SNIPPETS AND TASKS IN SAS UNIVERSITY EDITION

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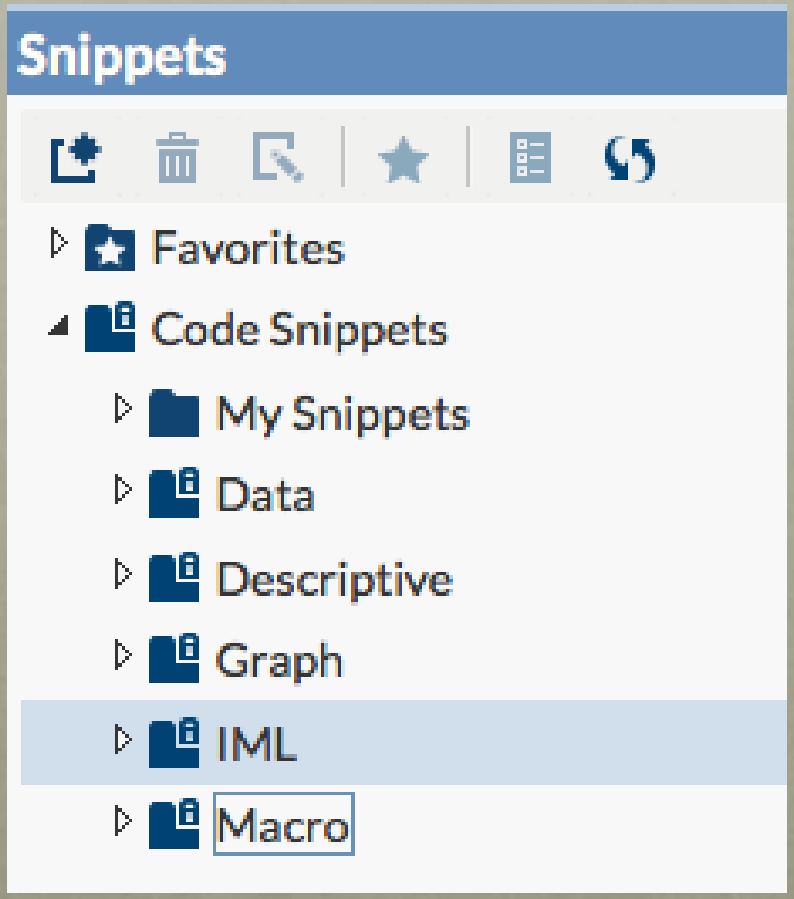
June 19, 2015

SNIPPETS


Snippets
Favorites
Code Snippets
My Snippets
Data
Descriptive
Graph
IML
Macro

AUTO-GENERATED CODE - IMPORT

```
1
2
3  /** FOR CSV Files uploaded from Windows **/
4
5  FILENAME CSV "<Your CSV File>" TERMSTR=CRLF;
6
7  /** FOR CSV Files uploaded from Unix/MacOS **/
8
9  FILENAME CSV "<Your CSV File>" TERMSTR=CR;
10
11 /** Import the CSV file.  **/
12
13 PROC IMPORT DATAFILE=CSV
14                      OUT=WORK.MYCSV
15                      DBMS=CSV
16                      REPLACE;
17 RUN;
18
19 /** Print the results. **/
20
21 PROC PRINT DATA=WORK.MYCSV; RUN;
22
23 /** Unassign the file reference.  **/
24
25 FILENAME CSV;
```

IMPORT DATA

```
1  /** Import an XLS file.   **/
2
3  PROC IMPORT DATAFILE="<Your XLS File>"
4                       OUT=WORK.MYEXCEL
5                       DBMS=XLS
6                       REPLACE;
7  RUN;
8
9  /** Print the results.  **/
0
1  PROC PRINT DATA=WORK.MYEXCEL; RUN;
```

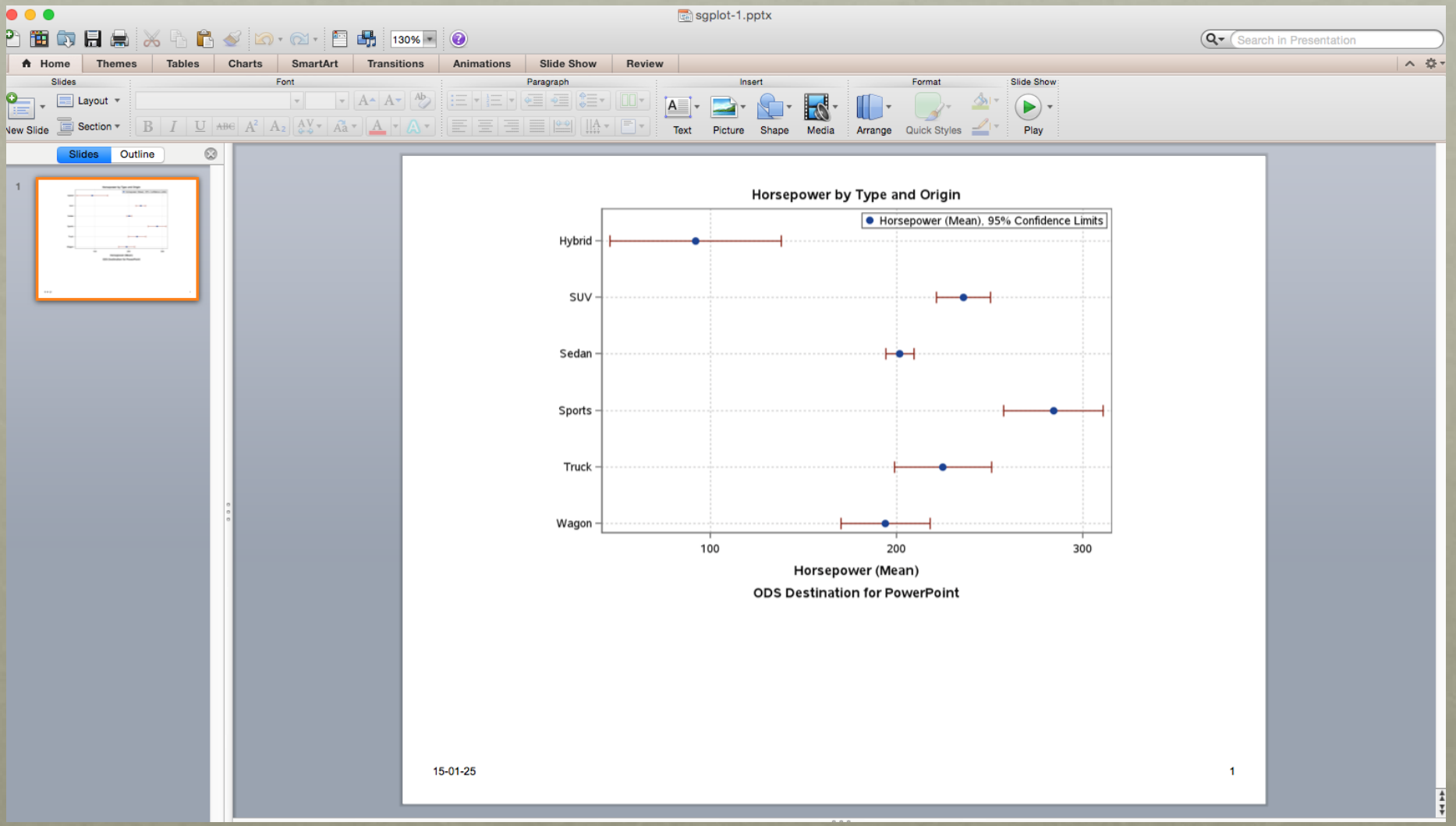
EXPORT DATA

```
1 /* Stream a CSV representation of SASHELP.CARS directly to the user's browser. */
2
3 proc export data=sashelp.cars
4             outfile= dataout
5             dbms=csv replace;
6 run;
7
8 %let _DATAOUT_MIME_TYPE=text/csv;
9 %let _DATAOUT_NAME=cars.csv;
```

OUTPUT TO POWERPOINT

```
1  /* Stream powerpoint output directly to the user's browser. */
2
3  ods graphics on / border=off;
4  filename _dataout "&_SASWSTEMP_/SGPlot.pptx";
5
6  ods powerpoint file=_dataout;
7  title 'PROC SGRENDER';
8  footnote 'ODS Destination for PowerPoint';
9
10 title 'Horsepower by Type and Origin';
11 proc sgplot data=sashelp.cars;
12   dot type / response=horsepower limits=both stat=mean
13       markerattrs=(symbol=circlefilled size=9);
14   xaxis grid;
15   yaxis display=(nolabel) offsetmin=0.1;
16   keylegend / location=inside position=topright across=1;
17   run;
18
19 ods powerpoint close;
20
21 %let _DATAOUT_MIME_TYPE=application/vnd.openxmlformats-officedocument.presentationml.presentation;
22 %let _DATAOUT_NAME=sgplot.pptx;
23
```

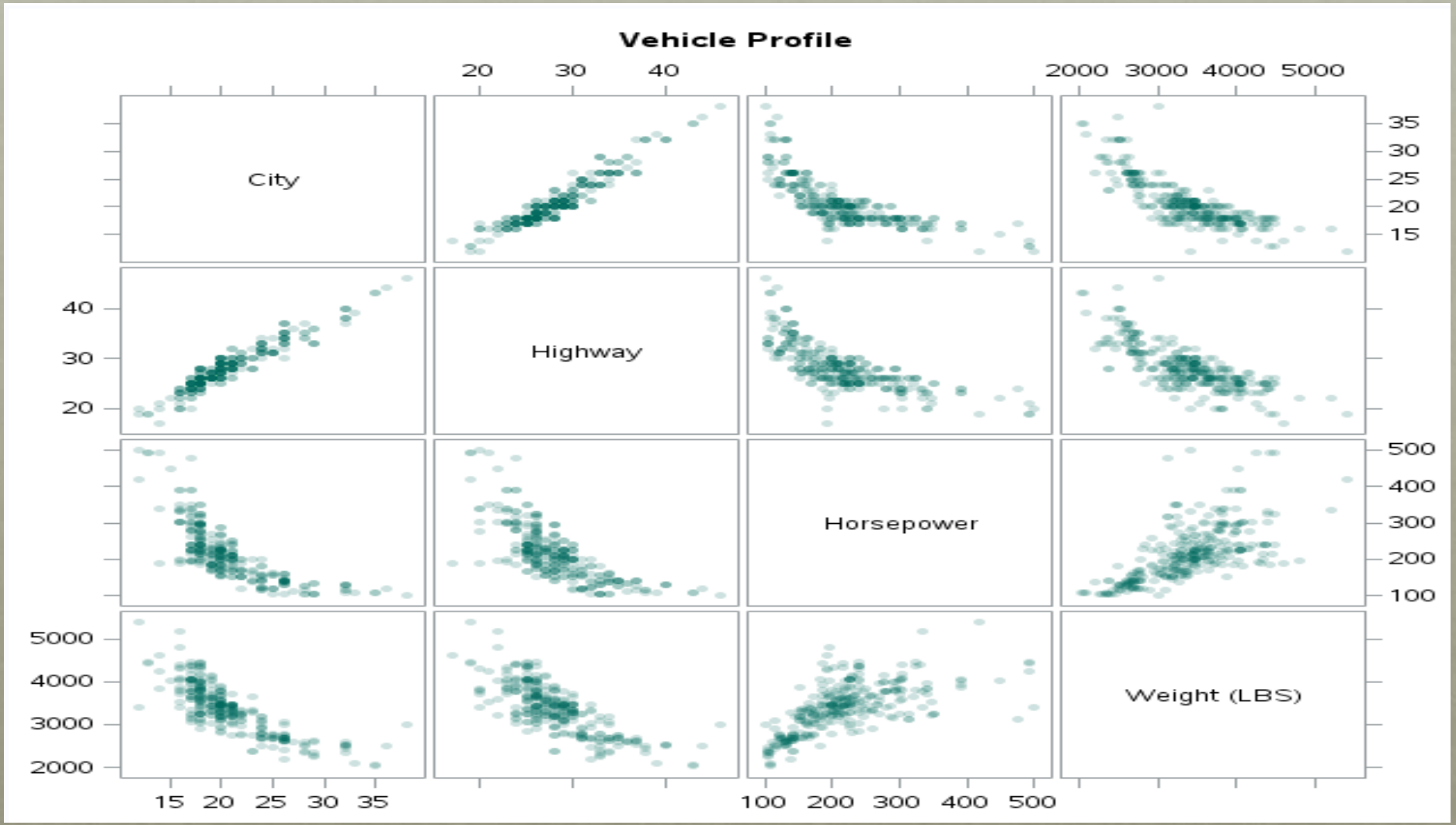
OUTPUT TO POWERPOINT II



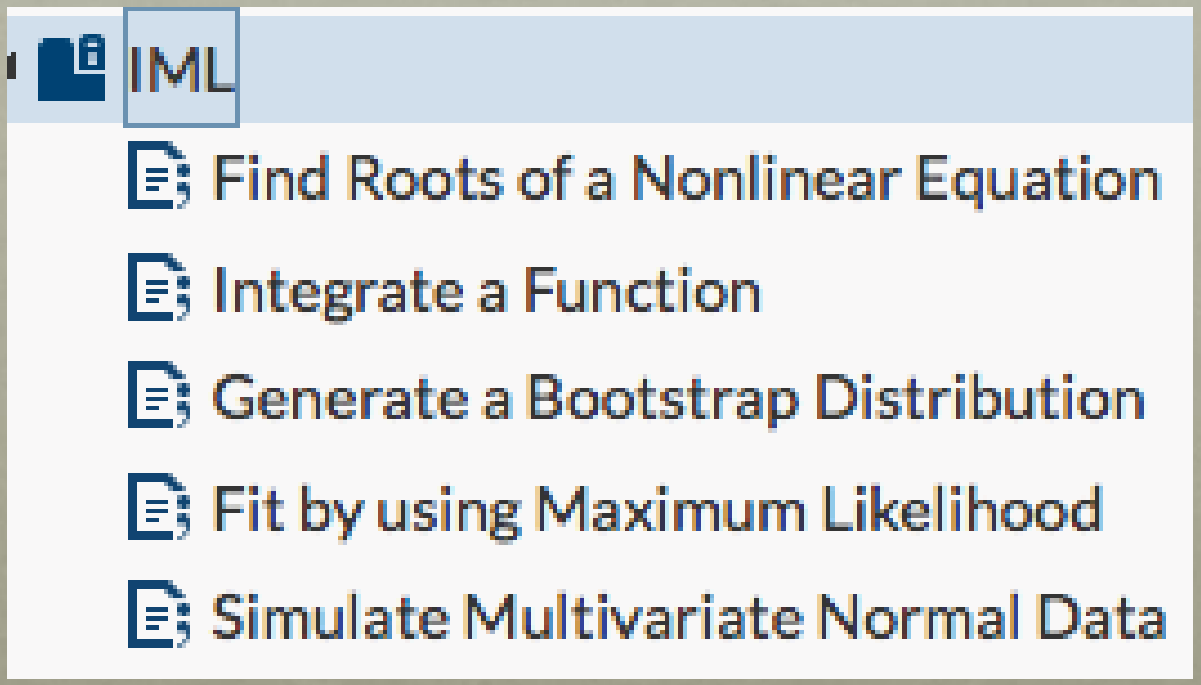
SCATTERPLOT

```
1  /*--Scatter Plot Matrix--*/
2  data _null_;
3          x=dcreate("ODSEditorFiles","/folders/myfolders/");
4  run;
5
6  ods listing gpath="/folders/myfolders/ODSEditorFiles";
7
8  title 'Vehicle Profile';
9  proc sgscatter data=sashelp.cars(where=(type in ('Sedan' 'Sports')));
10   label mpg_city='City';
11   label mpg_highway='Highway';
12   matrix mpg_city mpg_highway horsepower weight /
13      transparency=0.8 markerattrs=graphdata3(symbol=circlefilled);
14   run;
```

SCATTERPLOT II



MORE COMPLEX TASKS



FINDING THE ROOT OF A FUNCTION OF A VARIABLE

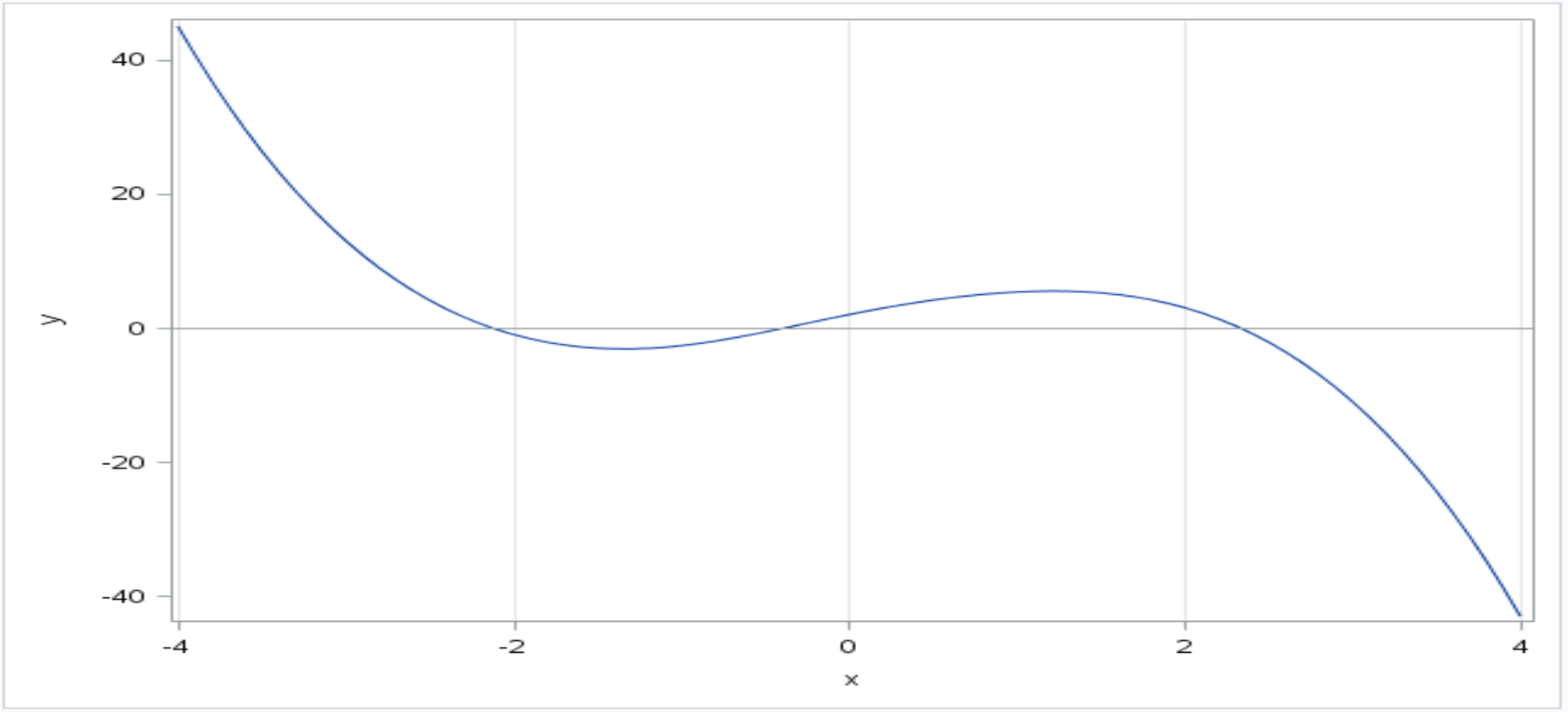
```
/* Find the root of a function of one variable.  Example taken from
   R. Wicklin, "A simple way to find the root of a function of one variable",
   The DO Loop blog, published Feb 4, 2014.
   URL: http://blogs.sas.com/content/iml/2014/02/05/find-the-root-of-a-function/
*/

proc iml;
/* define a function that has one or more zeros */
start Func(x);
   return( exp(-x##2) - x##3 + 5#x +1 );
finish;

if num(symget("SYSVER"))>=9.4 then do;
   /* plot the function to get an idea of how many roots there
      are and approximately where they are located */
   x = do(-4, 4, 0.1);
   y = Func(x);
   call Series(x, y)
        grid="x" other="refline 0 / axis=y"; /* reference line */
end;

/* Specify three intervals to search for roots */
intervals = {-4   -1.5,          /* 1st interval [-4, -1.5] */
             -1.5  1   ,         /* 2nd interval [-1.5 1]   */
              1    4   };        /* 3rd interval [1, 4]     */
Roots = froot("Func", intervals);
print Roots;
quit;
```

OUTPUT



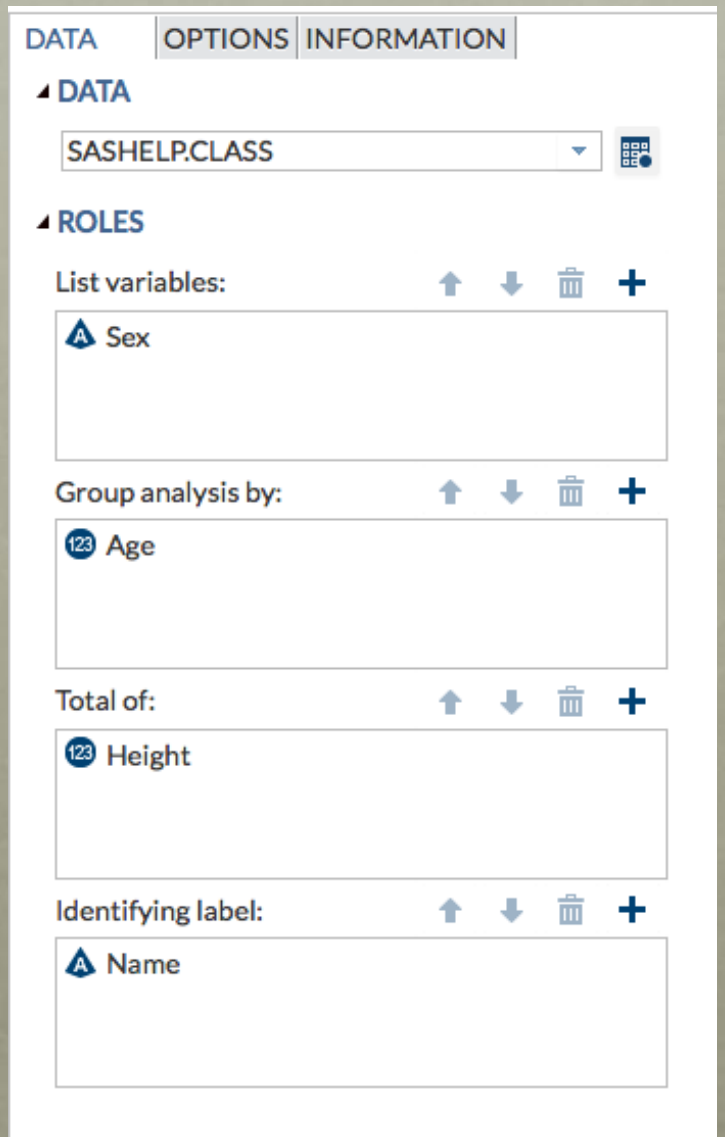
The SAS System

Roots
-2.127156
-0.383909
2.3304466

MAKE YOUR OWN SNIPPETS!

TASKS

LISTING DATA



LISTING DATA – AUTO-GENERATED CODE

```
1  /*
2   *
3   * Task code generated by SAS Studio 3.1
4   *
5   * Generated on 'Sat Dec 13 2014 14:04:40 GMT-0500 (EST)'
6   * Generated by 'sasdemo'
7   * Generated on server 'LOCALHOST'
8   * Generated on SAS platform 'Linux LIN X64 2.6.32-431.23.3.el6.x86_64'
9   * Generated on SAS version '9.04.01M2P07232014'
10  * Generated on browser 'Mozilla/5.0 (Macintosh; Intel Mac OS X 10.10; rv:34.0) Gecko/20100101 Firefox/34.0'
11  * Generated on web client 'http://localhost:10080/SASStudio/main?locale=en_US&zone=GMT-05%3A00'
12  *
13  */
14
15 title;
16 footnote;
17 title1 "List Data for SASHELP.CLASS";
18
19 /* Sort SASHELP.CLASS for BY group processing. */
20 proc sort data=SASHELP.CLASS out=WORK.SORTTEMP;
21     by Age;
22 run;
23
24 /* Print the table                              */
25 proc print data=WORK.SORTTEMP obs="Row number" label;
26     var Sex;
27     by Age;
28     sum Height;
29     id Name;
30 run;
31
32 quit;
33 title;
34 footnote;
```

LISTING DATA - RESULTS

List Data for SASHELP.CLASS

Age=11

Name	Sex	Height
Joyce	F	51.3
Thomas	M	57.5
Age		108.8

Age=12

Name	Sex	Height
James	M	57.3
Jane	F	59.8
John	M	59.0
Louise	F	56.3
Robert	M	64.8
Age		297.2

Age=13

Name	Sex	Height
Alice	F	56.5
Barbara	F	65.3
Jeffrey	M	62.5
Age		184.3

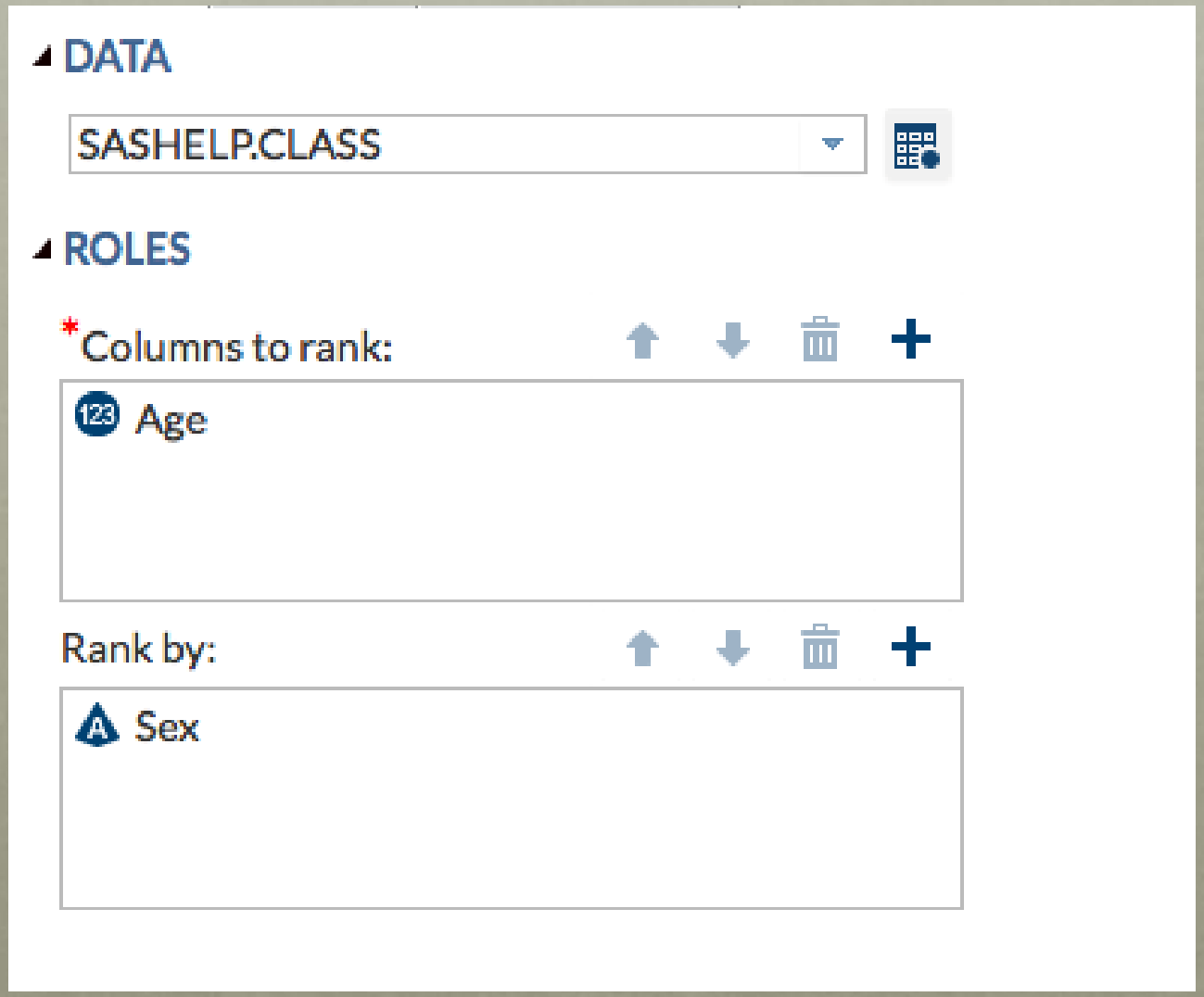
Age=14

Name	Sex	Height
Alfred	M	69.0
Carol	F	62.8
Henry	M	63.5
Judy	F	64.3
Age		259.6

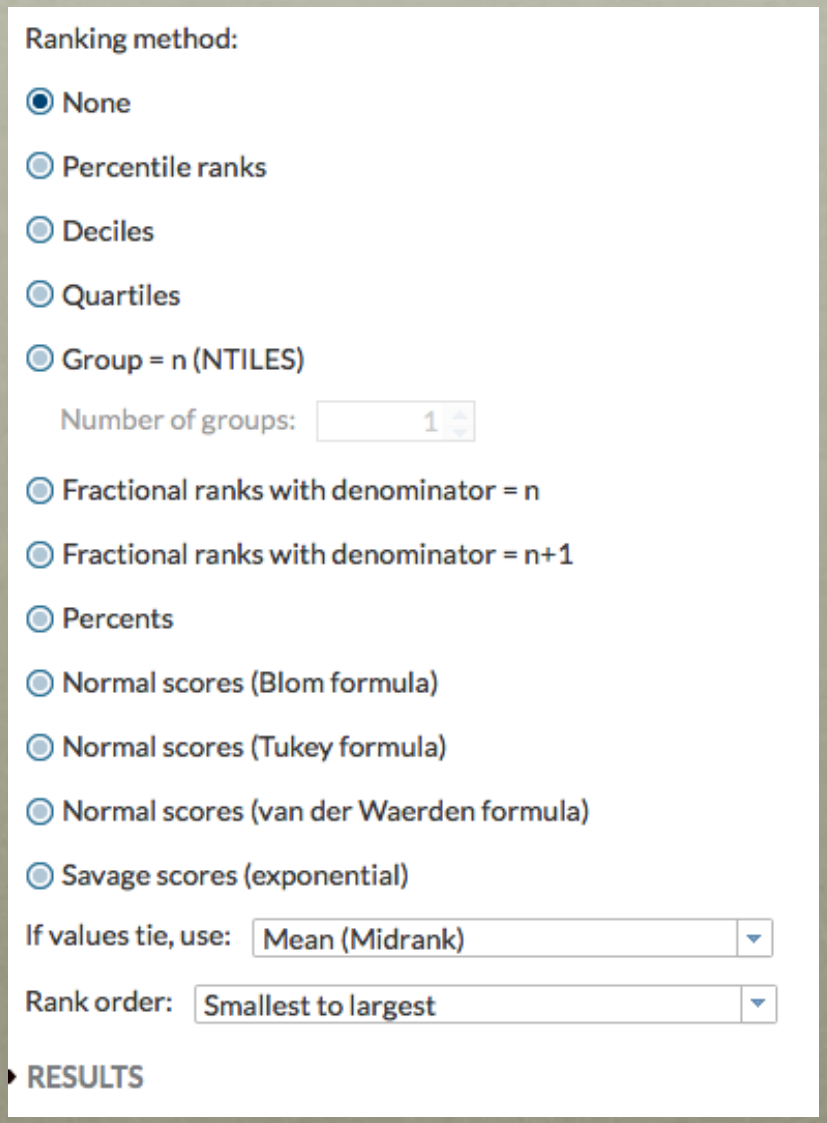
Age=15

Name	Sex	Height
Janet	F	62.5
Mary	F	66.5
Ronald	M	67.0
William	M	66.5
Age		262.5

RANKING DATA



RANKING DATA – METHOD SELECTION



RANKING DATA – AUTO-GENERATED CODE

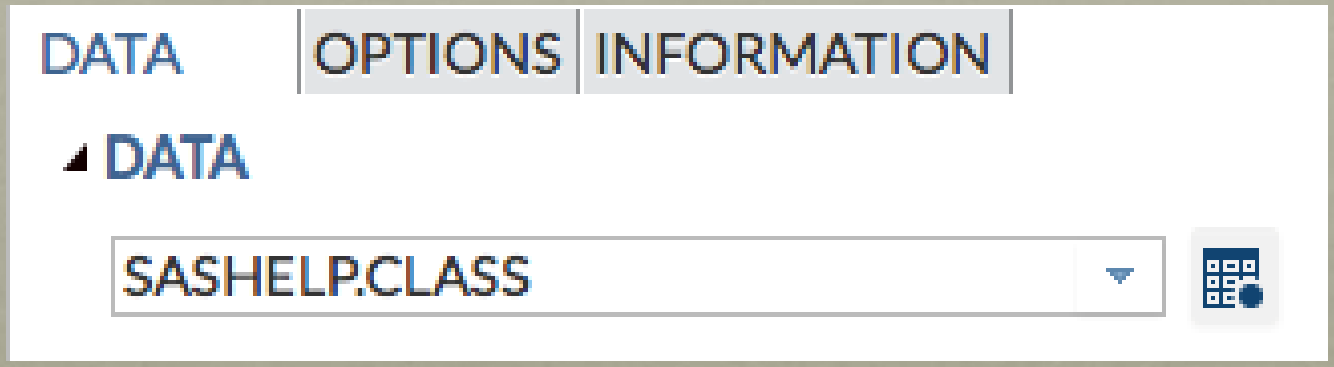
```
15 %web_drop_table(WORK.SORTTempTableSorted, WORK.Rank);
16 title;
17 footnote;
18
19 proc sort data=SASHELP.CLASS out=WORK.SORTTempTableSorted;
20     by Sex;
21 run;
22
23 proc rank data=WORK.SORTTempTableSorted ties=mean
24         out=WORK.Rank(label="Rank Analysis for SASHELP.CLASS");
25     by Sex;
26     var Age;
27     ranks rank_Age;
28 run;
29
30 quit;
31 title;
32 footnote;
33 %web_open_table(WORK.Rank);
34 %web_drop_table(WORK.SORTTempTableSorted);
```

RANKING DATA – RESULTS

Total rows: 19 Total columns: 6

	Name	Sex	Age	Height	Weight	rank_Age
1	Alice	F	13	56.5	84	4.5
2	Barbara	F	13	65.3	98	4.5
3	Carol	F	14	62.8	102.5	6.5
4	Jane	F	12	59.8	84.5	2.5
5	Janet	F	15	62.5	112.5	8.5
6	Joyce	F	11	51.3	50.5	1
7	Judy	F	14	64.3	90	6.5
8	Louise	F	12	56.3	77	2.5
9	Mary	F	15	66.5	112	8.5
10	Alfred	M	14	69	112.5	6.5
11	Henry	M	14	63.5	102.5	6.5
12	James	M	12	57.3	83	3
13	Jeffrey	M	13	62.5	84	5
14	John	M	12	59	99.5	3
15	Philip	M	16	72	150	10
16	Robert	M	12	64.8	128	3
17	Ronald	M	15	67	133	8.5
18	Thomas	M	11	57.5	85	1
19	William	M	15	66.5	112	8.5

DATASETS – DATA SELECTION



DATASETS – AUTO-GENERATED CODE

```
19 proc format ;
20     value _SS_VARTYPE 1="Numeric" 2="Character" other="unknown";
21 run;
22
23 proc datasets nolist nodetails;
24     contents data=SASHELP.CLASS
25         out=WORK.TableAttributes(label="Contents Details for CLASS");
26     run;
27 quit;
28
29 %let _LINESIZE=%sysfunc(getoption(LINESIZE));
30
31 proc sql ;
32     create view WORK.SCVIEW as select distinct memname label="Table Name",
33         memlabel label="Label", memtype label="Type", crdate
34         label="Date Created", modate label="Date Modified", nobs
35         label="Number of Obs.", charset label="Char. Set", protect
36         label="Password Protected", typemem label="Data Set Type" from
37         WORK.TableAttributes order by memname;
38     create table WORK.SCTABLE as select * from WORK.SCVIEW where
39         memname='CLASS';
40 quit;
41
42 proc report data=WORK.SCTABLE;
43     define memlabel / display width=&_LINESIZE;
44     label memname="Table Name" memlabel="Label" memtype="Type"
45         crdate="Date Created" modate="Date Modified" nobs="Number of Obs."
46         charset="Char. Set" protect="Password Protected"
47         typemem="Data Set Type";
48     column memname memlabel memtype crdate modate nobs charset protect typemem;
49 run;
50
51 proc sort data=WORK.TableAttributes out=WORK.TableAttributes;
52     by memname name;
53 run;
54
55 options nobyline;
56
57 proc sql ;
58     drop table WORK.SCTABLE;
59     create table WORK.SCTABLE as select * from WORK.TableAttributes where
60         memname='CLASS';
61 quit;
```

DATASETS – RESULTS

The DATASETS Procedure

Data Set Name	SASHELP.CLASS	Observations	19
Member Type	DATA	Variables	5
Engine	V9	Indexes	0
Created	06/12/2013 21:16:21	Observation Length	40
Last Modified	06/12/2013 21:16:21	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	Student Data		
Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	us-ascii ASCII (ANSI)		

Engine/Host Dependent Information	
Data Set Page Size	65536
Number of Data Set Pages	1
First Data Page	1
Max Obs per Page	1632
Obs in First Data Page	19
Number of Data Set Repairs	0
Filename	/opt/sasinside/SASHome/SASFoundation/9.4/sashelp/class.sas7bdat
Release Created	9.0401M0
Host Created	Linux
Inode Number	394245
Access Permission	rw-r--r--
Owner Name	sas
File Size (bytes)	131072

Alphabetic List of Variables and Attributes

#	Variable	Type	Len
3	Age	Num	8
4	Height	Num	8
1	Name	Char	8
2	Sex	Char	1
5	Weight	Num	8

Table Name	Label	Type	Date Created	Date Modified	Number of Obs.	Char. Set	Password Protected	Data Set Type
CLASS	Student Data	DATA	12JUN13:21:16:21	12JUN13:21:16:21	19		---	

Name	Variable Number	Type	Format	Label	Length
Age	3	Numeric			8
Height	4	Numeric			8

DATASETS – INFORMATION TAB

DATA | OPTIONS | INFORMATION

PROPERTIES

Name: Table Attributes

Description: The Table Attributes task creates a report with the table's creation date, location, and number of rows as well as the variable names, labels, types, and formats.

Category: Data

Procedures: DATASETS FORMAT SORT REPORT SQL CATALOG

Version: 1

RESOURCES

PROC DATASETS Documentation
PROC FORMAT Documentation
PROC SORT Documentation
PROC REPORT Documentation
PROC SQL Documentation
PROC CATALOG Documentation

PROC DATASETS Papers
PROC FORMAT Papers
PROC SORT Papers
PROC REPORT Papers
PROC SQL Papers
PROC CATALOG Papers

PROC DATASETS Samples and SAS Notes
PROC FORMAT Samples and SAS Notes
PROC SORT Samples and SAS Notes
PROC REPORT Samples and SAS Notes
PROC SQL Samples and SAS Notes
PROC CATALOG Samples and SAS Notes

References and Contact Info

- SAS Studio User's Guide - http://support.sas.com/documentation/cdl/en/webeditorug/66932/PDF/default/webeditorug.pdf
- My SAS Univeristy Edition blogs - https://communities.sas.com/people/DarthPathos/content
- Email – darth.pathos@gmail.com
- SAS Canada Community - http://sascanada.ning.com


KEEP
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