

significant figures. Microsoft BASIC supports double precision variables to 16 significant places.

Computers that do accept integer variables usually allocate two bytes to store the number, which can be in the range -32,768 to 32,767. This range is usually perfectly adequate for such variables as scores, numbers of employees, FOR ... NEXT loop counts and other numbers likely to have only integer values. Since only two bytes are used to store the number, using integer variables if they are available will save on memory, although in many BASICs this is true only for integer arrays, and not for individual variables.

The final part of the Basic Programming course will consider the advantages and disadvantages of BASIC as a language.

## Basic Flavours

### INKEYS

On the Lynx in the first program replace lines 110, 120 and 140 by:

```
110 C=KEYN
120 IF (C <> 13) AND (C <> 32) THEN I=0
140 IF C=13 THEN GOTO 160
```

### CURSOR MOVEMENT

The third program will RUN, but will not produce the desired result on the Dragon, the BBC, and the Lynx

### PEEK

On the BBC Micro replace PEEK(S) by ?S

### Spectrum Address Book

This is the full Spectrum version of the Address Book program. Basic Flavours for the Lynx, Dragon 32, BBC Micro, Commodore 64 and Vic-20 will be published in the next issue, and will refer to this listing.

```
1 REM *CREATE DATA FILE*
2 DIM N$(50,30)
3 LET N$(1)="@FIRST"
4 INPUT"INSERT DATA TAPE, PRESS PLAY, & HIT
  'ENTER'";A$
5 SAVE "NFLD" DATA N$( )
6 INPUT"REWIND TAPE, PRESS PLAY, HIT 'ENTER'";A$
7 VERIFY "NFLD" DATA N$( )
8 STOP
```

This is the initialising program that creates the array on tape for the first time. When you have run this program, rewind the Data Tape, LOAD the Main Program (listing below) and RUN. You will not need the initialising program again unless you want to create a new address book file.

```
10 REM 'MAINPS'
20 REM *INITIL*
30 GOSUB 1000
40 REM *GREET*
50 GOSUB 3000
60 FOR M=1 TO 1
70 LET M=0
80 REM *CHOOSE*
90 GOSUB 3500
100 REM *EXECUT*
110 GOSUB 4000
120 IF CHOI=9 THEN LET M=M+1
130 NEXT M
140 STOP
```

```
1000 REM *INITIL* S/R
1010 GOSUB 1100
1020 GOSUB 1400
1030 GOSUB 1600
1090 RETURN
```

```
1100 REM *CREARR* S/R
1110 DIM N$(50,30)
1120 DIM M$(50,30)
1130 DIM S$(50,30)
1140 DIM T$(50,15)
1150 DIM C$(50,15)
1160 DIM R$(50,15)
1170 DIM X$(50,30)
1180 DIM B$(30);DIM Z$(30)
1190 DIM U$(30);DIM W$(15)
1210 LET SIZE=0
```

```
1220 LET RM00=0
1230 LET SRD=1
1240 LET CURR=0
1250 LET Z$="@FIRST"
1260 LET G$=B$
1300 RETURN

1400 REM *RDINFL* S/R
1405 INPUT"INSERT DATA TAPE, PRESS PLAY, & HIT
  'ENTER'";A$
1410 LOAD "NFLD" DATA N$( )
1420 IF N$(1)=Z$ THEN LET G$=Z$;RETURN
1430 LOAD "MFLD" DATA M$( )
1440 LOAD "SFLD" DATA S$( )
1450 LOAD "TFLD" DATA T$( )
1460 LOAD "CFLD" DATA C$( )
1470 LOAD "TEFLD" DATA R$( )
1480 LOAD "NDXFLD" DATA X$( )
1485 INPUT"STOP THE TAPE, & HIT 'ENTER'";A$
1490 REM 'F_SIZE'
1500 LET SIZE=51
1510 FOR L=1 TO 50
1520 IF N$(L)=B$ THEN LET SIZE=L;LET L=50
1530 NEXT L
1540 RETURN
```

```
1600 REM *SETFLG* S/R
1640 IF G$=Z$ THEN LET SIZE=1
1690 RETURN
```

```
3000 REM *GREET*
3010 CLS
3020 PRINT:PRINT:PRINT:PRINT
3060 PRINT TAB(8);"*WELCOME TO THE*"
3070 PRINT TAB(5);"HOME COMPUTER COURSE*"
3080 PRINT TAB(2);"*COMPUTERISED ADDRESS BOOK*"
3090 PRINT
3100 PRINT TAB(1);"(PRESS SPACE-BAR TO CONTINUE)"
3110 FOR L=1 TO 1
3120 IF INKEY"<" " THEN LET L=0
3130 NEXT L
3140 CLS
3150 RETURN
```

```
3500 REM *CHOOSE* S/R
3520 IF G$=Z$ THEN GOSUB 3660;RETURN
3540 REM 'CHMENU'
3550 CLS
3560 PRINT"SELECT ONE OF THE FOLLOWING"
3570 PRINT:PRINT:PRINT
3600 PRINT"1. FIND RECORD (FROM NAME)"
3610 PRINT"2. FIND NAMES (FROM INCOMPLETE NAME)"
3620 PRINT"3. FIND RECORDS (FROM TOWN)"
3630 PRINT"4. FIND RECORD (FROM INITIAL)"
3640 PRINT"5. LIST ALL RECORDS"
3650 PRINT"6. ADD NEW RECORD"
3660 PRINT"7. CHANGE RECORD"
3670 PRINT"8. DELETE RECORD"
3680 PRINT"9. EXIT AND SAVE"
3690 PRINT:PRINT
3710 REM 'INCHOI'
3750 PRINT"ENTER CHOICE (1-9)"
3760 FOR L=1 TO 1
3770 FOR I=1 TO 1
3780 LET A$=INKEY$
3790 IF A$="" THEN LET I=0
3900 NEXT I
3810 LET CHOI=CODE A$-48
3820 IF (CHOI<1) OR (CHOI>9) THEN LET L=0
3840 NEXT L
3850 RETURN
```

```
3860 REM *FIRSTM* S/R
3870 LET CHOI=6
3880 CLS
3890 PRINT
3900 PRINT TAB(4);"THERE ARE NO RECORDS IN"
3910 PRINT TAB(2);"THE FILE. YOU WILL HAVE"
3920 PRINT TAB(2);"TO START BY ADDING A RECORD"
3930 PRINT
3940 REM *CONTINUE*
3950 GOSUB 3100
3990 RETURN

4000 REM *EXECUT* S/R
4040 IF CHOI=1 THEN GOSUB 5700
4050 REM 2 IS *FNDNMS*
4060 REM 3 IS *FNDTWN*
4070 REM 4 IS *FNDINT*
4080 REM 5 IS *LSTREC*
4090 IF CHOI=6 THEN GOSUB 4200
4100 IF CHOI=7 THEN GOSUB 6600
4110 IF CHOI=8 THEN GOSUB 7500
4120 IF CHOI=9 THEN GOSUB 5000
4140 RETURN
```

```
4200 REM *ADDREC* S/R
4210 CLS
4220 INPUT 'ENTER NAME';N$(SIZE)
4230 INPUT 'ENTER STREET';S$(SIZE)
4240 INPUT 'ENTER TOWN';T$(SIZE)
4250 INPUT 'ENTER COUNTY';C$(SIZE)
4260 INPUT 'ENTER PHONE NUMBER';R$(SIZE)
4270 LET RM00=1;LET SRD=0
4280 LET X$(SIZE)=STR$(SIZE)
4290 LET G$=""
4300 GOSUB 4500
4310 LET CHOI=0
4320 LET SIZE=SIZE+1
4350 RETURN
```

```
4500 REM *MODNAM* S/R
4510 REM CONVERT TO U/CASE
4520 LET D$=N$(SIZE);LET P$=""
4530 FOR L=1 TO LEN(D$)
```