DATA BASE
500/300

International
99/4
Users-Group

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DATA BASE 500/(300)

Data Base 500 is available on two configurations; "500" for use with dual-sided disk drives, and "300" for use with single-sided disk drives. The only difference is in the number of records available in the data base, 300 or 500. This limitation is imposed by the amount of storage space on an individual disk and not by the system.

Before using the system it is necessary to initialize a disk with the Disk Manager Module and name the DISK "DBF". To protect programs or data you may have on any other disks, DATA BASE 500 programs will only address a disk with the name "DBF". The system will not work with disks initialized under any other name.

After initialization, remove the disk from the drive, insert the Extended BASIC Module into the GROM slot and choose Extended BASIC from the menu screen. Do not insert the program disk yet. When the "READY" message is on the screen, type CALL FILES(2) and press ENTER, then type NEW and press ENTER. Now insert the PROGRAM disk into the drive. (Those with two drives may insert program and file disks in either drive interchangeably.) Type RUN"DSK.DB.LOAD", press ENTER.

You have now entered the system and you will be presented with a master menu of programs as follows:

1. MAIN PROGRAM

2. PRINT REPORTS

3. SORT FILES

4. SELECT SUBFILES

5. END

On choosing "MAIN PROGRAM" after the program loads you will see another menu:

1. ENTER RECORDS

2. UPDATE RECORDS

3. DISPLAY RECORDS

4. SCAN RECORDS

5. REPAIR FILES

6. CREATE RECORD FILES

0. END

On first use you must first choose option 6 to create your files before you can do any entries. You will be asked for a "MASTER FILE NAME". This is the name the disk file will be given to keep it distinct from other files you may create in the future.

The name must conform to the disk file naming conventions of the TI System and will be limited to eight characters. Periods and/or blank spaces may not appear in file names. You are then instructed to insert the newly initialized disk named "DBF" into the drive. You are then asked for another legal name (limited to 10 characters) which will be used internally as a screen prompt, etc.

Once the initialization process is completed you are returned to the lead menu and you may begin entering your records. The screen is displayed with 8 lines and "^" marking the field boundaries. Each line has 28 characters with the field marker displayed at position 15 on each line. The "Redo" key will place you at the beginning of the current line without erasing any data that appears there; the "Erase" key will erase anything to the right of the cursor on a line; the "Proceed" key will erase anything to the right of the cursor up to the beginning of the next field and then TAB ahead to that position. The Insert and Delete keys have their normal functions. On the screen at all times you will see the record number you are working on and the internal file name of the file so you will remember which file you are working on. As you finish each line of data press ENTER when you wish to go on to the next line.

If the data you entered ends at the last position on a line you will automatically be moved to the beginning of the next line. After entering your 8th line of data there is a brief pause and you see the message "R=REDO S=STORE". If you wish to reenter any of the data, press R. Pressing S will store the data in your file and you will be presented with the next screen for entry of your next record. When finished, enter "END" to return to the menu. It is important to keep in mind that the "SORT FILES" program always sorts your records based on the data that you place on the first line of a record, so use that for key information with a number or name that will be significant to your file.

The Display, Scan, and Update options have some features in common. With them you may search for a record by number and, if the file has been sorted, by the item on line 1 (key field identifier) that it was sorted by. In that case, for example, if a person's name were Smithfield and you couldn't remember the name completely, entering "SMI" or "SMIT", etc., would serve to locate the record for you.

The Update mode has all the other features of data entry mode and follows the same format. In the Scan mode you may look through the file sequentially (in the same order that the file was created),

by the sorted file (placed in alphabetical order) or with any name of a subfile that you have previously created (pointer array). You are told the total number of records in a file and asked which number you wish to start with. The program then presents the records on the screen. To stop the display press the space bar. Then you may continue by pressing ENTER or return to the menu by pressing FCTN Back. In this and the Display mode you may have a printed copy of the records if you so desire.

In the update mode, to delete a record, simply enter "ZZZZZ" in the first five spaces on line 1. There is no need to erase any part of the records. This is done automatically when the sort program is run.

The Repair Files mode is for a special purpose. All records in Master Files are always kept in the same order as when they were entered. If you delete any records and then run the Sort program all records are moved up in physical order to fill in the "holes" created by deletions. The various sort and subfile files used to create an order for display do not change the order of your master file records. They create a pointer array that shows where things are in the Master File but do not rearrange anything.

If for some reason you should ever wish to restore a deleted record to the EXACT PLACE in the file that it occupied before or wish to insert a new record in a specific location in the master file, then this is the section to be used. It will "open up" the file order and then insert the new record in the position that you tell it to. Under normal circumstances this mode will be used only rarely. If you ever use this mode, however, BE SURE TO RUN THE SORT PROGRAM IMMEDIATELY AFTER INSERTIONS to make sure that all pointer arrays are updated.

THE SORT PROGRAM

When run, this program will create a subfile pointer array that shows the contents of your file in alphanumeric order. The contents and the order of your file are not changed in any way but remain in the the same order as at the time of entry of the records. This program is a RAM Shell sort which is very fast. Five hundred records that have never been sorted can be sorted in about 7 minutes. Use of the "Hibbard interval" in the sort routine increases its efficiency. When files are near maximum capacity, it may be wise to do a CALL FILES(1) to free more memory.

After the sort it will be necessary to do another CALL FILES(2) to run
the other programs. Since the programs are both "BREAK" and
"WARNING" protected, it will be necessary to leave the drive door open
when at the master menu to induce a break so you can do the changing
CALL FILES ( ) routines.

THE SELECT SUBFILES PROGRAM

The ability to create selective subfiles of the main record file is
one of the most useful sections of Data Base 500. The program begins
by asking whether one or two key words are to be used in making the
record selection. You are also asked to give a legal disk file name
for this subfile. It should be different from any other file on the
data disk. You are asked for the keyword(s), the number of the field
(1-16) which is to be compared with the keyword and for the
relationship between the keyword and the field as follows:

1. P- KEYWORD PRESENT IN FIELD.

2. N- KEYWORD NOT PRESENT IN FIELD.

3. G- FIELD GREATER THAN OR EQUAL TO KEYWORD.

4. L- FIELD LESS THAN OR EQUAL TO KEYWORD.

In addition, if two keywords are specified, you are asked to give a relational indicator between them. Four relational indicators are available at this level of comparison:

1. AND

2. OR

3. NEITHER/NOR

4. EXCLUSIVE OR (one but not the other).

Once this information has been supplied the program begins its search according to the criteria that have been established. If the records have been sorted, the records are searched in alphabetic order and consequently, the selected subfile will be in order. Otherwise, records are searched in the physical order that they appear on the disk. When the search is completed, the pointer file which stores the locations of all records belonging to the subfile is then stored on disk under the name you have given it. This subfile name may then be used to "drive" the SCAN features in the main program or in the Report Printing program. You may create as many subfiles, each using any different criteria, as you need.

THE RECORD PRINT PROGRAM

In this program you are first asked the name of the "Master File" you wish to use. Then you must state which file name will be the driver file for the run; i.e., sequential, sorted, or a selected subfile name. After giving the name of your printer file name, you are asked how many fields the record is to be divided into which may be 2, 4, 8 or 16 fields. Then you begin to set up the actual printing format.

The printed record will have eight lines. In addition, any number of blank lines may be inserted between records. Within the 8 line record, a printed line may contain any field or combination of fields that you desire or it may be left blank. The actual format is made by following the screen prompts and entering for each line an order of printing. Each field number MUST be followed by a "/". A blank field may be indicated by entering a "Ø" (zero) and the "/" for the field number.

Let us suppose that a record is to be divided into 16 fields and that of those fields, fields 1 & 2 contain a name, 3 & 4 contain the street address, 5 contains the city, 6 the state, 7 the Zip code, 8 the home phone number, 9, 1Ø, & 11 a business address, 12 a business phone number, 13 a Social Security number, 14 the marital status, 15 the number of dependents and 16 the date hired. Then to format an address label we would enter it as follows:

LINE 1: 1/2/

LINE 2: 3/4/

LINE 3: 5/6/7/

LINE 4: Ø/

LINE 5: Ø/

LINE 6: Ø/

LINE 7: Ø/

LINE 8: Ø/

On another format printing an employee status report might be set up

as follows:

LINE 1: 1/2/Ø/13/

LINE 2: 3/4/5/6/7/

LINE 3: Ø/8/Ø/14/15/

LINE 4: Ø/

LINE 5: 9/1Ø/11/

LINE 6: Ø/12/Ø/16/

LINE 7: Ø/

LINE 8: Ø/

After your format is set up you are asked how many lines you wish to skip between records. This number can range from zero to one hundred. You are also asked if you wish to make any corrections or changes. If so, you are presented with your previous selections for review and correction. Then the printing routine begins. During printing you may halt it by depressing the space bar; to resume you press ENTER. When finished, you are given 4 more choices. You may repeat what was just done, select a new file, select a new format or end the program and return it to the master menu.

GLOSSARY

FILE -- A file is a collection of data or information. You may think of it as a file folder that holds documents.

RECORD -- A record is one set of data in a file. A record could be your work application or a work performance sheet or a list of sick leave taken.

FIELD -- A field is one part of a record. Your name could be one field, your address another. Think of it as one of those many blanks you fill in on an application form.

POINTER ARRAY -- A list, stored on disk, created by a program to keep track of where information is located depending on the criterion you have chosen.

THESE PROGRAMS HAVE BEEN WRITTEN WITH ALL NECESSARY PROTECTION FROM ERRORS IN DATA INPUT BY INADVERTENT ENTRY. IF FOR SOME REASON YOU SHOULD CAUSE THE PROGRAM TO STOP, STEPS HAVE BEEN TAKEN IN THE PROGRAM TO ENSURE THE SAFETY OF THE DATA IN YOUR DATA FILE AND PROTECT THE INTEGRITY OF ITS CONTENTS. WE CAUTION, HOWEVER, THAT WILLFUL INPUT OF INAPPROPRIATE DATA TO "TEST" THE SYSTEM MAY CAUSE UNPREDICTABLE RESULTS AND SOME OR ALL OF YOUR DATA MAY BE LOST.