Difficult to de-bug
Very fast in execution
Gives complete control over the microprocessor

PASCAL

Moderately easy to learn
Moderately easy to remember
De-bugging more difficult than in BASIC
Encourages better programming techniques
Execution faster than BASIC but slower than Assembly
Needs to be compiled, which takes time; once correctly compiled, runs nearly as fast as Assembly
Gives fair control over the microprocessor, but less than Assembly; string handling not as easy as in BASIC

FORTH

Not very easy to learn; easier for complete beginners, not so easy for BASIC programmers
Moderately easy to remember
De-bugging in interpreter mode very easy
Can be compiled; executes almost as quickly as Assembly language
Gives complete control over the microprocessor
Very economical on memory
Easier to learn than Assembly language, though less 'intuitive' than BASIC

Basic Flavours

LYNX 96

```
1  REM *CREATE DATA FILE*
2  DIM NS(30)
3  LET NS="@FIRST"
4  DIM FS(15)
5  LET FS="DUMMY"
6  LET Z=2
7  EXTBACK 1
8  EXTSTORE 1,Z,NS,NS,NS
9  EXTSTORE 1,FS,FS,FS,FS
10 INPUT "INSERT DATA TAPE, PRESS
     RECORD, & TYPE 'Y'";AS
11 SSAVE 1, "ADDBKDAT"
12 PRINT "STOP THE TAPE, AND REWIND"
13 END
```

NB This is the initialising program for the 96K Lynx; we have no information on cassette file handling for the other models.

Main Program Variables

Copy the Spectrum list with these substitutions for the numeric variables:

Replace: SIZE by Z
RMOD by R
SRTD by D
CURR by C
CHOI by H
BTM by b
MD by m
TP by t

and make the following line changes, substitutions, and deletions:

```
1100 REM *CREARR* S/R
1110 DIM NS(30)(50)
1120 DIM MS(30)(50)
1130 DIM SS(30)(50)
1140 DIM TS(15)(50)
1150 DIM CS(15)(50)
1160 DIM RS(15)(50)
1170 DIM XS(15)(50)
1180 DIM ZS(30)
1210 LET Z=0
1220 LET R=0
1230 LET D=1
1240 LET C=0
1250 LET ZS="@FIRST"
1260 LET QS=""
1300 RETURN
.
1400 REM *RDINFL* S/R
1405 PRINT "INSERT DATA TAPE AND PRESS
     PLAY"
1410 GOSUB 3100
1420 SLOAD 1, "ADDBKDAT"
1430 PRINT "STOP THE TAPE"
1440 GOSUB 3100
1450 EXTBACK 1
1460 EXTFETCH 1,Z
1470 FOR K=1 TO Z-1
1480 EXTFETCH 1,
     NS(K),MS(K),SS(K),TS(K),CS(K),RS(K)-
     ,XS(K)
1490 NEXT K
1500 LET QS=NS(1)
1510 RETURN
.
3120 IF KEYN<>32 THEN LET L=0
.
3780 LET AS=KEYS
.
3810 LET H=VAL(AS)
3820 IF (H<1) OR (H>9) THEN LET L=0
.
4500 REM *MODNAM* S/R
4510 REM CONVERT TO U/CASE
4520 LET DS=UPCS(NS(Z))
     (delete lines 4530-4590)
.
4600 LET PS=""
4601 LET AS=""
4602 LET T=LEN(DS)
4603 LET S=0
.
4610 REM LOCATE LAST SPACE
.
4630 IF MIDS(DS,L,1)=" " THEN LET S=L
.
4670 IF MIDS(DS,L,1)>"@" THEN LET
     PS=PS+MIDS(DS,L,1)
.
4710 IF MIDS(DS,L,1)>"@" THEN LET
     AS=AS+MIDS(DS,L,1)
```

Lines 5410 to 5460 must be reduced to single statements, for example:

```
5410 LET US=NS(L):LET NS(L)=NS(T): LET
     NS(T)=US     becomes
5410 LET US=NS(L)
5411 LET NS(L)=NS(T)
5412 LET NS(T)=US
```

and so on, no changes otherwise.

```
.
5600 REM *SAVREC* S/R
5605 PRINT "INSERT DATA TAPE AND PRESS
     RECORD"
5610 GOSUB 3100
5620 EXTBACK 1
5630 EXTSTORE 1,Z
5640 FOR K=1 TO Z-1
5650 EXTSTORE 1,
     NS(K),MS(K),SS(K),TS(K),CS(K),RS(K)-
     ,XS(K)
5660 SSAVE 1, "ADDBKDAT"
5670 PRINT "STOP THE TAPE"
5680 GOSUB 3100
5690 RETURN
.
5855 LET X=0
```