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DECUS NO.

FOCAL8-180

TITLE

FOCAL-SORT

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DATE

May 13, 1971

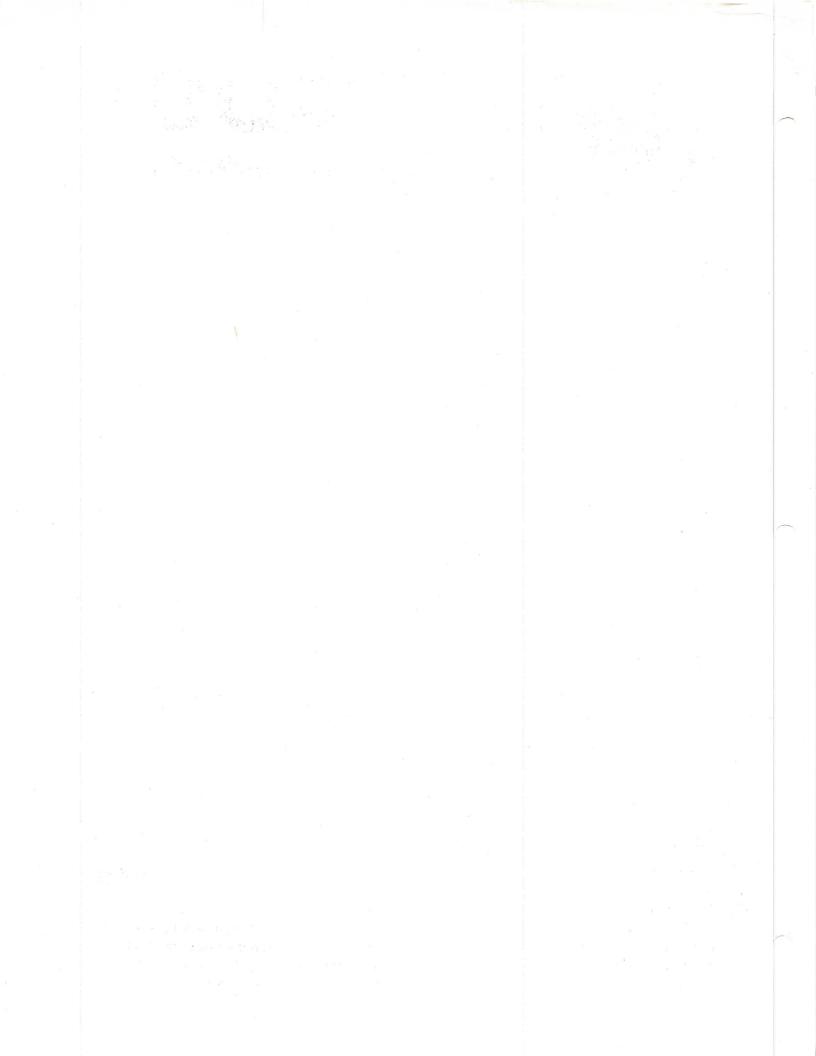
SOURCELANGUAGE

FOCAL - 1968

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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.

C-FOCAL., 1968

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01.10 C SORT BY PAIR INTERCHANCE
01.11 E
01.20 A "NUMBER TO SORT ", N,!!
01.21 \text{ F I=1,N;A X(I),Y(I)}
01.30 \text{ F J=1,N-1;D} 3
01.40 T !!"THE SORTED VALUES ARE:"!!
01.41 T 310.03
01.42 F I=1,N;T X(I),Y(I),!
Ø1.90 Q
03.10 C SORT FOR ASSENDING ORDER ON X
03.11 \text{ S I=1}
03.20 I (X(I)-X(I+1))3.4,3.6,3.3
03.30 \text{ C X(I)} > \text{X(I+1)} \quad [SWAP X]
\emptyset 3 \cdot 31 S QX = X(I); S QY = Y(I)
03.32 \text{ S RX=X(I+1); S RY=Y(I+1)}
03.33 5 X(I)=RX;S Y(I)=RY
03.34 \text{ S X(I+1)=QX;S Y(I+1)=QY}
03.40 C X(I) < X(I+1) [DO NOT SWAP X]
03.41 \text{ S } I = I + 1
03.42 I (I-N)3.2;
03.43 RETURN
03.69 \text{ C X(I)} = \text{X(I+1)}
                           [SORT ON Y]
03.61 \text{ I } (Y(1)-Y(1+1))3.8,3.9,3.7
03.70 C Y(I) > Y(I+1) [SWAP Y]
Ø3.71 D 3.31
Ø3.72 D 3.32
Ø3.73 D 3.33
03.74 D 3.34
Ø3.75 G 3.4
03.80 C Y(I) < Y(I+1) [DO NOT SWAP Y]
03.81 C 3.4
03.90 C Y(I) = Y(I+1) [COULD CONTINUE TO SORT ON SAY Z]
Ø3.91 G 3.4
```