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How to ...

Creating New Files

To create a new file you first must give it a name. Enter a **filename** into the dialogbox (8 characters at most, the extension '.DBF' is appended automatically).

Next you need to **define a set of fields** which determine the structure of the new database. Give each field a name as well. The names need not be unique, however this might be useful if you want to access the data from other applications. Then you must provide the **size** of each field. Simply enter the values into the boxes - the maximum size of a single field is 254 (characters), I recommend a **maximum size of 65** because that is what fits on the screen.

If you want to define a **date field** do not enter figures but the letter ' **d** ' instead - this makes EZB create a field with the internal size of 8 bytes (yyyymmdd) but a display size of 10 (dd.mm.yyyy - the **international date format**).

There are two special field codes if you want to <u>display graphics or text files</u> from within EZB. ' g ' defines a link field for displaying grafics and ' t ' for displaying text files. Just enter the appropriate letter. A field length of 12 is generated automatically (8 characters for entering the file names, one for the dot, 3 for the file extensions).

EZB can handle up to 20 fields.

That's it! All fields with the exeption of ' g '- and ' t '-fields will be <u>indexed</u> automatically.

Opening a File

Files are opened using the Windows standard dialog. The default extension is 'DBF'. EZB files are compatible to dBase files.

You also can use a file's name as argument when calling EZB. The database then is loaded immediately when EZB comes up.

You can access non EZB database files, but EZB will only display the first 20 fields of each record, in case there should be more. Also you can neither use the fast indexed search, nor store or delete records. But you can <u>browse</u> the database, <u>conduct a freetext search</u> or write data to <u>lists</u>.

Closing Files / Exiting EASY-Base

You may use the **Close** command from the **File** menu to close a file. All files (original data, parameters and index) will then be updated on the disk.

An opened file is **closed automatically** when you open another file or create a new one or **exit** EZB (using the menu option or the system bar).

EZB can only handle one file at the same time.

Rebuilding the Index

EZB creates and maintaines one index file for each database. Each field you have defined is indexed automatically. The entries in the index file are **updated automatically** when you <u>append</u>, <u>replace</u> or <u>delete</u> data.

Normally **you need not bother about the index file**.

The menu option **Reindex** might be useful, however, after data losses have occured or after importing data. When you have imported data or read in disk contents by using EASYDISK not the complete database will be reindexed but only new index entries for the appended records will be added.

Reorganizing Data

EZB **reorganizes data automatically**: the <u>index</u> is maintained automatically, and free disk space after deleting records is used for those newly entered.

Normally you can forget about this menu option.

The **Reorganize** command 'packs' the data and sorts the database on the first field. As the reorganization uses the index **never start "Reorganize" when the index is corrupted**. In this case <u>Reindex</u> the database first.

A reorganization can take pretty long depending on the number of records in the database, the number of fields and the size of the file. Note that after choosing this option the <u>index</u> is rebuilt automatically, too.

Searching / Sorting

To retrieve data type in the beginning of a character string into the field you want to search. Then press the [**Return**] key or click the '**<=**' symbol of the menu bar or choose the **Find** option from the **Record** menu.

EZB always does a **stem search**. You do not need wildcards. Just type in the first few letters. The search is **not case sensitive** either.

When you browse the data you will notice that the records are sorted on the field you chose for searching. Each field is indexed and thus used for sorting as well.

If you want to sort on a different citeria or sort the complete database use the menu item **Options - Sort**. You have to specify the field number here (the top field is '1' the bottom field is '20' or less).

When you have filled in more than one field the search is 'ANDed'. EZB retrieves all records for which all conditions are true simultaniously. In this case the records are not sorted at first (with the exception of a newly reorganized database), but you can sort them by means of the **Sort** option.

You can also conduct searches for **text strings** independently of the field structure of a database. Access the **Options** menu and select the **Search** item. Enter the text in the entry editor of the Search dialog box and click the OK button. This text search is **not case sensitive** either. You can even **find deleted records** (as long as they have not been replaced by new data). **This option also works with non EZB databases**. As the text search does not use the index file it may take a while, depending on the size of the database.

Again you will get a selection of all records where a match is found. You can sort the data choosing the **Sort** item in the **Options** menu (non-EZB data cannot be sorted because the sort option makes use of the index file).

There are extended search facilities for date fields**.** Here you can specify all records from a date (**>=**   - condition) or before a date (<   -condition). Or you can search all records for a year specified or a month and so on.

You have to enter the **internal date format** for this which goes yyyymmdd and you must specify an operator (' = ', ' < ' or   ' > ', where the latter actually means ' >= ').
Your entries in the searchfield might look like this:

>19940101
<1994
=199312
=1993

The search is truncated like always: '199312' means all data from December 1993, '1993' means the complete year 1993.

Of course you can also search for a single date. Type in the **international date format** (dd.mm.yyyy) in this case:

1.4.94

searches all records wich have the first of April in the date field. You can omit leeding zeroes.

Finally a database may contain **multiple-indexed fields**. Although   this field type cannot be specified in EZB you can profit from it in preconfigured databases. Here single entries which are separated by ' **;** ' or

' ;   ' (semicolon or semicolon-blank) **can be searched independently**. This feature is typically used for **keywords**, search terms (controlled terms, supplementary terms), classification codes, also author fields and so on. You will find further information in the Readme files accompanying predefined databases which use this option (like 'LIT' which comes with this packet).

Browsing the Database

You can browse the database by either pressing the [**PgDn**]- or [**PgUp**]-keys or clicking the ' **>>** ' respectively ' **<<** ' symbol from the menubar.

This works similarly after you have conducted a search. In this case you browse the selection of matching records.

When you open a file the data are not <u>sorted</u> at first. After conducting a <u>search</u>, however, the records are sorted on the search field. Alternatively you can sort the data selecting the **Sort** command from the **Options** menu.

Storing / Appending / Replacing records

Enter the data into the field editors displayed on the screen and press the [**Ins**] key or click '**=>**' at the menu bar or choose the **Store** command from the **Record** menu.

When you have entered the data into an **empty screen** the record is **appended** to the database. Have you displayed a record first and then changed some of the data the original record is **replaced** with the new one. This is normally what you want to do.

However, to make sure that a record is added to the database rather than replacing the one you just displayed, use the [**+**] key (from the numerical keyboard pad) or the **Append** option from the **Record** menu instead. Thus you can duplicate data.

Deleting Records

You can only delete records which are currently being displayed on the screen: conduct a <u>search</u> first or <u>browse</u>   the database until the record in question is displayed. Then press the [**-**] key (from the numerical keyboard pad) or select the **Delete** command from the **Record** menu. A dialog box is displayed then for confirmation.

The records are only deleted 'logically' at first. They remain in the database until you enter new data and the disk space is reused for this. As long as you do not enter new data you can **retrieve deleted records** either browsing the database or running a text search (**Options** - **Search**). Replace the ' ? ' at the beginning of the record and press the [**+**] key (from the numerical keyboard pad) or choose the **Append** command from the **Record** menu to restore the record. [Ins] or '=>' might not work correctly here.

Listing Records

The **List** command from the **Record** menu outputs the record currently being displayed to a file called **<name>.LST** (the name of the database with the extension 'LST'). A record is listed like it is shown on the screen. When you have altered any data these alternations will be in the list as well. This can be convenient when you want to address varying persons in the same organization without having to keep duplicate address entries in the database for each.

The output is formatted depending on your entries in the report parameter file. The default settings are: one line per data field and an extra line feed at the end of each record   (a form feed, when printing single records).

When you open the same database again the <name>.LST file is newly created. Former selections will be lost. The lists are only meant for **temporary storage**.

Selecting the **List All** item from the **Options** menu you can also list all records from the current selection. This is either the complete database or just part of it when you have conducted a search first.

Two further options are "**List all (DEL)**" and "**List all (SDF)**". Both ignore your entries in the parameter file and list all fields instead. As for 'List all (DEL)' trailing blanks are ignored, each field is succeeded by the **delimiter** as defined in the parameter file, and a carriage return/line feed sequence is appended to each record.   This format is often used for printing serial letters.

'List all (SDF)' outputs the data in the **structured data format**, which means with all trailing blanks included and a line feed at the end of each record. Thus you get a table format which can easily be **imported** by other programs.

Printing Records

When you select the **Print** command from the **Record** menu the record currently being displayed is printed on the default printer. The formatting depends on the report parameters.

You can also choose "**Print All**" from the **Options** menu. In this case all currently selected records   will be printed. I have not provided a Cancel option - so use this feature cautiously! Single records will be separated by a   line feed   (which makes an empty line if you also have defined a line feed as suffix code) and a form feed is appended at the end of the list.

Copying Records to the Clipboard

You can **transfer data to other applications** like your favorite word processor selecting the **Copy** command from the **Record** menu.

The record currently beeing displayed will be formatted according to the <u>report parameters</u> and copied to the clipboard.

Displaying Graphics or Text Files

EZB allows you to display images or text files from within a database by means of calling other applications. To enable this feature special field types must be defined: ' g '-fields for viewing graphics respectively ' t '-fields for viewing text. EZB then generates editor lines with field lengths of 12 characters for entering file names into the database.

When pressing the [**Return**] key while the cursor is active within such field the appropriate program is called with the fields contents as parameter. You can let EZB call **your favorite viewing programs** providing a file "**EZB.PAR**" in the working directory. The first entry (line) in this file defines the viewer for graphics the second the viewer called when displaying   text. If   "EZB.PAR" is missing, EZB uses PAINTBRUSH respectively NOTEPAD as default viewers.

Editing Data / Clearing the Screen

For each field defined in a database EZB creates one line on the screen which is used as well for entering new data as for searching.

You can move the cursor to the next field by pressing the [**Tab**] or [**Cursor down**] key. Move one line/field up with [**Cursor up**]. Alternatively you can activate the editor line of a field **clicking the left mouse button**.

To **clear the entire screen** press the [**Home**] key or click   the **Clear** command on the menu bar.

Defining Report Parameters

You can set up your own report parameters selecting the **Design Reports** item from the **Options** menu. The parameters you define here are used for output to lists as well as for copying data to the clipboard or printing.

To select the fields which shall be listed or printed, you have to enter **field numbers instead of field names**. The top field on the screen is number '1' the bottom one number '20' or less depending on the number of fields defined in the database. The field numbers are displayed in the first column of the screen. You can end the list by just entering an invalid field number in the next box - '0' for example. The following entries in the table will then be deleted automatically when the parameters are being stored.

The default is that all fields are listed or printed.

The field sequence for reports may differ from the screen layout. You could also list fields repeatedly.

Each field can be preceeded by a **prefix** and succeeded by a **suffix** when listed. The default value for the suffixes is a line feed. With MS-DOS systems a line feed consists of two characters: one for 'carriage return' and one for 'line feed'. EZB uses **\r** as code for a **carriage return** character and **\n** for a **new line**. You can also append ordinary characters or space characters as well. Or use **\t** (**tabulator**) for formatting the output.

Tabulator characters and form feeds are ignored when you print records. When printing single records a form feed is appended anyway. When printing lists single records are separated by empty lines and a form feed is appended at the end.

Using **prefixes** allows you to produce output like this:

        AU   = [author name]
        TI   = [book title]
        SO   = [source information]

Once again: important suffix codes

        \r\n   **line feed**
        \t   **tabulator**

The output is always 'delimited'. **Trailing space characters are cut off, fields with no contents are ignored**. To prevent field contents from beeing glued to each other you always should provide a suffix. Often a **space character** does the trick. Or use \t for formatting text especially with regard to proportional fonts.

You can also define a **delimiting character** (the **default** delimiter is ' **;** '). This is appended when listing all records of a selection with the "**List all (DEL)**" option. The delimiter will also be listed when there is no entry in a field. Thus you can rely on a fixed number of delimiters (fields), which is important when exporting data for serial letters etc.

Importing Data

This fuction is not yet implemented. A later version will allow you to import dBase compatible files and structured ASCII files (extensions 'DBF' and 'SDF').

Quick Reference

Several keys (**accelerator keys**) serve as shortcuts for menu options or mouse actions, these are:

[Return]   search / display images, text files or other databases
[Tab]   jump to next field
[Cursor down]   jump to next field
[Cursor up]   jump to previous field
[PgDn]   display next record
[PgUp]   display previous record
[Home]   clear screen
[Ins]   store a record
[+]   (numpad) append a record
[-]   (numpad) delete a record
[F1]   help
[Esc]   exit EZB

Messages

EZB uses default settings which make working with the program quite simple and straightforward. When you have displayed a record, altered data and then store it, EZB replaces the old record with the altered one. When storing a record after entering data into an empty screen layout a new record is created. Listing, printing or copying a record always means exporting the record like it is shown on the screen (not like it may be stored in the database). A search is always a combined search when you have filled out more than one field. When you choose just one data field for searching the hit list is sorted on this very field.

In 99% what EZB does is what you want it to do.

Nonetheless you may encounter one of the following information or error messages:

Maximum length of a field is 254 characters
You have tried to define a data field which is longer than 254 characters (bytes). Enter a value of 254 or less to make EZB happy again.

File already exists - use a different name
You have tried to create a new database using a name which already is in use for another. Either choose a different name or delete the existing database first (files: <name>.DBF, <name>.PAR and <name>.IDX).

Cannot open the file
This should never happen. Possibly the file in question is read-only.

Invalid file format - not a DBF-file?
Are you sure this file is in the dBase (TM) format?

Cannot display the dialog box
This should never happen either. Maybe you should close some other application to make Windows (TM) work properly again.

GetOpenFileName returned error-no. ...
Some Windows (TM) error message I never actually encountered.

No record found
You have conducted a search which brought up no hits.

First or last record of current selection
While browsing the complete database or your current selection (hit list) you have come to the first or last record in the list.

Record must be displayed prior to deleting
Record must be displayed prior to output
EZB does not know which record you mean. Bring it up to the screen first. After entering new data a record must be stored first before it can be listed or printed.

Invalid field number
You have entered a field number which is not defined in the database (a value of   0 or greater than the number of fields in your database). Try again.

Not an index/sort field
When you have defined your database using EZB all fields are indexed automatically. There may exist predefined databases though which also comprise non-indexed fields (note fields for example). Link fields

for displaying images or text files are not indexed either.

Error during sort
Possibly there is no record in the database (the display box says "0 of 0 selected"). Or there might be not enough space in the RAM of your computer. As this is very unlikely - EZB only needs 30 K to 400 K of RAM, depending on the number of records in the database -, I would like to be informed. Add a few informations like how many records are in the database, how many did you try to sort, does the sort work properly when you choose another field ... My Compuserve-ID is 100303,221.

This function is not yet implemented
The import feature will be implemented in a later version of EZB (registered users don't have to pay update fees).

Could not call Program/Viewer
Very likely the program you use for displaying images or text files is either not defined in 'EZB.PAR' or is not in a current path.

General Information

<u>Features/Limitations:</u>

any number of databases
a maximum of 65,534 records per database
a maximum of 20 fields per record
a maximum of 254 characters per field

field types: indexed field or indexed date field
(multiple indexed fields are interpreted correctly)
'link' - fields: ' g ' (for viewing graphics), ' t ' for viewing text files'
and ' l ' for accessing other EZB-database files

hierarchical index for all fields
with a maximum of 1,3 million entries
the first 10 characters of each field are used for indexing

automatic standard screen layout for editing and displaying data

<u>Files:</u>
*.DBF   original data
*.PAR   parameter file
*.IDX   index

*.LST   temporary list file
*.LSP   report parameters
*.TMP   temporary file during reorganization

<u>planned future developments:</u>

import of SDF and DBF files
direct conversion for DBF files
export of database structures

<u>Notes</u>

EZB does not support networking or multiple access to databases at the same time. To make sure, that
each database is opened only once, you should run SHARE.EXE when running EZB (you can start
SHARE from the AUTOEXEC.BAT or when before starting Windows).

When you use to work in one particular database most of the time (e.g.   ADR.DBF), you should   set up
a second item for EZB and use the database's name as an argument when calling EZB ('C:\DBPROG\
EZB   ADR.DBF'). The database then is loaded immediately.

License

EZB is distributed free of charge for evaluation purposes only. If you like EZB and plan to use it for longer than 30 days you are expected to pay a registering fee of **$15**. Once you have paid this fee you are entitled to use EZB as long as you like and update it as often as you like - and as long as there are any **updates** - **without paying any additional fees**. If you need my support or have any questions write a mail to my Compuserve-ID 100303,221 (registered users only). You can register electronically at Compuserve: GO SWREG and search for EZB as a keyword.

Although I have tested EZB on different computers in different environments I cannot garanty the program to work with any configuration. Registration is only required when proved to run satisfactorily on your machine.

Bernd Harmsen
Stuttgart, Germany - November 1994