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0 'KORMAS - Key oriented Read Mostly Archive System
10 'First line is arranged like this:
20 'FIELD 1,1AS"A",2ASLAST SORTED ENTRY RECORD#,2ASLAST U +
   NSORTED ENTRY,2AS
   NUMBER OF DELETED ENTRIES SO FAR
30 'So the three numbers +1 is the number of records in file
40 'Worst search number is = INT(LOGbase2(SORTEDLAST-1))+ +
   1+(UNSORTEDLAST-
   SORTEDLAST
50 'Other records in file are as follows:
60 'Sorted entry:
70 ' FIELD1,1AS"B",6ASKEY,121AS USER DEFINED
80 'Unsorted entry:
90 ' FIELD1,1AS"B",6ASKEY,121AS USER DEFINED
100 'Deleted entry
110 ' FIELD1,1AS"Z",127AS GARBAGE (DELETED) INFORMATION
120 'Note that when the file is sorted, a simple modifica +
   tion
130 'of the prime record are all that is necessary to
140 'fix the file completely. Note that all deleted entries
150 'Are Retained In an alphabetical table of their own.
160 'Undeletes are possible, but an EXPUNGE type utility
170 'Should be written as well as the sorter. The EXPUNGEr
180 'would simply copy all undeleted records to a new file,
190 'delete the old, and rename the new. The sorter woul +
   d only
200 'Need to extract the keys and sort these, then sorting
210 'the file directly into another and then deletins and +
   renamins
220 'as the EXPUNGE would. A combination could be writte +
   n so
230 'that it could do both at once if this is needed.
250 '**
260 OPEN "R",1,"TEST",3:CH=1
270 LINEINPUT "Command: (Init, Fetch, Add, Delete): ";HU$
280 IF HU$="" THEN 270 ELSE CM=INSTR("IFAD",LEFT$(HU$,1))
285 IF CM=0 THEN 270
290 IF CM>1 THEN LINEINPUT "Key: ";KEY$
300 FO=0:ON CM GOSUB 900,1000,1200,1300
305 PRINT "RC =";RC
310 IF FO THEN PRINT "Error":GOTO 270 ELSE PRINT "No Erro +
   r":GOTO 270
500 FOR A=1 TO 100
510 KEY$=RIGHT$(SPACE$(5)+STR$(A),4):GOSUB 1000
515 PRINT KEY$;" ";:IF FO THEN PRINT "Error" ELSE PRINT +
   "No error"
517 NEXT A
520 STOP
900 'Temp routine CREATE
910 'Set up the file on channel CH
920 FIELDCH,1ASS0$,2ASS1$,2ASS2$,2ASS3$
930 LSET$0$="A":LSET$1$=MKI$(1):LSET$2$=MKI$(1):LSET$3$=M +
   KI$(0):PUTCH,1

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940 RETURN
1000 'FUNCTION FETCH
1010 'The file should already be open, the channel is in CH
1020 'The record will be returned in RC, and will be accessed
1030 'for convenience, FO will contain 0 if there, -1 if not.
1040 'The entry may be modified as necessary, but do not alter
1050 'the Alpha flag or the Key, for if you do, Problems may result.
1060 GOSUB 2000 'Get the label words
1070 FIELD CH,7AS00$;FO=-1;K0$="B"+KEY$;K0$=LEFT$(K0$+SPACE(7),7)
1080 'Perform a binary search on sorted portion of file
1090 P1=1;P2=LS+1;IF P1>P2 THEN 1150 'No sorted list
1100 RC=P1+INT((P2-P1)/2)
1110 GET CH,RC
1115 IF LEFT$(00$,1)="Z" THEN IF RIGHT$(00$,6)=RIGHT$(K0$,6) THEN 1150
1116 IF LEFT$(00$,1)="Z" THEN LSET 00$="B"+RIGHT$(00$,6)
1120 IF 00$=K0$ THEN FO=0;RETURN
1130 IF 00$>K0$ THEN P2=RC ELSE P1=RC
1140 IF P1+1<P2 THEN 1100
1150 'Not on the sorted list, try a sequential on the unsorted
1160 P1=LS+1;P2=LU;IF P1>P2 THEN RETURN 'No unsorted list
1170 FOR RC=P1 TO P2:GET CH,RC;IF 00$=K0$ THEN FO=0;RETURN
1180 NEXT RC;RC=P2;RETURN 'Not found on either list
1200 'FUNCTION ADDNEW
1210 'Channel in CH, key in KEY$. Record allowed will be in RC,
1220 'Headers and key will be added to file now. Own modifications
1230 'may be done now, just as if it had been accessed by FETCH
1240 'If was added, FO will be 0, if there already, FO will be -1,
1250 'and RC will contain the number of the record there.
1260 'Please do not attempt to create a file the 2 same keys.
1270 GOSUB 1000;IF FO=0 THEN FO=-1;RETURN
1280 LSET 00$=K0$;LU=LU+1;PUTCH,LU;GOSUB 2100
1290 FO=0;RC=LU;RETURN
1300 'FUNCTION DELETE
1310 'Channel in CH, key in KEY$. If there, will be deleted, and FO
1320 'will be set to 0, if not, FO will equal -1.
1330 GOSUB 1000;IF FO=-1 THEN RETURN
1340 GETCH,RC;LSET 00$="Z"+KEY$;PUTCH,RC
1350 DL=DL+1;GOTO 2100
2000 'FUNCTION GETPAR
2010 FIELDCH,1ASS0$,2ASS1$,2ASS2$,2ASS3$
2020 GETCH,1;LS=CVI(S1$);LU=CVI(S2$);DL=CVI(S3$)

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2030 RETURN
2100 'FUNCTION REPPAR
2110 GETCH,1:LSETS1$=MKI$(LS):LSETS2$=MKI$(LU):LSETS3$=MK +
    I$(DL):PUTCH,1
2120 RETURN
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[illegible][illegible]