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# Introduction

Database **Browser Plus** is the combination of   Database Browser and Database Builder.

Database Browser is an easy to use tool with full edit, query, sorting and printing capabilities.   It supports Microsoft Access 1.1 and 2.0 (.MDB) in 16-bit version and '95 & '97 in addition in the 32-bit version, dBASE III, dBASE IV, dBase 5.0, FoxPro 2.0 and FoxPro 2.5 & 2.6 & 3.0 (.DBF), Paradox 3.x, 4.x and 5.x (.DB) and Btrieve (.DDF and .DAT, needs ODBC driver in 32-bit) and Excel and Lotus. It also supports all ODBC sources (when driver is installed), such as Oracle, SyBase, Informix, Progress,etc. Records are displayed in a scrollable grid in which columns may be moved and resized with the mouse. It provides QBE (query by example) form that makes record query easy. Fields which may contain a large amount of text (like Memo fields) may be viewed and edited in a separate window using a Zoom button. Database Browser Plus can be used in LAN (Local Area Network). Unlimited number of calculated columns can be added without effecting the actual data. Calculation supports all keywords of the Visual Basic programming language that is recognized by Microsoft Access SQL.

Database Browser can merge data to MSWord documents. The merge can include the insertion of Word tables fetching data from tables or queries of the same or other databases (called *catalog merging* in MSWord). The merge can be automated and started with the AutoMerge processor. When MSWord'97 is available the AutoMerge processor optionally installed within MSWord'97 providing the AutoMerge tool with direct access to the Browser and to the Builder. The AutoMerge tool in Word'97 also allows broadcast fax output using any installed fax software and in addition it provides the **Word to Access** function. Word to Access performs the opposite that merge does. Instead of merding data from the database to the document it exports data from Word tables to the database.

Database Builder is a tool to create Microsoft Access databases and its components, tables and queries. Tables can be created as native MSAccess tables or can be attached or imported from external databases, including other Access databases, dBase III,   IV, 5.0., FoxPro 2.0, 2.5, 2.6, 3.0, Paradox 3.x, 4.x, 5.x, Btrieve 5.1x and earlier, Excel 3.0, 4.0, 5.0, 7.0, '97, Lotus WKS, WK1, WK3, WK4, ODBC. Database Builder builds SQL 'Select' queries and provides tool to build and modify other kind of queries, including action queries for updating, appending, deleting. The 32-bit version also supports Microsoft Access '95 and '97,   but requires 32-bit ODBC driver for   Btrieve.

Please make sure you have the latest version. You can always upgrade your current version free of charge, just select Help - Visit us on the Internet and download the newest version.

# Registration

The simpliest way of registration to click on <u>Help - Ordering</u>. It will bring up a program that gives you all information for credit card orders, completes a form and faxes or e-mails it to Redei Enterprises.

You can also complete the Order Form in several online registration services on the Internet (https://www.setsystems.com/cgi-bin/buy-dbbrowser, http://www.atlantic-coast.com/cgi-bin/sellonline/r007a.htm), but in order to send you your registration code you must EMail the serial number of your installed <u>DATABASE</u> BROWSER PLUS.

After registration you will receive a code. Click the Register menu command on the Registration Form to enter the code.

You are entitled to experience DATABASE BROWSER PLUS   without registration and payment. <u>However, you must register in order to use the software.   The free trial will end after the tenth usage.</u>

You can operate one registered copy of   DATABASE BROWSER PLUS. DATABASE BROWSER PLUS can not be distributed as a part of an application. However, you can distribute the installation package of DATABASE BROWSER PLUS, which your user can register.

The 32-bit and the 16-bit versions have independent registrations.

# Requirements

Hardware

Operation System

Software

## Hardware

- Min. 486 processor
- Min. 4MB RAM, recommanded min. 8MB
- Min. 2MB free space on the hard drive
- Min. 1024 x 768 resolution Monitor is recommended

## Operation System

Microsoft ®Windows™ 3.1 or later including 32-bit Windows'95,Windows'98 and 'NT.

## Software

In order to use <u>Database</u> Browser Plus for merging data to MSWord, MSWord 6.0, '95 or preferably '97 must be installed.

# Installing Database Browser Plus

## General

To install <u>Database</u> Browser Plus you must use the Setup program, SETUP.EXE on the distribution disk or in the directory to where Database Browser Plus was downloaded from Compuserve, America Online, the Internet or BBS.

# Running Setup

1. Place the Installation Diskette in the floppy disk drive.

2. From the Program Manager or from the File Manager click **File** and choose **Run**.

3. When the dialog box appears, type as shown below:

   **A:SETUP**

   (Assuming that, drive A: is used. If drive B: is used type B: instead of A:.)

4. Click **OK**. Several seconds later you will be asked   where you want to install Database Browser Plus to. Select the default directory or any other by your choice and press **Enter**.

5. You will be notified when **Setup** finished the installation.

6. Setup will start Database Browser Plus. When Word'97 is available it will ask you if you want to install the add-on AutoMerge processor to Word. We suggest to answer "Yes" (you can always uninstall and reinstall it from the Browser).

**Note:** The installation procedure of the 16-bit edition of versions lower than 2.0 will place the VBDB300.DLL file in the application directory despite the fact it is usually resides in the Windows/System directory in order to avoid possible conflicts with other software that use the Access 1.1 engine and installed the same (only by name) file in the Windows/System directory.

## Installing in Local Area Network

Installing <u>Database</u> Browser Plus in Local Area Network needs special attention. Database Browser Plus needs to be installed individually on every station even if it will be installed on a network drive, unless a Netware site license obtained. Users must have read-write access to the application directory.

# Installing newer version

**IMPORTANT: Never delete the old version!**

Install the newer version on the top of the old one. If you delete the old version the new one will not run, or it will unable to handle external databases.

Upgrading 32-bit version is free for registered users of the 32-bit adition. The newest release is always available from http://ourworld.compuserve.com/homepages/p_redei2, or just simply click on Help - Visit us on the Internet. After downloading the newer version please uninstall first the old one and than install the new one to the same directory in which the old resided. The serial number will remain unchanged and registered.

# Uninstallation

Uninstallation is available only for the 32-bit version. Please follow these steps:

1. Using the Word **- Uninstall AutoMerge in Word'97** remove AutoMerge from Word. (If it is installed. No need to uninstall AutoMerge for upgrade.)

2. Invoke **MyComputer** and select **Control Panel**

3. Select **Add/Remove Programs**

4. Find Database **Browser Plus** in the listing, select it and click the **Add/Remove button**

# File Menu

[Builder](#)

[Open](#)

[Close](#)

[Table](#)

[Recent files](#)

[Exit](#)

# Builder

This command opens the Database Builder.

# Open

This command enables you to open a database file, table or query to browse.   Selecting the Open option the supported database formats will be listed for selection. Upon the selection a File Open dialog box or the ODBC dialog box will be displayed. It provides an easy means of selecting a database file to browse. Once a file has been selected, the OK button can be clicked to open the file and display its contents in the Browser. If the CANCEL button is selected, the dialog box will close and you will be returned to the Browser.

The drive and path, displayed directly underneath **Directories** at the upper middle portion of the dialog box is called the current directory. The current directory can be changed simply by double clicking on any of the entries in the **Directory list box**.. The current drive can be changed, by selecting from any of the drives listed in the **Drives combo box**.

The **File list box**, by default, displays all database files in the current directory that may be opened by the Database Browser Plus. To open one of these listed files, click the file name then select the OK button. Double-clicking on the filename will do the same thing.

You can also type a filename into the **File Filter text box**, then select OK to open the file. If a full path and filename is specified, that file will be opened, otherwise, the current directory will be used to determine the file's path.

Wild cards may also be entered into the File Filter text box. All files withibn the current directory that match a wild card will be listed in the File list box. Multiple wild cards may also be specified, as long as each one is separated by a semi-colon.

The **File Filter combo box** provides a quick way to list files with a certain database format. When you click the combo box's down arrow button. it will list all of the available database file types supported by Database Browser Plus. From this list, you can select a specific file type to display in the File list box.

If the **Read Only** box is checked at the time you select the OK button, the file will be opened as read-only.

If the database format you choose requires additional information such as a specific format or a Table or a Query selection within the given database, Database Browser Plus will prompt you for this additional information in the **Table list box**. DBF files require the format you wish to open them in (FoxPro or dBASE), MDB and DDF files will ask for a **Table or Query**. Paradox files (DB) are assumed to be any 3.X version.

Database Browser Plus handles Queries just like Tables. The only difference is that when a **Parameter Query** is selected you will be prompted to enter the parameter values. The Query Expression will be displayed for helping you to enter the correct type of value. If the type of value you entered does not match with the required type (for example you entered *January* as *Month* while the browsed query requires numeric data) an error message will appear and you can repeat your entry (enter *1* instead of *January* in the example).

Database Browser Plus can not open query that anticipates parameter value from an object. If such queries are detected a message informs you that they will be ignored if Verification is On, or an error message will be displayed if Verification is Off. (Verification choice is available only in 16-bit.)

Since Database Browser Plus can be used for unlimited number of databases that were created by other applications there is always a possibility for error. Errors usually neither will cause the termination of the application nor GPF (General Protection Fault). However, Database Browser Plus has a built in capability

of displaying those tables and queries that were understood even after a GPF when the SYSTEM - VERIFICATION ON menu command is active (as default it is inactive). When you restart Database Browser Plus following the GPF the query that caused it will be bypassed. Those problematic databases will be listed in the DATABASE.INI file and the name of the query which caused the GPF will appear in the section with True (-1) value.

When the opened table or query has no records the 32-bit version will not display the Browse. The menu will change however allowing adding records.

## Close

Closes the currently open Database.

## Table

Closes the currently open Table or Query and displays again the **Table list box** for another selection. This menu item is available only when the selected database has tables and/or queries.

## Recent files

This menu item appears when at least one <u>database</u> was opened and displays the eight most recently opened databases. Clicking on the datatabase in the listing will open it again.

ODBC datasources will be listed with all information needed.

## Exit

Exit <u>Database</u> Browser Plus. The Database Builder window will not be effected by this exit command. The Builder has its own Exit.

# Record Menu

Enabled/Disabled

Add

Update

Delete

Copy selected records

Global Update

Global Delete

First record

Last record

## Enabled/Disabled

The Record Menu is disabled when <u>Database</u> Browser Plus detects that the <u>Table</u> or <u>Query</u> is not update able.

# Add

This command allows you to add a new record to the database. Upon selection of the Add option, a dialog box will be displayed, enabling you to assign values to each field in the new record . Note that this option is only available for databases opened with read-write privileges.

The Add dialog box contains an entry field for each field in the database. If there are more fields than can fit in the box, scroll bars are also displayed.

A record may be added simply by entering data into one or more of the text fields, then clicking the **ADD** button. The dialog box remain displayed so that multiple records may be added. Close the dialog box at any time by clicking the **DONE** button.

The **ZOOM** button is useful for fields that may be very long, such as Memo fields. When this button is clicked, a multi-line text window will be displayed, allowing you to enter multi-line text in an editor-like fashion.

The **CLEAR** button clears all of the fields in the Add dialog box.

# Update

This command allows you to update the current record of the <u>database</u> or <u>table</u> or <u>query</u> which is being browsed. The current record is identified as the row in the Browser's grid that marquee is on. Note that this option is only available for databases opened with the read-write privileges and if a query is browsed, if the query is update able.

Upon selection of the Update option, a dialog box will be displayed, enabling you to modify the fields in the current record.

The Update dialog box contains an entry   field for each field in the database. If there are more fields than can fit in the box, scroll bars are also displayed. Initially, these entry fields contain the data that is stored in the current record.

A record may be updated simply by modifying data into one or more of the text fields, then clicking the **UPDATE** button. The dialog box will remain displayed so that multiple records may be updated. Close the dialog box at any time by clicking the **DONE** button.

The **ZOOM** button is useful for fields that may be very long, such as Memo fields. When this button is clicked, a multi-line text window will be displayed, allowing you to enter multi-line text in an editor-like fashion.

The **CLEAR** button clears all of the fields in the Update dialog box.

The Navigation buttons enable you to move from one record to another so that you can easily perform updates to multiple records. The **First** button makes the first record in the database current, and puts its data into the dialog's text fields. Likewise, the **Last** button makes the last record current.

You can also move sequentially from record to record by using the **Next** button and the **Previous** button.

## Delete

Deletes the current record or the currently selected records in the Browse. Read-write privilege is required and   the _table_ or _query_ must be updateable.

# Copy selected records

Select those rows you want to copy. Click on the Copy selected records menu will create a copy of each. Please note that the copying will fail and an error will occur when the table consists of an index containing a none-counter type unique key .

Copying records might be handy instead of adding records when most of the fields are identical. The required changes after copying will take less than adding the whole record.

# Global Update

Before selecting Global Update you need to display those records for which the global update needs to be done. Use the Query - Find menu command to display the required set of data.

Global Update is to perform global change of data. All columns will be listed with an expression text box on the right side. Enter the expression that determines the new field value. Name of fields must be enclosed in rectangular parenthesis. Text data must be enclosed in addition to that in single quotation marks.

DATABASE BROWSER PLUS accepts any Keywords from the Visual Basic language that is recognized by Microsoft Access SQL. When you click the **Commit** button the expression you entered will be evaluated for validity. You can build fairly complex expressions using the rules of the BASIC programming language. Most of the time you need to perform relatively simple calculations, for which you do not need to be a BASIC programmer.

**Examples:**

| | |
|---|---|
| ([RADIUS]^2)*3.141592 | calculates the area of a circle |
| [UNIT PRICE]*[MONTHLY SALES PER ITEM] | calculates the sales volume |
| ([INVENTORY STOCK1]+[INVENTORY STOCK2])/[DAILY USAGE] | calculates the total inventory in days |
| IIF(LEFT$('[PHONE]',1)='(' AND MID$ ('[PHONE]',5,1)=')', MID$ ('[PHONE]',6),'[PHONE]') | extracts phone numbers without the area code if the area code is enclosed in parenthesis |

 More field's value can be updated in the same time.

If DATABASE BROWSER PLUS is unable to create query for external databases a message will inform you that Global Update will be disabled. DATABASE BROWSER PLUS also returns error message if the field is not update able.

The Database Builder allows users to create Update queries performing the same task as described above. While using the Global Update menu command is easier, the execution of an update query can be much faster.

## Global Delete

Before selecting Global Delete you need to display those records for which the global delete needs to be done. Use the Query - Find menu command to display the required set of data.

After you confirm you really want to execute the mass deletion, the data currently browsed will be deleted if the database structure allows deletion. A message appears if the deletion is not allowed.

If DATABASE BROWSER PLUS is unable to create query for external databases a message will inform you that Global Delete will be disabled.

The Database Builder allows users to create Delete queries performing the same task as described above. While using the Global Delete menu command is easier, the execution of a delete query can be much faster.

# First record

It makes the first record current. From Version 2.1 and higher you can also click on the left end arrow of the Backward - Forward control under the browse.

# Last record

It makes the last record current. From Version 2.1 and higher you can also click on the right end arrow of the Backward - Forward control under the browse.

# Sort Menu

Unsorted

&lt;Fieldname&gt;

More Fields...

## Unsorted

Returns the current Table to an unsorted order.

## &lt;Fieldname&gt;

Sorts the current <u>Table</u> or <u>Query</u> by the selected field. You will also be prompted to select ascending or descending order.

You can combine sorting commands. You can select for example first the 'Last name' field to sort the table by last name. A check mark will appear in the Sort Menu at the Last name menu item showing the current sequence. Now, you can select for example 'First name'. A check mark will appear on the First name menu item as well and the table will be browsed as first field by last name and as second field by first name. Select Unsorted to return to the unsorted order and remove the checkmarks.

If Sort does not produce the expected result the index file associated with the selected sequence is probably corrupt. A short and dirty way to check that is to temporarily rename the associated <u>.INF</u> file.

## More Fields...

If there are more fields than can fit in the Menu, it brings up more fields from which to sort by.

# Query Menu

[Find](#)

[Find All](#)

[Action Query](#)

# Find

This command allows you to query the currently opened database using a Query By Example format.

Upon selection of the Find command, a dialog box will be displayed, enabling you to construct a QBE query.

The find dialog box contains a text field for each field in the browsed database table. The contents are originally blank. Queries are performed by typing search criteria into one or more of these fields, then clicking at the first time the **FIND,** later the **FIND ALSO** button. There is no visible change in the data until the **DONE** button will be clicked. Your actions will be confirmed only if the **CONFIRM** check box is checked (this is the default). Use the **CLEAR** button to clear all fields and restart the query.

Search criteria can be specified by entering a relational operator and a value into the field to which the search will apply. For example, suppose our current database has a field LASTNAME. You may type "**=Smith**" into the LASTNAME field to find all people having a last name of "Smith".

The general syntax of a QBE query is simple. The operators may be typed or placed to the field by clicking on one of the operator buttons. There are six simple relational operators: **=, >, <, >=, <= and <>**. Use them in syntax as

            relational-operator   *value*

Using the simple relational operators, the nature of the value (text, numeric, logical) is obvious and does not need any special bracket or quotation mark.

The **BETWEEN** *value1* **AND** *value2* operator is more complex. It allows you to select records between value1 and value2, but here the values must be placed between single quotation marks if they are text values. Consider the differences if 1, 2, 18 are numeric or text values (the numeric order: 1, 2 , 18, but the text order: 1, 18, 2)

The **LIKE** *pattern* operator is very useful for text search. The pattern also needs to be placed between single quotation marks.Wildcard characters may be used in the pattern as follows:

?            any single character

*            zero or more characters

#            any single digit (0 to 9)

[charlist]            any single characters in charlist

[!charlist]       any single characters NOT in charlist

Examples:

'?RAY' will match with either 'PRAY" and 'TRAY"

'?12*' will match with any of the follows: '012', 'A12', 'A123456789ADGTY'

'#12*' will match with '012' but NOT with 'A12' and with   'A123456789ADGTY'

'[PRS]RAY' will match with 'PRAY' but NOT with 'TRAY'

'[!PRS]RAY' will match with 'TRAY' but NOT with 'PRAY'

The **IIf** operator can be used in conjunction with other operators assigning a logical relationship. The syntax is:

**IIf(** *expr, truepart, falsepart* **)**

Where

expr    Expression you want to evaluate

truepart   Value or expression returned if *expr* is **True**

falsepart     Value or expression returned if *expr* is **False**.

Text values must be placed between single quotation marks.

<u>Example:</u>

Assuming that there are three fields named as: LASTNAME ,   AREA CODE and   LOCATION, alltext, you can enter in the text box at LOCATION:

IIf([AREA CODE] IN('310','213','714'),'Los Angeles','Out of LA')

which will select all records where the location is Los Angeles by the area code, and probably nothing for other area codes unless there are records with 'Out of LA' value in the Location field.

Note that, if the field name has space it must be enclosed in rectangular brackets. Most database does not allow space in the field name.

The **In** operator can be used in conjunction with other operators determining whether the value of the field is equal to any of several values in a specified list. This operator can be used in the following syntax:

 [**Not**] **In (***value1, value2,...***)**

The values can be either text or numeric. If text values are used they must be placed between single quotation marks.

The **Not** logical operator is used for negation of an expression.

Please note that spaces are required between operators and values, but space within a textvalue is a part of the value, it is a character. See the example for the IIf operator which also uses the IN operator.

## Find All

Removes find criteria from the <u>database</u>.

# Action Query

Displays the available Action queries of the currently open database for selection and executes the selected query.

You can use the Database Builder to create executable action queries for mass data processing.

# Print Menu

[Print Report](#)

[Set Printer](#)

[Copy to Clipboard](#)

[Print as Textfile](#)

[Mask](#)

[Edit Report](#)

[Add calculated column](#)

[Left (Right) Aligned Text](#)

# Print Report

This command allows you to print the data currently displayed in the Browser on the currently active printer. It will print all data in the <u>query</u> that is displayed, using the same column head text and column arrangement as it is in the Browse. You can enter however a different Title for the report.

# Set Printer

This command allows you to select, change the active printer and/or change its setup. The dialog box will be familiar for those who used any printing option from any Windows based software.

# Copy to Clipboard

This command allows you to copy the  browsed data  to the clipboard and transfer it  to another software. Available only in the 16-bit edition.

# Print as Textfile

This command allows you to copy the   browsed data to a text file. Available only in the 16-bit edition.

# Mask

This command allows you to change the appearance of numeric data on the screen and on the printed reports. Selecting Mask will invoke a list of options from which you can choose the desired format. Note the difference between **#** and **0** in the masking. While on the place of **#**   a number will be printed only when there is a number there, **0** will result in the number   or in a zero.

Mask is available only on numeric columns. The **Numeric Formatting** panel allows you to select a format as the current numeric column to be displayed and printed. The **Negative Format** panel allows you to select the way of displaying negative values, either in parenthesis or with the minus sign. Selecting 'Yes' on the Query **Shown** panel will result in the expression to be printed. The **Title Aligned** panel allows you to set the alignment of the Report Title (left or right). The **Print Totals for** panel will list all numeric columns. When the check box is marked the total of the column will appear on the printout. The **Margin** panel is for setting the left margin of the report.

Note that without masking numeric data might be printed differently as it appears on the screen. Mark the **Apply to all numeric fields** checkbox to mask all numeric fields at once.

# Edit Report

Use Edit Report to customize your report. You can change the Title and all column headings. Please notice that the width of a printed column will be determined by the longest of the heading and the data. Long column heading will greatly reduce the number of columns that you can print.

# Add calculated column

You can add as many calculated columns as you want. All columns will be listed. Clicking the name of the column will display it in the expression text box. DATABASE BROWSER PLUS detects the type of the data and displays it in the required format. All detailed name will be enclosed in rectangular parenthesis and text data will be enclosed in addition to that in single quotation marks.

DATABASE BROWSER PLUS accepts any Keywords from the Visual Basic language that is recognized by Microsoft Access SQL. When you click the Commit button the expression you entered will be evaluated for validity. You can build fairly complex expressions using the rules of the BASIC programming language. Most of the time you need to perform relatively simple calculations, for which you do not need to be a BASIC programmer.

**Examples:**

| | |
|---|---|
| ([RADIUS]^2)*3.141592 | calculates the area of a circle |
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| IIF(LEFT$('[PHONE]',1)='(' AND MID$ ('[PHONE]',5,1)=')', MID$ ('[PHONE]',6),'[PHONE]') | displays phone numbers without the area code if the area code is enclosed in parenthesis |

When you add a calculated column, you add it to the Browse and Report only. The Database you use will not be effected.

## Left (Right) Aligned Text

This command allows you to set the alignment of text columns. (Numeric columns will always be right aligned.)

Using the alignment on both the columns and on the title you can write reports in languages like Hebrew or Arabic.

# System Menu

Verification On/Off

Resources

Workgroup

Language

Fax Setup

# Verification On/Off

You might want to use <u>DATABASE</u> BROWSER PLUS for displaying data from a huge complicated Access Database, that have many queries, parameter queries and which might use internal references that DATABASE BROWSER PLUS can not understand. In these cases trying to display a <u>query</u> might result in GPF. DATABASE BROWSER PLUS as default does not verify the tables and queries of the database. Verification On will turn on the verification engine. When verification is on the speed will be greatly reduced, but DATABASE BROWSER PLUS will learn after each GPF which queries are to be bypassed, and finally will list only those are accessible.

## Resources

This command displays a small window in the bottom right corner of the screen showing continuously the status of Windows Resources. It can be helpful when memory problems occur. When the window is active a check mark appears on the left side of the menu item.

## Workgroup

Selecting this menu item allows access to secured Access databases. It also results in a Login procedure every time when either the Browser or the Bulder loads into memory.

Access to secured databases is available only in the 32-bit version.

# Language

The 32-bit version of <u>Database</u> Browser Plus is available in English and French. While the Help comes in either English or French depending which was installed, the display can be changed with this menu item.

The language selection applies for the next time when the executable loads into memory.

The language selection can also be a custom language. This option normally is grayed out. Follow these steps to customize Database Browser Plus to your language:

1. Edit the DBPlus32.ini file in the application directory with a text editor that allows editing large text files.

2. Find the [CUSTOMIZATION] section and write at the right side of the   'Custom Language_English=' line the English name of the language and to the right side of the 'Custom Language_Foreign=' line the name of this language in the selected language. Save the file.

3. Start Database Browser Plus. In the place of the grayed out 'Custom Language' now the English name of the selected language will appear. Select this language and also check on the 'Create template for translation' menu.

4. Exit the Browser and restart it. It will load much slower and despite the selected foreign language it will still appear in English. Use all screens for updating the translation <u>table</u> in the DBPlus32.ini file. When ready make unchecked   the   'Create template for translation'   menu and exit the Browser.

5. Find the [CUSTOM LANGUAGE]  section and write the translation of the text at the left side of the equal sign to the write side at each line. Save the DBPlus32.ini file when the translation is completed.

Launch Database Browser Plus. The display now should appear in the language you wanted.

# Fax Setup

Database Browser Plus can fax merged documents using the Word'97 add-in AutoMerge tool when any fax driver (fax software) is installed in the computer.

Different fax software products require different entries for sending faxes. Database Browser Plus needs to know the requirements of the fax driver you want to use.

The Fax Setup screen contains those informations that normally every fax software have. In addition it lists all installed printers, among them the fax driver you can select. It also provides a sample "Send fax" entry screen (QuickLink II) for better understanding. The sample screen can be invoked with the **Example** button and hide with the **Hide example** button. Clicking on the Save button while the sample is visible will save the sample es entry. Than you can modify it as required and save it again.

# Word Menu

[Export to MSWord](#)

[Merge to MSWord](#)

[Set Word Table Style](#)

[AutoMerge](#)

[Fax output](#)

[Word to Access](#)

[Install (Uninstall) AutoMerge in Word'97](#)

# Export to MSWord

This menu becomes enabled when the browse is displayed. Use ***Export to MSWord*** for exporting the data of the browse, exactly as it is displayed, into an MSWord table.

You can customize the appearance of the browse without actually changing anything in the data using the Print menu options before exporting to MSWord.

The export process starts with the selection of a document. The selected document will be created if not exists. You can click in the document at the place where the insertion of the data required. When the export finished Database Browser Plus will save the document and unload Word.

The created Word table will be unformatted. You can use Word's ***Table - AutoFormat*** for formatting it.

# Merge to MSWord

Clicking on the Merge to MSWord menu in the Browser will record a macro for the merge and test it by executing the merge right away to the default printer. When using AutoMerge for playback the recorded choices will be used.

**Related Topics:**

[Creating a Word template](#)

[Merging data to Word bookmarks](#)

[Datasource of merging tables](#)

### *Creating a Word template*

You need to create a template document before you use the <u>Database</u> Browser for merging data.

The template document is a normal <u>word</u> document. It consists of everything that needs to be printed and it is formatted the way as it needs to be printed, except those parts that will be merged from database. The best method of creating the template document is writing it first with sample data in it, format it, and than replace the data with Word bookmarks.

The Word bookmarks will refer to the column names in the Database Browser following these rules:

1. Only the first word counts when the name of the column in the Database Browser consists of more words.

2. The Database Browser must have unique 'first word' column names (you can change the names with <u>Print - Edit Report</u> or by creating a new <u>query</u> using the Builder).

3. The double underscore ("__") and the characters after that in Word bookmark names will be disregarded by the Database Browser. For example, these bookmarks *Name__1*, *Name__2* and *Name* will all refer to the same column in the browse, which name must start with the word *Name*. This rule allows the insertion of the same data to several places in the document (first insertion to *Name__1*, second to *Name__2*, etc.)

4. Word bookmarks, unreferenced in the Browse, can be used for the insertion of Word tables.

## *Merging data to Word bookmarks*

Browse the datasource of the merge. Customize the browse as needed using the Print menu items. Use the Query - Find menu to display only those records for which the merge is required.

**Tip**: *Use the Builder to create a query for displaying the browse exactly as needed when the same merge repeatedly will be used and/or will be automated.*

Clicking on Word **- Merge to MSWord** will ask for the document template and will start the merging. Database Browser will ask you if you want to insert a Word table. You will be instructed to select the Word bookmark to which the insertion will take place as well as datasource (database and table or query) upon *Yes* answer. This process will repeat for other tables until you answer *No*.

The table selection parameters will be stored in the DATABASE.INI (DBPlus32.ini using the 32-bit version) file in a section that is named as the Word document. The stored parameters will be used for AutoMerge.

The result of the merge will be as many printouts on the default printer as many records are in the browse (one for each). The merged documents can not be saved as documents.

### *Datasource of merging tables*

The datasource of merging tables must be either a table or a query in an Access database. Use the Builder to create an Access database and attach external tables when the datasource is actually in dBase, FoxPro, Paradox, Btrieve, etc.

The datasource of tables can be different for each. You can also use parameter queries as the datasource of inserted tables.

When you insert tables Database Browser Plus will ask you to select the source database and the source table/query. It will also ask you to determine the parameters for a parameter query.

When the merged table in the document has no formatting in the Database Browser Plus INI file you can select formatting when merging the first record. You can also determine if you wish to use the first row in the Word table for the names of the columns (fields) and if you wish to total any of the numeric fields in the last row of the Word table.

The alignment of the columns in merged tables depends on the type of the data in the column. When the data is numeric or currency the column will be right aligned.

## Parameter queries as datasource

Use parameter query as datasource of an inserted table when the content of the inserted table depends on the merging datarecord.

**Example**:

***Project***:

*A teacher is writing the grades of the students to the parents. The merging record consists of the name of the student, as well as the address and the name of the parents. Another dataset consists of all grades for all students. You want to place the grades of the respective student into a Word table.*

***Solution***:

*Create a parameter query on the dataset that consists of the grades with a parameter Studentname. Database Browser Plus will substitute the parameter with the name of the student, and insert the result into a Word table.*

All fields of the merging data record will be listed when the selected datasource of a merging table is a parameter query. You can drag the name of the field that supplies the value for the parameter to the parameter box and drop it into. The name of the dragged field will appear in the box with a leading slash. Like  */Student* - using the above example. The relation will be saved in the DATABASE.INI (DBPLUS32.INI USING THE 32-BIT VERSION)  file and used at the merge of all records. When the relation exists for all parameters the parameter entry screen will be bypassed. You will need to edit (with Notepad) the INI file and change or delete the relations. The Parameter entry screen will appear again if you delete at least one parameter-relation.

# Set Word Table Style

The inserted Word tables will be unformatted unless the **Set Word** Table **Style** menu determined a style or when merging the first record you assigned a style..

Clicking on **Set Word Table Style** you will be instructed to select the document template and than to select the bookmark to which the table will be inserted to. Than a list of styles will appear. The list is identical with the one that Word's **Table - Auto Format** provides. The selection will be saved in the DATABASE.INI/DBPlus32.ini file in the section named as the document template.

# AutoMerge

AutoMerge is loading <u>Database</u> Browser Plus with commandline parameters as follows (see more at Remote Access):

**C:\DAT_BASE\DATABASE.EXE** *Databasename* <u>Table</u>*/Queryname{Documentname}*

where the {} bracket must follow Table/Queryname containing the complete path to the document template, like *{H:\MYDOC\DBDOC.DOC}* . Valid *Table/Queryname* is mandatory, and *Databasename* must point to the datasource of the browse including the complete path.

AutoMerge will unload the Database Browser when the process finished.

You must run manually at least once with Merge to MSWord before using AutoMerge.

You can issue an AutoMerge command from the commandline, or for easier processing you can use the **AutoMerge processor** of the Database Browser Plus. You can use our ACTION Process Automator to start the DATABASE.EXE (16-bit) or DBPLUS32.EXE (32-bit) in a scheduled time to perform unattended reporting.

When <u>Word</u>'97 is available AutoMerge can be installed (during setup or later from the menu) as an add-in tool and be used as a part of Word'97. This is not only brings the convenience of having a complete database tool in MSWord, but also provides much faster processing and fax output.

# Fax output

There are two pre-requisites for fax output:

1. The fax driver is assigned using the System - Fax Setup menu item
2. Word'97 is installed

When these conditions are met Database Browser Plus will ask you while merging the first record if you wish to use fax output. Upon 'Yes' answer you will be asked to select the datasource for the fax informations and for the link to the datasource of the main body of the document.

The fax output will take place actually when using the AutoMerge from Word'97.

# Word to Access

Word to Access is available only with the AutoMerge processor that installed in Word'97.

Clicking on the Word to Access button will first search for tables in the active document and ask the user if the highlighted table is the one to use for export. If there is no table in the active document Word to Access will do nothing.

Word to Access can use existing database and table as target or it can create new database and table. The following rules apply:

1. The first row in the Word table must contain the fieldnames in the datasource.

2. If the datasource exists each column name in the first row must refer to a field.

3. When a new database will be created the user can select the version of the Access database.

4. When new table will be created the user will need to determine for each column the type of data it contains. In addition to that the user also will need to determine the size of the datafield for text data and the text that will be considered as *True* value for boolean data fields.

5. If the datasource exists the type of data for each column will be determined by the datasource.

6. Word to Access will check existing datasources with the Word table and return an error message when they are incompatible.

7. Word to Access will return error message when the data it attempts to merge does not match with the data type determined for the column.

8. Word to Access will offer the option to clear an existing datasource before the export starts.

# Install (Uninstall) AutoMerge in Word'97

Depending on the status of the installation either **Install** or **Uninstall** appears.

The installation will result in the AutoMerge tool on the Standard toolbar in <u>Word</u> and in the same menu item in the Tools menu. A simple click on either of them displays the AutoMerge screen allowing convenient access to the Browser or the Builder or very fast merge processing with one click.

This feature is unavailable for earlier versions of MSWord.

# Register Menu

This menu appears only for unregistered trial version.

**Related Topics:**

Registration Form

Registration Process

# Registration Form

It brings up the Registration Form. Complete all applicable questions and select the **Print** Menu command to print the form. Fold it, and mail it to the address printed on the Form.Credit card,   personal check or money order are accepted.

If you wish you can move from the Registration Form directly to the Registration Process by clicking the Register Menu command on the Registration Form.

Please allow us about 5 working days to send you your Registration Code by mail, and at least two days (usually it is the same day) to do it via EMail. If you provide your EMail address we can react promptly upon receiving your check or credit card order (Select Help - Ordering for credit card orders). You can also register via Compuserve (GO SWREG.Registration ID:   13052). In this case Compuserve will bill you and you will receive a temporarily Registration code by EMail. In order to mail your software and send you the final registration code you need to submit the serial number to Redei Enterprises.

Please consult with the enclosed ORDER.WRI file for details and click on Ordering for pricing and credit card ordering..

# Registration Process

When you received your Registration Code, click the Registration Process menu command. Enter your Registration Code and press the Enter key. Please note that the code is case sensitive.

Once you registered the Register Menu will disappear.

# Help Menu

Index

Help on Help

About...

About Shareware...

About Redei Enterprises...

Agreement

Ordering

## Index

It brings up the Help file. Note that pressing F1 at any screen provides context sensitive   Help.

## Help on Help

It shows you how to use Help.

## About...

It brings up Version information for the Database Browser Plus.

## About Shareware...

It brings up general information about shareware. The information can be printed   by clicking the ⬜ button.

Click ⬜   when you wish to close the window.

## About Redei Enterprises...

It displays information about Redei Enterprises, ASP Ombudsman and   Distributor   licensing.   The

information can be printed   by clicking the    button.

Click    when you wish to close the window.

## Agreement

It displays  disclaimer of warranty:  It can be printed  by clicking the  button. Click

 when you wish to close the window.

# Ordering

Fax your order

Internet order

### *Fax your order*

It will display an Order entry screen and fax the order upon completion using the fax software installed in your computer and set in Database Browser Plus.

### *Internet order*

It will connect to our safe credit card ordering in the Internet using your default Internet browser.

# Browser Information

The available information about the <u>Table</u> or <u>Query</u> is displayed at the upper part of the screen.

The **Table Name** field shows the name of the Table or Query you selected. The **Created** field displays the date when the table or query was created. It remains hidden when this information is not available. The **Last Update** field shows the date when it was updated the last time. The **Records** field informs you how many records are currently in the Browse. If Query is browsed the number of records is not   available immediately and a 'Click me' text appears.. Clicking on 'Click me' will display the number of records (it might be time consuming). The **Query Definition** will be shown for queries in the Browse. The Query Definition can be quite long. Use the vertical scroll bar if required.

Browser Information fields are NOT editable.

# Navigating

The current row on the grid is identified by a shaded marquee that runs the length of the record in 16-bit and with an arrow at the left side at 32-bit. Make another row current by clicking on it, or using the keypad navigation keys.

To scroll   the contents of the grid up or down, use the vertical scroll bar or the numeric keypad navigation keys. To scroll the contents of the grid left or right, use the horizontal scroll bar.

Jump to the first or to the last record using the **Record - First record/Last record** menu or clicking on the and arrows on the **Backward - Forward** control v.2.1 & up only).

# Formatting

To resize a column, grab the vertical line at the column's right edge (on the top in 32-bit version) and drag it to the desired location. Columns have a maximum width of one character or may be removed altogether.

To move a column (available only in 16-bit), grab its heading (the cell in which its field name is displayed) and drag it to the desired location. This feature is supported only by the 16-bit version.

# Editing Data

To edit the contents of a cell, first make the row current. Next click anywhere within the desired cell's boundaries. The cell will be highlighted, and an edit cursor will appear at the beginning of the cell's text. Use the left and right arrow keys to position the cursor within the cell. Typed characters are inserted at the current cursor position.

To get out of edit-mode, click on another cell or press the up or down arrow key. Any changes made to the edited cell will be committed to the database.

**Related Topics:**

Drop down lists in entry fields

Drop down Reference in entry fields

# Drop down lists in entry fields

It is possible to create drop down lists in editing fields that allows selection instead of typing. It is also possible to display in the list different type of data that is actually stored in the database. For example, you might want to use boolean type of data for a datafield *Gender*, but display *Male* or *Female* instead of Yes/No that is normally displayed for True/False values.

These options can be set in the **Builder**. See Custom Table Parameters - Drop down list.

When a datafield is set for drop down list it will automatically appear when you click on the cell that contains such data. Drop down lists will also appear automatically on the Add ,Update and Find screens.

# Drop down Reference in entry fields

The drop down reference in entry fields is similar to the drop down lists, but   instead of a simple list it will display another browse containing data from the referenced table or query.

These options can be set in the **Builder**. See Custom Table Parameters - Drop down Reference.

A small command button will appear at the right upper corner of the cell when a datafield is set for drop down reference. When the user clicks on this button the referenced data will be loaded, pointing to the record that is referenced by the current value in the cell. Moving to another record in the referenced browse will automatically update the value in the referenced cell . Data can be updated, new records can be added in the referenced browse. Cells in the referenced browse can also reference another browse and so on...

Data in cells can be updated without invoking the referenced data.

# Selecting Multiple Rows

If you want to have multiple rows selected in the grid you can do one of the followings:

- Position the mouse at the left of the record you want to select. The mouse pointer should change to a check mark. At this point simply click the left mouse button and the row should highlight in a different color. You can select as many rows as you want. To de-select a row repeat the same procedure. This method works only on the 16-bit version. The 32-bit version requires to hold down the Ctrl key while clicking on a row.

- Position the mouse anywhere on the first record you want to select. Press and hold down the right mouse button while moving the mouse vertically. When you release the right mouse button all lines you moved the cursor over will be selected. To de-select all records position the mouse cursor on one of the selected records and than click with the right mouse button.

# About 'Remote Access'

Remote Access means that you can invoke <u>Database</u> Browser Plus from another software having the look if Database Browser Plus would be a part of this application. (Matter of fact, you can embed Database Browser into your Visual Basic application using OLE.)

It also means that you can start Database Browser Plus directly with the database and <u>table</u>/<u>query</u> you need to display from the command line.

The general synthax:

**C:\DAT_BASE\DATABASE.EXE [*Databasename* [*Table/Queryname* ]]**

Note the spaces between EXE and Databasename and between Databasename and Table/Queryname.

The brackets stand for optional, they not to be typed.

**Examples:**

| | |
|---|---|
| **C:\DAT_BASE\DATABASE.EXE** | Invokes Database Browser Plus as normal. You will need to select database and table/query. |
| **C:\DAT_BASE\DATABASE.EXE C:\DB\MYDATA.DBF** | Browses MYDATA.DBF <u>dBase</u> table |
| **C:\DAT_BASE\DATABASE.EXE C:\DB\MYDATA.MDB** | Opens MYDATA.MDB Access database and displays all tables and queries for selection |
| **C:\DAT_BASE\DATABASE.EXE C:\DB\MYDATA.MDB YOU** | Opens MYDATA.MDB Access database and browses YOU, which can be either a table or a query. |

# Linking to applications

## Visual Basic and Application Basics (Word, Excel)

Use the Shell function. Here is an example:

*Dim x as Integer*

*x = Shell("C:\DAT_BASE\<u>DATABASE</u>.EXE MYDATA.MDB YOU", 1)*

*x = DoEvents()*

Note that the Shell function is asynchronous. It is your job to make sure Database Browser Plus will be on

the top and will not be covered.

# Add Database Browser Plus to a Visual Basic application

Use the OLE control to add <u>Database</u> Browser Plus to a VB project following these steps:

1. Add the OLE control to a Form

2. On the Insert Object dialog select 'Create from File'

3. Click on Browse

4. Find DBPlus32.exe and click Insert

5. Click Ok

6. Add this code to a module

   Declare Function WritePrivateProfileString Lib "kernel32" Alias "WritePrivateProfileStringA" (ByVal lpApplicationName As String, ByVal lpKeyName As Any, ByVal lpString As Any, ByVal lpFileName As String) As Long

   Declare Function GetWindowsDirectory Lib "kernel32" Alias "GetWindowsDirectoryA" (ByVal lpBuffer As String, ByVal nSize As Long) As Long

   **Sub WriteCommandline(Value As String)**

   Dim sc As Long

   Dim RetStr As String * 600

   'Commandline    must be given

   RetStr = Value

   sc = WritePrivateProfileString("DATABASE", "Commandline", RetStr, WinPath() + "DBRWSR.INI")

   'Helpfile if Help needed

   RetStr = App.Path + IIf(right$(App.Path, 1) = "\", "", "\") + "DATABASE.HLP"

   sc = WritePrivateProfileString("DATABASE", "Dathelp", RetStr, WinPath() + "DBRWSR.INI")

   'Data access if external databases or external attached tables are called

   RetStr = App.Path + IIf(right$(App.Path, 1) = "\", "", "\") + App.EXEName + ".INI"

   sc = WritePrivateProfileString("DATABASE", "Datini", RetStr, WinPath() + "DBRWSR.INI")

   **End Sub**

   **Function WinPath() As String**

   Dim temp$, x As Long

   temp$ = String$(145, 0)                ' Size Buffer

   x = GetWindowsDirectory(temp$, 145)    ' Make API Call

   temp$ = Left$(temp$, x)                ' Trim Buffer

   If right$(temp$, 1) <> "\" Then        ' Add \ if necessary

```
            WinPath = temp$ + "\"
        Else
            WinPath = temp$
        End If
```
   **End Function**

7. Browse data with the following code:

   WriteCommandline CompletePathToDatabase$ + " " + TableOrQueryToBrowse$

   *form*.OLE1.Action = 7

Database Browser Plus will be embedded into your executable when you compile your project. You will need to make sure all files will be distributed with your application that Database Browser Plus needs and in addition to that Database Browser Plus must be registered in your user's computer, or you must have embedded a sitelicensed version of Database Browser Plus.

# Accessing Paradox

Paradox stores important information about a table's primary key in an index (.PX) file.   If you access a Paradox table that has a primary key,   Database Browser Plus needs the .PX file to open the external table.   If you delete or move this file, you won't be able to open the external table.   If you attach a Paradox table that doesn't have a primary key, you cannot update data in the table using Database Browser Plus. To be able to update the table, define a primary key in Paradox.

The DATABASE.INI (DBPLUS32.INI USING THE 32-BIT VERSION)   file in the application directory consists of a dedicated section for Paradox 3.x:

**[Paradox ISAM]**

**ParadoxNetStyle=3.x**

When Database Browser Plus does not need to access the Paradox data in Network the above line should be disabled:

**;ParadoxNetStyle=3.x**

The above for Paradox 4.x:

**[Paradox ISAM]**
**ParadoxUserName=Whoever**
**ParadoxNetPath=Whateverpath**
**ParadoxNetStyle=4.x**
**CollatingSequence=Ascii**

# Accessing dBASE and FoxPro

Database Browser Plus can directly open external .DBF files in dBASE III, dBASE IV, or FoxPro version 2.0, 2.5 or 2.6 format.   If you directly open a dBASE or FoxPro table file, you can view and update data, even if others are using it with dBASE or FoxPro.   If you access a dBASE or FoxPro file,   you can also tell Database Browser Plus to use the index files (.NDX or .MDX for dBASE; .IDX or .CDX for FoxPro) to improve performance.

For dBASE and FoxPro databases, Database Browser Plus keeps track of the table indexes in a special information (.INF) file.   When you use Database Browser Plus to update the data in your .DBF file, Database Browser Plus also updates the index files to reflect your changes. You need to create the .INF files with a text editor (Notepad).

The format for the .INF files is as follows:

TableName.INF contains:

NDX1=<Index 1 Filename>.NDX
NDX2=<Index 2 Filename>.NDX
NDXn=<Index n Filename>.NDX

For example, an .INF file for the Authors table would be AUTHORS.INF and it might contain:

NDX1=CityIndx.NDX
NDX2=NameIndx.NDX

Place these index and .INF files in the same directory as the other dBASE III files.   FoxPro and dBASE databases are not maintained in a single file but in a disk directory which contains section separate data, index, and other support files.

If you access a .DBF file and associate an index file (.NDX or .MDX for dBASE or .IDX; .CDX for FoxPro), Database Browser Plus needs the index file to open the attached table. If you delete or move index files or the information (.INF) file, you won't be able to open the external table.

Additionally, if you use dBASE or FoxPro to update data in a .DBF file that you have accessed from with Database Browser Plus, you must also update any dBASE or FoxPro indexes associated with the .DBF file.

If the index files are not current when dBASE or FoxPro or Database Browser Plus tries to use them, the results of your queries are unpredictable.

# Accessing Btrieve

## General Considerations

Using the 16-bit version of <u>Database</u> Browser Plus, you can directly open in <u>Btrieve</u> 5.1x format. To use Btrieve tables, you must have the data definition files FILE.DDF and FIELD.DDF, which tell Database Browser Plus the structure of your tables. These files are created by Xtrieve or by another .DDF file-building program. If you delete or move these files or your data files, you won't be able to open an attached Btrieve <u>table</u>.

You must have the Btrieve for Windows dynamic-link library WBTRCALL.DLL. This file is available with Novell Btrieve for Windows, Novell NetWare SQL, and some other products for Windows that use Btrieve.

You can not use Btrieve files that have Xtrieve security. To use data files with Database Browser Plus, disable Xtrieve security.

The 32-bit version needs **ODBC driver for Btrieve**. Contact Pervasive Inc. (http://www.pervasive.com on the Internet) to obtain it. Once the driver is installed you can access Btrieve 5.1x and 6.1x formats as ODBC datasource.

## Using Compressed Data Files

If you're using compressed Btrieve files, you must be sure that the compression buffer Btrieve is using is adequate for your data. The buffer size must be at least as large as the largest record in your data files.

To ensure proper operation, set the compression buffer size option (/u) in the [btrieve] section of your WIN.INI file.   The units for this setting are kilobytes, so if your largest record is 2K, you would add /u:2 to the Btrieve options line in WIN.INI.

For more information on setting options, see "Setting Btrieve Options in WIN.INI" section.

## Using Btrieve in a Multiuser Environment

If you're using <u>Btrieve in a multiuser environment</u>, you must use the same transaction file (BTRIEVE.TRN) as other users on the network.   To do this, set the transaction file name option (/t) in the Btrieve section of your WIN.INI to point to the network location of BTRIEVE.TRN.

## Setting Btrieve Options in WIN.INI

The following section must be in the WIN.INI file in your Windows directory:

[btrieve]

options=/m:64 /p:4096 /b:16 /f:20 /l:40 /n:12 /t:C:\ACCESS\BTRIEVE.TRN

Although these are the recommended option settings, you can change these options in your WIN.INI file using the following table as a guide.   If the option you want to set is not on the line, add the option and desired setting at the end.

| Option | Description | Required value |
|--------|-------------|----------------|
| /m | Memory size | At least 38 |
| /p | Page size | 4096 |
| /b | Pre-image buffer size | 16 |
| /f | Open files | At least 4 |
| /l | Multiple locks | At least double the setting for the Open Files option (/f) |
| /n | Files in a transaction | At least 4 |
| /t | Transaction file name | Valid path to a .TRN file   in a multiuser environment, network path to the .TRN   file shared by all users |
| /u | Compression buffer size |  If your Btrieve data files are compressed, at least the length (in kilobytes) of the longest record in your data files |
| /i |  Pre-image file drive | |
| /c |  Index compaction | |
| /a | Activate logging | |
| /s | Discard unneeded segments | |

## Configuring Novell Network LAN Manager (NLM)

If you're using Novell Network LAN Manager (NLM), there are several considerations you must keep in mind about your configuration.

Before you use Btrieve data with Database Browser Plus, you should check for the following:

- You must have the following section in your WIN.INI file:

[BREQUESTDPMI]

datalength=4096
tasks=10
local=no
chkparms=no

- You must have transactions enabled on your NLM server
- You must be using version 6.0 of the NLM requestor files BREQUEST.EXE, WBTRCALL.DLL, and WBTRVRES.DLL (However, note   that you must still be using version 5.1x data file format.)

If you don't have the correct versions of these files, you won't be able to use Btrieve with Database Browser Plus.   If you have access to Compuserve, you can download the necessary files for this configuration using the instructions below.   If you don't have a Compuserve account, contact your Novell representative and ask for the 6.0 versions of the requestor files.

To update your Btrieve NLM files from Compuserve:

1. Connect to Compuserve and GO NOVLIB.

2. Go into the Btrieve/XQL library section.

3. Download the file BT515.ZIP, and then unpack the file using Redei Enterprises product the ZipServer, or PKUNZIP.EXE, or any other compatible utility.

4. Unpack the file BTRREQ.ZIP (one of the files from BT515.ZIP).

5. Follow the instructions in the README file for installing the resulting files and applying necessary patches to the BTRIEVE.NLM file on your server.

# Accessing Lotus spreadsheets

You can either attach Lotus spreadsheets to an Access <u>database</u> using the Builder or open them directly with the Browser using version 2.0 or higher of Database Browser Plus.

The MSLT3032.DLL driver used for external access to Lotus spreadsheets. The settings normally made in Windows registry by the Setup program. These setting might be overrode with a section in the DATABASE.INI (DBPLUS32.INI USING THE 32-BIT VERSION)   file typically looks like:

[Lotus ISAM]
win32=<pathname>\MSLT3032.DLL
TypeGuessRows=8
ImportMixedTypes=Text
AppendBlankRows=4
FirstRowHasNames=Yes

The first line assigns the location of the driver.

***TypeGuessRows*** means the number of rows to be checked for the data type.   The data type is determined given the maximum number of kinds of data found.   If there is a tie, the data type is determined in the following order: Number, Currency, Date, Text, Long Text.   If data is encountered that does not match the data type guessed for the column, it is returned as a Null value.   On import, if a column has mixed data types, the entire column will be cast according to the *ImportMixedTypes* setting.

***ImportMixedTypes*** can be set to MajorityType or Text (default).   If set to MajorityType, columns of mixed data types will be cast to the predominate data type on import.   If set to Text, columns of mixed data types will be cast to Text on import.

***AppendBlankRows*** means the number of blank rows to be appended to the end of a WK1, WK3, or WK4 worksheet before new data is added.   For example, if AppendBlankRows is set to 4, Database Browser Plus will append 4 blank rows to the end of the worksheet before appending rows that contain data.   Integer values for this setting can range from 0 to 16; the default is 0 (no additional rows appended).

***FirstRowHasNames*** can be set to Yes or No.   Yes indicates that the first row of the <u>table</u> contains column names; during export column names are exported as the first row.   No indicates no column names in the first row; column names appear as numbers (F1, F2, F3, and so on).

For the 16-bit version, the location of the Lotus driver engine is stored in the Windows Registry in the HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Jet20\InstallableISAM\ subkey.   The initialization settings are automatically set by default, but can be changed by creating a [Lotus ISAM] section of DATABASE.INI (DBPLUS32.INI USING THE 32-BIT VERSION)   file and inserting an entry with the new value.   Follow the format shown in the examples shown above for the 32-bit version.

# Accessing Excel worksheets

 The MSXL3032.DLL (32-bit) and the MSXL2016.DLL (16-bit) drivers are used for external access to Excel worksheets. The settings normally made in Windows registry by the Setup program. These setting might be overrode with a section in the DATABASE.INI (DBPLUS32.INI USING THE 32-BIT VERSION) file typically looks like:

[Excel ISAM]
win32=<pathname>\MSXL3032.DLL
TypeGuessRows=8
ImportMixedTypes=Text
AppendBlankRows=4
FirstRowHasNames=Yes

The first line assigns the location of the driver. The others have identical meaning with Lotus spreadsheets.

# Accessing MS Access 1.1, 2.0, 7.0 & 8.0

Default setup

'No Installable ISAMs found' error

General Protection Fault

# Default setup

Database Browser Plus 16-bit will be configured after installation for Access 2.0 and will be able to manage Access 1.1 databases as well.

If you encounter an "Invalid file format" error, that caused by one of the followings when DBPLUS v.1.x is running:

- There is another application loaded prior Database Browser Plus which is using Version 1.1
- There is a VBDB300.DLL file for Version 1.1 in the search path
- The VBDB300.DLL file is missing from the search path

Version 2.0 and higher can browse all versions, but 1.0 will have some limitations (you can upgrade it with the Builder).

## 'No Installable ISAMs found' error

This error occurs when the external <u>database</u> driver is missing from the DATABASE.INI file or it calls for different version than the one is in memory, or when the external driver that calls is missing.

# General Protection Fault

If General Protection Fault occurs in the external driver (XBS200.DLL, PDX200.DLL or BTRV200.DLL ) while opening external databases, or attached external tables, or queries using attached external tables, the reason most likely is an incompatible version of VBDB300.DLL (DBPlus v1.x only). This can happen when both the JET v.1.1 and 2.0 engines are used in the same computer..

# Loading the Database Builder

The Database Builder is accessible only from the Database Browser by clicking the **File - Builder** menu. The Database Builder window will appear. Everything will be disabled as long as no database will be opened or created.

# Open Database

Click **Open** Database when an existing database needs to be altered. Upon selecting the Open option, a File Open dialog box will be displayed. It provides an easy means of selecting a database file to build. Once a file has been selected, the OK button can be clicked to open the file and display its contents in the Builder. If the CANCEL button is selected, the dialog box will close and you will be returned to the Builder.

All tables of the existing database will be listed in the leftside listbox and all queries of the existing database will be listed in the rightside listbox.

There are message windows under both listboxes. The leftside message window remains empty when the selected table in the listbox is a native Access table. ***Attached table*** message appears when the selected table is attached from another Access, dBase, FoxPro, Paradox, Btrieve or ODBC database. You can open any v.2.0 Access database regardless if it was created with Database Browser Plus or with other software.

# Create Database

Clicking **Create** <u>Database</u> will invoke a File Open dialog as well. Select the drive and folder in the dialog in which you want to create the new Access 2.0 type database. Name the new file and click the OK button.

The listboxes will be empty, since no tables have been added.

# Create Table

The Create <u>Table</u> menu item becomes enables when a <u>database</u> is opened or created. Clicking it will display the **Create Table Dialog**.

**Related Topics:**

<u>Create Table Dialog</u>

# Create Table Dialog

When the Create Table dialog appears you will first need to enter the name of the table you want to create. You can enter any name that has not   used for naming other table or query and complies with the naming rules. Press the *Enter* key when finished typing.

Now, you need to type in the Fields box the name of the first field that you want to add to the new table. This name can be any name that has not used to name another field in the same table. Press the *Enter* key when finished typing. The name of the field you just added will appear in the listbox underneath. The field will be assumed as Text, containing no more than 50 characters. The number of characters (the length of the field) will appear in the Max.number of characters field and the Text option will be selected in the Field Type listing. If you really want a text field, but with different length, simply type the length you want in place of the '50'. Database Builder will accept any entry between   1 and 255. (If you need longer text select Memo as Field type.)

Select the appropriate option from the listing if the field you added is not text type:

## Related Topics:

Boolean (Yes/No)

Number - Integer

Number - Long Integer

Number - Currency

Single precision number

Double precision number

Date/Time

Text

Memo

Counter

### *Boolean (Yes/No)*

This type of data can carry two options, like Yes/No, True/False that can have only one of two states.

### *Number - Integer*

Integer data is ranging in value from -32,768 to 32,767.

## *Number - Long Integer*

Long integer data is ranging in value from -2,147,483,648 to 2,147,483,647.

## *Number - Currency*

The Currency data type is useful for calculations involving money and for fixed-point calculations in which accuracy is particularly important.

Currency data gives a fixed-point number with 15 digits to the left of the decimal point and 4 digits to the right.   This representation provides a range of -922,337,203,685,477.5808 to 922,337,203,685,477.5807.

### *Single precision number*

Single precision data is ranging in value from -3.402823E38 to -1.401298E-45 for negative values and from 1.401298E-45 to 3.402823E38 for positive values.

### *Double precision number*

Double precision data is ranging in value from -1.79769313486232E308 to -4.94065645841247E-324 for negative values and from 4.94065645841247E-324 to 1.79769313486232E308 for positive values.

### *Date/Time*

This type of data will hold the date/time data and display it as the default settings is in the Windows Control Panel.

### *Text*

It can hold 1 through 255 characters.

### *Memo*

Use it for text type of data that is longer than 255 characters.

## *Counter*

Use this type of data for fields that needs automatically being incremented when new data is added. Counter data is actually a long integer type, but <u>Database</u> Browser will automatically increase its value.

Changes of   Fieldtype and Fieldlength apply always to the currently selected field   The **Create button** becomes enabled when at least one field entered. Clicking on this button will create the <u>table</u>.

# Modify Table

The Modify <u>Table</u> menu command will become enabled when a table is selected in the listing. Clicking it will display the Modify Table Dialog, that is identical with the Create Table Dialog except that the name of the table is the one that was selected.

You can modify only native, empty tables.

**Related Topics:**

<u>Rename field</u>

# Rename field

Select the name of the field to rename. Click on **Rename field**. Change the current name in the entry screen and click OK.

The name you enter will be verified for availability.

Renaming takes place right away, regardless you click on the **Modify** button or not.

# Delete Table

This menu item is available only on native tables. Deleting a <u>table</u> will remove the data in the table as well and will make invalid all queries using the table. <u>Database</u> Builder will ask for confirmation before executing the deletion.

Use the Detach Table menu item on attached tables.

You can NOT delete a table that is opened by the Browser or another application.

# Attach Table

As soon as you opened or created the <u>database</u> you can attach tables to it. First you will need to select from a list the type of the external database. Depending on the selection you will need to select next the file that contains the external data, or the DNS of an ODBC database. You will also be asked to select the <u>table</u> for <u>Btrieve</u> or ODBC.

Database Browser Plus might encounter error when components of the attached source are missing. For example, when a DBF file has a Memo field and the referenced DBT file is not found an error occurs. When an index is referenced in an INF file for a DBF file and the index is not found also an error occurs.

Data from attached tables will NOT be imported. It will remain in its original source and be only linked to the database. This is a very important fact. Other applications using the original source will continuously using it and changing it. That includes indexes as well. Database Browser will update only those indexes that are understandable and known to it. If some of the indexes are not maintained by the Database Browser other applications might fail. This danger especially apply to DBF files. You should always verify if all indexes are listed in .INF files, and also that Database Browser will recognize and update them.

The Browser can directly access all datasources that you can attach or import using the Builder. Attaching the datasources is more advantages, because

- data can be combined with other data (native or also attached)
- easier to invoke the data, since all information is stored in the database
- some features, like AutoMerge, drop down list boxes or drop down references require attaching them to an Access database.

# Rename Table

Select the name of the <u>table</u> to rename. Click on **Rename Table**. Change the current name in the entry screen and click OK.

The name you enter will be verified for availability.

# Detach Table

Since data in attached tables resides in the original source, detaching a <u>table</u> will not delete the data. It will delete only the link to the original source. Deleting the link to the attached data can corrupt queries. Before detaching the table you need to verify that, none of the queries refers to it. You can NOT detach a table that is opened by the Browser or another application.

# Import Table

You can import the same kind of tables that you can attach. It is important to understand the differences between the two. While the data in attached tables will reside in the original datasource and will be available for those applications that were using this data, importing will make a one time copy in the form of a native access table and from this point will loose any kind of relationship with the source.

First you will need to select from a list the type of the external database. Depending on the selection you will need to select next the file that contains the external data, or the DNS of an ODBC database. You will also be asked to select the table for Btrieve or ODBC.

Both the structure and the data will be imported. Depending the size of the dataset the import might take longer. When it finished the name of the table will appear in the listing.

# Copy Table

Structure only

Structure and Data

# Structure only

Creates   a copy of the selected <u>table</u> in the selected Access <u>database</u> without the data. The name of the table must not be used in the target database.

## Structure and Data

Creates  a copy of the selected <u>table</u> in the selected Access <u>database</u> with the data. The name of the table must not be used in the target database.

Note that the data transfer will be slow, but it will allow you copying data from secured sources as well. While the data transfer is in progress the source database can not be closed and the Builder can not ne terminated.
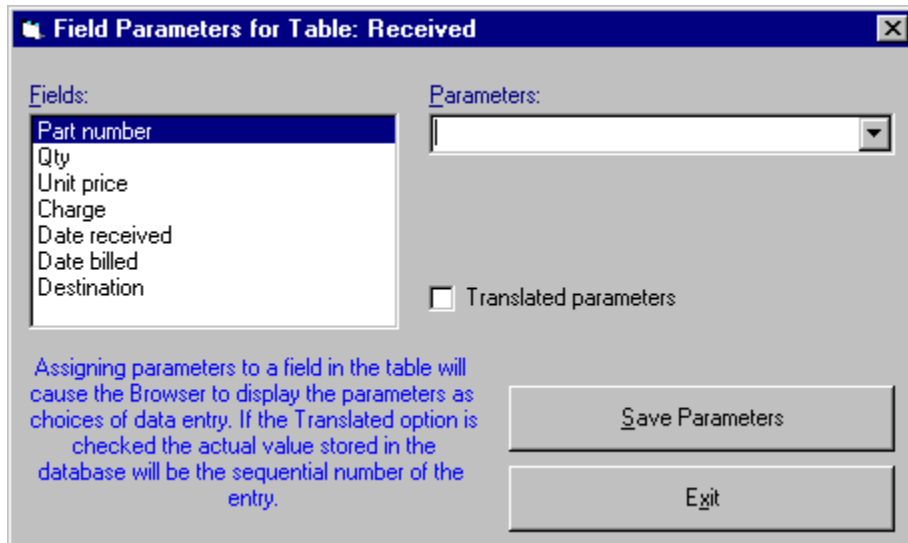
# Custom Table Parameters

[Drop down list](#)

[Drop down Reference](#)

# Drop down list

The purpose of this feature is to create drop down lists for fields displayed in the Browser.

Open the <u>database</u> and select the <u>table</u> in the list that contains the field(s) to which you want to add drop down display in the Browser. Clicking on Custom Table Parameters will display this screen:



Select the field that you want to display with drop down list. If the field already has drop down list assigned the current list of options will appear in the Parameters list. Click on the right side down arrow to see the list.

## Related Topics:

<u>Adding to the Parameters list</u>

<u>Deleting items from the Parameters list</u>

<u>Translated parameters</u>

### *Adding to the Parameters list*

Type the name of the parameters you want to display in the drop down list in the same sequence as they need to be displayed and press the Enter key to add it to the list.

Database Browser Plus will validate the entry if it is the same type of data as assigned to the field, unless the **Translated parameters** option is checked. When the Translated parameters checked validation will take place only for boolean type of fields. You will still be able to enter any text, but only two items.

In order to save the list as it is click on Save Parameters.

### *Deleting items from the Parameters list*

Select the item and press the Delete key.

In order to save the list as it is click on Save Parameters.

### *Translated parameters*

Translated parameters will automatically be checked for boolean fields. For other type of fields you need to set it.

Translated parameters option will display in the Browser an associated text instead of the actual field value. For example, it can display Male/Female for a boolean type of field instead of the default Yes/No, or it can display Alan Powers, Jeffrey Smith and Cindy Reese in the "Salesperson Id" field having actual values as 0, 1 and 2. This might be very handy in certain cases.

Please note that the actual value remains unchanged. When you generate reports still the actual values will be used. In order to include the translated values in your reports you will need to create queries, like *SELECT IIf(Gender = True, 'Male', 'Female') AS Sex*.

You also need to be careful when changing translated values. The changes will apply to prior records as well. When you delete a reference let's say for value of 5 that was "Mary", all records that displayed "Mary" value before will display now "5". You can change however "Mary" to "Lisa" related to value of 5, that will display everywhere "Lisa" instead of "Mary".

# Drop down Reference

The purpose of this feature is to create drop down browse for fields displayed in the Browser.

Open the <u>database</u> and select the <u>table</u> in the list that contains the field(s) to which you want to add drop down reference in the Browser. Clicking on **Custom Table Parameters - Drop down Reference** will display a screen in which

- select in the left side list box the field you want to reference
- select the name of the table or "Select" <u>query</u>   in the middle list that you want to display in the child browse
- select the name of the field in the child browse that will supply the data to the cell in the mother browse
- click on the **Save Relations** button

The above process can be repeated for more fields.

# Export

Export Table to coma delimited Text file

Export Query to coma delimited Text file

Export to DBF

# Export Table to coma delimited Text file

Select a table in the Tables listing. Clicking **on File - Export - Export Table to coma delimited Text file** will create a text file of your choice. These text files (normally with .csv file extension) can be imported by most of the popular database programs.

# Export Query to coma delimited Text file

Select a "select type" <u>query</u> in the Queries listing. Clicking on **File - Export - Export Query** to coma delimited Text file will create a text file of your choice. These text files (normally with .csv file extension) can be imported by most of the popular <u>database</u> programs.

## Export to DBF

It executes a JET engine independent export of an Access <u>table</u> or <u>query</u> to DBF III or to DBF IV formats.

Click on the *Export to* field to create a DBF file. Click on each listed field   and change the length of the field and the number of decimals as required for numeric fields. Other type of fields are unchangeable. Click on the Export button when all fields are set.

Fieldnames must start with alpha characters and their length can not exceed ten characters. Text fields can not be longer than 254 characters. Violation of these rules will result in "Unable to create DBF file" message.

# Index

You can create, delete and change indexes of native Access tables only. Indexes of attached tables are inherited and you can not change them using the Database Browser. In order to change indexes on attached tables you will need to use the original software that created the indexes. Using attached DBF files you can include or ignore existing indexes by changing the listing in the related .INF files.

**Related Topics:**

Modify/Delete

New Index

## Modify/Delete

You can Modify/Delete indexes of the selected <u>table</u> using the **Index - Modify/Delete** menu command.

The Index Manager will be displayed. The available indexes will be listed in a listbox. When you select an index the fields of the table used in the index will appear on the right side. The **'+'** sign stands for ascending, the **'-'** sign for descending order. Fields are listed in sequence separated with the **';'** character.

You need to know the fields of the selected table for creating or changing index.. The fields are displayed for this convenience in a second listbox underneath the index listing.

Between the two listboxes there are two check boxes, **Primary** and **Unique**. If the selected index is a primary and/or unique index the relevant checkboxes will be checked.

### Related Topics:

<u>Deleting an Index</u>

<u>Modifying an Index</u>

### *Deleting an Index*

Click the **Delete button** to delete the selected index. Database Builder will ask for confirmation before executes the command.

### *Modifying an Index*

Change the current values on the display and click the **Save button**. <u>Database</u> Builder will ask for confirmation before executes the command. You can change the state of the Primary and/or Unique check boxes and/or you can change the indexed fields. ***<u>Remove the + sign</u>*** prior saving if the order is ascending.

## New Index

You can add indexes to the selected <u>table</u> using the **Index - New Index** menu command.

The Index Manager will be displayed. The available indexes will be listed in a listbox. When you select an index the fields of the table used in the index will appear on the right side. The **'+'** sign stands for ascending, the **'-'** sign for descending order. Fields are listed in sequence separated with the **';'** character.

When you want to create an index you need to know the fields of the selected table. The fields are displayed for this convenience in a second listbox underneath the index listing.

Between the two listboxes there are two check boxes, **Primary** and **Unique**. If the selected index is a primary and/or unique index the relevant checkboxes will be checked.

<u>Enter a name</u> to the **'Name of the new Index'** field. The name must comply with the <u>naming rules</u>. Change the values of the checkboxes and the Indexed fields as needed and click the **Save button** to create the index.

## Naming rules

The same naming riles apply for tables, queries and fields.

- length limit: 64 characters

- any character, except the period (.), the exclamation mark (!) and the backquote (`) mark and control characters (ACII 0 through ASCII 32)

- the first character must be a letter

The names will NOT be case sensitive.

# Repair database

When your Access <u>database</u> behaves abnormally or there are other signs of damage the Repair database function will attempt repairing it.

# Compact database

Access databases are growing fast. It is a good idea to compact them regularly.

The compaction will also create a backup and in addition allows upgrade to newer version.

# Editing and creating Queries

Database Builder features a Query Editor allowing the creation, modification and deletion of queries. All types of queries are supported.

Database Builder also features an automated query builder for the most frequently used 'Select' type of queries using two tables or queries as source.

**Related Topics:**

Building a 'Select' query

Saving Query Dialog

Editing existing queries

Creating new queries in the Saving Query Dialog

When the Query does not provide what was expected

# Building a 'Select' query

Queries can use tables or other existing 'Select' type of queries as sources. Double click the name of the <u>table</u> or <u>query</u> you want to use as the first source. The underlying fields of the selected source will be listed in the **Fields in Source A:** listbox and the **A:** will change to the name of the selected source. Repeating the same with the second source will fill in the **Fields in Source B:** listbox and changing its name.

## Related Topics:

<u>Selecting Fields for the new query</u>

<u>Determine Relations between the sources</u>

<u>Clearing the Fields in Source listboxes</u>

### *Selecting Fields for the new query*

Make sure that the **Show option** is selected in the right bottom corner of the window. Select the fields in both the leftside and rightside listboxes you want to display in the new query. You can select multiple lines by holding the **Ctrl key** down while clicking with the mouse, or keeping the left mouse button down while moving it vertically.

Click on the **Commit Show** button to save the setup.

### *Determine Relations between the sources*

Make sure that the **Relations option** is selected in the right bottom corner of the window. Select one field in each listboxes that will relate to each other. Click the button between the listboxes that describes the relation. (Most of the time it will be the equal sign.) The selected relation will appear in the larger button in the middle.

Click on the **Commit Relations button** to save the relation.

You might need to repeat the above procedure with more pair of fields if the relation between the sources is NOT based on primary keys.

For example, an Order Number might have multiple items to ship, so you need to establish relations like:

 SourceA.[Order Number]=SourceB.[Order Number]
AND
SourceA.[Item Number]=SourceB.[Item Number]

Click on the **Edit & Save** Query button when all relations are saved.

### *Clearing the Fields in Source listboxes*

Click anywhere in the listbox that you want to clear and press the **Delete key**.

Note that it makes no difference which source will be listed in the left and which in the right side. The second source will be listed in the one that is available (empty).

# Saving Query Dialog

Clicking on the **Edit & Save** <u>Query</u> button or on the **Query - Edit menu command** will display the **Saving Query** dialog.

The SQL field in the Saving Query dialog will show the resulting query expression if you saved both 'relations' and 'fields to display' for a new query (as described in the prior section). Enter a <u>long unique name</u> to the **Save As** field and click on the **Save button**. You can verify any queries with the **Test button**. However, the verification is also a part of the saving procedure.

## Editing existing queries

The Saving <u>Query</u> dialog will display in the SQL field the query expression of the currently selected query if there is no relations saved in memory for a new query. The Save As field will show the name of the currently selected query.

You can make changes in the query expression, test it and save it on the same name or typing a new name into the Save As field.

# Creating new queries in the Saving Query Dialog

You can actually write a new query of any type in the Saving Query Dialog, since   everything is changeable in it.

Writing query expressions assumes familiarity with the SQL programming language. Database Builder provides samples for various types of queries in the Saving Query Dialog that you can paste to the SQL field and change it to your data.

Using the **Test button** you can on-line verify the queries and correct them prior saving.

You can create queries that will perform actions, such as append or update a table. Using the Test button on such queries might results in unwanted change in the data.

**Please backup your data before you test Action Queries!**

**Do not forget to backup the attached tables and indexes as well!**

# When the Query does not provide what was expected

The Query Editor validates the queries. This validation detects synthax errors. The query might results unexpected problems:

1. Fields are not listed in the sequence you wanted

   Edit the Query and change the listings following the SELECT statement.

2. Records are duplicated

   Use the DISTINCT, DISTINCTROW predicates.

3. Too many records are displayed

   Check the logic of the query. The links might pick up unwanted data.

4. Records are missing

   Check the logic of the query. You might have linked data that has missing reference in the linked datasource.

5. Data is not updateable

   Use for linking indexed fields, if it is possible create primary indexes. Use INNER JOIN ... ON operation instead of WHERE clauses. Note that the query builder does not create imbedded joins.

# SQL keywords

Database Browser does NOT aim to provide a thorough lesson for SQL (Structured Query Language). This section is for those users who are already familiar with SQL and need information about the dialect that Database Browser is using.

## Related Topics:

ALL, DISTINCT, DISTINCTROW, TOP Predicates

Between...And Operator

DELETE Statement

FROM Clause

GROUP BY Clause

HAVING Clause

IN Clause

INNER JOIN Operation

LEFT JOIN, RIGHT JOIN Operations

Like Operator

ORDER BY Clause

PARAMETERS Declaration

PROCEDURE Clause

SELECT Statement

SELECT...INTO Statement

SQL Aggregate Functions

TRANSFORM Statement

UNION Operation

WITH OWNERACCESS OPTION Declaration

# ALL, DISTINCT, DISTINCTROW, TOP Predicates

Purpose:

Specifies records selected with SQL queries.

Syntax:

SELECT **[ALL | DISTINCT | DISTINCTROW | [TOP** n [PERCENT]]]
FROM table

Where:

ALL             Assumed if you don't include one of the predicates.   The
following                   two examples are equivalent   (1):SELECT ALL
*, (2) SELECT *

DISTINCT        Omits records that contain duplicate data in the selected
fields.

DISTINCTROW Omits data based on entire duplicate records, not just
duplicate                   fields.

TOP             Returns a certain number of records that fall at the top or
the                         bottom of a range specified by an ORDER BY
clause.   Suppose                   you want the names of the top 25
students from the class:                         SELECT TOP 25
        You can also use the PERCENT reserved word to return a
certain             percentage of records that fall at the top or the bottom of
a range                 specified by an ORDER BY clause.   Suppose
that, instead of the                 top 25 students, you want the top 10
percent of the class:
        SELECT TOP 10 PERCENT

table           The name of the table from which records are retrieved.

# Between...And Operator

expr [Not] **Between** value1 **And** value2

Where:

| | |
|---|---|
| expr you want to | Expression identifying the field that contains the data evaluate |
| value1, value2 | Expressions against which you want to evaluate expr |

# DELETE Statement

Creates a delete query that removes records from one or more of the tables listed in the FROM clause that satisfy the WHERE clause.

Syntax:

**DELETE** [table.*]
FROM tableexpression
WHERE criteria

Where:

table          The optional name of the table from which records are deleted.

tableexpression The name of the table or tables from which records are deleted.            This argument can be a single table name or a compound                      resulting from an INNER JOIN, LEFT JOIN, or RIGHTJOIN          operation.

criteria          An expression that determines which records to delete.

# FROM Clause

:

SELECT fieldlist **FROM** tableexpression [IN externaldatabase]

Where:

fieldlist            The name of the field or fields to be retrieved along with any                       field-name aliases, SQL aggregate functions, selection predicates                  (ALL, DISTINCT, DISTINCTROW, or TOP), or other SELECT           statement options.

tableexpression An expression that identifies one or more tables from which data                    is retrieved.   The expression can be a single table name, a saved                    query name, or a compound resulting from an INNER JOIN or           LEFT JOIN or RIGHT JOIN.

externaldatabase      The full pathname of an external database containing all the                              tables in tableexpression.

# GROUP BY Clause

:

Combines records with identical values in the specified field list into a single record.   A summary value is created for each record if you include an SQL aggregate function, such as Sum or Count, in the SELECT statement.

Syntax:

SELECT fieldlist
FROM <u>table</u>
WHERE criteria
**GROUP BY** groupfieldlist

Where:

fieldlist          The name of the field or fields to be retrieved along with any                         field-name aliases, SQL aggregate functions, selection predicates          (ALL, DISTINCT, DISTINCTROW, or TOP), or other SELECT          statement options.

table          The name of the table from which records are retrieved. For more                    information, see the FROM clause.

criteria          Selection criteria.   If the statement includes a WHERE clause, the                  it groups values after applying the WHERE conditions to the                          records.

groupfieldlist   The names of up to 10 fields used to group records. The order of                    the field names in groupfieldlist determines the grouping levels          from the highest to the lowest level of grouping.

# HAVING Clause

Purpose:

Specifies which grouped records are displayed in a SELECT statement with a GROUP BY clause.   Once GROUP BY combines records, HAVING displays any records grouped by the GROUP BY clause that satisfy the conditions of the HAVING clause. It is optional.

Syntax:

SELECT fieldlist
FROM table
WHERE selectcriteria
GROUP BY groupfieldlist
**HAVING** groupcriteria

Where:

| | |
|---|---|
| fieldlist any selection predicates TOP), or other SELECT | The name of the field or fields to be retrieved along with field-name aliases, SQL aggregate functions, (ALL, DISTINCT, DISTINCTROW, or statement options. |
| table For more | The name of the table from which records are retrieved. information, see the FROM clause. |
| selectcriteria clause, it conditions to the | Selection criteria.   If the statement includes a WHERE groups values after applying the WHERE records. |
| groupfieldlist The order of grouping levels | The names of up to 10 fields used to group records. the field names in groupfieldlist determines the from the highest to the lowest level of grouping. |
| groupcriteria display. | An expression that determines which grouped records to |

# IN Clause

To identify a destination table:

[SELECT | INSERT] INTO destination **IN** {path | ["path" "type"] | ["" [type; DATABASE = path]]}

To identify a source table:

FROM tableexpression IN path | ["path" "type"] | ["" [type; DATABASE = path]]}

Where:

| | |
|---|---|
| destination | The name of the external table into which data is inserted. |
| tableexpression | The name of the table or tables from which data is retrieved. |
| path | The full path for the directory or file containing table. |
| type database III, dBASE IV, | The name of the database type used to create table if a isn't an Access database (for example, dBASE Paradox 3.x, Paradox 4.x, or Btrieve). |

# INNER JOIN Operation

Purpose:

Combining records from two tables whenever there are matching values in a common field.

Syntax:

FROM table1 INNER JOIN table2 ON table1.field1 compopr table2.field2

Where:

table1, table2    The names of the tables from which records are combined.

field1, field2    The names of the fields that are joined.   If they aren't numeric, the                fields must be of the same data type and contain the same kind of                    data, but they don't have to have the same name.

compopr                Any relational comparison operator: "=," "<," ">," "<=," ">=," or                "<>."

# LEFT JOIN, RIGHT JOIN Operations

<u>Purpose</u>:

Combining source-<u>table</u> records when used in any FROM clause.

<u>Syntax</u>:

FROM table1 [ **LEFT | RIGHT ] JOIN** table2
ON table1.field1 compopr table2.field2

<u>Where</u>:

| | |
|---|---|
| table1, table2 | The names of the tables from which records are combined. |
| field1, field2 | The names of the fields that are joined.   The fields must be of the same data type and contain the same kind of data, but they don't have to have the same name. |
| compopr | Any relational comparison operator: "=," "<," ">," "<=," ">=," or "<>." |

# Like Operator

:

Comparing a string expression to a pattern in an SQL expression.

:

Expression **Like** "pattern"

:

expression      SQL expression used in a WHERE clause.

pattern      String or character string literal against which expression
is                          compared.

# ORDER BY Clause

Purpose:

Arranges the resulting records on a specified field or fields in ascending or descending order.

Syntax:

SELECT fieldlist
FROM table
WHERE selectcriteria
**ORDER BY** field1 [ASC | DESC ][, field2 [ASC | DESC ][, ...]]

Where:

fieldlist     The name of the field or fields to be retrieved along with any                       field-name aliases, SQL aggregate functions, selection predicates            (ALL, DISTINCT, DISTINCTROW, or TOP), or other SELECT          statement options.

table         The name of the table from which records are retrieved. For more                      information, see the FROM clause.

selectcriteria    Selection criteria.   If the statement includes a WHERE clause, it                     orders values after applying the WHERE conditions to the                            records.

field1, field2    The names of the fields on which to sort records.

# PARAMETERS Declaration

:

Declaring the name and data type of each parameter in a parameter query.

Syntax:

**PARAMETERS** name datatype [, name datatype [, ...]]

Where:

name            The name of the parameter.   Assigned to the Name property of the           Parameter object and used to identify this parameter in the                        Parameters collection.   You can use name as a string that is                      displayed in a dialog box while your application runs the query.                   Use brackets ([ ]) to enclose text that contains spaces or punctuation.   For example, [Low price] and [Begin report with which month?] are valid name arguments.

datatype                   The parameter's data type.

# PROCEDURE Clause

Defining the name and optional parameters for a query.

Syntax:

**PROCEDURE** name [param1 datatype[, param2 datatype[, ...]]

Where:

name            A name for the procedure.   It must follow standard naming                           conventions.

param1, param2            One or more field names or parameters.   For example:

> PROCEDURE Sales_By_Country [Beginning Date] DateTime, [Ending Date] DateTime;

datatype            One of the 13 primary Microsoft Jet SQL data types or their                           synonyms.

# SELECT Statement

**SELECT** [predicate] { * | <u>table</u>.* | [table.]field1 [, [table.]field2[, ...]]}
[AS alias1 [, alias2 [, ...]]]
FROM tableexpression [, ...] [IN externaldatabase]
[WHERE... ]
[GROUP BY... ]
[HAVING... ]
[ORDER BY... ]
[WITH OWNERACCESS OPTION]

<u>Where</u>:

| | |
|---|---|
| predicate | One of the following predicates: ALL, DISTINCT, |
| | DISTINCTROW, or TOP.   You use the predicate |
| to restrict the | number of records returned. |
| * | Specifies all fields from the specified table(s) are |
| selected. | |
| table | The name of the table containing the fields from which |
| records | are selected. |
| field1, field2 | The names of the fields to retrieve data from.   If you |
| include more | than one field, they are retrieved in the order |
| listed. | |
| alias1, alias2 | The names to use as column headers instead of the |
| original | column names in table. |
| tableexpression | The name of the table or tables containing the data you |
| want to | retrieve. |
| externaldatabase | The name of the <u>database</u> containing the tables |
| in tableexpression | if not in the current database. |

# SELECT...INTO Statement

<u>Purpose</u>:

Creating a make-<u>table</u> <u>query</u>.

<u>Syntax</u>:

**SELECT** field1[, field2[, ...]] **INTO** newtable [IN externaldatabase] FROM source

<u>Where</u>:

field1, field2      The name of the fields to be copied into the new table.

newtable       The name of the table to be created.

externaldatabase       The path to an external <u>database</u>.   For a description of the path,            see the IN clause.

source            The name of the existing table from which records are selected.              This can be either a single table or a query.

# SQL Aggregate Functions

Using the SQL aggregate functions, you can determine various statistics on sets of values.

## Related Topics:

Avg Function

Count Function

Min, Max Functions

StDev, StDevP Functions

Sum Function

Var, VarP Functions

## *Avg Function*

Calculating the arithmetic mean of a set of values contained in a specified field on a query.

Syntax:

**Avg**(expr)

Where:

expr            string expression identifying the field that contains the numeric                data you want to average or an expression that performs a                    calculation using the data in that field. Operands in expr can                        include the name of a table field, a constant, or a function (which                can be either intrinsic or user-defined but not one of the other            SQL aggregate   functions).

### Count Function

Calculates the number of records returned by a query.

Syntax:

**Count**(expr)

Where:

expr            string expression identifying the field that contains the
data you                want to count or an expression that performs a
calculation using              the data in the field.   Operands in expr
can include the name of a              table field or function (which can
be either intrinsic or user-              defined but not other
SQL aggregate functions).   You can count              any kind of
data, including text.

## *Min, Max Functions*

Purpose

Returning the minimum or maximum of a set of values contained in a specified field on a query.

Syntax:

**Min**(expr)

**Max**(expr)

Where:

expr             string expression identifying the field that contains the data you               want to evaluate or an expression that performs a calculation                    using the data in that field.   Operands in expr can include the               name of a table field, a constant, or a function (which can be                      either intrinsic or user-defined but not one of the other SQL                         aggregate functions).

### StDev, StDevP Functions

Returning estimates of the standard deviation for a population or a population sample represented as a set of values contained in a specified field on a query.

Syntax:

**StDev**(expr)

**StDevP**(expr)

Where:

expr                    string expression identifying the field that contains the numeric                    data you want to evaluate or an expression that performs a                    calculation using the data in that field. Operands in expr can                    include the name of a table field, a constant, or a function (which                    can be either intrinsic or user-defined but not one of the other                    SQL aggregate functions).

### *Sum Function*

:

Returning the sum of a set of values contained in a specified field on a query.

Syntax:

**Sum**(expr)

Where:

expr            string expression identifying the field that contains the numeric            data you want to add or an expression that performs a calculation            using the data in that field.   Operands in expr can include the            name of a table field, a constant, or a function (which can be            either intrinsic or user-defined but not one of the other SQL        aggregate functions).

### *Var, VarP Functions*

Returning estimates of the variance for a population or a population sample represented as a set of values contained in a specified field on a query. VarP evaluates a population, and Var evaluates a population sample.

Syntax:

**Var**(expr)

**VarP**(expr)

Where:

expr                string expression identifying the field that contains the numeric                    data you want to evaluate or an expression that performs a                    calculation using the data in that field. Operands in expr can                    include the name of a table field, a constant, or a function (which                    can be either intrinsic or user-defined but not one of the other                    SQL aggregate   functions).

# TRANSFORM Statement

:

Creating a crosstab query.

Syntax:

**TRANSFORM** aggfunction

selectstatement

PIVOT pivotfield [IN (value1[, value2[, ...]])]

Where:

aggfunction     An SQL aggregate function that operates on the selected
data.

selectstatement A SELECT statement.

pivotfield     The field or expression you want to use to create column
headings          in the query's result set.

value1, value2  Fixed values used to create column headings.

# UNION Operation

:

Combining the results of two or more independent queries or tables.

Syntax:

[TABLE] query1 **UNION** [ALL] [TABLE] query2 [**UNION** [ALL] [TABLE] queryn [ ... ]]

Where:

query1, query2, queryn  A SELECT statement, the name of a stored query, or the                          name of a stored table preceded by the TABLE keyword.

# WITH OWNERACCESS OPTION Declaration

In a multiuser environment with a secure workgroup, use the WITH OWNERACCESS OPTION with a query to give the user who runs the query permission to use the tables in the query with the same permissions assigned to the query's owner, rather than the user's own.

Syntax:

sqlstatement

**WITH OWNERACCESS OPTION**

# Rename Query

Select the name of the <u>query</u> to rename. Click on **Query - Rename Query**. Change the current name in the entry screen and click OK.

The name you enter will be verified for availability.

# Delete Query

Select the name of the query and click on **Query - Delete Query**.

# Glossary of Terms

Btrieve

Database

dBase

FoxPro

LAN

Microsoft Access

Paradox

Query

Table

Word

# Btrieve

Registered trademark of Novell, Inc.

# Database

A collection of data.

## dBase

Registered trademark of Borland International.

## FoxPro

Registered trademark of Borland International.

# LAN

Local Area Network

# Microsoft Access

Products of Microsoft Corporation.

## Paradox

Registered trademark of Borland International.

# Query

Data gathered from one or more tables by request.

# Table

The store of data.

# Word

Product of Microsoft Corporation.