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STAT506

HW1

1. Submitting a Program
    a. How many steps are in the above code? How many statements are in the above code?
        i. 2 steps and 7 statements
    b. Copy the above code into the Editor window. Submit the program for execution. How many rows and columns are in the report (excluding the variable name row) in the Results Viewer window?
        i. 10 rows and 3 columns
    c. Examine the Log window. Based on the log notes following the DATA step, how many observations and variables are in the sashelp.cars table?
        i. 428 observations and 15 variables
2. Diagnosing and Correcting Syntax Errors
    a. The above SAS code might have some errors. State the error(s).
        i. The error message says " ERROR: Procedure PRNT not found."
        >There is a typo, PRNT. It is supposed to be PRINT.
        >It does not comment out the comment properly.
        >It needs to use "RUN;" properly.
        >It forgets to put a semicolon at the end of the VAR statement.
    b. Correct the error(s) and submit the program. *Show the final code and the output showing the first five observations.*

```
proc print data=sashelp.cars;
  var EngineSize hoRsepoWeR;
  RUN;
/* This line is a comment and we don't want it to run; */
```

i.

Obs	EngineSize	Horsepower
1	3.5	265
2	2.0	200
3	2.4	200
4	3.2	270

3. Understanding SAS Dates
    a. The Justice League of America debuted in comics on December 29, 1959. What is that as a SAS date?
        i. -3
    b. When stored in a variable as a SAS date, what would its default length (byte size) be?
        i. 8
4. Examining the Descriptor Portion of a SAS Table
    a. Write a PROC CONTENTS step to display the descriptor portion of the sashelp.Holiday table. *Show your code.*

```
proc contents data=sashelp.Holiday;
run;
```

    b. Submit the program and answer the following questions:
        i. How many observations (rows) are in the data set?
            1. 27
        ii. How many variables (columns) are in the data set?
            1. 8
        iii. What is the length (byte size) of the variable desc?
            1. 64
5. Accessing a SAS Data Library
    a. Write and submit the appropriate LIBNAME statement to provide access to the pg1/data folder. Call the libref “pg1”. *Submit the libname statement.*

```
libname pg1 "/home/u62387331/STAT506";
```

    b. Check the log to confirm that the SAS data library was assigned. *Submit this portion of the log.*

```
1          OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
68
69         libname pg1 "/home/u62387331/STAT506/pg1/data";
NOTE: Libref PG1 was successfully assigned as follows:
      Engine:        V9
      Physical Name: /home/u62387331/STAT506/pg1/data
70
71         OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
81
```

i.

c. Add a PROC CONTENTS step to display the descriptor portion of the table pg1.storm_range. Submit the code and the output. (Yes, there will be a lot of output.)

```
proc contents data=pg1.storm_range;
run;
```

The CONTENTS Procedure

Data Set Name	PG1.STORM_RANGE	**Observations**	2959
Member Type	DATA	**Variables**	7
Engine	V9	**Indexes**	0
Created	08/30/2023 13:44:34	**Observation Length**	104
Last Modified	08/30/2023 13:44:34	**Deleted Observations**	0
Protection		**Compressed**	NO
Data Set Type		**Sorted**	NO
Label			
Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	utf-8 Unicode (UTF-8)		

Engine/Host Dependent Information	
Data Set Page Size	131072
Number of Data Set Pages	3
First Data Page	1
Max Obs per Page	1258
Obs in First Data Page	1232
Number of Data Set Repairs	0
Filename	/home/u62387331/STAT506/pg1/data/storm_range.sas7bdat
Release Created	9.0401M7
Host Created	Linux
Inode Number	25924367322
Access Permission	rw-r--r--
Owner Name	u62387331
File Size	512KB
File Size (bytes)	524288

Alphabetic List of Variables and Attributes

#	Variable	Type	Len	Format	Informat
2	Basin	Char	2	$CHAR2.	$CHAR2.
3	Name	Char	57	$CHAR57.	$CHAR57.
1	Season	Num	8	BEST4.	BEST4.
4	Wind1	Num	8	BEST3.	
5	Wind2	Num	8	BEST3.	
6	Wind3	Num	8	BEST3.	
7	Wind4	Num	8	BEST3.	

6. Using PROC IMPORT for CSV Files
    a. Download the file hw1data.csv from Brightspace. You will want to take note of the location of the downloaded file. If you're working with SAS OnDemand or Software Remote, you'll have to then upload it to the remote environment. Write a PROC IMPORT step to read into SAS as a table named **work.hw1data**. *Submit the code*.

```
proc import datafile="/home/u62387331/STAT506/pg1/hw1data.csv"
      dbms=csv out=work.hw1data;
run;
```

    b. The PROC IMPORT you just ran created a new file named hw1data.sas7bdat on your system. After you end your SAS session (don't do that right now), what will happen to that file and why?
        i. Contents will be deleted at the end of the SAS session, since the created table is in the "work" library which is temporary and will be deleted once SAS session ends.
    c. Then run the below code. Submit a screenshot of the output.

Obs	Did_This_Work	Homeworks_Completed	And_There_Was_Much_Rejoicing
1	Looks like it	1	Yaaaaaaaaaaaaay