

Thomas Pattara
SAS Homework 11

24.2. Create a temporary SAS data set containing the average price for each stock and the number of values used to create this average. In addition, this data set should contain the minimum and maximum price for each stock.

CODE:

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

proc means data=learn.dailyprices mean min max maxdec=2;
class Symbol;
var Price;
output out=summary(drop=_freq_ _type_)
mean=
n=
min=
max= / autoname;
run;
```

OUTPUT:

The MEANS Procedure				
Analysis Variable : Price				
Symbol	N Obs	Mean	Minimum	Maximum
AVID	1	41.25	41.25	41.25
BAC	5	51.04	49.90	52.10
CSCO	4	20.31	19.75	21.00
IBM	5	77.80	75.00	81.00
LU	2	2.54	2.53	2.55

24.6. Using the SAS data set DailyPrices, compute the difference between the price on the last day minus the price on the first day using the LAG or DIF function.

CODE:

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

```
proc sort data=learn.dailyprices out=dailyprices;
by Symbol Date;
run;
data first_last;
set dailyprices;
by Symbol;
if first.Symbol and last.Symbol then delete;
if first.Symbol or last.symbol then Diff = dif(Price);
if last.Symbol then output;
keep Symbol Price Diff;
run;
title "Listing of FIRST_LAST";
proc print data=first_last noobs;
run;
```

OUTPUT:

Listing of FIRST_LAST

Symbol	Price	Diff
BAC	52.10	1.10
CSCO	21.00	1.25
IBM	81.00	5.00
LU	2.53	-0.02

25.1, Rewrite the following program to assign the starting and ending values of the DO loop to macro variables. Print your results and make sure documentation is added. (hint: Program 25-5)

```
data func1;
do n = -3 to 3;
f1 = 1/2/sqrt(constant('pi'))*exp(-(n**2)/2);
output;end;run;
title"normal density function values from -3 to 3";
proc print data=func1;run;
```

CODE:

```

%macro gen(n, /* number of random numbers */
           Start, /* Starting value */
           End /* Ending value */);
data func1;
do n = &Start to &End;
f1 =1/2/sqrt(constant('pi'))*exp(-(n**2)/2);
output;
end;
run;
title"normal density function values from -3 to 3";
proc print data=func1(obs=&n);
run;
%mend gen;
/*****
Example: To generate 7 observations from
-3 to 3 use:
%gen(7,-3,3);
*****/
%gen(7,-3,3);

```

OUTPUT:

normal density function values from -3 to 3

Obs	n	f1
1	-3	0.00313
2	-2	0.03818
3	-1	0.17110
4	0	0.28209
5	1	0.17110
6	2	0.03818
7	3	0.00313

25.2, Turn the following program into a macro (call it SUMM), making it more general. Use as calling arguments the input data set name (Dsn), the CLASS variables (Class), and variables listed in the VAR statement (Vars):

```
title "Statistics from data set learn.bicycles"
```

```
;proc means data=bicycles n mean std median maxdec=2;
```

```
class Country;
```

```
var Units TotalSales;run;
```

Test your macro by calling it like this: %SUMM(learn.bicycles, Country, Units TotalSales)

CODE:

```
%macro SUMM(dsn, /* data set name */
            class, /* list of CLASS variables */
            vars /* list of VAR variables */);
    title "Statistics from &dsn";
```

```
    proc means data=&dsn n mean min max maxdec=1;
```

```
    class &class;
```

```
    var &vars;
```

```
    run;
```

```
    %mend SUMM;
```

```
data bicycle;
```

```
set '/home/thomaspattara0/sasuser.v94/bicycles.sas7bdat';
```

```
run;
```

```
%SUMM(bicycle, Country, Units TotalSales)
```

OUTPUT:

Statistics from bicycle

The MEANS Procedure

Country	N Obs	Variable	Label	N	Mean	Minimum	Maximum
France	5	Units		5	2360.0	800.0	5600.0
		TotalSales	Sales in Thousands	5	4244.6	594.0	8500.0
Italy	3	Units		3	2866.7	700.0	4500.0
		TotalSales	Sales in Thousands	3	6623.3	483.0	13005.0
USA	5	Units		5	4300.0	2000.0	6000.0
		TotalSales	Sales in Thousands	5	7225.0	2925.0	11000.0