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DECUS NO.	FOCAL8-180
TITLE	FOCAL-SORT
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SOURCE LANGUAGE	FOCAL - 1968

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FOCAL - SORT

DECUS Program Library Write-up

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ABSTRACT

This is a short routine to sort subscripted arrays by pair interchange. If duplication is found in array (x) then corresponding two elements in array (y) are sorted into ascending order.

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C-FOCAL., 1968

01.10 C SORT BY PAIR INTERCHANCE
01.11 E
01.20 A "NUMBER TO SORT  ",N,!!
01.21 F I=1,N;A X(I),Y(I)
01.30 F J=1,N-1;D 3
01.40 T !!"THE SORTED VALUES ARE:"!!
01.41 T %10.03
01.42 F I=1,N;T X(I),Y(I),!
01.90 Q

03.10 C SORT FOR ASSENDINC ORDER ON X
03.11 S I=1
03.20 I (X(I)-X(I+1))3.4,3.6,3.3
03.30 C X(I) > X(I+1)    [SWAP X]
03.31 S QX=X(I);S QY=Y(I)
03.32 S RX=X(I+1);S RY=Y(I+1)
03.33 S X(I)=RX;S Y(I)=RY
03.34 S X(I+1)=QX;S Y(I+1)=QY
03.40 C X(I) < X(I+1)    [DO NOT SWAP X]
03.41 S I=I+1
03.42 I (I-N)3.2;
03.43 RETURN
03.60 C X(I) = X(I+1)    [SORT ON Y]
03.61 I (Y(I)-Y(I+1))3.8,3.9,3.7
03.70 C Y(I) > Y(I+1)    [SWAP Y]
03.71 D 3.31
03.72 D 3.32
03.73 D 3.33
03.74 D 3.34
03.75 G 3.4
03.80 C Y(I) < Y(I+1)    [DO NOT SWAP Y]
03.81 G 3.4
03.90 C Y(I) = Y(I+1)    [COULD CONTINUE TO SORT ON SAY Z]
03.91 G 3.4
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