Stat 657
Assignment 03 - SAS

Scope:

This assignment will primarily utilize, but is not limited to, techniques covered in the first 4 lectures. You may need to refer to the Programming 1 course notes and/or SAS Help for more information on the commands required to complete this assignment. This is primarily for review purposes since the skills required to complete this assignment are a prerequisite for this class.

General Homework Instructions:

There will usually be three PDF files posted to WebAssign –one for the program, one for the log, and one containing the SAS output. For this assignment we will be creating two output files so there will be four files in all. The files must be named according to a defined pattern that begins with your Net Id. More details about the naming convention will be provided later. Begin each SAS program with a header that contains at least the Last Run Date, Program Name, Program Location, Creation Date, Author, and Purpose as discussed in lecture 1. Refer to the SAS WOW! Document, under Links on eCampus, for examples. Fill in the relevant information for this specific assignment. Include the appropriate comment blocks for each program step. Whether explicitly included in the instructions or not, complete documentation including header and comments must be a part of all programs submitted. You may be penalized up to 10 points for incomplete documentation.

Specific Instructions for this Assignment:

In the last quarter of 2006 Orion Star completed the acquisition of Unicorn Athletics including all of its employees. The transition began on December 1, 2006. Even though it was contrary to the terms of the acquisition, it is believed that the CEO of Unicorn continued to hire and fire staff during the transition period. You have been asked to analyze the **Unicornstaff** data set which was created from a text file found on the CEO's personal laptop. You have also been asked to provide some information regarding the Orion data that is available for the transition team to analyze.

1. If you have not already done so, download the Sample Programs and Data associated with the SQL course notes. Extract these files to a folder that can be accessed from your SAS sessions. If you are using SAS Studio, this folder will need to be under SASUniversityEdition, myfolders. In your program code, assign a libref to this folder. Add the access=readonly option to your libname statement to ensure that you do not accidentally overwrite any of this data. We will refer to this as the Orion data throughout this assignment. Create another folder on your computer to which you can download assignment data files from eCampus and access them from SAS. Download the **Unicornstaff** data set to this folder. Create a libref, with a name of your choosing that points to this folder. Add the readonly option to this libref. You will need to create and/or designate a third folder that can be used to store the data sets and output files created in assignments this semester. This section of your program will also contain two filerefs, one for each of the PDF output files that will be described later. The filerefs will need to use the path of this third folder as the location in which to store these output files.
2. Create two user-defined formats that can be used to enhance the way values are displayed.
    a. The first is to be a character format that will display the full gender name. Create the format so that upper or lower case M is displayed as Male, upper or lower case F is displayed as Female and any other values are displayed as Unknown.

b. The second format will be used to display salary ranges as defined below:
   Anything $26,000 or less is displayed as Very Low.
   Over $26,000 through $50,000 is Low.
   Over $50,000 through $75,000 is Medium.
   Over $75,000 through $100,000 is High.
   Any value of more than $100,000 is Very High.

3. Write a PROC step that will send a listing of all the available styles to the default output destination.
4. Close all open ODS destinations. Open two PDF destinations to capture the output from the procedures that follow. Refer to the "ODS Tip Sheet" document for options to control the output. Use a name for the first file like FKincheloe_HW03 _outputA.pdf using your own Net ID instead of the instructor's. In the ODS statements, use the filerefs created at the top of the program so you do not have actual file names down in the body of your program. Do not apply a style to the first output destination and use an option that will prevent it from creating the table of contents/bookmarks. Use a similar name for the second PDF file except end the name with outputB. Apply the FancyPrinter style to the second ODS PDF output. Create the PDF bookmarks on the second PDF file but do not show them by default.
5. Run a procedure to list all of the data sets in the Orion data library without showing the details of each data set. The titles and footnote on your output must match the sample output files posted on eCampus.
6. Turn off the printing of the date at the top of the page for the remainder of the output.
7. Run a procedure that will print the descriptor portion of the Unicornstaff data set downloaded from eCampus.
8. Close the outputA destination so that it only contains the output of the two procedures executed above.
9. Print a subset of the data portion of the Unicornstaff data set showing **Emp_ID**, **Hire_dt**, **Job_Title, Salary,** and **Gender** of original Unicorn employees (**TrueUnicorn** value is yes) who had not been terminated at the time the file was created (no termination date). Apply the first user defined format to the gender variable. Apply the second user-defined format to the salary variable and give it the label "Salary Level". Apply the appropriate label to the **Hire_dt** variable. Suppress the printing of observation numbers. Change the lower title to "Unicorn Employees Still Working". Note that there is a blank line between the two titles. Make sure no footnote is printed for this list.
10. Close the second PDF destination and end the program with the appropriate housekeeping steps to ensure titles and footnotes do not carry over to the next program that is executed.
11. When you have your program running as desired without errors, close SAS then reopen it and run your program from a clean session.
12. Save or print the SAS log as a PDF file with a name like FKincheloe_HW03_log.pdf using your Net ID in place of FKincheloe.
13. Save the final version of the program and convert it to a PDF file with a name like FKincheloe_HW03_prog.pdf.
14. Post the four PDF documents on WebAssign.