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10 CLEARA: CLEAR4000: CLOSE
20 OUT 17,27: OUT 17,42: WAIT 16,2
25 PRINT: PRINT
30 PRINT "What to do (ADD,LIS,DEL,FIX): "; LINEINPUT HU$
40 IF HU$="" THEN 20
50 CC=INSTR("ALDF",LEFT$(HU$,1)): IF CC=0 THEN 20
60 ON CC GOTO 200,400,600,800
200 GOSUB 2000
210 RC=R2-2: GOSUB 3000
215 PRINT "The next code to add is "MN$
230 LINEINPUT "Do you wish to add this?"; HU$
240 IF LEFT$(HU$,1) <> "Y" THEN CLOSE2: GOTO 20
250 LINEINPUT "Name "NM$
255 IF NM$="" THEN 215
260 LINEINPUT "X coord "XC$
270 LINEINPUT "Y coord "YC$
280 LSET M3$=NM$: LSET M2$=CHR$(LEN(NM$))
290 LSET M4$=MKS$(VAL(XC$+"!")): LSET M5$=MKS$(VAL(YC$+"!"))
300 LSET M1$=MKI$(R1+R2): PUT 2,R2
310 GET 2,1: LSET R2$=MKI$(R2+1): PUT 2,1: CLOSE 2: GOTO 20
400 GOSUB 2000: ON ERROR GOTO 580
405 CONSOLE 18,1: NULL3: WIDTH80
410 FOR RG=2 TO R2-1
420 GET 2,RG
430 RC=RG-2
440 GOSUB 3000
445 FM$="###.## ###.##"
447 PRINT TAB(5); MN$: TAB(10); LEFT$(M3$,ASC(M2$)): TAB(30);
448 X1=CVS(M4$): Y1=CVS(M5$)
450 PRINT USING FM$; X1,Y1
460 DIM LB$(R2): NL=0
470 FOR RB=2 TO R2-1
480 IF RG=RB THEN 500
482 GET 2,RB: RC=RB-2: GOSUB 3000
485 X2=CVS(M4$): Y2=CVS(M5$)
488 DS=SQR((X2-X1)^2+(Y2-Y1)^2)
490 NL=NL+1: LB$(NL)=RIGHT$(SPACE$(10)+STR$(INT(DS*100)),1 +
    0)+MN$
500 NEXT RB
510 GOSUB 20000
520 FOR PO=1 TO NL
530 PRINT TAB(7); RIGHT$(LB$(PO),1)+ " "; USING "###.## Km " +
    ; VAL(LEFT$(LB$(PO),10))/100
540 NEXT PO: ERASE LB$: PRINT CHR$(12);
570 NEXT RG
580 CONSOLE 16,1: NULL0: WIDTH79: GOTO 20
800 LINEINPUT "What code do you wish to fix? "; MN$
810 GOSUB 4000
820 IF ER THEN 20
830 GOSUB 2000
840 GET 2,RC+2
845 PRINT
850 PRINT "      Code number "; MN$

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860 PRINT "#1 - Name          ";LEFT$(M3$,ASC(M2$))
870 PRINT "#2 - X coord      ";CVS(M4$)
880 PRINT "#3 - Y coord      ";CVS(M5$)
885 PRINT
890 LINEINPUT "Fix any entry of save these (1,2,3,S):";HU$
900 IF HU$="" THEN 850
910 CC=INSTR("123S",LEFT$(HU$,1));IF CC=0 THEN 850
920 IF CC=4 THEN PUT 2,RC+2;CLOSE2;GOTO 20
930 IF CC=1 THEN LINEINPUT "Name          ";HU$;IF HU$="" TH +
    EN PRINT "Not changed";GOTO 940 ELSE LSET M3$=HU$;LSET M +
    2$=CHR$(LEN(HU$))
940 IF CC=2 THEN LINEINPUT "X coord      ";HU$;IF HU$="" TH +
    EN PRINT "Not changed";GOTO 950 ELSE LSET M4$=MKS$(VAL(H +
    U$+"!"))
950 IF CC=3 THEN LINEINPUT "Y coord      ";HU$;IF HU$="" TH +
    EN PRINT "Not changed";GOTO 960 ELSE LSET M5$=MKS$(VAL(H +
    U$+"!"))
960 GOTO 850
2000 CLOSE2;OPEN "R",2,"MESF",1;FIELD 2,2ASR1$,2ASR2$
2010 'R1$ is a representation of the random index
2020 'R2$ is the next available record
2030 GET 2,1;R1$=CVI(R1$);R2$=CVI(R2$)
2200 FIELD 2,2ASM1$,1ASM2$,30ASM3$,4ASM4$,4ASM5$
2210 'M1$ is an interger who is the random index plus this +
    record
2220 'M2$ is a 1 byte number that is the length of M3$
2230 'M3$ is the name of the item
2240 'M4$ is a real number that is the X coord of item
2250 'M5$ is a real number that is the Y coord of item
3000 'Recieve the record number in RC and translate to
3010 'romanal into MN$
3015 RD=RC
3020 MN$=""
3030 RM=RC MOD 26
3040 MN$=CHR$(RM+65)+MN$
3050 RC=RC \ 26
3060 IF RC=0 THEN RC=RD;RETURN ELSE 3030
4000 'Recieve the romanal in MN$ and place record in RC
4010 ER=0
4020 IF MN$="" THEN ER=-1;RETURN
4030 RC=0
4040 FOR M2=1 TO LEN(MN$)
4050 MC$=MID$(MN$,M2,1)
4060 IF MC$=" " OR MC$=CHR$(9) THEN 4100
4070 IF MC$<"A" OR MC$>"Z" THEN ER=-1;RETURN
4080 RC=(RC*26)+ASC(MC$)-65
4100 NEXT M2
4110 RETURN
20000 'Quicksort character array LB$(NL), where NL is # o +
    f lines
20005 DIM LV$(10),UV$(10)
20010 LV$(1)=1;UV$(1)=NL;PZ=1;SC=0
20015 IF PZ<=0 THEN 20060 ELSE IF LV$(PZ)>=UV$(PZ) THEN P +
    Z=PZ-1;GOTO 20015

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20020 IZ=LVZ(PZ)-1;JZ=UVZ(PZ);PVZ=JZ
20025 IF IZ>=JZ THEN 20045 ELSE IZ=IZ+1
20030 IF LB$(IZ)>=LB$(PVZ) THEN JZ=JZ-1;GOTO 20035 ELSE I +
    Z=IZ+1;GOTO 20030
20035 IF JZ<=IZ THEN 20040 ELSE IF LB$(JZ)<=LB$(PVZ) THEN +
    20040 ELSE JZ=JZ-1;GOTO 20035
20040 IF IZ<JZ THEN SWAP LB$(IZ),LB$(JZ);GOTO 20025 ELSE +
    20025
20045 JZ=UVZ(PZ);SWAP LB$(IZ),LB$(JZ)
20050 IF (IZ-LVZ(PZ)<UVZ(PZ)-IZ) THEN LVZ(PZ+1)=LVZ(PZ);U +
    VZ(PZ+1)=IZ-1;LVZ(PZ)=IZ+1 ELSE LVZ(PZ+1)=IZ+1;UVZ(PZ+1) +
    =UVZ(PZ);UVZ(PZ)=IZ-1
20055 PZ=PZ+1;GOTO 20015
20060 ERASE LVZ,UVZ;RETURN
    
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[illegible]

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     **        ** *           *             * *            **
    * * * * * ***** *****          * * * * *          *
   * *** * * *                * *         *       *       *
  * * * * * ***** ***** *          *      * **** *
                                     *
*****          *               *          *          *          *
*              *              *          *          *          *
***          *          *          *          *          *          *
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[illegible]