

# Stat 657

## Assignment 9 - SAS

### Scope:

In this exercise practice transforming SAS code from traditional code to code with macro variables then on to become a stored macro program. You will need to have seen the first 14 lectures to complete this assignment.

### Specific Instructions for this Assignment:

1. Set a system option that writes macro variable values to the SAS log as they are resolved and an option that writes to the SAS log the text that is generated by macro execution. Assign a libref to the folder you have been using as your permanent library for assignment data. You will be writing to this library in this assignment.
2. Copy the PROC SQL code that was used to create the view in Assignment 8 and paste it into this program. (NOTE: If you had trouble creating this code or if you prefer, you may copy the code from the Assignment 8 solution once it is posted on eCampus.) Remove the library reference from the SQL query and assign the library in the body of your program. Be sure to set the access on this libref to readonly. Change the code so that it creates a table instead of a view. Modify the SQL code so that you can use global, user defined macro variables to specify the gender, start date, end date and the library name for the output table. Assign values to the macro variables and run the code. The following statements have been extracted from the SAS log.

```
Macro variable OUTLIB resolves to work
```

```
Macro variable STARTDT resolves to 01Jan2006
```

```
Macro variable ENDDT resolves to 31Dec2006
```

```
Macro variable GENDER resolves to F
```

3. Use a PROC PRINT to print the data portion of the data set by using the SYSLAST macro variable. NOTE: The title is designed to NOT resolve the value of &SYSLAST.
4. Copy the SQL section created above. Create a macro with arguments so that you can run the entire procedure with the desired parameters in a one-line macro call. When calling this macro, you will specify the fully spelled out Gender name (Female or Male) instead of the first letter so that this one parameter can be used throughout your macro program. Include a line of code that will automatically convert the value of this macro parameter to proper case should you or someone calling the macro write the value some other way. You will need to modify the where clause to parse out the gender code from the Gender name using a macro function. Modify the SQL code so that it automatically constructs the name of the output data set in the form of Female2006 based on the gender and the year of the start date. Use macro functions to parse out the year for the dataset name so you only have to specify a minimum number of parameters

in the macro call. Within the macro definition, add another SQL query that will print the data contained in the table. Use the macro parameters to construct the title for the printed output. Create a footnote that prints the value of the SYSLAST macro variable. Include “housekeeping” statements at the bottom of the macro to ensure that the title and footnote do not get included in future output.

5. Call the macro with the following call. (Substitute the libref name of your permanent library in the place of mylib.):

```
%donations(mylib, male, 01Jan1974, 30Jun1974)
```

6. Copy the macro definition code that you have just created and paste it at the bottom of your SAS program. Use the necessary options to store it as a compiled macro in your permanent library that you assigned in step 1.
7. Use the catalog procedure to list macros that are stored in your permanent library. Your output for this step should be similar to the sample output posted on eCampus but may vary depending on the files already in your permanent library.
8. Three PDF files must be uploaded to WebAssign. Convert your program and the SAS log to PDF files. The third file will contain all the requested output from ODS PDF. The program must contain a completed header block and comment blocks for each step. Options that control page headers and bookmarks must be set so that part of the output looks like that in the Assignment output posted on eCampus.