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5 OPENOUT "dummy":MEMORY HIGH-1:CLOSEOUT
10 ' Main program
20 GOSUB 1000 ' initialise
30 WHILE NOT chosen
40   GOSUB 1100
50   IF menu THEN GOSUB 2000
60   IF choice THEN chosen=TRUE
70 WEND
80 CHAIN MERGE choice$(choice),3000,DELETE 1000-
90 chosen=FALSE:GOTO 30
100 ' Heading routine
110 PRINT#2,TAB(FNcentre(heading$(head),2))heading$(head)
120
190 RETURN
200 ' User Input Routine (mark 1.3)
210 long=0:MID$(byte$,1)=" "
220 WHILE byte$(<>CHR$(13)) AND long<length 'OR or max
length
230   MID$(byte$,1)=" "
240   WHILE byte$=" "
250     MID$(byte$,1)=INKEY$
255     PRINT CHR$(143);:PRINT CHR$(8); 'cursor
256     IF (byte$=CHR$(127)) AND (long>0) THEN PRINT CHR$(8);" ";CHR$(8);CHR$(8);:MID$(user.input$,long,1)=" ":long=long-1:MID$(byte$,1)=" "
260   WEND
265   IF byte$=" " THEN IF long=0 THEN 220 ELSE IF (MID$(user.input$,long,1)=" ") THEN 220
267   IF caps THEN IF (ASC(byte$)>=97) AND (ASC(byte$)<

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=122) THEN MID$(byte$,1)=CHR$(ASC(byte$)-32)
270 IF INSTR(control$(control),byte$) AND long<length
THEN long=long+1:MID$(user.input$,long,1)=byte$:PRINT
byte$;
280 WEND
285 PRINT " " 'wipe cursor at end of line
290 RETURN
300 ' clear memory for data
310 CLS#1:CLS#3
320 t!=TIME
330 PRINT#1,TAB((modewidth-13)/2)"Please wait !"
350 room=FRE("")
360 IF TIME-t!<1000 THEN t!=1000-(TIME-t!):GOSUB 780
370 CLS#1
390 RETURN
400 ' Record display screen
410 ade=2:GOSUB 600:WINDOW #3,2,79,4,23:WINDOW #2,1,80,
2,2
415 PEN 1
420 PRINT CHR$(150)STRING$(78,CHR$(154))CHR$(156);
430 GOSUB 180:LOCATE 1,2:PRINT CHR$(149):LOCATE 80,2:PR
INT CHR$(149);
440 PRINT CHR$(151)STRING$(78,CHR$(154))CHR$(157);
450 FOR I=1 TO 20
460 LOCATE 1,I+3:PRINT CHR$(149):LOCATE 80,I+3:PRINT CH
R$(149);
470 NEXT
480 PRINT CHR$(147)STRING$(78,CHR$(154))CHR$(153);
490 RETURN
500 ' Yes/No
510 CLS#1:PRINT#1,TAB((modewidth-12)/2)"Press Y or N"
520 caps=TRUE:PEN 0
530 control=1:length=1:GOSUB 200 ' User input
540 caps=FALSE:PEN 1
550 IF byte$="Y" THEN yes=TRUE ELSE yes=FALSE
590 RETURN
600 ' mode change (Version 1.0)
610 MODE ade
620 modewidth=(2*(ade+1))*10
630 WINDOW#1,1,modewidth,25,25
640 WINDOW#2,1,modewidth,1,1
650 WINDOW#3,1,modewidth,2,24
690 RETURN
700 ' pause routine
710 pause!=TIME
720 WHILE TIME<pause!+t!:WEND
730 RETURN
800 ' press any key
810 CLS#1:PRINT#1,TAB((modewidth-13)/2)"Press any key";
820 WHILE INKEY$(">"):WEND
825 WHILE INKEY$="":WEND
830 CLS#1
890 RETURN
900 ' User defined functions
910 DEF FNcentre(strg$,offset)=(modewidth-offset-LEN(s

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trg$)/2
990 RETURN
1000 'initialise
1010 GOSUB 10000 ' set inks
1040 GOSUB 13000 ' initialise variables
1050 GOSUB 900
1060 mde=1:GOSUB 600 ' set mode & windows for s
tart
1090 RETURN
1100 ' command input
1110 mde=1:GOSUB 600 'set mode
1120 head=menu.number:GOSUB 100 'print heading
1125 mistake=0
1130 choice=1:menu=FALSE
1140 LOCATE 5,12:PRINT"what can I do for you ? ";:lengt
h=10:caps=TRUE:control=11:GOSUB 200:caps=FALSE
1145 IF long=0 THEN 1180
1150 FOR i=1 TO menu.length(menu.number)
1160 IF INSTR(command$(i+start(menu.number)),LEFT$(us
er.input$,long)) THEN choice=i+(start(menu.number))
1170 NEXT
1180 CLS#3:LOCATE (30-LEN(menu$(choice)))/2,12:PRINT"Co
nfirm ";menu$(choice);" ?"
1190 GOSUB 500 ' yes/no
1200 IF yes THEN IF choice=1 THEN menu=TRUE:RETURN ELSE
choice=choice-1:RETURN
1210 mistake=mistake+1
1220 IF mistake<3 THEN CLS#1:CLS#3:GOTO 1130
1230 menu=TRUE:RETURN
2000 ' menu routine (Version 3)
2010 mde=1:GOSUB 600 'set mode
2020 head=menu.number:GOSUB 100 'print heading
2030 choice=1:doit=FALSE
2040 FOR i=1 TO menu.length(menu.number)
2050 LOCATE 7,5+(i*2):PRINT STR$(i)". "menu$(i+start
(menu.number))
2060 NEXT
2070 CLS#1:PRINT#1," 1-"STR$(menu.length(menu.number)
)" to select - [RET] to execute"
2080 WHILE NOT doit
2090 LOCATE 7,5+(choice*2)
"STR$(choice)". "menu$(choice+start(menu
"
2100 control=menu.length(menu.number)-1:length=1:PEN
0:GOSUB 200:PEN 1
2110 IF VAL(byte$)<>choice THEN LOCATE 7,5+(choice*2)
:PRINT STR$(choice)". "menu$(choice+start(menu.number)
)
2120 IF byte$=CHR$(240) THEN choice=choice-1 ELSE IF
byte$=CHR$(241) THEN choice=choice+1 ELSE IF VAL(byte$)
>0 THEN choice=VAL(byte$)
2130 IF choice<1 THEN choice=menu.length(menu.number)
ELSE IF choice>menu.length(menu.number) THEN choice=1
2140 IF byte$=CHR$(13) THEN doit=TRUE
2150 WEND

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2160 choice=choice+(start(menu.number)-1)
2170 RETURN
3000 ' Sub-programs loaded here
3010 CLOSEIN
3015 mode=2:GOSUB 600 ' set mode
3020 GOSUB 900 ' recover functions
3030 GOSUB 300 'clear memory
10000 ' set inks etc.
10010 INK 0,23 ' light background
10020 BORDER 23 ' matching border
10030 INK 1,1 ' default & mode 2 writing
10040 INK 2,0 ' black writing
10050 INK 3,11 ' light blue writing
10090 RETURN
13000 ' initialisation of variables etc.
13010 DEFINT a-z
13015 ' Boolean operators
13020 TRUE=-1:FALSE=0
13030 ' User input
13040 DIM control$(12)
13050 RESTORE 40000
13060 FOR i=1 TO 12:READ control$(i):NEXT 'User input
control
13065 FOR i=2 TO 9:control$(i)=control$(i)+CHR$(240)+C
HR$(241):NEXT
13070 user.input$=STRING$(254,"#")
13080 byte$=""
13090 menu.number=1
13100 ' Menus
13110 DIM menu$(17)
13120 RESTORE 40100
13130 FOR i=1 TO 17:READ menu$(i):NEXT ' Menu opt
ions
13140 DIM menu.length(6)
13150 FOR i=1 TO 6:READ menu.length(i):NEXT 'Menu leng
ths
13160 DIM start(6)
13170 FOR i=1 TO 6:READ start(i):NEXT 'Menu star
ting points
13200 ' Headings
13210 DIM heading$(6)
13220 RESTORE 40200
13230 FOR i=1 TO 6:READ heading$(i):NEXT 'Heading valu
es
13250 ' Commands
13255 DIM command$(17)
13260 RESTORE 40300
13270 FOR i=1 TO 17:READ command$(i):NEXT "commands"
13280 ' Sub-programs
13282 DIM choice$(3)
13284 RESTORE 40400
13286 FOR i=1 TO 3:READ choice$(i):NEXT ' sub-programs
13300 ' Current file name
13310 file.name$=SPACE$(8)
13315 keep$=SPACE$(12)

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13320 file.extn$=".EXP"
13330 file.iden$=file.name$+file.extn$
13340 file.test$=file.iden$
13400 ' Dummy dimensioning of data array
13410 DIM file.data$(1,1),point(1)
13800 ' User defined functions
13810 DEF FNcentre(strg$,offset)=(modewidth-offset-LEN(
strg$))/2
13900 RETURN
40000 ' DATA for control$(n)
40010 DATA "YN","123","1234","12345","123456","1234567"
,"12345678","123456789","1234567890","ABCDEFGHIJKLMNPO
RSTUNWVXYZ 1234567890","abcdefghijklmnopqrstuvwxyz ABCDE
FGHIJKLMNOPQRSTUVWXYZ"
40015 DATA "1234567890.,:;%'()/-abcdefghijklmnopqrstuv
wxyz ABCDEFGHIJKLMNOPQRSTUVWXYZ"
40100 ' DATA for menu$(n)
40110 DATA Look at the MENU,SETUP a new expertise,TEACH
existing expertise,ENQUIRE within on any subject,NAME
expertise,DEFINE elements,RELATE elements,CONFIRM exper
tise structure,PERSON,VERB,OBJECT,INSTRUMENT,SURNAME,GI
VEN name(s)/ initials,DATES
40115 DATA BIRTH place,DIED (place)
40120 ' DATA for menu.length(n)
40130 DATA 3,4,5,5,0,0
40140 ' DATA for start(n)
40150 DATA 1,4,8,13,0,0
40200 ' DATA for heading$(n)
40210 DATA Main Menu,Set up new expertise,Teach me !,En
quire herein,Name Expertise,Define Elements
40300 ' DATA for command$(n)
40310 DATA MENU,SETUP NEW START,TEACH OLD INPUT ADD EDI
T,ENQUIRE SEARCH LEARN LOOK,NAME,DEFINE,RELATE
40400 ' DATA for choice$(n)
40410 DATA setup.bas,teacher.bas,enquire.bas

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3000 ' Set up new expert system
3040 head=2:GOSUB 100
3050 LOCATE 7,10:PRINT"This routine will set up a dataf
ile, with preset relationships etc."
3060 GOSUB 800
3090 GOTO 90
10000 '
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3000 ' Edit existing data file for expert system
3040 head=3:GOSUB 100
3050 LOCATE 5,10:PRINT"This routine will enable the edi
ting of datafiles for our expert system"
3060 GOSUB 800
3090 GOTO 90
10000 '
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3000 ' Consult expert
3040 head=4:GOSUB 100
3050 LOCATE 14,10:PRINT"This routine will be used for e
nquiries and reports"
3060 GOSUB 800
3090 GOTO 90
10000 ' 4
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