48K Spectrum

FREE TEXT DATABASE

HOME INFORMATION SYSTEM

ROYBOT FREE TEXT DATABASE

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THE ROYBOT FREE TEXT DATABASE

The FREE TEXT DATABASE is a new concept in Home Information Systems for Spectrum users who have microdrives. If one examined information sources in a typical household, they would comprise a selection of books, pads, cards and scraps of paper. The idea is to bring them together in an ordered filing system that has easy to use input and retrieval facilities. The following are suggested for inclusion:

a) a name, address and telephone directory, with services or products;

b) a diary for inserting social events, birthdays, anniversaries etc.;

c) a mail box for each member of the family for leaving messages;

d) shopping lists, recipes, pop charts, football tables or other lists;

e) letters or other text;

f) documentation for computer programs;

Any combination of these can be in one database and a number of examples are shown in the demonstration database supplied with the software.

The concept of the database is that it comprises a box of cards and each card can contain up to 512 characters, which is the size of physical sectors on the cartridge. The first card contains an index with 36 entries. When a new entry is selected, the next free card in the pack is presented for data entry and this is noted in the index. This first entry card has its own index of all following related cards, which can be at any later position in the box.

In accessing an existing entry, all the associated cards are extracted from the box and placed end to end for viewing or updating and returned when finished with.

A cartridge can contain about 180 cards and one entry up to 39 cards. The latter is equivalent to nearly 20,000 characters - an 8 page report or over 300 names and addresses.

The program is written in BASIC, using RAMDOS (Random Access Micro Drive Operating System) extensions. RAMDOS is designed to handle microdrives more like floppy disks than tapes, that is updating existing files rather than making a new copy each time. It also allows multiple cartridges to be used on one drive and files to be on more than one cartridge. Other features include a screen editor, text formatting (such as this description), file and cartridge copying and comparing, a sensible catalog, sorting and searching facilities, printing and error recovery features.

A second program is supplied with the database software to enable back up copies to be made and to compress the main file, to get rid of unwanted data and improve data access times.

A further ROYBOT package (RAMDOS UTILITIES) is available for general microdrive management, the particular features relevant to the database software are for file recovery when the database cannot be read by normal means.

USING THE SOFTWARE

The software is designed for ease of use. On initial loading, the index is presented with code letters A to Z and a to j. When one of these is selected, the screen editor cursor appears at the side of the letter to allow an optional label or title to be entered or changed. As for most other facilities, a list of commands is displayed at the bottom of the screen and the first letter of the command is pressed to execute it (in this case a for accept, c for cancel). Each index entry can have its own format in terms of width of text (usually 32 or less for the screen) and justification (text right/left as this document, tables etc. left).

A new entry goes via the format options into data entry mode to allow data to be typed in on the screen, using the left, right, up, down and delete Spectrum cursor keys when required: insertion is automatic at the selected point. Exit from data entry is via pressing the EDIT key (as indicated at the bottom of the screen at the time).

Following the above, or when an existing entry is loaded, the command list presented provides facilties for scanning (up, down, home), changing the format and/or printing, saving or returning to the index, editing or searching.

Searching can be by line number (e.g. record number for 1 line records) or by entering the text to be found (e.g. a name). Editing allows insert, delete, modify, reinsert of lines or deletion of a complete entry (e.g. a letter when no longer required). Using modify and reinsert, a new record can be created, for example, a new football league table.

For printing, RAMDOS presents the data in a normal BASIC string and uses LPRINT. As the program is written in BASIC, extra lines can be added to drive printers which are not connected to the Interface 1 serial port (instructions are provided). The printing format is optionally different to that on the screen and all of a database entry can be printed or any number of lines from the start of the screen. An example of the latter would be find "name", print lines "5" to print a name and address.

Instructions are provided on how to use the software and for overcoming problems; also to provide a self teaching aid, used in conjunction with the example database entries.

OPERATION

FIRST STEP

The first step on obtaining the software is to make a back-up copy on a new formatted cartridge. To make use of the foolproof RAMDOS mechanism for using multiple cartridges on one drive, this and all other cartridges used for the database should be formatted with a unique name e.g. DB1, DB2 (see Sinclair manual).

COPYING THE SOFTWARE & DATABASE

1. Switch the computer on, or press NEW and ENTER.

2. Insert the ROYBOT cartridge in drive 1. Press RUN and ENTER.

3. This loads an initial menu selection program and the RAMDOS machine code. Press 2 and ENTER to load the copy utilities.

4. The utilities menu is then displayed. Press 2 and ENTER (Copy DB programs).

5. The next request is to select a drive for the source (ROYBOT) cartridge. Press 1 and ENTER. An insert cartridge message is then given - press ENTER. The cartridge is then opened.

6. Next is a request to select a drive for the destination cartridge. If you have more than one drive select 2 or whatever. If you only have one drive select 1 again. Insert the newly formatted cartridge in the required drive and press ENTER to open it.

7. If two drives are being used programs run, scode, dbut and ftdb will be copied then verified.

8. If only one drive is used a message is given to change cartridges, identifying the name, and to press ENTER when done, each time a copy or verification is carried out.

9. If the copies are completed correctly the program returns to the menu. If verification comparison failure is indicated, either erase the offending file or reformat the cartridge (for other problems see ERRORS later).

10. Select 1 from the menu to copy the demonstration database. Again, if one drive is being used, messages will be given to change cartridges.

11. Now put the ROYBOT cartridge away in a safe place and only use in an emergency. Select 6 from the menu to stop.

LOADING THE DATABASE

1. Insert the new cartridge in drive 1. Press NEW and ENTER then RUN and ENTER to load the initial program as 3 above. This time select 1 to load the database software.

2. On loading the database software, the first request is for the drive number to use. In this case just press 1. Following a message to insert cartridge, press ENTER.

3. The cartridge is then read to open the database. An index is then displayed.

LEARNING HOW TO USE THE DATABASE

1. In order to learn how to use the software, press a and ENTER to load the general description (ROYBOT DB).

2. The selected entry (ROYBOT DB) will then flash. Press c to cancel and it stops flashing, to go back to 1. Press a to accept to cause the description to be read in and displayed.

SCAN TEXT DEMONSTRATION

1. Read the first screen then press d for down for the next one and repeat until the end is reached. Press h for home to go back to the start. Press d for down a few times then u for up and you will see that the previous text is displayed (usually to the start of a paragraph).

2. Do not select any other options at this stage (except d,h or u): these are covered in later demonstrations.

3. When you have finished reading the description, press s for save/index/end, then i to return to the index.

4. If you select a again, from the index, the same data is displayed again, the last selection being remembered.

SEARCH DEMONSTRATION

This time select c from the index (COMMANDS). After reading, the command list is displayed, along with instructions for using the search facilities. If you get lost, press c to cancel, then h for home.

FORMAT DEMONSTRATION

1. Select p for print/format; input line width 28; press r for right/left justification; press n for no print.

2. You will see that the text is now narrower: try some searches and you will see they still work, but some data is not on the screen.

3. Try other widths up to 32 and left justification.

4. Now select line width 64 (above 32 is only for printing) but select no print. Some data is displayed then "Scroll?": press ENTER until the command list re-appears.

5. Press s then i to return to the index.

FIND LINE DEMONSTRATION (POPS)

1. Select g from the index (EXAMPLES). These cover various types of data which would normally be separate index entries. The first one is pop charts to show line or record number find.

2. After reading, press f for find, l for line, then input 18, l 2 etc. Press c cancel then h home.

EDITING AND DIARY DEMONSTRATION

1. Select find text "1986 DIARY", then find text "OCT"; cancel find.

2. Press e to edit then use the down arrow cursor key to move the highlight into the space following OCTOBER and press ENTER.

3. Press i for insert; the input box will appear on the screen.

4. Type in 26 British Summer Time Ends and press ENTER. Use left and right arrow cursor keys, delete and retype deleted characters.

5. Press EDIT to insert the text. Press c to cancel edit.

UPDATE DEMONSTRATION (FOOTBALL)

1. Select find text "FOOTBALL"; cancel find.

2. Select edit and move line indicator to Man Utd; press ENTER.

3. Press d for delete then cancel edit, select up, then edit again.

4. Move the pointer down to Liverpool; press ENTER. Press r - reinsert.

5. Press m to modify; the Man Utd entry will appear in the input box.

6. Move the flashing cursor past win column; delete 22; insert 27; move to lost column; delete 10; insert space 5; move to points column change to 91.

7. Press EDIT to insert. Note that modify saves the original values and reinsert could be used to restore them.

NAME AND ADDRESS DEMONSTRATION

1. Cancel edit and select find text "ROYBOT". This shows the way in which names, addresses and telephone numbers can be recorded (probably under the index letter).

2. Then try text "DATABASE"; cancel find and press u for up: this shows how the address of suppliers of particular products can be retrieved. Cancel find.

MAIL BOX DEMONSTRATION

1. Select find text "DAD" to display a mail box.

2. Edit the top line of the box (modify then EDIT) and you will see that it is 32 #'s and ENTER. The box can be constructed using modify and reinsert. If data is entered, the end characters have to be deleted to maintain the box structure.

ADD DEMONSTRATION

1. Cancel edit and select a for add.

2. Type in some text. Use ENTER twice for a new paragraph.

3. When more than one line has been entered, use the up and down arrow cursor keys besides left, right and delete to insert a word in the middle of text.

4. If the box is nearly full and the entry is incomplete, type a space at the end. Press EDIT to insert the text, then continue typing. Press EDIT again to exit from the add mode.

5. Note if the box is full and data is inserted, some text may be pushed out of the box and lost.

SAVE DEMONSTRATION

1. Press s for save then, this time, n for neither save nor cancel. Next press i for index. This shows how to avoid saving if the data has been changed temporarily for printing.

2. Select g from the index to return to the text. Press s for save and s again. The changed text will be saved and verified if extended.

PRINTING DEMONSTRATION

1. If you have a printer on the Interface 1 serial port, follow the FORMAT procedures above except select one of the print options.

2. To print selected lines, first use find text, then lines print and enter the number of lines. This documentation was produced as follows - change format to line width 74; find line 1; print 56 lines (margin 13); form feed on printer; find line 57; print 56 lines, and so on.

3. For other printers see PRINT in the command descriptions.

ERASE ALL TEXT

Select e for edit; press ENTER; press e for erase. This request will be queried. If you press y, all text in memory will be deleted: then, if you save, the area used on the cartridge will be blanked out. At this stage just press ENTER.

PROCEDURES FOR A NEW DATABASE

1. If the program is in, press BREAK to stop; then RUN and ENTER.

2. Select the drive you want to use and insert a newly formatted cartridge; press ENTER.

3. The cartridge is opened. The software recognizes that a database is not present, opens one and displays a blank index.

4. Select an index entry and give it a title. When accepted the program will go to the text entry (add) mode.

BACK-UP AND RECOVERY

1. Back-up copies of the database should be made occasionally, to prevent all the data being lost, in the event of a drive or cartridge becoming faulty.

2. If problems are suspected, or as an extra precaution, make tape dumps before returning to the database index (see below).

3. To make a full back-up copy, follow the COPYING procedures above; except just select 1 (Copy database) from the menu.

4. To leave out entries or to include tape dumps, select 2 (Copy/compress/include tape).

5. Select drives etc. as for normal copy.

6. The index is displayed. To omit from copy, press o then index code letter and confirm (press y). The index entry is deleted.

7. To include a tape back-up copy, press r, index code letter and confirm. T will appear in the index.

8. When finished, press e for end, to copy the database. A request will be made to start a tape (index code given) when it is required to restore a dump.

9. The index can also be restored from a dump (menu item 5). If this is used and all entries are either omitted or tape dump selected, the source cartridge will not be read.

TAPE BACK-UP

1. In using the database and following selection of save, press d for dump to tape. Then select i for index and/or t for text.

2. Insert the cassette tape and start; rewind for verify. The index takes a few seconds but the text takes 1 min. 45 secs. per pass.

3. If verification errors occur, press GOTO 1452 and ENTER to save again.

ERASING A DATABASE

Because of the way in which the database is written, it may be necessary to erase twice using ERASE "m";1;"AAAAAAAAAA".

MICRODRIVE ERRORS

1. In the event of a new card being written and a verification failure or a record position not being found for a random update, the program will indicate "FATAL ERROR" and go to the dump routine before stopping.

2. For "Microdrive not present" messages, if the cartridge is not in the drive, insert it and press CONT: in other cases, the tape may be stuck and you can pull the tape out of the cartridge with the end of a ball point pen and even tug it gently.

3. If 2. is unsuccessful or for other errors press GOTO 200 and ENTER and then select tape dump before deleting the program.

4. Following fatal errors, use the back-up and recovery procedures above.

5. If you do not have a back-up and the cartridge is part readable, you may be able to recover most of the data with the ROYBOT MICRODRIVE MANAGEMENT & RECOVERY PACKAGE (RAMDOS UTILITIES).