KEY 30 Total Points

Homework Assignment 1  
Covers Notes through Lesson 03

**Problems to be Completed Outside of SAS**

These problems can be done outside of SAS in Word or any other way you feel most comfortable with.

#### Multiple Choice *[1 Point per Q; 4 Points Total]*

1. True or False.
   1. \_***T***\_\_ You can place more than one SAS statement on a single line.
   2. \_***T***\_\_ You can use several lines for a single SAS statement.
   3. \_***F***\_\_ SAS has three data types: character, numeric, and integer.
   4. \_***T***\_\_ OPTIONS and TITLE statements are considered global statements.
2. Which SAS library is a temporary library?
   1. TEMP
   2. WORK
   3. ORION
   4. All of the above
3. Suppose that you have a data set that includes the gender, age, and height of students in a course. Which BY statement will tell SAS to sort the data so that within each age (youngest to oldest), the data will be organized by males (tallest to shortest), followed by females (tallest to shortest)?
   1. BY DESCENDING Gender Age DESCENDING Height;
   2. BY DESCENDING Gender DESCENDING Height Age;
   3. BY Age DESCENDING Height DESCENDING Gender;
   4. BY Age DESCENDING Gender DESCENDING Height;
4. In SAS data sets, missing numeric data are represented by which of the following?
   1. A single space
   2. A single period
   3. Any number of spaces
   4. All of the above

#### Short Answer *[2 Points per Q; 6 Points Total]*

1. I would like to get an idea of the programming experience from everyone enrolled in the course! Post a brief description of your programming experience, before enrolling in this course, to the *Programming Experience* thread on the **Homework Assignment 1** forum on the Discussion Board in BB. If this is your first experience with programming, be sure to specify that! If you have programming experience, provide the details regarding the software you utilized. *If you posted, you get two points!*

1. You have a data set consisting of Student ID, English, History, Math, and Science test scores on 10 students.
   1. The number of variables is \_\_ ***5***\_\_\_\_.
   2. The number of observations is \_\_ ***10***\_\_\_.
2. Describe two different ways that you can view the variable attributes of a SAS data set.
   1. *Use a PROC CONTENTS data=datasetname to get the results tables. The last table from the procedure contains information regarding variable attributes.*
   2. *Open the SAS dataset in SAS to open the VIEWTABLE. Within the VIEWTABLE, double click on any column header (top row) and it will bring up the column attributes table. This table contains all the variable attributes.*

**Directions**

Launch SAS and open a new Editor. For each problem, type your SAS code into the Editor. Use comments to annotate your code with informative annotations (e.g., the problem number and any other necessary information). At the end of the activity, save your annotated program and submit it into Blackboard.

**Problems to be Completed by SAS**

These problems MUST be done in SAS. Feel free to embed your explanation (when asked) or answers to additional questions, within your SAS comments, or within the document you answered the previous sections questions in.

**Preparing Your SAS Session**

After compiling all of the SAS syntax necessary to complete the entire assignment, you will:

(a) Save the program.

(b) Close out of SAS.

(c) Re-open the program.

(d) Submit the ENTIRE program by NOT highlighting any syntax and hitting the Submit button. This will submit a clean version of the ENTIRE program at one time.

(e) Verify there are no ERRORS: or WARNINGS:

(f) Save the program and submit the program to BB.

**REMINDER: Do one statement at a time. Run you DATA or PROC step after completing ONE statement and verify there are no errors in your log implying the program step ran correctly.**

**Level 1 *[2 Points]***

1. Use a LIBNAME statement to point to the location on your computer that the data set, *shoes,* from the orion data is saved.
2. In your Explorer window, navigate to the libref (name of the library from 1.) to verify the data set is there.

Level 2 *[6 Points Total; 1 Point each]*

* 1. Submit a PROC CONTENTS step to display the descriptor portion of **sales**.
  2. How are the variables arranged in the output? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  3. How many observations are in the data set? \_\_\_\_\_\_\_
  4. How many variables are in the data set? \_\_\_\_\_\_
  5. Add the VARNUM option to the PROC CONTENTS step, following the data set name. Submit the step.
  6. How are the variables arranged in the output? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Challenge *[12 Points Total; a & e 1 point each, b-d & f-g 2 points each]***

* 1. Write a PRINT step to display the permanent data set in the **Sasuser** library, *Baseball*.
  2. Use a SORT procedure to read in the permanent data set, *Baseball,* to create a temporary data set called *Baseball.* The [OUT=](http://support.sas.com/kb/24/835.html) option will need to be utilized.
  3. Write another PRINT step that references the newly sorted temporary *Baseball* dataset. Add a SUM statement to display the sum of **nHome** (number of home runs).
  4. Modify the program to display a subset of *Baseball* by selecting only the observations for players with a Name that CONTAINS Will. Also, suppress the Obs column.
  5. Did the sum of **nHome** change to reflect only the subset? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  6. Add a statement to use **Team** instead of Obs as the identifying column. Submit the program and verify the results.
  7. Add a LABEL, “Number of Home Runs”, to the **nHome** variable. Add an appropriate TITLE and FOOTNOTE to the report.