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Terminal Talk - The Wofford Collection - March 1971

Wofford College Computer Center

Statistics Demonstrations.

DEMO1*   This Fortran program is designed to illustrate the law of large numbers and the comparison of estimators. It generates observations one at a time from any of 6 distributions, and plots them together with the cumulative value of 7 different statistics. The student can then trace the course of each statistic as the sample size increases, and thus visualize its behavior and compare it with the others. The available distribution functions are: A-shaped triangular, Cauchy, Laplace, Normal, Uniform and v-shaped triangular.

DEMO2*   This Fortran program is designed to illustrate the law of large numbers and the central limit theorem. The computer requests the relative frequencies of a set of M (M $<$ = 13) events. The user chooses to see a running plot of population mean vs. sample number or to see a plot of the distribution of the means of 1000 samples of size N (N $\leq$ 100).

Listings for these programs are available in the Computer Center.

MATCAL***.

This new Fortran program has been added to the system library to perform standard matrix operations--transposition, addition, subtraction, multiplication, and inversion. The program is designed to make it easy for the user to save and unsave the matrix and to correct items individually. Run for instructions.

Program Modifications in Statistical Package.

All of the data-preparation programs in the Quade statistics package have been modified. If the file has a line numbered zero, the programs will assume this line contains the data names; if there is no line zero, they assume that there are no names and that numbers will be used instead. It is expected that all the analysis programs in this package will also include this modification soon.

Another change in all these programs is as follows: line 10 is used to specify data file for input and line 20 for output.

Furthermore, the programs no longer ask the question
HOW MANY FILES ARE IN YOUR INPUT DATA SET?
(which confused many users). Instead, they assume the answer is "1" (i.e. that your input data set does not consist of two or more linked files). If you use linked files for your input data and the program also writes an output file then you must indicate this by specifying the number of input files as "NF" in line 30: for example
```
10 $FILE A/B/C
20 $FILE Y/Z
30 NF = 3
```
(The linking of output files causes no problems).

Other changes since the publication in December 1969 of the CAC manual, Data Preparation Programs, are as follows:

LISDAT***   If an output file is provided, LISDAT will write the "neat, unpacked listing" thereon (with no output file, it prints out the listing as previously).

DIVDAT***   —can now divide one file into as many as 35.

COMDAT***   —can now combine as many as 30 files. (Do not use linked files for input.)

SELDAT***   —will accept the line number of a file as "variable number 0 (zero)." (Do not use linked files for input.)

GENDAT***   Two new distributions, the A-shaped and V-shaped triangular distributions, have been added. Also, the Function Z( ) which generates normal deviates has been rewritten so that you can conveniently incorporate it into your own programs: just EDIT EXTRACT 90-91, and remember to set the random number generator by issuing a dummy call to the RND(X) function before using Z( ).

TRADAT***   Any specification which is too long for a single line of input can be continued onto two or more lines: just type a semicolon (";"), followed by a carriage return, at any point, then continue where you left off when you receive a question mark (?).

PRODAT***   The line numbers to be used have changed: put OUTPUT:FORMAT in line 40, and start your transformation routine in line 100. (Just RUN for full details).

Further information is on file in the computer Center.