**Homework Controlling Input and Output**

1. The SAS data set discount2016 is in the STA5066 directory on the sas cloud. It contains the variables Discount, End\_Date, Product\_ID, Start\_Date, and Unit\_Sales\_Price. The data set contains labels explaining what information each variable contains as well as formats that are to be applied when displaying the data.
2. Create a library, prg, that points to the directory on which the data set prg.discount2016 is located.
3. Use a proc contents step to examine the labels of the variables as well as the formats they are to be displayed with.
4. Use a proc print step to print the first 7 observations on the data set prg.discount2016.
5. Due to excellent sales in 2016, all discounts from December 2016 will be repeated in July 2017. Both the December 2016 and the July 2017 discounts will be called the Holidays Bonus promotion. Use a data step to create a new data set work.extended that contains all discounts for the Holidays Bonus"
6. Use the explicit OUTPUT statement to create the data set, work.extended, that contains all discounts being offered in the Holidays Bonus promotion.
7. Use a WHERE statement to read only observations with a start date of 01Dec2016.
8. Create a variable, Promotion, which has the value Holidays Bonus for each observation.
9. July 2017 discounts should have a start date of 01Jul2017 and an end date of 31Jul2017.
10. Drop the Unit\_Sales\_Price variable and create a variable, Season, that has a value of Winter for the December observations and Summer for the July observations.
11. Output two observations for each observation read.
12. Use a proc print step to display the data set
13. The SAS data set country is in the STA5066 directory on the SAS cloud.
14. Create a library, lands, that points to the location of the dataset country.
15. Use a proc print step to examine the data set.
16. Use a data step to create a new data set work.new\_country
17. The data set work.new\_country should contain one observation for each country. If there is a former country name then the data set should contain an observation for the former country name. (For this additional observation the variable country\_name should be set to the former country name.
18. Create a new variable Outdated that is N for the observation for which the variable country\_name has not been changed and Y is the country\_name has been changed to the former country name.
19. Use a proc print step to display the data set work.new\_country.
20. The SAS data set adultdemographics is in the STA5066 on the SAS cloud. The data set contains the variables DMAETHNR (Ethnicity), DMARACER (Race), DMARETHN (Race-ethnicity), HSAGEIR (Age at interview), SEX (Sex), and SEQN (Sequence number)

The variable hssex is a numeric variable coded 1 if the participant is male and 2 if the participant is female.

1. Define a library, nh3, that points to the location of the adultdemographics data set.
2. Use a single data step to read nh3.adultdemographics to create two data sets, work.males containing only male participants and work.females containing only female participants.
3. The variable sex should not be on either of the two data sets created.
4. Use two proc print steps to list the first 3 observations on each of the created data sets.
5. Use two proc contents steps to verify that variable sex is not on either data set.
6. The data set orders is in the STA5066 directory on the SAS cloud.
7. Define a library, fact, that points to the directory containing the data set orders.
8. Use a proc contents step to examine the contents of the dataset fact.orders.
9. Use a proc print step to display the first 10 observations on the data set fact.orders.
10. Use a data step to read fact.orders and create three new data sets: work.fast, work.slow, and work.slowest. The observations on these data sets will depend on how long it took to deliver the items.
11. Define a new variable ShipDays to be the number of days between ordering and shipping the item.
12. If ShipDays is less than three, output to work.fast
13. If ShipDays is 5 to 7 then output to work.slow
14. If ShipDays is greater than 7 then output to work.slowest
15. Do not output an observation when the value of ShipDays is 3
16. Drop the variable Employee\_ID.
17. Use three proc print steps to display the data sets work.fast, work.slow and work.slowest
18. The data set employee\_organization is in the STA5066 directory on the SAS cloud.
19. Create a library, hr, that points two the directory containing the data set employee\_organization
20. Use a proc contents step to examine the contents of the dataset hr.employee\_organization.
21. Use a proc print step to display the first 5 observations on the data set employee\_organization.
22. Use a single data step to create two data sets: one for the Sales department (named work.sales) and another for the Executive department (named work.exec).
23. Output only observations from the Sales and Executives departments.
24. Employees whose department is Sales should be included in the work.sales SAS data set.
25. work.sales should contain three variables Employee\_ID, Job\_Title, and Manager\_ID.
26. work.exec data set should contain two variables: Employee\_ID and Job\_Title and have four observations.
27. Use a proc print step to print the first five observations on the work.sales data set.
28. use a proc print step to print all of the observations on the work.exec data set.
29. This exercise uses the data set, order, created in Exercise 5. The data set contains information on in-store, catalog, and Internet orders as well as delivery dates.
30. Define a library, comp, that points to the location where the data set orders is located.
31. Use a proc contents step to examine the contents of comp.orders for information contained in variable labels and formats.
32. Use a proc print step to examine the first 11 records on the comp.orders file
33. Use a single data step to read comp.orders and create two files: work.instore and work.delivery.
34. Create a variable ShipDays as the number of days between when the order was placed and when it was delivered.
35. If ShipDays is equal to zero output to work.instore otherwise output to work.delivery
36. work.instore should contain the variables: Order\_ID, Customer\_ID, and Order\_Date
37. work.delivery should contain the variables Order\_ID, Customer\_ID, Order\_Date, and ShipDays
38. use a proc print step to examine the first 12 observations in work.delivery
39. use a proc print step to examine the first 25 observations in work.instore
40. The SAS data set employee\_organization is in the STA5066 directory on the SAS cloud.
41. Create a library, prg2, that points to the directory on which the SAS data set employee\_organization resides.
42. Copy or type the following program into the SAS editor and submit it. The results of this program will provide numbers to check your results below.

proc freq data=prg2.employee\_organization ;

tables department;

run;

1. Use a single data step and conditional output to create three files:
2. work.admin should contain observations for which Department is Administration.
3. work.stock should contain observations for which Department is Stock & Shipping.
4. work.purchasing should contain observations for which Department is Purchasing.
5. Check the log to make sure the number of observations on the created data sets matches those displayed in the results of the proc freq step above.
6. Use three proc print steps to print the first 3 observations on each of the created data sets.