**THOMAS PATTARA**

Chapter 3 & 4 homework

9.8.17

**3.15.2** You are given a CSV (comma-separated values) file called political.csv containing state, political party, and age. A listing of this file is shown here:  File political.csv  a. Write a SAS program to create a temporary SAS data set called Vote. Use the variable names State, Party, and Age. Age should be stored as a numeric variable;  State and Party should be stored as character variables. b. Include a procedure to list the observations in this data set. c. Include a procedure to compute frequencies for Party.

data vote;

infile '/courses/d4e71f65ba27fe300/political.csv' dsd;

informat State $2. Party $3.;

input State

Party

Age;

run;

title "Listing of VOTE";

proc print data=vote;

run;

title "Frequencies";

proc freq data=vote;

tables Party / nocum;

run;

**Listing of VOTE**

| **Obs** | **State** | **Party** | **Age** |
| --- | --- | --- | --- |
| **1** | NJ | Ind | 55 |
| **2** | CO | Dem | 45 |
| **3** | NY | Rep | 23 |
| **4** | FL | Dem | 66 |
| **5** | NJ | Rep | 34 |

**Frequencies**

**The FREQ Procedure**

| **Party** | **Frequency** | **Percent** |
| --- | --- | --- |
| **Dem** | 2 | 40.00 |
| **Ind** | 1 | 20.00 |
| **Rep** | 2 | 40.00 |

**3.15.5** You want to create a test data set that uses a DATALINES statement to read in values for X and Y. In the DATA step, you want to create a new variable, Z, equal to 100 + 50X + 2X2 – 25Y + Y2. Use the following (X,Y) data pairs: (1,2), (3,6), (5,9), and (9,11).

data testdata;

input X Y;

Z = 100 + 50\*X + 2\*X\*\*2 - 25\*Y + Y\*\*2;

datalines;

1 2

3 5

5 9

9 11 ;

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title "Listing of TESTDATA";

proc print data=testdata noobs;

run;

**Listing of TESTDATA**

| **X** | **Y** | **Z** |
| --- | --- | --- |
| 1 | 2 | 106 |
| 3 | 5 | 168 |
| 5 | 9 | 256 |
| 9 | 11 | 558 |

**3.15.6** You have a text file called **bankdata.txt** with data values arranged as follows:

Roberts$M234$45000

Chien$M74777$$

Walters$$75000

Rogers$F7272$78131

**Variable Description Starting Column Ending Column Data Type**

Name Name 1 16 Char

Acct Account number 21 27 Char

Balance Acct balance 15 20 Num

Rate Interest rate 26 30 Num

Create a temporary SAS data set called Bank using this data file. Use column input to specify the location of each value. Include in this data set a variable called Interest computed by multiplying Balance by Rate. List the contents of this data set using PROC PRINT.

Here is a listing of the text file: File **bankdata.txt**

Philip Jones V1234 4322.32

Nathan Philips V1399 15202.45

Shu Lu W8892 451233.45

Betty Boop V7677 50002.78

data bank;

infile '/courses/d4e71f65ba27fe300/bankdata.txt' pad;

input Name $ 1-15

Acct $ 16-20

Balance 21-26

Rate 27-30;

Interest = Balance \* Rate;

format Balance Interest dollar10.2;

run;

title "Listing of BANK";

proc print data=bank noobs;

run;

**Listing of BANK**

| **Name** | **Acct** | **Balance** | **Rate** | **Interest** |
| --- | --- | --- | --- | --- |
| Philip Jones | V1234 | $432.00 | 2.32 | $1,002.24 |
| Nathan Philips | V1399 | $1,520.00 | 2.45 | $3,724.00 |
| Shu Lu | W8892 | $45,123.00 | 3.45 | $155674.35 |
| Betty Boop | V7677 | $5,000.00 | 2.78 | $13,900.00 |

**4.11.1** Run the program here to create a permanent SAS data set called Perm. You will need to modify the program to specify a folder where you want to place this data set. Run PROC CONTENTS on this data set and then use the SAS Explorer to investigate the properties of this data set as well.

libname learn '/home/thomaspattara0/sasuser.v94/learn';

data learn.perm;

input ID : $3. Gender : $1. DOB : mmddyy10.

Height Weight;

label DOB = 'Date of Birth'

Height = 'Height in inches'

Weight = 'Weight in pounds';

format DOB date9.;

datalines;

001 M 10/21/1946 68 150

002 F 5/26/1950 63 122

003 M 5/11/1981 72 175

004 M 7/4/1983 70 128

005 F 12/25/2005 30 40

;

title "Contents of data set PERM";

proc contents data=learn.perm varnum;

run;

**Contents of data set PERM**

**The CONTENTS Procedure**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Set Name** | LEARN.PERM | **Observations** | 5 |
| **Member Type** | DATA | **Variables** | 5 |
| **Engine** | V9 | **Indexes** | 0 |
| **Created** | 09/08/2017 18:02:34 | **Observation Length** | 32 |
| **Last Modified** | 09/08/2017 18:02:34 | **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** | 1 |
| **First Data Page** | 1 |
| **Max Obs per Page** | 4078 |
| **Obs in First Data Page** | 5 |
| **Number of Data Set Repairs** | 0 |
| **Filename** | /home/thomaspattara0/sasuser.v94/learn/perm.sas7bdat |
| **Release Created** | 9.0401M4 |
| **Host Created** | Linux |
| **Inode Number** | 4852013 |
| **Access Permission** | rw-r--r-- |
| **Owner Name** | thomaspattara0 |
| **File Size** | 256KB |
| **File Size (bytes)** | 262144 |

| **Variables in Creation Order** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **#** | **Variable** | **Type** | **Len** | **Format** | **Label** |
| **1** | ID | Char | 3 |  |  |
| **2** | Gender | Char | 1 |  |  |
| **3** | DOB | Num | 8 | DATE9. | Date of Birth |
| **4** | Height | Num | 8 |  | Height in inches |
| **5** | Weight | Num | 8 |  | Weight in pounds |

**4.11.2** Run PROC PRINT on the data set you created in Problem 1. Use the SAS VIEWTABLE window to open this data set and compare the headings in the window to the column headings from your PROC PRINT. What is the difference?

title "Listing of PERM";

proc print data=learn.perm noobs;

run;

**Listing of PERM**

| **ID** | **Gender** | **DOB** | **Height** | **Weight** |
| --- | --- | --- | --- | --- |
| 001 | M | 21OCT1946 | 68 | 150 |
| 002 | F | 26MAY1950 | 63 | 122 |
| 003 | M | 11MAY1981 | 72 | 175 |
| 004 | M | 04JUL1983 | 70 | 128 |
| 005 | F | 25DEC2005 | 30 | 40 |

The difference is that the column headings with PROC PRINT are variable names. With the SAS Viewer, you get variable labels.

**4.11.3** Run this program to create a permanent SAS data set called Survey2007. Close your SAS session, open up a new session, and write the statements necessary to compute the mean age.

libname prob3 '/home/thomaspattara0/sasuser.v94/learn';

data perm.survey2007;

input Age Gender $ (Ques1-Ques5)($1.);

datalines;

23 M 15243

30 F 11123

42 M 23555

48 F 55541

55 F 42232

62 F 33333

68 M 44122

;

libname prob3 '/home/thomaspattara0/sasuser.v94/learn';

title "Computing Average Age";

proc means data=perm.survey2007;

var Age;

run;

**Computing Average Age**

**The MEANS Procedure**

| **Analysis Variable : Age** | | | | |
| --- | --- | --- | --- | --- |
| **N** | **Mean** | **Std Dev** | **Minimum** | **Maximum** |
| 7 | 46.8571429 | 16.4360232 | 23.0000000 | 68.0000000 |