Complete the following tasks using SAS. Paste whatever is requested after each question and submit the completed file via the drop box prior to the assigned due date and time. Be sure to use appropriate comments in the SAS program, and that output has appropriate titles.

1. Write a SAS data step that reads the 030827 PN1 001.csv from the drug activity data and creates a permanent SAS data set (Be sure to have FULLSTIMER on).

Use PROC MEANS to get the overall average for each of the columns d1-d16.

Use PROC SQL to get the overall average for each of the columns d1-d16.

/\*Q1 SAS data step that reads the 030827 PN1 001.csv

from the drug activity data and creates a permanent SAS data set\*/

/\*fullstimer option is set to ON\*/

options fullstimer;

filename myfiles

("/home/axb96520/my\_courses/steven.lalonde/drugact/030827 PN1 001.csv");

data newdata;

infile myfiles dlm=',' termstr=crlf firstobs=8;

input column CPDcode time d1 d2 d3 d4 d5 d6 d7 d8 d9 d10

d11 d12 d13 d14 d15 d16;

if 1 le column le 12;

run;

/\*PROC MEANS to get the overall average for each of the columns d1-d16.\*/

proc means data=newdata mean;

title"Average of columns D1-D16 using PROC MEANS";

var d1-d16;

run;

/\*PROC SQL to get the overall average for each of the columns d1-d16.\*/

proc sql;

title"Average of columns D1-D16 using PROC SQL";

select

avg(d1) as avgD1,avg(d2) as avgD2 ,avg(d3) as avgD3 ,avg(d4) as avgD4,

avg(d5) as avgD5,avg(d6) as avgD6 ,avg(d7) as avgD7 ,avg(d8) as avgD8,

avg(d9) as avgD9,avg(d10) as avgD10 ,avg(d11) as avgD11 ,avg(d12) as avgD12,

avg(d13) as avgD13,avg(d14) as avgD14 ,avg(d14) as avgD14 ,avg(d15) as avgD15,avg(d16) as avgD16

from newdata;

quit;

NOTE: The infile MYFILES is:

Filename=/home/axb96520/my\_courses/steven.lalonde/drugact/030827 PN1 001.csv,

Owner Name=steven.lalonde,Group Name=oda,

Access Permission=-rw-rw-r--,

Last Modified=16Apr2014:14:26:28,

File Size (bytes)=59224

NOTE: 480 records were read from the infile MYFILES.

The minimum record length was 119.

The maximum record length was 122.

NOTE: The data set WORK.NEWDATA has 480 observations and 19 variables.

NOTE: DATA statement used (Total process time):

real time 0.03 seconds

user cpu time 0.03 seconds

system cpu time 0.01 seconds

memory 19825.62k

OS Memory 51380.00k

Timestamp 05/11/2016 05:36:25 AM

Step Count 150 Switch Count 64

Page Faults 0

Page Reclaims 198

Page Swaps 0

Voluntary Context Switches 206

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 19488

NOTE: There were 480 observations read from the data set WORK.NEWDATA.

NOTE: PROCEDURE MEANS used (Total process time):

real time 0.05 seconds

user cpu time 0.05 seconds

system cpu time 0.01 seconds

memory 27222.26k

OS Memory 57032.00k

Timestamp 05/11/2016 05:36:25 AM

Step Count 151 Switch Count 39

Page Faults 0

Page Reclaims 1509

Page Swaps 0

Voluntary Context Switches 105

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 16

NOTE: PROCEDURE SQL used (Total process time):

real time 0.02 seconds

user cpu time 0.02 seconds

system cpu time 0.00 seconds

memory 24767.18k

OS Memory 57016.00k

Timestamp 05/11/2016 05:36:25 AM

Step Count 152 Switch Count 51

Page Faults 0

Page Reclaims 298

Page Swaps 0

Voluntary Context Switches 150

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 0

**Average of columns D1-D16 using PROC MEANS**

**The MEANS Procedure**

| Variable | Mean |
| --- | --- |
| d1  d2  d3  d4  d5  d6  d7  d8  d9  d10  d11  d12  d13  d14  d15  d16 | 1.1577681  1.0560119  1.0599585  0.8745608  1.0851035  0.9967683  1.0034906  0.8956625  1.1160533  0.7960821  1.1654367  0.9042471  1.0383650  0.7580173  1.0989367  0.8434565 |

**Average of columns D1-D16 using PROC SQL**

| avgD1 | avgD2 | avgD3 | avgD4 | avgD5 | avgD6 | avgD7 | avgD8 | avgD9 | avgD10 | avgD11 | avgD12 | avgD13 | avgD14 | avgD14 | avgD15 | avgD16 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1.157768 | 1.056012 | 1.059959 | 0.874561 | 1.085104 | 0.996768 | 1.003491 | 0.895663 | 1.116053 | 0.796082 | 1.165437 | 0.904247 | 1.038365 | 0.758017 | 0.758017 | 1.098937 | 0.843456 |

PROC MEANS TIME = 0.05 Seconds

PROC SQL TIME = 0.02 Seconds

1. Change the BUFSIZE to MAX and re-execute the same SAS data step that reads the 030827 PN1 001.csv from the drug activity data and creates a permanent SAS data set (Be sure to have FULLSTIMER on).

Use PROC MEANS to get the overall average for each of the columns d1-d16.

Use PROC SQL to get the overall average for each of the columns d1-d16.

/\*Q2. Change the BUFSIZE to MAX and re-execute the same SAS data step that reads the 030827 PN1 001.csv

from the drug activity data and creates a permanent SAS data set \*/

/\*BUFSIZE to MAX \*/

options bufsize=MAX;

/\*fullstimer option is set to ON\*/

options fullstimer;

filename myfiles

("/home/axb96520/my\_courses/steven.lalonde/drugact/030827 PN1 001.csv");

data newdata2;

infile myfiles dlm=',' termstr=crlf firstobs=8;

input column CPDcode time d1 d2 d3 d4 d5 d6 d7 d8 d9 d10

d11 d12 d13 d14 d15 d16;

if 1 le column le 12;

run;

/\*PROC MEANS to get the overall average for each of the columns d1-d16.\*/

proc means data=newdata2 mean;

title"Average of columns D1-D16 using PROC MEANS with BUFSIZE as MAX";

var d1-d16;

run;

/\*PROC SQL to get the overall average for each of the columns d1-d16.\*/

proc sql;

title"Average of columns D1-D16 using PROC SQL with BUFSIZE as MAX";

select

avg(d1) as avgD1,avg(d2) as avgD2 ,avg(d3) as avgD3 ,avg(d4) as avgD4,

avg(d5) as avgD5,avg(d6) as avgD6 ,avg(d7) as avgD7 ,avg(d8) as avgD8,

avg(d9) as avgD9,avg(d10) as avgD10 ,avg(d11) as avgD11 ,avg(d12) as avgD12,

avg(d13) as avgD13,avg(d14) as avgD14 ,avg(d14) as avgD14 ,avg(d15) as avgD15,avg(d16) as avgD16

from newdata2;

quit;

WARNING: Bufsize 2147483647 too large for file WORK.NEWDATA2.DATA. Maximum allowed for this file is 1073741824.

NOTE: The infile MYFILES is:

Filename=/home/axb96520/my\_courses/steven.lalonde/drugact/030827 PN1 001.csv,

Owner Name=steven.lalonde,Group Name=oda,

Access Permission=-rw-rw-r--,

Last Modified=16Apr2014:14:26:28,

File Size (bytes)=59224

NOTE: 480 records were read from the infile MYFILES.

The minimum record length was 119.

The maximum record length was 122.

NOTE: The data set WORK.NEWDATA2 has 480 observations and 19 variables.

NOTE: DATA statement used (Total process time):

real time 0.04 seconds

user cpu time 0.03 seconds

system cpu time 0.01 seconds

memory 19849.96k

OS Memory 51380.00k

Timestamp 05/11/2016 05:40:05 AM

Step Count 157 Switch Count 64

Page Faults 0

Page Reclaims 418

Page Swaps 0

Voluntary Context Switches 207

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 19488

NOTE: There were 480 observations read from the data set WORK.NEWDATA2.

NOTE: PROCEDURE MEANS used (Total process time):

real time 0.05 seconds

user cpu time 0.04 seconds

system cpu time 0.01 seconds

memory 27262.04k

OS Memory 57288.00k

Timestamp 05/11/2016 05:40:05 AM

Step Count 158 Switch Count 39

Page Faults 0

Page Reclaims 1717

Page Swaps 0

Voluntary Context Switches 118

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 8

NOTE: PROCEDURE SQL used (Total process time):

real time 0.02 seconds

user cpu time 0.02 seconds

system cpu time 0.01 seconds

memory 24752.96k

OS Memory 57272.00k

Timestamp 05/11/2016 05:40:05 AM

Step Count 159 Switch Count 51

Page Faults 0

Page Reclaims 293

Page Swaps 0

Voluntary Context Switches 152

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 0

**Average of columns D1-D16 using PROC MEANS with BUFSIZE as MAX**

**The MEANS Procedure**

| Variable | Mean |
| --- | --- |
| d1  d2  d3  d4  d5  d6  d7  d8  d9  d10  d11  d12  d13  d14  d15  d16 | 1.1577681  1.0560119  1.0599585  0.8745608  1.0851035  0.9967683  1.0034906  0.8956625  1.1160533  0.7960821  1.1654367  0.9042471  1.0383650  0.7580173  1.0989367  0.8434565 |

**Average of columns D1-D16 using PROC SQL with BUFSIZE as MAX**

| avgD1 | avgD2 | avgD3 | avgD4 | avgD5 | avgD6 | avgD7 | avgD8 | avgD9 | avgD10 | avgD11 | avgD12 | avgD13 | avgD14 | avgD14 | avgD15 | avgD16 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1.157768 | 1.056012 | 1.059959 | 0.874561 | 1.085104 | 0.996768 | 1.003491 | 0.895663 | 1.116053 | 0.796082 | 1.165437 | 0.904247 | 1.038365 | 0.758017 | 0.758017 | 1.098937 | 0.843456 |

PROC MEANS TIME = 0.05 Seconds

PROC SQL TIME = 0.02 Seconds

1. Use a SASFILE statement to load the permanent SAS data set created into memory (Be sure to have FULLSTIMER on).

Use PROC MEANS to get the overall average for each of the columns d1-d16.

Use PROC SQL to get the overall average for each of the columns d1-d16.

/\*Q3 3. Use a SASFILE statement to load the permanent SAS data set created into memory\*/

/\*fullstimer option is set to ON\*/

options fullstimer;

/\*sasfile to load the data into the memory\*/

sasfile work.newdata2 load;

/\*PROC MEANS to get the overall average for each of the columns d1-d16.\*/

proc means data=newdata2 mean;

title"Average of columns D1-D16 using PROC MEANS with SASFILE statement";

var d1-d16;

run;

/\*PROC SQL to get the overall average for each of the columns d1-d16.\*/

proc sql;

title"Average of columns D1-D16 using PROC SQL with SASFILE statement";

select

avg(d1) as avgD1,avg(d2) as avgD2 ,avg(d3) as avgD3 ,avg(d4) as avgD4,

avg(d5) as avgD5,avg(d6) as avgD6 ,avg(d7) as avgD7 ,avg(d8) as avgD8,

avg(d9) as avgD9,avg(d10) as avgD10 ,avg(d11) as avgD11 ,avg(d12) as avgD12,

avg(d13) as avgD13,avg(d14) as avgD14 ,avg(d14) as avgD14 ,avg(d15) as avgD15,avg(d16) as avgD16

from newdata2;

quit;

sasfile work.newdata2 close;

NOTE: The file WORK.NEWDATA2.DATA has been loaded into memory by the SASFILE statement.

NOTE: There were 480 observations read from the data set WORK.NEWDATA2.

NOTE: PROCEDURE MEANS used (Total process time):

real time 0.04 seconds

user cpu time 0.05 seconds

system cpu time 0.00 seconds

memory 7787.82k

OS Memory 47552.00k

Timestamp 05/11/2016 05:42:39 AM

Step Count 164 Switch Count 35

Page Faults 0

Page Reclaims 1542

Page Swaps 0

Voluntary Context Switches 108

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 8

NOTE: PROCEDURE SQL used (Total process time):

real time 0.02 seconds

user cpu time 0.03 seconds

system cpu time 0.00 seconds

memory 5277.25k

OS Memory 47536.00k

Timestamp 05/11/2016 05:42:39 AM

Step Count 165 Switch Count 55

Page Faults 0

Page Reclaims 32

Page Swaps 0

Voluntary Context Switches 155

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 0

**Average of columns D1-D16 using PROC MEANS with SASFILE statement**

**The MEANS Procedure**

| Variable | Mean |
| --- | --- |
| d1  d2  d3  d4  d5  d6  d7  d8  d9  d10  d11  d12  d13  d14  d15  d16 | 1.1577681  1.0560119  1.0599585  0.8745608  1.0851035  0.9967683  1.0034906  0.8956625  1.1160533  0.7960821  1.1654367  0.9042471  1.0383650  0.7580173  1.0989367  0.8434565 |

**Average of columns D1-D16 using PROC SQL with SASFILE statement**

| avgD1 | avgD2 | avgD3 | avgD4 | avgD5 | avgD6 | avgD7 | avgD8 | avgD9 | avgD10 | avgD11 | avgD12 | avgD13 | avgD14 | avgD14 | avgD15 | avgD16 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1.157768 | 1.056012 | 1.059959 | 0.874561 | 1.085104 | 0.996768 | 1.003491 | 0.895663 | 1.116053 | 0.796082 | 1.165437 | 0.904247 | 1.038365 | 0.758017 | 0.758017 | 1.098937 | 0.843456 |

PROC MEANS TIME = 0.04 Seconds

PROC SQL TIME = 0.02 Seconds

1. Write a SAS data step VIEW that reads the 030827 PN1 001.csv from the drug activity data. (Be sure to have FULLSTIMER on).

Use PROC MEANS to get the overall average for each of the columns d1-d16.

Use PROC SQL to get the overall average for each of the columns d1-d16.

/\*Q4 SAS data step VIEW that reads the 030827 PN1 001.csv from the drug activity data. \*/

/\*fullstimer option is set to ON\*/

options fullstimer;

filename myfiles

("/home/axb96520/my\_courses/steven.lalonde/drugact/030827 PN1 001.csv");

/\*Data Step VIEW that reads the 030827 PN1 001.csv from the drug activity data\*/

data newdataview / view=newdataview;

infile myfiles dlm=',' termstr=crlf firstobs=8;

input column CPDcode time d1 d2 d3 d4 d5 d6 d7 d8 d9 d10

d11 d12 d13 d14 d15 d16;

if 1 le column le 12;

run;

/\*PROC MEANS to get the overall average for each of the columns d1-d16.\*/

proc means data=newdataview mean;

title"Average of columns D1-D16 using PROC MEANS with SAS Data Step View ";

var d1-d16;

run;

/\*PROC SQL to get the overall average for each of the columns d1-d16.\*/

proc sql;

title"Average of columns D1-D16 using PROC SQL with SAS Data Step View";

select

avg(d1) as avgD1,avg(d2) as avgD2 ,avg(d3) as avgD3 ,avg(d4) as avgD4,

avg(d5) as avgD5,avg(d6) as avgD6 ,avg(d7) as avgD7 ,avg(d8) as avgD8,

avg(d9) as avgD9,avg(d10) as avgD10 ,avg(d11) as avgD11 ,avg(d12) as avgD12,

avg(d13) as avgD13,avg(d14) as avgD14 ,avg(d14) as avgD14 ,avg(d15) as avgD15,avg(d16) as avgD16

from newdataview;

quit;

NOTE: DATA STEP view saved on file WORK.NEWDATAVIEW.

NOTE: A stored DATA STEP view cannot run under a different operating system.

NOTE: DATA statement used (Total process time):

real time 0.00 seconds

user cpu time 0.00 seconds

system cpu time 0.00 seconds

memory 613.65k

OS Memory 32164.00k

Timestamp 05/11/2016 05:44:21 AM

Step Count 170 Switch Count 44

Page Faults 0

Page Reclaims 173

Page Swaps 0

Voluntary Context Switches 121

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 264

NOTE: The infile MYFILES is:

Filename=/home/axb96520/my\_courses/steven.lalonde/drugact/030827 PN1 001.csv,

Owner Name=steven.lalonde,Group Name=oda,

Access Permission=-rw-rw-r--,

Last Modified=16Apr2014:14:26:28,

File Size (bytes)=59224

NOTE: 480 records were read from the infile MYFILES.

The minimum record length was 119.

The maximum record length was 122.

NOTE: View WORK.NEWDATAVIEW.VIEW used (Total process time):

real time 0.05 seconds

user cpu time 0.04 seconds

system cpu time 0.00 seconds

memory 8200.90k

OS Memory 38068.00k

Timestamp 05/11/2016 05:44:21 AM

Step Count 171 Switch Count 44

Page Faults 0

Page Reclaims 1560

Page Swaps 0

Voluntary Context Switches 208

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 0

NOTE: There were 480 observations read from the data set WORK.NEWDATAVIEW.

NOTE: PROCEDURE MEANS used (Total process time):

real time 0.05 seconds

user cpu time 0.06 seconds

system cpu time 0.00 seconds

memory 8200.90k

OS Memory 38068.00k

Timestamp 05/11/2016 05:44:21 AM

Step Count 171 Switch Count 42

Page Faults 0

Page Reclaims 1604

Page Swaps 0

Voluntary Context Switches 354

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 8

NOTE: The infile MYFILES is:

Filename=/home/axb96520/my\_courses/steven.lalonde/drugact/030827 PN1 001.csv,

Owner Name=steven.lalonde,Group Name=oda,

Access Permission=-rw-rw-r--,

Last Modified=16Apr2014:14:26:28,

File Size (bytes)=59224

NOTE: 480 records were read from the infile MYFILES.

The minimum record length was 119.

The maximum record length was 122.

NOTE: View WORK.NEWDATAVIEW.VIEW used (Total process time):

real time 0.02 seconds

user cpu time 0.03 seconds

system cpu time 0.01 seconds

memory 5525.90k

OS Memory 38052.00k

Timestamp 05/11/2016 05:44:21 AM

Step Count 172 Switch Count 46

Page Faults 0

Page Reclaims 80

Page Swaps 0

Voluntary Context Switches 124

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 0

96 quit;

NOTE: PROCEDURE SQL used (Total process time):

real time 0.02 seconds

user cpu time 0.03 seconds

system cpu time 0.01 seconds

memory 5525.90k

OS Memory 38052.00k

Timestamp 05/11/2016 05:44:21 AM

Step Count 172 Switch Count 60

Page Faults 0

Page Reclaims 158

Page Swaps 0

Voluntary Context Switches 407

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 0

PROC MEANS TIME = 0.05 Seconds

PROC SQL TIME = 0.02 Seconds

**Average of columns D1-D16 using PROC MEANS with SAS Data Step View**

**The MEANS Procedure**

| Variable | Mean |
| --- | --- |
| d1  d2  d3  d4  d5  d6  d7  d8  d9  d10  d11  d12  d13  d14  d15  d16 | 1.1577681  1.0560119  1.0599585  0.8745608  1.0851035  0.9967683  1.0034906  0.8956625  1.1160533  0.7960821  1.1654367  0.9042471  1.0383650  0.7580173  1.0989367  0.8434565 |

**Average of columns D1-D16 using PROC SQL with SAS Data Step View**

| avgD1 | avgD2 | avgD3 | avgD4 | avgD5 | avgD6 | avgD7 | avgD8 | avgD9 | avgD10 | avgD11 | avgD12 | avgD13 | avgD14 | avgD14 | avgD15 | avgD16 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1.157768 | 1.056012 | 1.059959 | 0.874561 | 1.085104 | 0.996768 | 1.003491 | 0.895663 | 1.116053 | 0.796082 | 1.165437 | 0.904247 | 1.038365 | 0.758017 | 0.758017 | 1.098937 | 0.843456 |

1. Create a (permanent) copy of the permanent SAS dataset created before. Use length statements to reduce the amount of space required to store the SAS data set (both character and numeric variables).

USE PROC COMPARE to compare the two permanent SAS data sets.

/\*Q5 5. Create a (permanent) copy of the permanent SAS dataset created before.

Use length statements to reduce the amount of space required to store the SAS data set\*/

data copynewdata\_short;

length column 3;

length CPDcode 3;

length time 3;

length d1-d16 3;

set newdata;

run;

/\*PROC COMPARE to compare the two permanent data sets\*/

proc compare base=newdata

compare=copynewdata\_short listall;

run;

NOTE: There were 480 observations read from the data set WORK.NEWDATA.

NOTE: The data set WORK.COPYNEWDATA\_SHORT has 480 observations and 19 variables.

NOTE: DATA statement used (Total process time):

real time 0.03 seconds

user cpu time 0.03 seconds

system cpu time 0.01 seconds

memory 27085.71k

OS Memory 59208.00k

Timestamp 05/11/2016 05:47:00 AM

Step Count 177 Switch Count 88

Page Faults 0

Page Reclaims 770

Page Swaps 0

Voluntary Context Switches 303

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 7328

NOTE: There were 480 observations read from the data set WORK.NEWDATA.

NOTE: There were 480 observations read from the data set WORK.COPYNEWDATA\_SHORT.

NOTE: PROCEDURE COMPARE used (Total process time):

real time 0.28 seconds

user cpu time 0.27 seconds

system cpu time 0.02 seconds

memory 39790.50k

OS Memory 69972.00k

Timestamp 05/11/2016 05:47:00 AM

Step Count 178 Switch Count 34

Page Faults 0

Page Reclaims 3663

Page Swaps 0

Voluntary Context Switches 86

Involuntary Context Switches 1

Block Input Operations 0

Block Output Operations 352

The COMPARE Procedure

Comparison of WORK.NEWDATA with WORK.COPYNEWDATA\_SHORT

(Method=EXACT)

Data Set Summary

Dataset Created Modified NVar NObs

WORK.NEWDATA 11MAY16:05:36:25 11MAY16:05:36:25 19 480

WORK.COPYNEWDATA\_SHORT 11MAY16:05:47:00 11MAY16:05:47:00 19 480

Variables Summary

Number of Variables in Common: 19.

Number of Variables with Differing Attributes: 19.

Listing of Common Variables with Differing Attributes

Variable Dataset Type Length

column WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

CPDcode WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

time WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d1 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d2 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d3 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d4 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d5 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d6 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d7 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d8 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d9 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d10 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d11 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d12 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d13 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d14 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

The COMPARE Procedure

Comparison of WORK.NEWDATA with WORK.COPYNEWDATA\_SHORT

(Method=EXACT)

Listing of Common Variables with Differing Attributes

Variable Dataset Type Length

d15 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

d16 WORK.NEWDATA Num 8

WORK.COPYNEWDATA\_SHORT Num 3

Observation Summary

Observation Base Compare

First Obs 1 1

First Unequal 1 1

Last Unequal 480 480

Last Obs 480 480

Number of Observations in Common: 480.

Total Number of Observations Read from WORK.NEWDATA: 480.

Total Number of Observations Read from WORK.COPYNEWDATA\_SHORT: 480.

Number of Observations with Some Compared Variables Unequal: 480.

Number of Observations with All Compared Variables Equal: 0.

Values Comparison Summary

Number of Variables Compared with All Observations Equal: 3.

Number of Variables Compared with Some Observations Unequal: 16.

Total Number of Values which Compare Unequal: 7665.

Maximum Difference: 0.00024375.

Variables with Unequal Values

Variable Type Len1 Len2 Ndif MaxDif

d1 NUM 8 3 479 0.00024

d2 NUM 8 3 480 0.00024

d3 NUM 8 3 479 0.00024

d4 NUM 8 3 480 0.00024

d5 NUM 8 3 478 0.00024

d6 NUM 8 3 478 0.00024

d7 NUM 8 3 478 0.00024

d8 NUM 8 3 480 0.00024

d9 NUM 8 3 479 0.00024

d10 NUM 8 3 480 0.00024

d11 NUM 8 3 479 0.00024

d12 NUM 8 3 479 0.00024

d13 NUM 8 3 479 0.00024

1. Starting with the reduced space permanent SAS data set…

Use PROC MEANS to get the overall average for each of the columns d1-d16.

Use PROC SQL to get the overall average for each of the columns d1-d16.

/\*Q6 6. Starting with the reduced space permanent SAS data set\*/

/\*PROC MEANS to get the overall average for each of the columns d1-d16.\*/

proc means data=copynewdata\_short mean;

title"Average of columns D1-D16 using PROC MEANS with reduced space permanent SAS data set";

var d1-d16;

run;

/\*PROC SQL to get the overall average for each of the columns d1-d16.\*/

proc sql;

title"Average of columns D1-D16 using PROC SQL with reduced space permanent SAS data set";

select

avg(d1) as avgD1,avg(d2) as avgD2 ,avg(d3) as avgD3 ,avg(d4) as avgD4,

avg(d5) as avgD5,avg(d6) as avgD6 ,avg(d7) as avgD7 ,avg(d8) as avgD8,

avg(d9) as avgD9,avg(d10) as avgD10 ,avg(d11) as avgD11 ,avg(d12) as avgD12,

avg(d13) as avgD13,avg(d14) as avgD14 ,avg(d14) as avgD14 ,avg(d15) as avgD15,avg(d16) as avgD16

from copynewdata\_short;

quit;

NOTE: There were 480 observations read from the data set WORK.COPYNEWDATA\_SHORT.

NOTE: PROCEDURE MEANS used (Total process time):

real time 0.04 seconds

user cpu time 0.04 seconds

system cpu time 0.01 seconds

memory 15135.75k

OS Memory 45384.00k

Timestamp 05/11/2016 05:49:28 AM

Step Count 183 Switch Count 35

Page Faults 0

Page Reclaims 1838

Page Swaps 0

Voluntary Context Switches 104

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 8

NOTE: PROCEDURE SQL used (Total process time):

real time 0.02 seconds

user cpu time 0.03 seconds

system cpu time 0.00 seconds

memory 12599.93k

OS Memory 45368.00k

Timestamp 05/11/2016 05:49:28 AM

Step Count 184 Switch Count 51

Page Faults 0

Page Reclaims 340

Page Swaps 0

Voluntary Context Switches 153

Involuntary Context Switches 0

Block Input Operations 0

Block Output Operations 0

**Average of columns D1-D16 using PROC MEANS with reduced space permanent SAS data set**

**The MEANS Procedure**

| Variable | Mean |
| --- | --- |
| d1  d2  d3  d4  d5  d6  d7  d8  d9  d10  d11  d12  d13  d14  d15  d16 | 1.1576663  1.0559128  1.0598785  0.8744706  1.0850176  0.9966755  1.0034154  0.8955744  1.1159637  0.7960157  1.1653305  0.9041522  1.0382795  0.7579636  1.0988495  0.8433765 |

**Average of columns D1-D16 using PROC SQL with reduced space permanent SAS data set**

| avgD1 | avgD2 | avgD3 | avgD4 | avgD5 | avgD6 | avgD7 | avgD8 | avgD9 | avgD10 | avgD11 | avgD12 | avgD13 | avgD14 | avgD14 | avgD15 | avgD16 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1.157666 | 1.055913 | 1.059879 | 0.874471 | 1.085018 | 0.996675 | 1.003415 | 0.895574 | 1.115964 | 0.796016 | 1.165331 | 0.904152 | 1.038279 | 0.757964 | 0.757964 | 1.098849 | 0.843377 |

The output from the compressed dataset has lost some precision. Like d1 in earlier results was 1.177681 and in compressed data set it’s coming out to be 1.1576663.