

BIOE 811  
Biostatistics for the Health Sciences I

Notes on the Use of PC-SAS<sup>®</sup>

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## **SAS Display Manager System**

Your PC-SAS software contains an electronic users' manual, which provides assistance and documentation for the statistical procedures that you will be using. This manual appears as soon as you open PC-SAS. You should have this source of help available whenever you are using PC-SAS.

This manual will explain the use of the various windows that appear in the display manager. This manual also contains information about how to enter SAS statements, cut and paste, and run SAS programs after you have created them and finished editing them. This manual will also provide guidance for saving to your hard drive or other drive your SAS command files, as well as your LOG and output (LST) files. This user manual is the best source of information that you have available to you. You should complete the SAS tutorial before attempting to use PC-SAS.

## **DMS Windows**

You start PC-SAS by double clicking on the SAS icon or selecting the SAS program using your program manager feature of your PC. After starting SAS the display manager system (DMS) will contain two basic windows; this is the SAS windowing environment. Like most programs located on your PC, PC-SAS is an interactive program. The SAS windowing environment will look and respond in a similar manner to other computer packages located on your PC. REMEMBER: Only one window is active at a time. You can move between windows by clicking on tabs located at the bottom of the screen.

You enter SAS command statements and data lines, and run SAS files in the PROGRAM EDITOR. The LOG window shows the log of steps executed by the SAS command file. This window will also contain notes, warnings, and error messages. Once you have successfully executed all or part of your SAS command file, the OUTPUT window will contain the output from your program. The PROGRAM EDITOR, LOG, and OUTPUT windows are the three basic DMS windows.

Above the LOG window is a command field. In this course we will not use this field. However, as you become more experienced with using SAS you may wish to use this for editing and writing SAS command files.

To the left of your LOG and PROGRAM EDITOR windows is the EXPLORER window that gives you access to your SAS programs and libraries. For this course you will not have to use this window, but as you become more experienced you may wish to use it.

Above the command field is the TOOLBAR and the MENU BAR. The MENU BAR also contains the choices on the TOOLBAR.

## **Entering and Running a SAS Command File**

You use the PROGRAM EDITOR window in a manner similar to a word processor. You create a SAS command file by typing the text lines into this window. The cursor should be visible in the window and you merely begin typing. When you reach the end of a line, you press the return or enter key on your keyboard.

After you have completed your SAS command file, you are now ready to execute the program. You do this by selecting the icon on the TOOLBAR that looks like a person running. Statements will then begin to appear rapidly in the LOG window. When the LOG file is finished, you will see the OUTPUT window displayed in your DMS. If there is no OUTPUT window displayed or if only part of your SAS command file was executed, you have made one or more mistakes in writing your SAS command file. First, check the LOG window for errors. Then, select the PROGRAM EDITOR and edit your program to correct your mistakes.

Copying, cutting and pasting are permitted in the PROGRAM EDITOR. These features operate the same way as those in a typical word-processor package. You highlight the lines to be copied or cut and choose the copy or cut icon on the TOOLBAR. Then you place your cursor in the place you want to paste the lines and choose the paste option from the TOOLBAR.

Likewise, you may insert new lines into a SAS command file. You do this in the same manner, as you would insert lines into a document in a word-processor. You place the cursor at the end of a line, press the return or enter key on your keyboard and then type the new lines on the line that appears. If a line does not appear, you may need to use the insert key on your keyboard.

The undo icon on the TOOLBAR reverses the last change that you have made to your SAS command file. This feature will not be active if you have not made any changes.

### **Saving a SAS Command File**

Select the save icon (the diskette) on the TOOLBAR to save a SAS command file. A save-as window will appear. The window allows you to select the location for saving the SAS command file. The extension on SAS command files is SAS; this is done automatically. This feature is useful in having the PC-SAS recognize your saved programs. PC-SAS will save these programs with a distinct icon in the location you have selected.

### **Re-using a Saved Program**

Once you have entered a SAS command file in the PROGRAM EDITOR and saved it, you can re-use without retyping it. If you have saved your SAS command file, you select the open icon (open folder) on your TOOLBAR. This displays an open window. Select the location for PC-SAS to look for your saved SAS command file. Select the appropriate program and depress the open button. If you select the submit option in the upper right hand corner of this window, you will open and submit the SAS command file. You may also drag the icon for the SAS command file into your PROGRAM EDITOR window. If you now make changes to your SAS command file you can either save the file by overwriting and replacing the existing SAS command file or save it using a new name.

### **Printing a SAS Command File**

To print the contents of the PROGRAM EDITOR, select the print icon on the TOOLBAR. The Print window will display the name of the printer selected, the contents of the PROGRAM EDITOR, the number of copies desired, and the name of the file to be printed.

### **Printing a LOG File**

To print the contents of the LOG window, be sure that the LOG window is active. Select the print icon on the TOOLBAR. The Print window will display the name of the printer selected, the contents of the LOG window, the number of copies desired, and the name of the file to be printed (with the LOG extension automatically added).

### **Printing and Saving Output**

After you have successfully generated your complete output, you can print it or save it to a file. Be sure that the OUTPUT window is active. Select the print icon on the TOOLBAR. The same print window will appear but it will display the contents of the OUTPUT window.

You can save the output by making sure that the OUTPUT window is active and then selecting the save icon on the TOOLBAR. The save window appears. Select the appropriate location for your output. PC-SAS will automatically save the contents of the OUTPUT window with the LST extension.