Assignment 5

Submission format:

* Submit your code as a .sas file. The filename MUST have the following format:

LastnameFirstname\_Username\_AsssignmentNumber.sas.

In this file the problems must be listed in order. Each problem must also have a comment line that precedes it. For example, for question 2, use:

\*\*\* q2 \*\*\*;

Each *part* of a problem must also have a comment line that precedes it. For example for question 2b, use:

\*\*\* q2b \*\*\*;

This ensures that I and the graders can follow your work.

* Include your problem #’s in your solution (as a comment).
* The output of the code and SAS LOG is submitted in a Word document. You have to specify clearly which problem does the output of the code and the SAS LOG belong to.The filename MUST have the same format ( but with .doc extension). In the Word document, you should have problem #’s too.

One way of obtaining the LOG and the ouput:

Run your code then go to RESULTS tab. Click on Download results as a RTF file.

Then you can click on the LOG tab and copy the LOG of the run.

Save both the log and the output in a DOC file and name it :

LastnameFirstname\_Username\_AssignmentNumber\_output.doc

* The code should be written so that, except for file-directory locations, the code can be directly run on any computer with SAS or SAS University ed.
* Any text that is not code ( such as responses to a question) will be included in the .sas file as comment lines. (IMPORTANT). The word document is strictly for SAS output. Everything else should be in the .sas file.
* You must submit the HW to the correct myCourses dropbox.
* Due date: 5pm Monday 14th, 2019.
* Make sure you have both files in the submission.

1. (2 pts)
   * (1) Modify the following macro so that it can read in data from any lib, any dsn, and for any number of observations. Use keyword parameters lib, dsn, obs, with defaults of WORK, \_LAST\_[[1]](#footnote-1), and 5, respectively. Name the macro **pam**. Execute your macro on the SAS data set tb2000, printing out the first 8 records.

%macro p5am;

title "Listing of first 5 records from library &lib, member &dsn,";

title2 "on &sysday, &sysdate..";

proc print data=&lib..&dsn (obs=5);run;

title;

%mend p5am;

Provide code for your macro definition, code for your macro execution, and a listing of your output.

* + (1) Update the macro you created above so that it includes another keyword parameter, fobs, with default value of 1. This is the observation at which the listing begins. Write your code so that if fobs=11 and obs=5, then records 11-15 will print out. Name the macro **pam2**. Update the title in an appropriate way. Execute your macro on the SAS data set tb2000, printing out 3 records, starting at record 11.

Provide code for your macro definition, code for your macro execution, and a listing of your output.

1. (6pts) This problem is based on data from a past web search of a database that keeps records on donations made to political campaigns. The data is in a SAS data set named churchdata, which contains the contributions from some U.S. states from people whose last name began with “Church”. As usual, it’s a good idea to see the structure of this data set first:

**proc** **contents** data=perm.churchdata order=varnum;

**run**;

* 1. (1) Write a SAS program that accesses the data in the permanent SAS data set named churchdata. Subset the data to only contain records with the last name of Church that live in New York State (NY). Do not assume that all such values are in uppercase.

Submit your code.

* 1. (1) Modify the macro %p5m3 from Week6 lecture code so it can print out only a subset of all the variables. Using your macro, print out the first 5 records from the SAS data set you created in (a), but only for the variables date, receiver, and amount. Include appropriate titles in your listing.

Submit your macro-definition code, your macro-execution code, and the listing.

* 1. (1) Modify your code in part (a) so that the last name of the donor and the state of the donor are macro variables, named &lname and &state, that are created in the first two lines of your program with %let commands. Use the name Churchill (entered exactly like this in your macro variable) and make Virginia (VA) the state. Then run the macro that you created in part (b) to get a listing again, but this time with the data set you just created, with the same N of records and the same variables. Include the macro variables in the title statements so that they resolve to the correct values.

Submit your macro-definition code, your macro-execution code, and the listing.

* 1. (2) Create a SAS macro named ***%donor*** that would be used to subset the data and then produce the listing. Make the last name of the donor, the state of the donor, the input SAS data set name, the variables to print, and the number of observation to print as keyword parameters. Make the name of the SAS data set equal to “Name|State” For example, for part (a) the SAS data set would be named ChurchNY. Place the macro in an external SAS file, in a directory of your choice (You can copy/paste this into a file, or put it in a separate SAS-program file and save it directly—your choice. Remember, the standard extension for such files is .sas.) Make the macro self-standing—for example, do not use the macro that you created in part (b.) within this macro. (This is frequently done, and is actually often better than what I am asking you to do, because it is modular—but here, I want the macro to be fully defined on its own.)

Submit your macro definition.

* 1. (1) Create a SAS program that “includes” the file that contains the macro definition created in part (d) and then calls the macro to create the same report that was created in part (c). Also call the macro again, to produce a report for those people named Churchill who reside in Pennsylvania (PA).

Submit your code and the two listings.

1. (2pts) This problem is based on the code used to create the profits report. (You can find this code if you search Week6 for “retain sumP”, which will be in the DATA-step portion of it)
   1. (2) Modify the code used to create the profits report so the spaces after the Q’s in the title “Based on data from Q 1 2011 to Q 4 2013” disappear; that is, so the new title reads “Based on data from Q1 2011 to Q4 2013”. Of course, you need to do this so the results are based on the data in the file, even if the data changes, so you need to extract the information as was done in Week6 to put it in the title.

Submit your new code. Use a comment line with an explanation before every line of code you changed (or added) to that it will be very obvious what was changed. Also submit the title portion and the first few lines of your listing.

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1. WORK.\_LAST\_ appears to work the same as \_LAST\_, which is good. [↑](#footnote-ref-1)