SAS: The last of the great mainframe stats packages

STA305 Winter/Spring 2014

Suggested Reading

- Data analysis with SAS, Chapter Two

It almost seemed like there was one for every major university

- **DATATEXT**: Harvard
- **SPSS**: University of Chicago
- **BMDP**: University of California at Los Angeles
- **SAS**: University of North Carolina at Chapel Hill
- **OMNITAB**: Pennsylvania State University

SAS File Types Include

- Raw data file
- Program file
- Log file
- Procedure output file

- Data set
- Library

Four file types s

- **Raw Data File**: A file consisting of rows and columns of numbers; or maybe some of the columns have letters (character data) instead of numbers. The rows represent observations and the columns represent variables.

- **Program File**: A file consisting of commands that the SAS software tries to follow. You create this file with a text editor like emacs. The command file contains a reference to the raw data file (in the infile statement), so SAS knows where to find the data. Program files have names like reading1.sas.

- **Log File**: This file is produced by every SAS run, whether it is successful of unsuccessful. It contains a listing of the program file, as well any error messages or warnings. The name of the log file is automatically generated by SAS; it combines the first part of the program file's name with the extension .log. So for example, when SAS executes the commands in reading1.sas, it writes a log file named reading1.log.

- **Procedure Output File**: The procedure output file contains the output of the statistical procedures requested by the program file. It can be in various formats including pdf, rtf and html as well as plain text. The original procedure output file is the list file, a plain text file with the extension .lst. The list file is produced by default on unix/linux systems --- so, for example, running SAS on the command file reading1.sas will (if there are no errors) produce reading1.lst as well as reading1.log.

Work Flow

- Obtain or create the raw data file. It will be a plain text file or Excel spreadsheet in your (working) unix directory. If it's a text file, it must have unix line breaks.

- Open 2 unix windows. Arrange your desktop so you can click back and forth.

- In one window, `emacs hw8.sas`. Type in your program or edit the existing program.

- In the other window at the unix prompt

  1. `sas hw8` and go to Step 2.

  2. `less hw8.log`

     a) If no errors or warnings, `less hw8.lst`. If you are not satisfied, click on the emacs window and edit the program. Then click on the window with the unix prompt and go to Step 1.

     b) If errors or warnings, click on the emacs window and edit the program. Then click on the window with the unix prompt and go to Step 1.

  3. Transfer the log and list file (or other procedure output file) to a local computer for printing.

More detail

- Chapter 2 of *Data analysis with SAS*
- It's much more detailed than this
- And assumes a unix-linux environment

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