MicroCosm Database Management Software v1.3

Created by Peter Gervais

Introduction

MicroCosm was created over a period of 8 months. The first 4 months consisted of an average 57 hours/day of programming and debugging. The last 4 months averaged 34 hours/day. Many days and weeks have gone into debugging MicroCosm as to provide a strong program that will not 'Guru' on the user after he/she has entered 100 records. The program was designed using a base concept from Oracle (copyright Oracle Corporation) RDBMS (relational database management system) which I found to be quite powerful and flexible at the same time. I used some of the ideas from Oracle and implemented them into MicroCosm. Some of the ideas are still pending installation but will come! The program was always slated for the shareware market and thus, a small usage fee is requested by the programmer for his HUNDREDS of hours of programming/debugging. Although a fee of $15 is requested (which is diddlysquat compared to the costs of Database program currently on the market), I will certainly not complain over a $5$10 payment or even a $15$20 payment. Use your judgement like most rational Amiga users ;)

Becoming a Registered User

To become a registered user of MicroCosm, send a cheque or money order (don't send cash through the mail!) made payable to Peter Gervais. Mail to:

Registered User/MicroCosm
c/o Peter Gervais
2444 Woodward Avenue
Burlington, Ontario, CANADA
L7R 1T9

Please be sure to include your return address along with any functions you would like to see implemented into the software.

Getting Started

Boot the disk containing MicroCosm Database and double click on the Forms Designer Icon or enter the CLI task and type:

1> MC

If this fails, be sure you are in the appropriate directory or make sure the file "mc" is in the 'C' directory of your boot disk.

MENUS

MicroCosm DBMS contains 3 menu items. Below is a description of the usage for each of the menu items.

FILE ITEMS

ABOUT (AmigaA) Tells version number, copyright notice, authors name and program name.

NEW DATABASE This item is used to create a new database. Since certain parameters are needed to creat a database file, the used must have a form (which contains all the necessary parameters) loaded. If all goes correctly, the message "Database created but not opened" should appear on the message line. If not, the message "Unable to create new database." will appear.

OPEN (1)FORM This item is used to load a form into memory. When forms are loaded, the current page of the form is displayed. To change pages, use the cursor UP and DOWN keys. If the form is loaded correctly, the message "Page Redrawn" should appear. If not, the message "Unable to read form" or "Checksum error in file" will appear. See "Using the File Requester" for more information.

(2)DATABASE This item is used to open a database for reading and writing access. once a database has been opened, the message "Database Opened" will appear on the message line. Otherwise, the message "Unable to open database" will appear, indicating a failure to open the database.

CLOSE DATABASE This item is used to close the database file that is currently opened. Files could become corrupt if they are not closed properly. When exiting the program, use the "QUIT" item to ensure safety. Do not power off while files are writing which is indicated by the red access light.

DATABASE CURATOR (AmigaC) This item has not yet been implemented.

QUIT (AmigaX) This item is used to exit the program. The "window close" gadget as well as the ESC key perform the same function. Using "QUIT" ensures that all files have been properly closed.

EDIT ITEMS

QUERY (AmigaQ) This item is used to gather records in the database that correspond to a given set of values. The query function does actually retrieve the records, it retrieves the location of the record in the file. See "Using the QUERY function" for a more detailed explanation.

ENTER RECORD (AmigaN) This item is used to add a record to the database. After selecting this item, the fields of the form will go blank and the cursor will be placed in the first field of the form. If there is a default value set for the field, it will automatically appear. Some fields have specified cases (UPPER CASE and LOWER CASE) and thus, sometimes the user will be forced to enter a certain case. This can be changed by using MicroCosm Forms. A message may also appear when the user enter a field. If a help message has been set for this field, it will appear on the message line located at the bottom of the form. Help messages are used to aid the user by given a range of values, an example of what to enter, or a simple comment. Some fields also have an autoskip flag set on them. An autoskip field means than when the user reaches the maximum length for the field, he/she is automatically placed in the next field of the form. To learn more about field attributes, please refer to the MicroCosm Forms Instruction Manual which outlines the details and how to alter field attributes. After the user has entered the information for the record he/she may then select the SAVE RECORD item to add the record to the database.

SAVE RECORD (AmigaS) This item is used to write the current contents of the buffer to the database file. After the record is saved, MicroCosm will respond by indicating the total number of bytes written to the file.

IMPORT ASCII (AmigaI) This items is used to import an ASCII file into MicroCosm. For a full description, see "Importing an ASCII File."

EXECUTE STEP (AmigaE) This item is used to execute a procedure step that the user creates. In future versions, if will perform as a connection of the programmer to the database. See "Executing Procedures" for more information.

DELETE RECORD (AmigaD) This item is used to delete a record from the database. This option actually deletes the record in the current record buffer kept by MicroCosm. Therefore, the user must be sure that they are viewing the current record that they wish to delete.

SPECIAL ITEMS

REDRAW PAGE (AmigaR) This option is used to redraw the current page of the form. It is used in the case where the screen needs to be redrawn when MicroCosm is not aware.

BROWSE DATABASE (AmigaB) This option is used to browse the database without performing a query. Refer to "Browsing the Database" for more information.

SYSTEM TIME (AmigaS) This option displays the system time and date. Use the preferences tool on the Workbench disk to set the time and date. NOTE: This option uses the DATESTAMP functionwhich gets the Amigas time and WILL work with clock cards, etc.

Using the File Requester

After MicroCosm opens a file requester, it reads in the current directory of files. At the top of the requester the user sees the title (ie:Load Form), below, they see a blank line and directly underneath is the current directory line. At the bottom of the requester are the following:

??	To enter a file name.
NEXT	To scroll down the list of files.
PREVIOUS	To scroll up the list of files.
NEWDIR	To change directories.
CANCEL	To abort the file requester.

In addition to the above gadgets, the following also work:

CURSOR UP	Same as "PREVIOUS."
CURSOR DOWN	Same as "NEXT."
WindowClose	Same as "CANCEL."

Also, by clicking the mouse select button in the blank line at the top of the requester, the user can then enter the requested filename. By clicking in the "Current Directory" line, the user can change directories. NOTE: Be sure to add the

backslash "/" character to the directory name if you are NOT JUST specifying a device (ie:DF0). NOTE: You cannot select a filename by clicking the mouse select button on it...maybe next version.

Using the Query Function

The QUERY function allows the user to perform specified searches through the database. The following characters can be used in fields when performing a query.

* This character (asterisk) allows the user to search for parts of a word. (ie:The user wishes to search for all the names in a database that start with the three characters "Ste". The user would enter the query function, advance to the appropriate field and type "Ste*". Note:This function is CASE sensitive.

^ This character (carat) allows the user to search for words where case sensitivity is NOT needed. (ie:The user wishes to search a description field for the word "fun" but cannot recall if he/she used upper or lower case.) The user would enter the query function, enter the appropriate field and type "fun^". This function can also be used in conjunction with the 'asterisk' function where there is more than one word in a field (like a description field). The user would type "fun*^".

< This character (less than) is used in NUMBer fields to search for values that are less than a supplied value. ie: Theuser wishes to search the GROSS PAY field of a payroll form to see who earns less than $400.00 a week. The user would enter the query function, enter the appropriate field and type "400<".

> This character (greater than) is used in NUMBer fields to search for values that are greater than a supplied value. ie: The user wishes to search the GROSS PAY field of a payroll form to see who earns more than $500.00 a week. The user would enter the query function, enter the appropriate field and type "500>".

! This character (exclamation (logical NOT)) is used to search for any field in a record that does NOT contain the supplied value. ie: The user wiches to search a library form for every book type other than FICTION. The user would enter the query function, enter the approriate field and type "FICTION!".

The query function is NOT in any way limited to only one field. Users can perform as many queries on a specific fields at one time as much as they wish. These are called multiple search queries.

Importing an ASCII File

This function is for users who know exactly what they wish to place into their database. To import an ASCII file, the user creates a file containing exact number of fields need to fill a record. The user simply seperates each field information by a semicolon ";" and places a " a a ~ character at the very end of the file. The user must be sure they do not exceed the set length of a field and that the information they are placing in to database is going into the correct field. To be sure, create a simple one line import file and attempt to import it. It all goes well, there should be not problems importing multiple records. NOTE: The ~ character MUST be the last character in the file. If it is not, MicroCosm will not know when to stop importing record and will keep trying and trying (there is no way out either...)

Executing Procedures

In this release there is only one procedure avaliable. The SELECT command gets placed in the COMMAND line. The user then presses enter and then enter either ALL (to select every record) or WHERE (to perform a search query). More commands on the drawing board include DELETE WHERE and SORT.