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PROGRAM LIBRARY

DECUS NO.	FOCAL8-130
TITLE	FLHSTO
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SOURCE LANGUAGE	FOCAL

FLHSTO

DECUS Program Library Write-up

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INTRODUCTION

Many statistical analyses proceed optimally if a graphical analysis of each variable exists at the start. The program described below provides a "front end" for various analyses by producing an ordered frequency table and histogram for data from one variable. Data can be from any scale of measurement, but non-numerical data must be numerically coded (decimal) for proper input.

OPERATING PROCEDURE

FLHSTO must be loaded on a system which runs Focal (e.g., TSS-8). Best results occur if the extended functions are omitted to maximize data storage space.

Execution of FLHSTO with a "GO" or other command transfers control to a "tight" gathering loop in groups 2.0 and 3.0 which asks for data input, accepts valid numerical entries, and stores counts of unique data accepted. The loop continues indefinitely to permit analysis of data sets of arbitrary counts.

When all data have been entered, the tight gathering loop should be interrupted by entering a Control/C (octal 203). A display of the results occurs then if control is transferred (e.g., GOTO 4.1) to statement 4.1.

The complete display consists of first the total data count (N), second the frequency table, and third the histogram.

An input-output transaction with FLHSTO on a TSS-8 follows:

.R FOCAL

SHALL I RETAIN LOG, EXP, ATN ?:NO

SHALL I RETAIN SINE, COSINE ?:NO

PROCEED.

*LIBRARY CALL FLHSTO

*G

D:1 D:1 D:1 D:1 D:1 D:2 D2: D:2 D:2 D3: D:3 D:4 4D: 5D: 6D: 7D: 8D: 9D:
D:1 D:2 D:3 D:4 5D: 6D: 7D: 7D: 8D: 8D: 9D: 0D:
D:1 D:1 D:1 1D: D:2 D:2 D:3 3D: 4D: 4D: D:5 5D: 5D: 5D: 5D: 5D: 6D: D:7
D:1 D:2 D:3 D:4 5D: 6D: 6D: 6D: 6D: 6D: 6D: 6D: 6D: 6D: 6D: 6D: 7D: 7D: 8
D: ?00.00 @ 02.20

*G 4.1

N= 67.0000

DATUM= 0.0000 FREQ= 1.0000
DATUM= 1.0000 FREQ= 11.0000
DATUM= 2.0000 FREQ= 8.0000
DATUM= 3.0000 FREQ= 6.0000
DATUM= 4.0000 FREQ= 6.0000
DATUM= 5.0000 FREQ= 9.0000
DATUM= 6.0000 FREQ= 14.0000
DATUM= 7.0000 FREQ= 6.0000
DATUM= 8.0000 FREQ= 4.0000
DATUM= 9.0000 FREQ= 2.0000

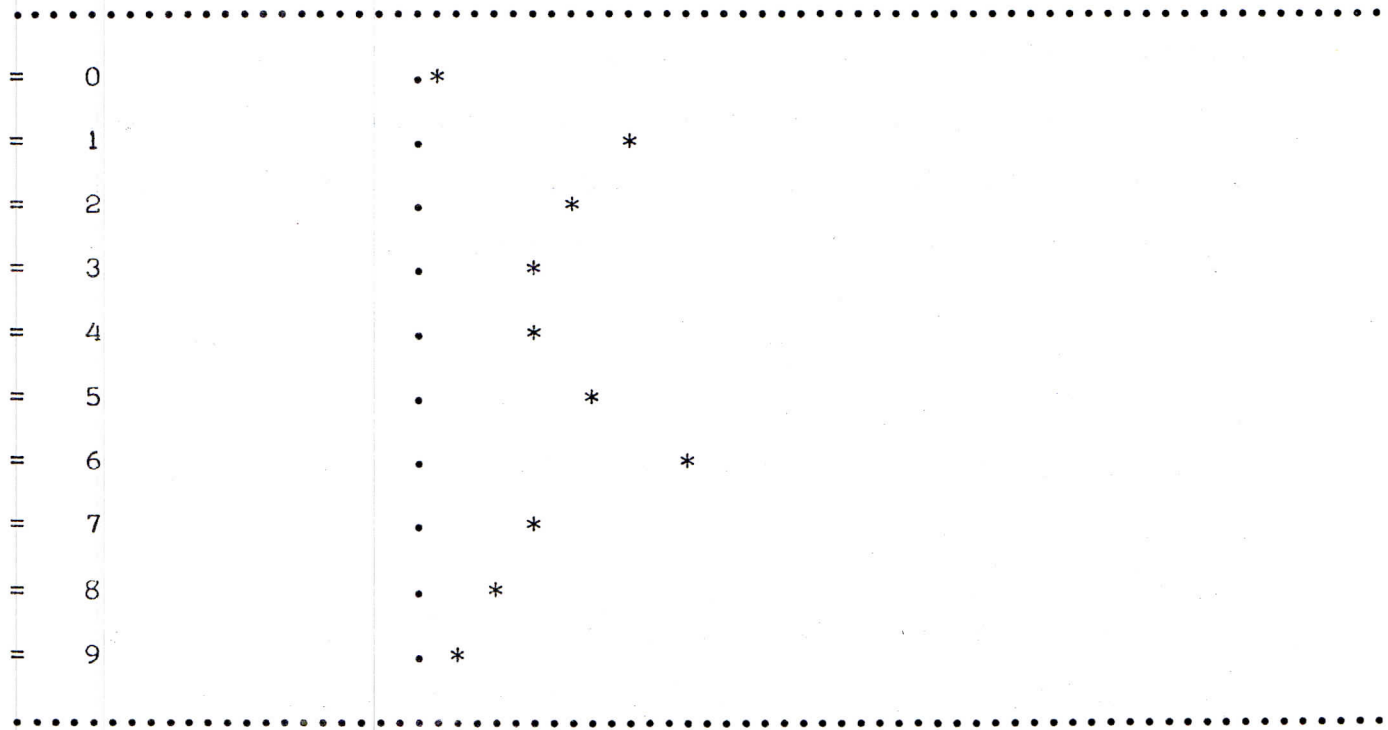
X VALUE

FREQ.

0
↑

= 20
↑

= 40
↑



W
C-FOCAL,1969

02.10 S N=0;S UC=0;S I=0
02.20 A "D",TX;S N=N+1
02.40 IF (N-1)2.6,2.6,2.8
02.60 S DA(I)=TX;S UC=UC+1;S Q(I)=1;G 2.2
02.80 S I=0

03.10 IF (TX-DA(I))3.3,3.2,3.3
03.20 S Q(I)=Q(I)+1;G 2.2
03.30 S I=I+1;IF (I-UC)3.1,2.6,2.6

04.10 S J=0
04.12 S K=J+1;G 5.1
04.19 S TX=Q(0);S J=1;G 9.11
04.20 S J=J+1;IF (J-UC)9.11,4.21,4.21
04.21 IF (TX-50)4.37,4.37,4.31
04.31 S SF=TX/50;S SF=FITR(SF);S X=1
04.33 IF (SF-10*X)4.35,4.35,4.34
04.34 S X=X+1;GOTO 4.33
04.35 S X=X-1;S SF=SF+10*X;G 4.38
04.37 S SF=1
04.38 T ?N?,!!!;G 6.1

05.10 IF (DA(J)-DA(K))5.6,5.6,5.2
05.20 S TM=DA(J);S DA(J)=DA(K);S DA(K)=TM
05.21 S TM=Q(J);S Q(J)=Q(K);S Q(K)=TM
05.60 S K=K+1;IF (K-(UC-1))5.1,5.1,5.62
05.62 S J=J+1;IF (J-(UC-2))4.12,4.12,4.19

06.10 F X=0,1,UC-1;T "DATUM",DA(X)," FREQ",Q(X),!

07.10 T !!!;T " X VALUE "

07.30 S L=21;D 9.1
07.40 T "FREQ.",!!!!;D 7.3;T "0";S L=18;D 9.1
07.60 T %3.0,20*SF;S L=14;D 9.1;T 40*SF,!
07.70 D 7.3;T "t"
07.80 S L=19;D 9.1;T "t"
07.90 D 7.8;T !;F M=1,1,72;T "."

08.10 F I=0,1,UC-1;D 10.0
08.11 T !!!;F I=1,1,72;T "."
08.20 T !!!!!;Q

09.10 F M=1,1,L;T " "
09.11 IF (Q(J)-TX)4.2,4.2,9.2
09.20 S TX=Q(J);G 4.2

10.10 T !!,DA(I)," .",#
10.20 S L=FITR(Q(I)/SF)+21;D 9.1;T "*" *
*

