleshooting IBM DB2-MDI](#)

[Query files](#)

## Database files



You can work with database files in a dBASE, Paradox, or FoxPro format. When you create a new database in Approach, the default file type for it is dBASE IV.

### dBASE III+ and dBASE IV



Approach lets you create and use dBASE III+ and dBASE IV files. The filename extension for dBASE files is .DBF.

### Paradox 3.5 and Paradox 4.0



You can create and use Paradox 3.5 and Paradox 4.0 (including Paradox for Windows) database files in Approach. The filename extension for Paradox database files is .DB.

### FoxPro 2.1



You can create and use FoxPro 2.1 database files in Approach. The filename extension for all FoxPro files is .DBF. The FoxPro file type is similar to dBASE IV but uses a different format for memo files.

### Microsoft Access



You can create and use Microsoft Access database tables in Approach. The filename extension for Access databases is .MDB.

### Filename extensions



The filename extensions you'll probably see most often in Approach are .DBF for dBASE and FoxPro files, .DB for Paradox files, .APR for Approach files, and .MDB for Access files. But you may see additional extensions in the file dialog boxes if you select a different file type or All Files in the List Files of Type drop-down list.

### See also

[About creating and opening files](#)

[About SQL tables](#)

[ODBC data sources](#)



## dBASE III+ and dBASE IV



Approach lets you create and use dBASE III+ and dBASE IV files. The filename extension for dBASE files is .DBF. 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 5000 characters cannot be viewed in the internal memo editor for dBASE III+.



Memo fields greater than 64,000 character cannot be viewed in the internal memo editor for dBASE IV.



Approach PicturePlus fields cannot be viewed in other dBASE applications.

### Field names

The names of fields in Approach dBASE files can be up to 32 characters long. You can use any characters in a field name, including letters, whole numbers, spaces, commas, periods, and 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'll see the modified field names.

### Field lengths

You must specify a field length for text and numeric fields. The length for a text field can be from 1 to 254. The length for a numeric field can be from 1 to 19. If you want to display numbers with high precision, you can also specify up to 15 decimal places for a numeric field.

The other fields are fixed in length or do not require a specified length.

### Index files

Approach uses its own indexes for keeping track of records in a dBASE file.

If you have any other dBASE-type index files you want Approach to maintain, you can associate those indexes with a dBASE file in Approach. Approach does not use the external indexes but maintains them for other dBASE applications. For more information, see [Maintaining external indexes for a dBASE or FoxPro database](#).

### Files, records, and fields

These are the limits on files, records, and fields for the dBASE file types:

Item	Limit
File size	2GB
Database files open	Up to 255 (depending on memory)
Records per database	1,000,000,000
Record size	4KB
Fields per record	128 (dBASE III+) or 255 (dBASE IV)
Fields used in a sort	255

Size of a memo file	5KB (dBASE III+) or 64KB (dBASE IV)
Indexes per database	255

**See also**

[Creating a new database file](#)

[Opening a database created in another application](#)

[Setting database options for a dBASE or FoxPro file](#)

## Paradox 3.5 and Paradox 4.0



You can create and use Paradox 3.5 and Paradox 4.0 database files in Approach. The filename extension for Paradox database files is .DB. All of the characteristics of Paradox 4.0 described in this topic also apply to Paradox for Windows.

The Paradox file types require a key field -- a field or group of fields that uniquely identifies each record in the database. When you create a Paradox database in Approach or try to use one that does not have a key field, a dialog box appears so that you can assign one. For more information, see [Specifying a key field for a Paradox database](#).

You can share Approach Paradox files on a network.

### Viewing Paradox files in Approach

This is the main difference between viewing Paradox files in Approach and in other Paradox applications:



Memo and PicturePlus fields cannot be viewed in 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.

### Field names

The names of text, numeric, and date fields in Approach Paradox files can be up to 25 characters long. The names of time, memo, Boolean, and PicturePlus fields can be up to 18 characters long. These characters can include letters, whole numbers, spaces, commas, periods, and arithmetic signs.

A field name in Paradox cannot begin with a space and cannot contain these characters anywhere in the name:

[ , ], { , }, ( , ), " , ->

You cannot use a number sign (#) by itself in a field name, but you can combine it with other characters, such as Invoice #.

When using a Paradox field name in a formula, you must enclose it in double quotation marks if it contains a space, a period, a comma, or any of the following characters:

/ , \* , + , - , < , >

### Field lengths

You must specify a field length for text fields. The length for a text field can be from 1 to 255.

The other fields are fixed in length or do not require a specified length.

### Index files

A primary index for a Paradox file is built on the key field specified when the file is created. If you want to create additional, secondary indexes for the file in Approach, see [Creating secondary indexes for a Paradox database](#).

Approach automatically uses and maintains all indexes for Paradox database files.

Indexes in Paradox 3.5 are case-sensitive and in Paradox 4.0 are case-insensitive. If you want to change a Paradox 4.0 search to case-sensitive, see [Setting database options for a Paradox file](#).

### Files, records, and fields

These are the limits on files, records, and fields for the Paradox file types:

Item	Limit
File size	4GB
Database files open	2 to 10 (depending on the number of secondary index files open)
Records per database	2,000,000,000

Record size            1350 bytes

Fields per record    255

Fields used in a  
sort                    255

Indexes per  
database              255

**See also**

[Creating a new database file](#)

[Opening a database created in another application](#)

## FoxPro 2.1



You can create and use FoxPro 2.1 database files in Approach. The filename extension for all FoxPro files is .DBF. The FoxPro file type is similar to dBASE IV but uses a different format for memo files.

Unlike dBASE and Paradox database files, FoxPro files cannot be shared 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.

### Field names

The names of fields in Approach FoxPro files can be up to 32 characters long. You can use any characters in a field name, including letters, whole numbers, spaces, commas, periods, and 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'll see the modified field names.

### Field lengths

You must specify a field length for text and numeric fields. The length for a text field can be from 1 to 254. The length for a numeric field can be from 1 to 19. If you want to display numbers with high precision, you can also specify up to 15 decimal places.

The other fields are fixed in length or do not require a specified length.

### Index files

Approach uses its own indexes for keeping track of records in a FoxPro file.

If you have any other FoxPro-type index files you want Approach to maintain, you can associate those indexes with a FoxPro file in Approach. Approach does not use the external indexes but maintains them for other FoxPro applications. For more information, see [Maintaining external indexes for a dBASE or FoxPro database](#).

### Files, records, and fields

These are the limits on files, records, and fields for the FoxPro file type:

Item	Limit
File size	2GB
Database files open	Up to 255 (depending on memory)
Records per database	1,000,000,000
Record size	4KB
Fields per record	255
Fields used in a sort	255
Size of a memo	64KB

file

Indexes per        255  
database

**See also**

[Creating a new database file](#)

[Opening a database created in another application](#)

[Setting database options for a dBASE or FoxPro file](#)

## Microsoft Access



You can create and use Microsoft Access database tables in Approach. The filename extension for Access databases is .MDB.

To be able to create an Access table in Approach, you need to have an Access database already set up. You add the table to this database using the Approach New dialog box. The table is in the Access file type version 1.0, 1.1, or 2.0, depending on the version of the database.

You can share Access tables on a network in Approach. To set up an Access database for multiple users, see the Access documentation.

### 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 an 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.

### Field names

In an Access table in Approach, the first character in a field name must be a letter. After that, the name can have letters and whole numbers. Spaces and ODBC keywords are not allowed.

The names of text, numeric (numeric/currency), memo, and Boolean (bit) fields can be up to 32 characters long. The names of date, time, and PicturePlus (OLE object) fields can be up to 26 characters long.

### Field lengths

You must specify a field length for text fields, from 1 to 255.

The other fields are fixed in length or do not require a specified length.

### Tables, records, and fields

These are the limits on tables, records, and fields for Access tables in Approach:

Item	Limit
Table size	1GB (1.1/2.0), 128MB (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	32KB

file

Size of a                1 GB (1.1, 2.0),  
PicturePlus file      128 MB (1.0)

Indexes per            32  
database

**See also**

[Creating a new database file](#)

[Opening a table created in Microsoft Access](#)

[Setting database options for SQL, Access, ODBC, and Lotus Notes tables](#)



## Filename extensions



The filename extensions you'll probably see most often in Approach are .DBF for dBASE and FoxPro files, .DB for Paradox files, .APR for Approach files, and .MDB for Access files. But you may see additional extensions in the file dialog boxes if you select a different file type or All Files in the List Files of Type drop-down list.

### Files created or used by Approach

These are the extensions for Approach files and data-related files that Approach creates or uses. The *n*'s in some of the extensions are wildcards for individual numbers; for example, the extension .Xnn might appear in a filename as .X24.

You may see other extensions for files that another database application has created for its own purposes. For information about those extensions, see the documentation that came with the application.

Extension	File type
.ADX	Approach dBASE index
.APR	Approach file (for storing views)
.APT	Approach data and views (created when you attach an .APR file to Notes)
.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
.NDX	Non-maintained dBASE index
.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 text and spreadsheet files for creating database files and for importing and exporting data. These are the filename extensions for supported file types:

Extension	File type
.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
.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:

Extension	File type
.BMP	Windows bitmap
.EPS	Encapsulated Postscript
.GIF	Graphics interchange
.PCX	Windows Paintbrush
.TGA	Targa
.TIF	TIFF (Tagged

.WMF

Image File Format)  
Windows metafile

## About SQL tables



Approach allows you to view and work with SQL data right at your desktop. The data can be stored in Oracle SQL, Microsoft/Sybase SQL Server, or IBM DB2 tables. If you have other SQL tables that can be opened through an ODBC driver, you also have access to those tables in Approach.

### Oracle SQL



You can use Approach to work with tables in Oracle SQL, versions 6 and 7. You can work with an Oracle table on a server or on your local drive.

### SQL Server



You can use Approach to work with tables in Microsoft/Sybase SQL Server, in any version under 5.0.

### IBM DB2



You can use Approach to work with tables in IBM DB2 (Database 2) through ODBC support or through the Micro Decisionware Database Gateway (MDI), version 2.0 or above.

### Query files



Query files allow you to quickly connect to a server and get access to specific information in a SQL table. The filename extension for query files is .QRY.

### Troubleshooting Oracle SQL on a server



### Troubleshooting Oracle SQL on your local drive



### Troubleshooting Microsoft SQL Server



### Troubleshooting Sybase SQL Server



### Troubleshooting IBM DB2-MDI



### See also

[ODBC data sources](#)

[About working with SQL tables](#)

[Setting database options for SQL, Access, ODBC, and Lotus Notes tables](#)

## Oracle SQL



You can use Approach to work with tables in Oracle SQL, versions 6 and 7. 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 an 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.

In Oracle, each table is assigned a user as its owner. When Oracle tables are showing in file dialog boxes, the names of tables appear in the File Name list, the names of table owners appear in the Directories list, and the names of servers you're connected to appear in the Drives drop-down list.

### Field names

The names of text, numeric, and memo fields in Oracle SQL tables can be up to 30 characters long. The names of date, time, Boolean, and PicturePlus fields can be up to 23 characters long. An Oracle field name can include any character except for the double quotation mark (").

When using an Oracle field name in a formula, you must enclose it in double quotation marks if it contains a space, a period, a comma, or any of the following characters:

/, \*, +, -, <, >, (, )

Field names in Oracle are not case-sensitive.

### Field lengths

You must specify a field length for text fields. The length for a text field can be from 1 to 255. (In Oracle SQL 7, a text field can be up to 2000 characters. If you create a text field that is longer than 255 characters, Approach treats it as a memo field.)

The other fields are fixed in length or do not require a specified length.

### Tables, records, and fields

These are the limits on tables, records, and fields for Oracle SQL in Approach:

Item	Limit
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	64KB (Oracle 6) or 2GB (Oracle 7)
Memo and picture fields per table	1 memo field or 1 picture field (but varchar2 fields already in an Oracle 7 table are treated as memo fields in Approach)

**See also**

[Connecting to an Oracle server](#)

[Connecting to Oracle on your local drive](#)

## Troubleshooting Oracle SQL on a server



If you are having problems getting access to Oracle SQL tables on a server through Approach, check for these requirements:



The server and workstation utilities must be for Oracle version 6 or 7.



You must be running the SQL\*Net drivers specific for the type of client and server on the network. Novell networks might run SQLSPX.EXE, whereas a UNIX-based network might run SQLTCP.EXE. The drivers themselves must also be the version 6 or 7 release.



If you get the message "SQL\*Net driver not loaded," it probably means that the DOS SQLSPX driver is not loaded or that it needs to be loaded into another part of memory because it is conflicting with something else. Sometimes when a driver is loaded, it is put into a part of memory that is later overwritten or buried by another product or driver.

Experiment with the load order of the drivers in AUTOEXEC.BAT or the .DLL file. Always try to load the Oracle SQL\*Net drivers as the absolute last resident program. Do not load SQL\*Net drivers high.



Check for the presence of a CONFIG.ORA file or an ORACLE.INI file, and examine the file using a text editor or the DOS TYPE command. A CONFIG.ORA or ORACLE.INI file might look like this:

```
ORACLE_HOME=C:\ORA6
MACHINE_TYPE=2
ORACLE_TIO=VIDEO
DBA_AUTHORIZATION=approach
LOCAL=X:ORASRV
SQLPATH=C:\ORA6
```

You can determine your network type from the CONFIG.ORA or ORACLE.INI file by looking for the "login string" usually located on the "LOCAL=" or "REMOTE=" line. In the example above, the X signifies Novell's SPX. Right after the login string is the database server name, such as ORASRV. This is the default database on the network.

If this configuration is present, you should have to enter only your user name and password in the Connect dialog box. Approach will translate the remaining information by first looking at the DOS environment to find out where the CONFIG environment variable is set and then at the CONFIG.ORA or ORACLE.INI file to determine the default information. To reduce the risk of typing errors, enter only your user name and password and let Approach fill in the other text boxes.



If you get the message "invalid server name," check with the database administrator to find out what the actual server name is. Sometimes the server name is cryptic and will have an alias so that you can log into a server named "Sales" rather than the actual "W45GG16X." Approach currently requires you to enter the actual server name and will not honor an alias.



If your configuration appears to be correct in CONFIG.ORA or ORACLE.INI and you still can't get access to Oracle tables on your drive, check the available DOS conventional memory using MEM/CJMore in DOS. If you have less than 450KB of memory, remark out drivers and Terminate Stay Residents to make more memory available.

For more information about troubleshooting Oracle SQL, see your Oracle documentation.

### See also

[Connecting to an Oracle server](#)

## Troubleshooting Oracle SQL on your local drive



If you are having problems getting access to Oracle SQL tables on a local drive through Approach, check for these requirements:



Windows must be running in Standard mode. Choose the About command from the Program Manager Help menu to verify this. You may get errors if Windows is running in Enhanced mode.



You must be running version 6 or 7 of Local PC-Oracle.



When logging in, you need to enter only your user name and password. Approach gets the rest of the information from the CONFIG.ORA or ORACLE.INI file.



If you get messages like "invalid server name" or "SQL\*Net driver not loaded," check the CONFIG.ORA or ORACLE.INI file. Add a line to the file that says "LOC=S:" if there isn't one already. This tells Approach to look for a local Oracle database rather than a remote database server.



If your configuration appears to be correct in CONFIG.ORA or ORACLE.INI and you still can't get access to Oracle tables on your drive, check the available DOS conventional memory using MEM/C|More in DOS. If you have less than 450KB of memory, remark out drivers and Terminate Stay Residents to make more memory available.

For more information about troubleshooting Oracle SQL, see your Oracle documentation.

### See also

[Connecting to Oracle on your local drive](#)



## SQL Server



You can use Approach to work with tables in Microsoft/Sybase SQL Server, in any version under 5.0.

### 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 for money. 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 an 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 a SQL Server view file or a SQL Server table without a unique index or timestamp, Approach opens a read-only copy of the view file or table.

When SQL Server tables are showing in file dialog boxes, the names of tables appear in the File Name list, the names of databases (groups of tables) appear in the Directories list, and the names of servers you're connected to appear in the Drives drop-down list.

### Field names

The names of text, numeric, memo, and Boolean fields in SQL Server tables can be up to 30 characters long. The names of date, time, and PicturePlus fields can be up to 24 characters long.

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 symbols #, \_, and \$. Spaces are not allowed.

### Field lengths

You must specify a field length for text fields. The length for a text field can be from 1 to 255.

The other fields are fixed in length or do not require a specified length.

### Table names

A table name that begins with a number sign (#) is for a temporary table. Other object names cannot begin with a #.

Table names have the same restrictions as field names.

### Tables, records, and fields

These are the limits on tables, records, and fields for SQL Server in Approach:

Item	Limit
Table size	Limited only by disk space
Tables open at a time	255
Records per table	Limited only by disk space
Record size	1962 bytes, not including picture and memo fields
Fields per record	250
Fields used in a sort	16

Size of a memo or picture field	2GB
Memo and picture fields per table	Limited only by disk space

**See also**

[Connecting to a server in SQL Server](#)

## Troubleshooting Microsoft SQL Server



### Opening SQL Server tables

If you are having problems getting access to Microsoft SQL Server tables through Approach, check for these requirements:



Check the spelling of the server name and user name/password combination. SQL Server is case-sensitive, so the server name "SERVER" is not the same as "Server," and both are different from "SeRvEr".



If you are accessing data through a Novell network, make sure the Named Pipes (DOSNP.EXE) and related NETAPI.DLL files are from the updated OS/2 Requester Utilities disk from Novell. The file dates on the updated files should be no earlier than 6/24/91 for NETAPI.DLL and 4/2/92 for DOSNP.EXE. You can obtain these files from Novell directly or via Netwire (Novell's CompuServe file connection). The files must be installed both on the client workstation running Approach and on the OS/2 machine running SQL Server.

### Abnormal behavior in SQL tables

Sometimes when you open a SQL Server table in Approach, you may notice abnormal behavior, such as no data even though the status bar might say "Found 300 of 300." This is usually because you do not have the most recent version of the W3DBLIB.DLL and DBNMP3.DLL files. These .DLL files are installed by other products in the Windows/System directory and may be older than the versions installed by Approach; the files can also appear in other directories. Approach may not overwrite existing .DLL files during installation. If the correct versions of these .DLL files are not installed, you may get erratic behavior in a table.

Use a File Find utility to locate the W3DBLIB.DLL and DBNMP3.DL files, and rename or delete all occurrences of these files on your hard drive or path. After verifying that the files no longer exist, re-install Approach. This will install all the correct versions of the .DLL files. Older products will still work with the newer .DLL files because the files are made to be downward-compatible.

For more information about troubleshooting SQL Server, see your SQL Server documentation.

### See also

[Connecting to a server in SQL Server](#)

## Troubleshooting Sybase SQL Server



### Opening SQL Server tables

If you are having problems getting access to Sybase SQL Server tables through Approach, check for these requirements:



Check the spelling of the server name and user name/password combination. SQL Server is case-sensitive, so the server name "SERVER" is not the same as "Server," and both are different from "SeRvEr".



Confirm that the Netlib .DLL file from Sybase is in your Windows\System directory or somewhere in the path.

### Sybase SQL Server and IPC connections

Sybase SQL Server uses the same client application API and the same SQL dialect as Microsoft SQL Server, but it uses different IPC mechanisms to talk to the server application. Microsoft SQL Server requires the Named Pipes transport, whereas Sybase SQL Server can use minicomputer protocols like TCP/IP and DECnet.

Currently, a client using a single transportation IPC stack will not have access to Microsoft and Sybase SQL Server at the same time. Some users have set up dual-transport protocol stacks in order to achieve the connection. Although Named Pipes is not necessary, you do need to have an additional .DLL file from Sybase in your Windows/System directory that is specific to the type of network you are running in order to communicate with the database server. This file is included in the Netlib client utilities from Sybase.

Make sure you have the correct Netlib utilities for your particular client environment; for example, TCP/IP. You can get the most recent version from Sybase. Typically, the utilities that ship with version 4.x or newer of Sybase are sufficient.

### Abnormal behavior in SQL tables

Sometimes when you open a SQL Server table in Approach, you may notice abnormal behavior, such as no data even though the status bar might say "Found 300 of 300." This is usually because you do not have the most recent version of the W3DBLIB.DLL and DBNMP3.DLL files. These .DLL files are installed by other products in the Windows/System directory and may be older than the versions installed by Approach; the files can also appear in other directories. Approach may not overwrite existing .DLL files during installation. If the correct versions of these .DLL files are not installed, you may get erratic behavior in a table.

Use a File Find utility to locate the W3DBLIB.DLL and DBNMP3.DL files, and rename or delete all occurrences of these files on your hard drive or path. After verifying that the files no longer exist, re-install Approach. This will install all the correct versions of the .DLL files. Older products will still work with the newer .DLL files because the files are made to be downward-compatible.

For more information about troubleshooting SQL Server, see your SQL Server documentation.

### See also

[Connecting to a server in SQL Server](#)

## IBM DB2



You can use Approach to open IBM DB2/2, DB2/6000, and DB2/HP-UX tables 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; and 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 a 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.

In DB2, each table is assigned a user as its owner. When DB2 tables are showing in file dialog boxes, the names of tables appear in the File Name list, the names of table owners appear in the Directories list, and the names of servers you're connected to appear in the Drives drop-down list.

### Field names

In a DB2 table you open through ODBC, the names of PicturePlus fields can be up to 12 characters long and of Boolean fields can be up to 11 characters long. The names of other types of fields can be up to 18 characters long. The first character in a field name must be a letter. After that, the name can have letters and whole numbers. Spaces and ODBC keywords are not allowed.

In a DB2 table you open through MDI, the names of Boolean fields can be up to 11 characters long. The names of other types of fields can be up to 18 characters long. These characters can include letters, whole numbers, and the underscore character (\_). The first character in a field name must be a letter.

### Field lengths

You must specify a field length for text fields. The length for a text field can be from 1 to 254.

The other fields are fixed in length or do not require a specified length.

### Tables, records, and fields

These are the limits on tables, records, and fields for DB2 in Approach:

Item	Limit
Table size	Limited only by disk space
Tables open at a time	255
Records per table	Limited only by disk space
Record size	2KB or 4KB
Fields per record	300
Fields used in a sort	As many fields as are in the table
Memo and picture fields per	Limited only by disk space

table (available only for  
DB2 tables you  
open through  
ODBC)

**See also**

[Connecting to an IBM DB2 or SQL/DS server through ODBC](#)

[Connecting to an IBM DB2 server through MDI](#)

## Troubleshooting IBM DB2-MDI



### Setting up the Micro Decisionware (MDI) Gateway

The Micro Decisionware (MDI) Gateway makes DB2, an IBM mini or mainframe database, look like SQL Server to client applications. You need these three elements to set up an MDI system for DB2:



A client application (Approach) that makes calls that are nearly identical to SQL Server



A dedicated OS/2 machine to run the part of the gateway software that talks to a CICS process on the IBM mini or mainframe computer (via L.U. 6.2, an IBM SNA communication standard)



Micro Decisionware's product, running as a CICS process, which communicates directly with the DB2 database

Named Pipes is used as the transport mechanism between the client application and the MDI gateway on the OS/2 machine. All issues for SQL Server also apply to DB2.

The MDI gateway must be version 2.0 or later.

### Getting access to the system table

Make sure that you have access permission to the Catalog Stored Procedures (CSP). Following MDI specifications, Approach uses CSP to determine which table access you have. (Older products try to get access to the system table directly. ) For example, if you are not using CSP you will be able to see the table names in Q+E but not in Approach. This is often evidence that you do not have Select access to CSP.

If you have access to the system table directly, you may view files that you shouldn't and may modify or delete files that should not be altered. The CSP is something like a "view" or an alias of the system table, allowing a database administrator to grant selective access to tables and items you need to see and restrict other items that are not necessary for you to view or modify.

The system table is also subject to change, which can sometimes cause a product to work improperly. The CSP eliminates these problems and is the standard method of access that MDI recommends in versions 2.0 and later of their DB2 gateway.

Using the CSP method is somewhat slower than using the system table directly because of the processing required.

For more information about troubleshooting IBM DB2-MDI, see your DB2 and MDI documentation.

### See also

[Connecting to an IBM DB2-MDI server](#)

## Query files



Query files allow you to quickly connect to a server and get access to specific information in a SQL table. The filename extension for query files is .QRY.

You can 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 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 be in any order except that the Select statement must be last.

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 non-alphanumeric 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

Path=ORASRV

User=Rich

Password=sequoia

Select Name,Address,City From Employee

### See also

[Creating a query file in Approach](#)

[Opening a query file in Approach](#)

[Saving or exporting data from a query](#)



## ODBC data sources



Approach is fully compatible with the Open Database Connectivity standard (ODBC). You can use a Level 1 Tier 1 ODBC drive engine or a Level 1 Tier2 ODBC driver to get access to ODBC data sources in Approach.

### 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 an 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.

### Field names

The first character in a field name must be a letter. After that, the name can have letters and whole numbers. Spaces and ODBC keywords are not allowed.

The limits on the length of a field name depend on whether the ODBC driver supports the field's data type:



Text (Char or Var Char)

30 characters or limit of driver (always supported)



Numeric (Bit Int, Tiny Int, Small Int, Real, Numeric, Decimal, Integer, Double, or Float)

If driver supports data type: 30 or limit of driver

If driver does not support data type: 30 or limit of driver; stored as text



Memo (Long Var Char)

If driver supports data type: 30 or limit of driver

If driver does not support data type: Field is disabled



Boolean (Bit)

If driver supports data type: 30 or limit of driver

If driver does not support data type: (30 or limit of driver) minus 7; stored as text



Date (Date)

If driver supports data type: 30 or limit of driver

If driver does not support data type: (30 or limit of driver) minus 6; stored as timestamp (if supported) or as text



Time (Time)

If driver supports data type: 30 or limit of driver

If driver does not support data type: (30 or limit of driver) minus 6; stored as timestamp (if supported) or as text



PicturePlus (Long Var Binary)

If driver supports data type: (30 or limit of driver) minus 6

If driver does not support data type: Field is disabled

If two lengths are given for a field name (such as "30 or limit of driver"), the field name can be the shorter of the two lengths.

### Field lengths

You must specify a field length for text fields, from 1 to the limit of the ODBC driver. Most drivers have a limit of 255. The other fields are fixed in length or do not require a specified length.

**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.

**See also**

[About working with ODBC data sources](#)

## Find request

In Find, you create a find request that tells Approach what to search for. A new find request is a blank copy of the view you're currently using. You enter the search criteria in fields of the find request. If the view contains a summary field, you see the summary field along with the other fields in the find request.

### See also

[Repeating a search](#)

[Showing all records](#)

[Creating a find request](#)

## Find Special

You use the Find Special dialog box to find duplicate or unique records. You can find all records that have either the same value in a field (duplicate records) or a unique value.

When you find duplicate records, Approach searches in the current found set for duplicates of any value you specify. You can find all duplicate records or just the extra duplicates.

When you find unique records, Approach searches in the current found set for each occurrence of a unique value.

### See also

[Finding duplicate values](#)

[Finding unique values](#)

## Sort

You use the Sort dialog box to select the fields that Approach uses to sort records in a database. For each field, you can specify ascending or descending order.

### See also

[Changing the sort order](#)

[Showing records in their original order](#)

[Sorting records by a field in a view](#)

## **Align**

You use the Align dialog box to align selected objects along their tops, bottoms, sides, or centers. You can also distribute objects vertically or horizontally to place an equal amount of space between them.

### **See also**

[Aligning and distributing objects](#)

## **Approach File Info**

You use the Approach File Info dialog box to provide a description of an Approach file and to enable a variable field for Notes F/X 1.1. This dialog box also displays information about the Approach file, including size, number of views, and date and time the file was created.

### **See also**

[Enabling a variable field for Notes F/X 1.1](#)

## Define Checkboxes

You use the Define Checkboxes dialog box to specify values for a field's checkboxes.

### See also

[Displaying a field as a checkbox](#)



## Define Radio Buttons

You use the Define Radio Buttons dialog box to specify values for a field's radio buttons.

### See also

[Displaying a field as radio buttons](#)

## Macros

You use the Macros dialog box to create a new macro or to select an existing macro for editing or deleting.

### See also

[Defining a macro](#)

[Editing a macro](#)

[Deleting a macro](#)

## Define Macros: Browse

You use the Browse command to switch to Browse. This command has no options.

### See also

[Defining a macro](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Close

You use the Close command to close the current Approach file. You can also automatically disconnect from the server while the macro runs.

### See also

[Defining a macro](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Delete

You use the Delete command to delete the current record, found set, or Approach file. The "Don't show warning" option deletes the item you've selected without opening alert boxes while the macro runs.

### See also

[Defining a macro](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Dial

You use the Dial command to dial the telephone number in the field you select. Approach uses the modem settings you specify in Dialer preferences. This command has no options.

### See also

[Defining a macro](#)

[Setting dialing preferences](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Edit

You use this panel of the Define Macros dialog box to select the Cut, Copy, Paste, or Select All command. You can also have the macro open the Paste Special dialog box and wait for input while the macro runs. The Edit command is used mostly for putting data on the Clipboard or for pasting it.

### See also

[Defining a macro](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## **Define Macros: Enter**

You use the Enter command to accept the current record (this is the same as pressing the ENTER key or clicking the Enter icon). This command has no options.

### **See also**

[Defining a macro](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)



## Define Macros: Exit

You use the Exit command to exit Approach. This command has no options.

### See also

[Defining a macro](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Export

You use the Export command to export data from Approach. You can set export options now (click Edit Export), or set Approach to open the Export Data dialog box and wait for input while the macro runs.

### See also

[Defining a macro](#)

[Exporting data from Approach](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Find

You use the Find command to perform a stored find request, to show all records in the database file, or to refresh the found set. You can set Approach to open a find request or to open the Find Again dialog box and wait for input while the macro runs. The stored find request can be a new one you define now (click New Find) or one that has already been defined. You can also edit a stored find by clicking Edit Find. If no records are found, you can select another macro for Approach to run.

### See also

[Defining a macro](#)

[Finding a set of records with a macro](#)

[Creating a find request](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Find Special

You use the Find Special command to find duplicate or unique records. You can set Find Special options now (click Edit Find Special), or set Approach to open the Find Special dialog box and wait for input while the macro runs.

### See also

[Defining a macro](#)

[Finding duplicate values](#)

[Finding unique values](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Records

You use the Records command to go to a record, hide a record, duplicate a record, or create a new record.

### See also

[Defining a macro](#)

[Moving to another record](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Import

You use the Import command to import data or views into Approach. You can set import options now, or set Approach to open the Import Data dialog box and wait for input while the macro runs. You can set up a new import (click Define Import File) or edit an existing import setup (click Edit Import Setup).

### See also

[Defining a macro](#)

[Importing a database file](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Mail

You use the Mail command to e-mail a view. You can set mailing options now (click Edit Send Mail), or set Approach to open the Send Mail dialog box and wait for input while the macro runs.

### See also

[Defining a macro](#)

[Sending e-mail from Approach](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Menu Switch

You use the Menu Switch command to switch to another menu. You use this panel to select the menu you want to switch to. You can also create a custom menu now (click Customize Menus).

### See also

[Defining a macro](#)

[Customizing menus](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)



## Define Macros: Message

You use the Message command to create a boxed message that appears while the macro runs.

### See also

[Defining a macro](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Open

You use the Open command to open a file while the macro runs. You can set file-opening options now (click Files), or set Approach to open the Open dialog box and wait for input while the macro runs. The file can be another Approach file, a different database file, or another application, such as Lotus 1-2-3. You can even open a communication application that uses a script to upload your data to another computer.

### See also

[Defining a macro](#)

[Opening an Approach file](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Preview

You use the Preview command to switch to Preview. There are no options for this command.

### See also

[Defining a macro](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Print

You use the Print command to print a view. You can set printing options now (click Edit Print), or set Approach to open the Print dialog box and wait for input while the macro runs.

### See also

[Defining a macro](#)

[Printing a view](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Replicate

You use the Replicate command to replicate a Notes database. You can set replication options now (click Edit Replicate), or set Approach to open the Replicate Notes Database dialog box and wait for input while the macro runs.

### See also

[Defining a macro](#)

[Replicating a new Notes database](#)

[Replicating a Notes database with a server](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Run

You use the Run command to set a condition and either run another macro or continue with the current macro depending on whether the condition is met. You set the condition in a formula (click Define Formula), and specify a macro to run when the result of the condition is true and a macro to run when the result is false. You can also set Approach to return to the current macro after running another macro.

### See also

[Defining a macro](#)

[Defining a conditional macro](#)

[Using an If calculation in a macro](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Save

You use the Save command to save the current Approach file. You can either save the current Approach file, or you can set Approach to open the Save As dialog box and wait for input while the macro runs.

### See also

[Defining a macro](#)

[Saving a copy of an Approach file and a database file](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Zoom

You use this panel of the Define Macros dialog box to set the options for the Zoom command. The Zoom command scales the current window by zooming in or out.

### See also

[Defining a macro](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)



## Define Macros: Set

You use the Set command to set a value in any uncalculated field. You specify the field to be set and the value to use. You can type a value or define a formula (click Formula).

### See also

[Defining a macro](#)

[Setting up a formula for a calculated field](#)

[Setting a value in a field with a macro](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Sort

You use the Sort command to sort database records. You can set sort criteria when you define the macro, or set Approach to open the Sort dialog box and wait for input while the macro runs.

### See also

[Defining a macro](#)

[Specifying a sort order](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Spell Check

You use the Spell Check command to check the spelling of data in records and text in memo fields (in Browse) or the spelling of text in text objects (in Design).

### See also

[Defining a macro](#)

[Running the spelling checker](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: Tab

You use the Tab command to tab forward or backward among the fields in a record. You can specify the number of times to tab.

To view or change the data entry order for fields and buttons on a form, use the Show Data Entry Order command in the View menu in Design.

### See also

[Defining a macro](#)

[Changing the data entry order for fields](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## Define Macros: View

You use the View command to go to another view, show a view, or hide a view. You can select the view to go to, or show or hide the current view.

### See also

[Defining a macro](#)

[Switching to another view with a macro](#)

[About macro commands](#)

[Adding and removing commands in a macro](#)

## **Preferences: Display**

You use the Preferences Display panel to determine the window elements that appear in the Approach work area, the default named style for Assistants, the elements that appear in Design, and the settings for the design grid.

### **See also**

[Setting display defaults](#)

## **Preferences: Dialer**

You use the Preferences Dialer panel to define a standard modem setting to be used whenever you have Approach dial a telephone number. Modem settings include the name of the serial port the modem is connected to, the modem's baud rate (speed), and the type of dialing service to use.

### **See also**

[Setting dialing preferences](#)

## Preferences: Database

You use the Preferences Database panel for a dBASE or FoxPro database to make the file read-only in the current Approach file, to change to another character set, or to compress the file for more efficient storage. You can use either the DOS character set or the Windows character set.

You use the Preferences Database panel for a Paradox database to make the file read-only in the current Approach file, to change to another character set, and (for Paradox 4.0) to change case sensitivity for searches. You can use either the DOS character set or the Windows character set.

You use the Preferences Database panel for SQL to make all SQL and ODBC tables you work with in Approach read-only, to display SQL system tables in file dialog boxes, and to cache the names of SQL tables. These options are saved in your APPROACH.INI file and affect all SQL tables you open or create in Approach.

### See also

[Setting database options for a dBASE or FoxPro file](#)

[Setting database options for a Paradox file](#)

[Setting database options for all SQL tables](#)



## Preferences: General

You use the Preferences General panel to make the ENTER key work the same way in Browse as the TAB key, to open the Add Field dialog box right after you define a field, to show a Cancel Macro dialog box whenever you run a macro, to download the current data set whenever you go to Preview, and to allow two network users to edit a record at the same time using optimistic record locking.

### See also

[Setting general working preferences](#)

## Preferences: Index

You use the Preferences Index panel for a dBASE or FoxPro database to create an association between a database file and any indexes you may have created in dBASE or FoxPro. Associating an index and a database field allows Approach to maintain an index even though Approach doesn't use the index. You can also close an external index so that it will no longer be maintained.

You use the Preferences Index panel for a Paradox database to create additional, secondary indexes in Approach for the database file. Approach automatically uses and maintains all indexes for Paradox database files.

### See also

[Maintaining external indexes for a dBASE or FoxPro database](#)

[Creating secondary indexes for a Paradox database](#)

## Preferences: Password

You use the Preferences Password panel to define passwords for database files and Approach files. You can give a database file a read/write password or a read-only password.

### See also

[Defining a password for a file](#)

## Preferences: Order

You use the Preferences Order panel to set a new default order for records to appear in Browse. When you show all records after sorting them, the records return to the order you specify here.

### See also

[Setting a default order for records](#)

## **Form Assistant: Layout**

You use the Form Assistant Layout panel to name a form, select a SmartMaster style, and select a SmartMaster layout.

### **See also**

[Creating a form](#)

## **Form Assistant: Fields**

You use the Form Assistant Fields panel to select the fields that appear on a form.

### **See also**

[Creating a form](#)

## **Form Assistant: Panel**

You use the Form Assistant Panel panel to select the fields that appear in a repeating panel.

### **See also**

[Creating a form](#)

## Report Assistant: Layout

You use the Report Assistant Layout panel to name a report, select a SmartMaster style, and select a SmartMaster layout.

### See also

[Creating a standard or columnar report](#)

[Creating a report with summaries](#)

[Creating a repeating panel report](#)



## Report Assistant: Fields

You use the Report Assistant Fields panel to select the fields that appear on a report.

### See also

[Creating a standard or columnar report](#)

[Creating a report with summaries](#)

[Creating a repeating panel report](#)

## **Report Assistant: Trailing Summary**

You use the Report Assistant Trailing Summary panel to select the field used to group records for a trailing summary and the calculation used in the trailing summary.

### **See also**

[Creating a report with summaries](#)

[Creating a repeating panel report](#)

## **Report Assistant: Leading Summary**

You use the Report Assistant Leading Summary panel to select the field used to group records for a leading summary and the calculation used in the leading summary.

### **See also**

[Creating a report with summaries](#)

## **Report Assistant: Grand Summary**

You use the Report Assistant Grand Summary panel to select the field used to group records for a grand summary and the calculation used in the grand summary.

### **See also**

[Creating a report with summaries](#)

## **Report Assistant: Repeating Fields**

You use the Report Assistant Repeating Fields panel to select the database and fields you want for the repeating portion of a repeating panel report.

### **See also**

[Creating a repeating panel report](#)

## **Mailing Label Assistant: Basics**

You use the Mailing Label Assistant Basics panel to select a SmartMaster layout for mailing labels, select and position the mailing label's fields, and select a label code.

### **See also**

[Creating a mailing label](#)

## **Mailing Label Assistant: Options**

You use the Mailing Label Assistant Options panel to give custom mailing labels a name; to set the labels' size, page margins, and space between labels; to specify the number of labels that appear on a page and their arrangement; and to set printing options if necessary.

### **See also**

[Creating a mailing label](#)

[Creating a custom mailing label format](#)

## Mailing Label Options

You use the Mailing Label Options dialog box to change the current custom mailing label definition, select a different label definition, or create a new one. You can also delete a custom label definition.

### See also

[Creating a custom mailing label format](#)

[Creating a mailing label](#)



## **Form Letter Assistant: Layout**

You use the Form Letter Assistant Layout panel to name a form letter, select a SmartMaster style, and select a SmartMaster layout.

### **See also**

[Creating a form letter](#)

## **Form Letter Assistant: Return Address**

You use the Form Letter Assistant Return Address panel to type the return address that appears in a form letter.

### **See also**

[Creating a form letter](#)

## **Form Letter Assistant: Inside Address**

You use the Form Letter Assistant Inside Address panel to select a SmartMaster Address layout and the fields that appear in a form letter's address.

### **See also**

[Creating a form letter](#)

## **Form Letter Assistant: Salutation**

You use the Form Letter Assistant Salutation panel to select the fields that appear in a form letter's salutation. You can also change the wording and punctuation of the salutation.

### **See also**

[Creating a form letter](#)

## **Form Letter Assistant: Close**

You use the Form Letter Assistant Close panel to type the closing that appears in a form letter.

### **See also**

[Creating a form letter](#)

## **Worksheet Assistant**

You use the Worksheet Assistant to select the fields that appear on a worksheet.

### **See also**

[Creating a worksheet](#)

## **Crosstab Assistant: Rows**

You use the Crosstab Assistant Rows panel to select the fields that appear in a crosstab's rows.

### **See also**

[Creating a crosstab](#)

## **Crosstab Assistant: Columns**

You use the Crosstab Assistant Columns panel to select the fields that appear in a crosstab's columns.

### **See also**

[Creating a crosstab](#)



## **Crosstab Assistant: Values**

You use the Crosstab Assistant Values panel to select a formula to be used in calculating the values in a crosstab's body cells and to select the field to be calculated.

### **See also**

[Creating a crosstab](#)

## **Chart Assistant: Layout**

You use the Chart Assistant Layout panel to name a chart, select a SmartMaster style, and select a SmartMaster layout.

### **See also**

[Creating a chart using the Chart Assistant](#)

## **Chart Assistant: X Axis**

You use the Chart Assistant X Axis panel to select the field that appears in a chart's x-axis.

### **See also**

[Creating a chart using the Chart Assistant](#)

## **Chart Assistant: Y Axis**

You use the Chart Assistant Y Axis panel to select the field that appears in a chart's y-axis.

### **See also**

[Creating a chart using the Chart Assistant](#)

## **Chart Assistant: Series**

You use the Chart Assistant Series panel to select the field used for grouping a chart's series.

### **See also**

[Creating a chart using the Chart Assistant](#)

## **Chart Assistant: Pie Fields**

You use the Chart Assistant Pie Fields panel to select the field that appears in a chart's pie wedges.

### **See also**

[Creating a chart using the Chart Assistant](#)

## Links

You use the Link dialog box to change when a link is updated, manually update a link, activate a linked object, change the link to another source file, or break the link and convert the object into a graphic element.

### See also

[Modifying a link](#)

## **Choose Key Field**

You use the Choose Key Field dialog box to specify a key field when you save or create a Paradox database.

### **See also**

[Specifying a key field for a Paradox database](#)



## Confirm Password

You use the Confirm Password dialog box to confirm a new password being assigned to a database file.

### See also

[Defining a password for a file](#)

[Entering a password](#)

## Confirm Approach File Password

You use the Confirm Approach File Password dialog box to confirm a new password being assigned to an Approach file.

### See also

[Defining a password for a file](#)

[Entering a password](#)

## **dBASE Network Connection**

You use the dBASE Network Connection dialog box to specify file-sharing options for dBASE and FoxPro database files on a network.

### **See also**

[Setting file-sharing options for dBASE files](#)

## **Connect to DB2-MDI**

You use the Connect to DB2-MDI dialog box to connect to an IBM DB2-MDI server.

### **See also**

[Connecting to an IBM DB2-MDI server](#)

## Paradox Network Connection

You use the Paradox Network Connection dialog box to specify file-sharing options for Paradox database files on a network.

### See also

[Setting file-sharing options for Paradox files](#)

## **Connect to ORACLE**

You use the Connect to ORACLE dialog box to connect to an ORACLE server.

### **See also**

[Connecting to an Oracle server](#)

## **Connect to SQL Server**

You use the Connect to SQL Server dialog box to connect to a server in SQL Server.

### **See also**

[Connecting to a server in SQL Server](#)

## **Copy View to Clipboard**

You use the Copy View to Clipboard dialog box to copy the current view or all views to the Clipboard. You can copy the view with or without data.

### **See also**

[Creating an Approach OLE object in Approach](#)



## Connect Options

You use the Connect Options dialog box to set system catalog and tablespace options when connecting to an IBM DB2-MDI server.

### See also

[Connecting to an IBM DB2-MDI server](#)

## Enter Password

You use the Enter Password dialog box to type a password associated with a database file.

### See also

[Entering a password](#)

[Defining a password for a file](#)

## Named Styles

You use the Named Styles dialog box to create a new named style, or to select a named style for editing, copying, or deleting.

### See also

[Defining and saving a named style](#)

## Define Style: Font

You use the Define Style Font panel to define text attributes for data in fields and for text in text objects.

### See also

[Defining and saving a named style](#)

[Changing text attributes](#)

## Define Style: Label

You use the Define Style Label panel to define the position and text attributes for field labels.

### See also

[Defining and saving a named style](#)

[Changing text attributes](#)

## **Define Style: Lines and Colors**

You use the Define Style Lines and Colors panel to define properties for widths, colors, frames, and field borders.

### **See also**

[Defining and saving a named style](#)

[Changing line or color settings for an object](#)

## **Define Style: Picture**

You use the Define Style Picture panel to define properties for PicturePlus fields.

### **See also**

[Defining and saving a named style](#)

[Changing display options for a PicturePlus field](#)

## Define Style: Background

You use the Define Style Background panel to define properties for the background of views.

### See also

[Defining and saving a named style](#)

[Changing line or color settings for a view](#)



## Field Definition

You use the Field Definition dialog box to add, modify, or delete fields in a database.

### See also

[Adding fields to a database](#)

## Field Definition: Default Value

You use the Field Definition Default Value panel to specify a default value for a field.

### See also

[Entering data automatically](#)

## Field Definition: Define Formula

You use the Field Definition Define Formula panel to define a formula for a calculated field.

### See also

[Setting up a formula for a calculated field](#)

[Setting up a formula for a summary calculated field](#)

## Field Definition: PicturePlus Options

You use the Field Definition PicturePlus Options panel to set OLE options for a PicturePlus field.

### See also

[Setting OLE options for a PicturePlus field](#)

## Field Definition: Validation

You use the Field Definition Validation panel to define validation options for data in a field.

### See also

[Verifying the accuracy of entered data](#)

## Field Definition: Define Summary

You use the Field Definition Define Summary panel to define a calculation for a summary field.

### See also

[Setting up a formula for a calculated field](#)

[Setting up a formula for a summary calculated field](#)

## Field Definition: Variable Options

You use the Field Definition Variable Options panel to set data options for a variable field.

### See also

[Setting data options for a variable field](#)

## **Import Approach File**

You use the Import Approach File dialog box to select an Approach file to import.

### **See also**

[Importing an Approach file](#)



## Import Setup

You use the Import Setup and Import Approach File Setup dialog boxes to align fields in the file you're importing with fields in the current database and to select a field to import. If you're importing a database, you also select the import method and the fields you want to match if the method includes matching.

### See also

[Importing an Approach file](#)

[Importing data into a database](#)

## Select Range

You use the Select Range dialog box to select a Lotus 1-2-3 range to open as a database file.

### See also

[Opening a named range from a Lotus 1-2-3 spreadsheet](#)

## **Edit Dictionary**

You use the Edit Dictionary dialog box to add, change, or delete words in your personal dictionary.

### **See also**

[Editing the user dictionary](#)

[Running the spelling checker](#)

## Summary

You use the Summary dialog box to add a summary panel to a report. You select the way you want to summarize records, the field to summarize on, and the alignment and location of the summary panel.

### See also

[Adding a summary panel to a report](#)

## Change Icon

You use the Change Icon dialog box to change the icon used to represent an OLE object.

### See also

[Embedding a new OLE object](#)

[Embedding an existing OLE object](#)

## Copy to File

You use the Copy to File dialog box to specify the name of a file to which you're copying the contents of a PicturePlus field.

### See also

[Copying a PicturePlus picture to a file](#)

## Export Data

You use the Export Data dialog box to type the name for a file you're exporting to, to specify where you want the file to be saved, to select a database file type, and to select the amount of data to export.

### See also

[Exporting data from Approach](#)

## Formula

You use the Formula dialog box to edit a formula that is part of a field definition or to build a formula for a macro.

### See also

[Setting up a formula for a calculated field](#)

[Using an IF calculation in a macro](#)



## **Fixed-Length Text File Setup**

You use the Fixed-Length Text File Setup dialog box to select the character set used in a fixed-length text file and to define the fields in the file.

### **See also**

[Creating a database from a fixed-length text file](#)

## **Fill Field**

You use the Fill Field dialog box to enter or edit text used to fill a field.

### **See also**

[Filling a field with a new value](#)

## Define Filter

You use the Define Filter dialog box to define a set of conditions for displaying a subset of field data in a drop-down list.

### See also

[Displaying a field as a drop-down list](#)

## Open

You use the Open dialog box to select a file to open.

### See also

[Opening an Approach file](#)

[Opening a database created in another application](#)

## **Go To Record**

You use the Go To Record dialog box to type the record number of a record you want to go to.

### **See also**

[Moving to a specific record](#)

## Add Field

You use the Add Field dialog box to add a field to a view.

### See also

[Adding a field as a field box](#)

[Adding a field to a repeating panel](#)

[Adding a field to a form letter](#)

[Adding a database field to a worksheet](#)

## Join

You use the Join dialog box to establish a link between two or more databases. You can also use the dialog box to unjoin joined databases.

### See also

[Joining database files](#)

[Unjoining database files](#)

## Relational Options

You use the Relational Options dialog box to set options for inserting or deleting records automatically in joined databases.

### See also

[Setting options for a join](#)



## Language Options

You use the Language Options dialog box to switch to another dictionary when you check spelling.

### See also

[Changing to another main dictionary](#)

[Running the spelling checker](#)

## Define Main Database

You use the Define Main Database dialog box to select the main database for a view that contains fields from two or more joined databases.

### See also

[Creating a chart using the Chart Assistant](#)

[Creating a crosstab](#)

[Creating a form](#)

[Creating a form](#)

[Creating a mailing label](#)

[Creating a standard report](#)

[Creating a worksheet](#)

## Customize Menus

You use the Customize Menus dialog box to create, edit, or delete custom menu bars.

### See also

[Customizing menus](#)

## **Define Custom Menu Bar**

You use the Define Custom Menu Bar dialog box to create a custom menu bar by specifying its menus and commands.

### **See also**

[Customizing menus](#)

## More Macros

You use the More Macros dialog box to select a macro to be run when you have more macros than will fit in the Run Macro submenu.

### See also

[Running a macro](#)

## **Paste from File**

Use the Paste From File dialog box to paste a picture into the background of a view or into a PicturePluss field.

### **See also**

[Pasting a picture \(Design\)](#)

[Pasting a picture \(Browse\)](#)

## **Paste Special**

You use the Paste Special dialog box to embed OLE objects in an Approach file.

### **See also**

[Embedding an existing OLE object](#)

## Print

You use the Print dialog box to print a view.

## See also

[Printing a view](#)



## **New Notes Replica**

You use the New Notes Replica dialog box to replicate a new Lotus Notes database.

### **See also**

[Replicating a new Notes database](#)

## **Replicate with Notes Server**

You use the Replicate with Notes Server dialog box to replicate a Notes database with the server.

### **See also**

[Replicating a Notes database with a server](#)

## **Save Approach File**

You use the Save Approach File dialog box to specify a name and location for a new Approach file.

### **See also**

[Saving an Approach file](#)

## **Save Database As**

You use the Save Database As dialog box to specify a name and location for a database file when you save a copy of an Approach file.

### **See also**

[Saving a copy of an Approach file and a database file](#)

## Save Approach File As

You use the Save Approach File As dialog box to specify a name and location when you save a copy of an Approach file.

### See also

[Saving a copy of an Approach file and a database file](#)

## **Send Mail**

You use the Send Mail dialog box to specify the views and data to include when you send e-mail from Approach.

### **See also**

[Sending e-mail from Approach](#)

## Spell Check

You use the Spell Check dialog box to check the spelling in database records and Approach files. In Browse, you check the spelling of data in records, including text in memo fields. In Design, you check the spelling of text in field labels and text objects, including text in the body of form letters.

### See also

[Running the spelling checker](#)

## Speller Options

You use the Speller Options dialog box to tell Approach the type of errors to find or ignore when checking spelling.

### See also

[Setting options for checking spelling](#)

[Running the spelling checker](#)



## Welcome

You use the Welcome dialog box to create a new database file or to select a file to open. If you're creating a file, you can select a template in the Welcome dialog box.

### See also

[Creating a new database file](#)

## Text File Options

You use the Text File Options dialog box to select the character set used in a delimited text file and to specify the field separators in the file.

### See also

[Creating a database from a delimited text file](#)

## Drop-Down List

You use the Drop-Down List dialog box to specify values for a field's drop-down list.

### See also

[Displaying a field as a drop-down list](#)

## Enter Approach File Password

You use the Enter Approach File Password to type a password when you create views, join databases, or go to Design in an Approach file that has a password.

### See also

[Entering a password](#)

## InfoBox: Basics

You use the InfoBox Basics panel to set basic properties for an object, field, repeating panel, summary panel, or view.

### See also

- [Changing the basic properties of an object](#)
- [Changing the basic properties of a field](#)
- [Changing the basic properties of a PicturePlus field](#)
- [Changing the basic properties of a repeating panel](#)
- [Changing the number of columns in a report](#)
- [Keeping records together](#)
- [Changing the basic properties of a view](#)

## InfoBox: Macros

You use the InfoBox Macros panel to attach macros to a macro button, field, object, or view.

### See also

[Attaching a macro to a macro button](#)

[Attaching a macro to a field](#)

[Attaching a macro to a view](#)

[Attaching a macro to a button or object](#)

## **InfoBox: Printing**

You use the InfoBox Printing panel to set printing properties for a worksheet or crosstab.

### **See also**

[Formatting a worksheet for printing](#)

## **InfoBox: Text**

You use the InfoBox Text panel to set text attributes for a fields or text object (including the body text of a form letter).

### **See also**

[Changing text attributes of data](#)

[Changing text attributes](#)



## **InfoBox: Lines and Colors**

You use the InfoBox Lines and Colors panel to change the appearance of lines and colors for a field, object, repeating panel, summary panel, or view.

### **See also**

[Changing line or color settings for a field](#)

[Changing line or color settings for an object](#)

[Changing line or color settings for a repeating panel](#)

[Changing line or color settings for a report panel](#)

[Changing worksheet settings](#)

[Changing line or color settings for a view](#)

## InfoBox: Dimensions

You use the InfoBox Dimensions panel to slide or resize an object or field.

### See also

[Sliding an object when you print](#)

[Sliding or resizing a field when you print](#)

## InfoBox: Format

You use the InfoBox Format panel to set a data format for a field.

### See also

[Setting a numeric format](#)

[Setting a standard date format](#)

[Setting a special date format for periods of a year](#)

[Setting a time format](#)

[Setting a text format](#)

## **InfoBox: Label**

You use the InfoBox Label panel to set properties for a field label.

### **See also**

[Changing the wording, attributes, or position of a label](#)

## **InfoBox: Display**

You use the InfoBox Display panel to specify the alignment and position of a summary panel.

### **See also**

[Changing the alignment or position of a summary panel](#)

## **InfoBox: Options**

You use the InfoBox Options panel to set display options for a PicturePlus field when the graphic in the field is either larger or smaller than the field.

### **See also**

[Changing display options for a PicturePlus field](#)

## **InfoBox: Formula**

You use the InfoBox Formula panel to edit the crosstab formula used in summary columns and body cells or in summary rows.

### **See also**

[Editing a crosstab formula](#)

## New

You use the New dialog box to create a new database file.

## See also

[Creating a new database file](#)



## SmartIcons

Use the SmartIcons dialog box to add, modify, or delete an icon bar.

### See also

[Customizing the SmartIcon bar](#)

## **Delete File**

Use the Delete File dialog box to delete a database file or an Approach file.

### **See also**

[Deleting a file](#)

## **Insert Object**

Use the Insert Object dialog box to insert an OLE object into a view. You can either create a new object or link to an existing object.

### **See also**

[Embedding a new OLE object](#)

[Inserting a linked object](#)

## **Add Repeating Panel**

Use the Add Repeating Panel dialog box to add a repeating panel to a form.

### **See also**

[Adding a repeating panel to an existing form](#)

## **Print Setup**

Use the Print Setup dialog box to change printer settings, such as orientation, paper size, and paper source.

### **See also**

[Specifying the printer, paper, and orientation](#)

## Options

Use the (Print Setup) Options dialog box to set printer options, such as those for grayscale printing and duplex printing.

### See also

[Printing a view](#)

## About

Use the (Print Setup Options) About dialog box to see which printer driver is currently being used by your computer.

## See also

[Printing a view](#)

## **Insert Field**

Use the Insert Field dialog box to add a field to a text block (such as in a form letter).

### **See also**

[Adding a field to a form letter](#)



## **Add Index**

Use the Add Index dialog box to add an external index to a dBASE or FoxPro database or to add a secondary index to a Paradox database.

### **See also**

[Maintaining external indexes for a dBASE or FoxPro database](#)

[Creating secondary indexes for a Paradox database](#)

**<<Fieldname>> must be filled in**

This field must be filled in.

**See also**

[Verifying the accuracy of entered data](#)

### **The entry in <<Fieldname>> must be unique**

The entry in this field must be unique.

#### **See also**

[Verifying the accuracy of entered data](#)

**The entry in <<Fieldname>> must be in the range...**

The entry in this field must be with a certain range.

**See also**

[Verifying the accuracy of entered data](#)

**The entry in <<Fieldname>> is not one of the items...**

The entry in this field must be one of the items in the data validation list.

**See also**

[Verifying the accuracy of entered data](#)

### **The entry in <<Fieldname>> is invalid**

The entry is\n this field is not valid for some reason.

#### **See also**

[Verifying the accuracy of entered data](#)

## **The find rule is not valid**

There's an error in the find request you've created.

### **See also**

[Creating a find request](#)

