

STAT 506: Homework 1

You should first download the Data folder for the Programming 1 course from Blackboard; it is available in a zip file called “PG1.zip.” You will need to unzip it and follow the instructions on running the cre8data.sas program. Make sure it is in a location that is accessible from where you are running SAS. The folder contains all the datasets and SAS programs that go along with the SAS course we are following.

Also, in the assignments when I ask for you to “submit a screenshot”, all you need to do is push the ‘Print Screen’ button on your computer (or use the Snipping Tool / Snip & Sketch app in Windows or Shift-Command-4 on a Mac) and then paste the image into your homework submission. Also, any time there are *italicized* instructions at the end of a step, those are my instructions for you to show me your work.

1. Submitting a Program and Using the Help Facility

```
data hw1;  
    set sashelp.cars;  
run;  
  
proc print data=hw1 noobs;  
    var Make Model MPG_City;  
    where MPG_City > 35;  
run;
```

- How many steps are in the above code? How many statements are in the above code?
- Copy the above code into the Editor window. Submit the program for execution. How many rows and columns are in the report (excluding the variable name row)?
- Examine the Log window. Based on the log notes following the DATA step, how many observations and variables are in the **sashelp.cars** table?
- Clear the Log window (SAS windowing environment only; Hint: “Edit” in the menu). *Submit a screenshot of the cleared log.*

2. Setting Up a Function Key to Clear the Log and Output Windows

- Select **Tools** ⇒ **Options** ⇒ **Keys** to access the KEYS window. The KEYS window is a secondary window used to browse or change function key definitions. Type the following commands in the Definition column for the F12 key:

```
clear log; clear output
```

Submit a screenshot of the KEYS window with these commands entered.

- Which key is currently programmed to submit a KEYS command?
- Close the KEYS window. This saves the key definition in your user profile. Press the F12 key and confirm that the Log and Output windows are cleared. *Submit a screenshot of the cleared windows.*

(This is a good way to create your own handy keyboard shortcuts.)

3. Diagnosing and Correcting Syntax Errors

```
proc prnt data=sashelp.cars;  
    var EngineSize hoRsepoWeR  
    /* This line is a comment and we don't want it to run;  
RUN;
```

- a. The above SAS code might have some errors. *State the error(s).*
- b. Correct the error(s) and submit the program. *Show the final code and the output showing the first five observations.*

4. Understanding SAS Dates

- a. The Justice League of America debuted in comics on December 29, 1959. What is that as a SAS date?
- b. When stored in a variable as a SAS date, what would its default length (byte size) be?

5. Examining the Descriptor Portion of a SAS Table

- a. Write a PROC CONTENTS step to display the descriptor portion of the **sashelp.Holiday** table. *Show your code.*
- b. Submit the program and answer the following questions:
How many observations (rows) are in the data set?
How many variables (columns) are in the data set?
What is the length (byte size) of the variable **name**?

6. Accessing a SAS Data Library

- a. Write and submit the appropriate LIBNAME statement to provide access to the pg1/data folder. Call the libref "pg1". *Submit the libname statement.*
- b. Check the log to confirm that the SAS data library was assigned. *Submit this portion of the log.*
- c. Add a PROC CONTENTS step to display the descriptor portion of the table **pg1.storm_range**. *Submit the code and the output.*

7. Using PROC IMPORT for CSV Files

- a. Download the file hw1data.csv from Brightspace. You will want to take note of the location of the downloaded file. Write a PROC IMPORT step to read into SAS as a table named **work.hw1data**. *Submit the code.*
- b. The PROC IMPORT you just ran created a new file named **hw1data.sas7bdat** on your system. After you end your SAS session (don't do that right now), what will happen to that file and why?
- c. Then run the below code. *Submit a screenshot of the output.*

```
proc print data=work.hw1data; run;
```