ST555 Homework 7

When you have completed this HW, submit via Moodle the following:

I. Your SAS program (.sas) that contains the answers to the fill in the blanks as comments. Be sure to include the question number and letter for each comment.
II. Your SAS log
III. Your Results, generate your results using ods as a .pdf or .rtf file

1) Creating course data files. There is another **cre8data** program to create the data files that accompany the SAS Programming 2: Data Manipulation Techniques book. This program must be executed once.
    a. Go to Moodle and download the SAS Programming 2 data files. Remember where you have downloaded the materials, unzip it, and save it. Remember the path where you have saved the unzipped materials, we will refer to this as your course target location. SAS Programming 2 course materials defines the default location for all course data as **s:\workshop**. If your data files are to be created in a location other than **s:\workshop**, you must identify a location for the SAS data files. I suspect most of us will have a different path location. For example my path location on my desktop is:
        i. \\stat.ad.ncsu.edu\Redirect\rhmoore\Documents\RHM\Teaching\St555\SASCourseNotes\New Program 2 Course Files

        ii. (Note I'm creating a separate folder and path for programming 2 so I don't confuse the materials from programming 1 and 2 books)

    b. Now open the cre8data.sas program in SAS. If you open SAS, you can utilize the menu:
        i. Select **File** ⇨ **Open** ⇨ **Program**.
        ii. Navigate to the data folder, select **cre8data**, and click **Open**. The program is displayed in an editor.

    c. Note the default values for the %LET statement. If your files are to be created at a location other than **s:\workshop**, change the value assigned to PATH= to reflect the location of the SAS data files. I suspect that most of you will have to change your path. If you are unsure where you saved the data files, go to your Windows Explorer to find the path for the folder where you want to keep your SAS Programming 2 course data files. Here is a screen shot of my Windows Explorer and I've clicked in the top box to find the path name

    d. Once you have entered the correct pathname in the %LET statement in cre8data.sas, click the running man or press F3 to submit the program.

    e. Click the **Results** tab and verify that the output contains a list of data files. In the Result Viewer, the list of data files will appear.

    f. Go to your course target location and you will see the libname.sas program and your course target location path should be automatically written in the %let path=… and *libname orion …; statements

g. How many datasets did the cre8data.sas program for the SAS Programming 2 book create? _____

2) In this problem, you will use the datasets 'Sales121999.sas7bdat' and 'Target121999' which contain target sales and actual sales of different flights.

a. Write any procedure other than PRINT that will create a report with the variable names of each dataset.

b. Sort both datasets based on flight number and save the sorted datasets in the Work library with new dataset names. In the sorted datasets, do not include the variables associated with Business Passengers. Only include observations with Start Point values of 'BHM' and flights scheduled for Christmas Day. Do not use a DATA step to do any of these tasks in part b.

c. Utilize the two original datasets 'Sales121999.sas7bdat' and 'Target121999', do the following in **one** DATA step:

i. Merge the two datasets based on flight number

ii. Create a dataset that contains all observations with Start Point values of 'BHM', call this dataset 'BHM'. How long did it take you to complete this question? _____

iii. Output all observations with Start Point values different than 'BHM' into one dataset and call this dataset 'NonBHM'. How long did it take you to complete this question? _____

iv. Use the SUM function to create a new variable called 'TotalTar' that is the sum of the target revenue based on passengers and cargo.

v. Create a new variable called 'TotalSal' that is the sum of all sales based on passengers and cargo.

vi. Create a new variable called 'Goal' whose value is either 'Met' or 'Not Met' depending on if the actual revenue is more than the target revenue.

vii. Steps iv, v, and vi should be conducted for both new dataset 'BHM' and 'NonBHM'

d. Update the 'BHM' dataset and call it 'BHM_Final'. For 'BHM_Final',

i. do not include the observation whose flight number is IA02401

ii. do not include any flights that did not meet the goal.

iii. Only keep the variables that correspond to flight number, actual revenue (not target revenue) and the 'Goal' variable.

e. Print the 'BHM_Final' dataset created in part d with these specifications

i. Do not print the observation number.

ii. Format 'TotalSal' so that it displays the dollar sign, comma, and two decimal places. Do NOT use more length than necesssary.

iii. Add a label so that TotalSal reads as 'Total Revenue'.

f. How long did it take you to complete this question? _____

3) Go to this week's group discussion forum, obtain your group members' SAS datasets "GroupIntro_YourLastName" and yours too. Merge the 3 – 4 datasets together (3 if you have total group members, 4 if you have 4 total group members including yourself)
    a. Call the permanent merged dataset "GroupIntro_YourLastName_YourGroupNumber" so Dr. Moore's dataset could be called GroupIntro_Moore_Group13.sas7bdat
    b. It is up to you how to merge the datasets. Obviously all rows (observations, students) in the dataset with have the same variable names (columns), however for some students there may be missing values for certain variables. Keep all information provided.
    c. How many variables are in your merged GroupIntro dataset? _____
    d. How long did it take you to complete this question? _____

4) Please give one positive aspect about Paul's performance, thus far, as our TA for ST555. Please give one meaningful suggestion for how Paul can improve his performance as TA, i.e. how can Paul better serve you?
    a. What's good?
    b. What can be improved?