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DECUS NO.	8-518
TITLE	PS/8 FORTRAN ALPHABETICAL SORT
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PS/8 FORTRAN ALPHABETICAL SORT

DECUS Program Library Write-up

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This is an alphabetical sort of any number of fields of any width. The array to be sorted must be an integer array of ASCII characters stored in A2 format. The program is a subroutine and is called from the main program.

Call SORT with the following arguments:

NAME - Array with fields to be sorted. Routine returns the sorted array in NAME.

NFLD - Width of field divided by 2. If field contains 20 characters, NFLD=10.

NUMBER - The number of fields to be sorted.

For efficiency the dimension of NAME should be adjusted to that of your longest array to be sorted. NAMEA and NAMEB should be adjusted to the maximum field width divided by two.


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C      ***** ALPHABETICAL SORT*****
C      CALL SORT FROM MAIN PROGRAM
C      NAME -- ARRAY WITH FIELDS TO BE SORTED/RETURNS SORTED
C      NFLD -- WIDTH OF FIELD DIVIDED BY 2
C      NUMBER -- NUMBER OF FIELDS
C
C
C      FOR EFFICIENCY ADJUST DIMENSION OF NAME TO THAT OF
C      YOUR MAXIMUM ARRAY TO BE SORTED.
C
C      SUBROUTINE SORT (NAME, NFLD, NUMBER)
C      DIMENSION NAME(1000), NAMEA(36), NAMEB(36)
C      IX=NUMBER-1
800    LSW=1
C      DO 1000 I=1, IX
C      DO 900 J=1, NFLD
C      M=NFLD* I+J-NFLD
C      N=NFLD* I+J
C      NAMEA(J)=NAME(M)
900    NAMEB(J)=NAME(N)
C      *COMPARE FIELDS*
C      DO 20 J=1, NFLD
C      IF (NAMEA(J)-NAMEB(J) ) 1000, 20, 30
20     CONTINUE
C      GOTO 1000
30     LSW=1
C      *INTERCHANGE FIELDS (THEY ARE NOT ALPHABETICAL)*
C      DO 950 J=1, NFLD
C      M=NFLD* I+J-NFLD
C      N=NFLD* I+J
C      NAME(M)=NAMEB(J)
950    NAME(N)=NAMEA(J)
1000   CONTINUE
C      *IF AN INTERCHANGE WAS MADE DURING THIS PASS
C      MAKE ANOTHER PASS*
C      IF (LSW) 999, 1010, 800
1010   RETURN
999    CALL EXIT
END

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