

Statistical Analysis System: Class 22

Dated: 13/05/2018

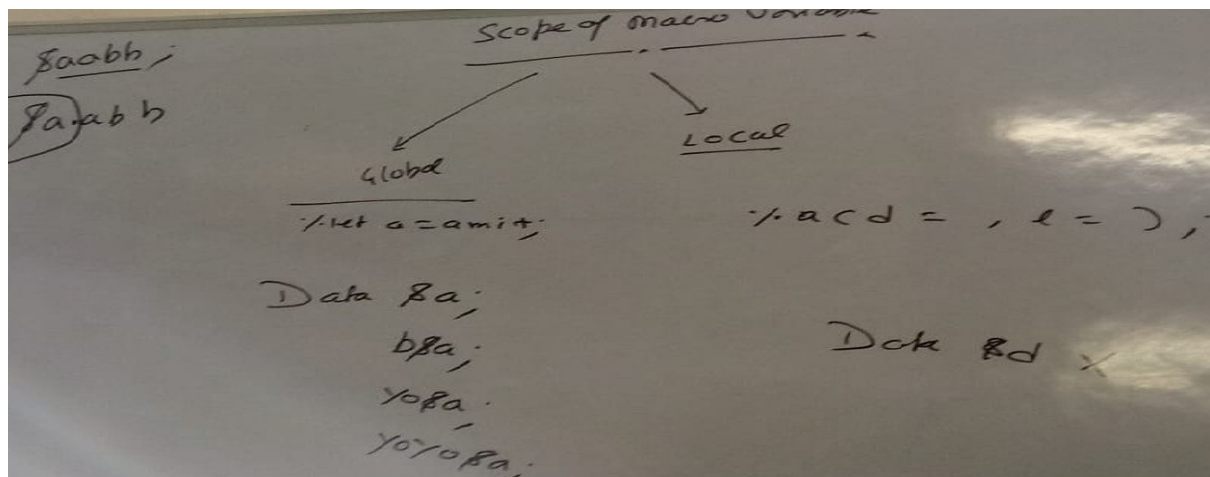
.....

Revising on macro:

Macro call with subsetting (drop) and where as dataset option.

Code 1	Output																																																																																										
<pre>%macro a(d=); data &d; set sasuser.admit; run; %mend a; %a(d= ram (drop= name where=(age gt 40)));</pre>	<table><tr><th></th><th>ID</th><th>Sex</th><th>Age</th><th>Date</th><th>Height</th><th>Weight</th><th>ActLevel</th><th>Fee</th></tr><tr><td>1</td><td>2523</td><td>F</td><td>43</td><td>31</td><td>63</td><td>137</td><td>MOD</td><td>149.75</td></tr><tr><td>2</td><td>2539</td><td>M</td><td>51</td><td>4</td><td>71</td><td>158</td><td>LOW</td><td>124.80</td></tr><tr><td>3</td><td>2568</td><td>F</td><td>49</td><td>27</td><td>64</td><td>172</td><td>LOW</td><td>124.80</td></tr><tr><td>4</td><td>2571</td><td>F</td><td>44</td><td>19</td><td>66</td><td>140</td><td>HIGH</td><td>149.75</td></tr><tr><td>5</td><td>2578</td><td>M</td><td>47</td><td>5</td><td>72</td><td>173</td><td>NA</td><td>124.80</td></tr><tr><td>6</td><td>2579</td><td>M</td><td>60</td><td>22</td><td>71</td><td>191</td><td>LOW</td><td>149.75</td></tr><tr><td>7</td><td>2584</td><td>F</td><td>43</td><td>29</td><td>65</td><td>123</td><td>MODY</td><td>124.80</td></tr><tr><td>8</td><td>2589</td><td>F</td><td>41</td><td>16</td><td>67</td><td>141</td><td>HIGH</td><td>149.75</td></tr><tr><td>9</td><td>2595</td><td>M</td><td>54</td><td>7</td><td>71</td><td>183</td><td>MOD</td><td>149.75</td></tr></table>		ID	Sex	Age	Date	Height	Weight	ActLevel	Fee	1	2523	F	43	31	63	137	MOD	149.75	2	2539	M	51	4	71	158	LOW	124.80	3	2568	F	49	27	64	172	LOW	124.80	4	2571	F	44	19	66	140	HIGH	149.75	5	2578	M	47	5	72	173	NA	124.80	6	2579	M	60	22	71	191	LOW	149.75	7	2584	F	43	29	65	123	MODY	124.80	8	2589	F	41	16	67	141	HIGH	149.75	9	2595	M	54	7	71	183	MOD	149.75
	ID	Sex	Age	Date	Height	Weight	ActLevel	Fee																																																																																			
1	2523	F	43	31	63	137	MOD	149.75																																																																																			
2	2539	M	51	4	71	158	LOW	124.80																																																																																			
3	2568	F	49	27	64	172	LOW	124.80																																																																																			
4	2571	F	44	19	66	140	HIGH	149.75																																																																																			
5	2578	M	47	5	72	173	NA	124.80																																																																																			
6	2579	M	60	22	71	191	LOW	149.75																																																																																			
7	2584	F	43	29	65	123	MODY	124.80																																																																																			
8	2589	F	41	16	67	141	HIGH	149.75																																																																																			
9	2595	M	54	7	71	183	MOD	149.75																																																																																			

Scope of Macro variable



Global	Local
<ul style="list-style-type: none">Definition of a global macro — <code>%let a=amit;</code><code>%let a=amit;</code> defines static value	<ul style="list-style-type: none">Definition of a local macro — <code>%a(d=,l=);</code><code>%a(d=,l=);</code> defined is dynamic and changes as per the parameters passed.

Reference to a macro variable.

- **Simple reference :**

Example : data &a;

- **Addition of text in the prefix of macro variable during call.**

Example:

```
data b&a;
data yo&a;
data yoyo&a;
```

- **Addition of text in the suffix of macro variable during call.**

Example:

```
data &aabh;
```

The above way to write is wrong, since SAS looks for macro variable "aabh", to rectify this we use dot (.) symbol to separate macro variable and text in the suffix to a macro variable,

Example: data &a.abh

- **Using double dots (..) :** If we want "sasuser.admit" to be processed in the dataset using macro variable passed as parameter, we always use 2 dot (..) during the call in the dataset. Example:

Sasuser.admit

To get this processed in the dataset we write:

&l.&d ---- during the Macro variable call resulting to sasuser.admit

1st dot is consumed alongwith (&l) as (&l.) and 2nd dot is copied as it is in the dataset

Refer below:

Code 2	Output																																																																																																																																																																																																																												
<pre>%macro a(d=,l=); data a; set &l..&d; run; %mend a; %a(d=admit,l=sasuser)</pre>	<table><tr><th></th><th>ID</th><th>Name</th><th>Sex</th><th>Age</th><th>Date</th><th>Height</th><th>Weight</th><th>ActLevel</th><th>Fee</th></tr><tr><td>1</td><td>2458</td><td>Murray, W</td><td>M</td><td>27</td><td>1</td><td>72</td><td>168</td><td>HIGH</td><td>85.20</td></tr><tr><td>2</td><td>2462</td><td>Almers, C</td><td>F</td><td>34</td><td>3</td><td>66</td><td>152</td><td>HIGH</td><td>124.80</td></tr><tr><td>3</td><td>2501</td><td>Bonaventure, T</td><td>F</td><td>31</td><td>17</td><td>61</td><td>123</td><td>LOW</td><td>149.75</td></tr><tr><td>4</td><td>2523</td><td>Johnson, R</td><td>F</td><td>43</td><td>31</td><td>63</td><td>137</td><td>MOD</td><td>149.75</td></tr><tr><td>5</td><td>2539</td><td>LaMance, K</td><td>M</td><td>51</td><td>4</td><td>71</td><td>158</td><td>LOW</td><td>124.80</td></tr><tr><td>6</td><td>2544</td><td>Jones, M</td><td>M</td><td>29</td><td>6</td><td>76</td><td>193</td><td>HIGH</td><td>124.80</td></tr><tr><td>7</td><td>2552</td><td>Reberson, P</td><td>F</td><td>32</td><td>9</td><td>67</td><td>151</td><td>MOD</td><td>149.75</td></tr><tr><td>8</td><td>2555</td><td>King, E</td><td>M</td><td>35</td><td>13</td><td>70</td><td>173</td><td>MOD</td><td>149.75</td></tr><tr><td>9</td><td>2563</td><td>Pitts, D</td><td>M</td><td>34</td><td>22</td><td>73</td><td>154</td><td>LOW</td><td>124.80</td></tr><tr><td>10</td><td>2568</td><td>Eberhardt, S</td><td>F</td><td>49</td><td>27</td><td>64</td><td>172</td><td>LOW</td><td>124.80</td></tr><tr><td>11</td><td>2571</td><td>Nunnelly, A</td><td>F</td><td>44</td><td>19</td><td>66</td><td>140</td><td>HIGH</td><td>149.75</td></tr><tr><td>12</td><td>2572</td><td>Oberon, M</td><td>F</td><td>28</td><td>17</td><td>62</td><td>118</td><td>LOW</td><td>85.20</td></tr><tr><td>13</td><td>2574</td><td>Peterson, V</td><td>M</td><td>30</td><td>6</td><td>69</td><td>147</td><td>LOW</td><td>149.75</td></tr><tr><td>14</td><td>2575</td><td>Quigley, M</td><td>F</td><td>40</td><td>8</td><td>69</td><td>163</td><td>HIGH</td><td>124.80</td></tr><tr><td>15</td><td>2578</td><td>Cameron, L</td><td>M</td><td>47</td><td>5</td><td>72</td><td>173</td><td>NA</td><td>124.80</td></tr><tr><td>16</td><td>2579</td><td>Underwood, K</td><td>M</td><td>60</td><td>22</td><td>71</td><td>191</td><td>LOW</td><td>149.75</td></tr><tr><td>17</td><td>2584</td><td>Takahashi, Y</td><td>F</td><td>43</td><td>29</td><td>65</td><td>123</td><td>MODY</td><td>124.80</td></tr><tr><td>18</td><td>2586</td><td>Derber, B</td><td>M</td><td>25</td><td>23</td><td>75</td><td>188</td><td>HIGH</td><td>85.20</td></tr><tr><td>19</td><td>2588</td><td>Ivan, H</td><td>F</td><td>22</td><td>20</td><td>63</td><td>139</td><td>LOW</td><td>85.20</td></tr><tr><td>20</td><td>2589</td><td>Wilcox, E</td><td>F</td><td>41</td><td>16</td><td>67</td><td>141</td><td>HIGH</td><td>149.75</td></tr><tr><td>21</td><td>2595</td><td>Warren, C</td><td>M</td><td>54</td><td>7</td><td>71</td><td>183</td><td>MOD</td><td>149.75</td></tr></table>		ID	Name	Sex	Age	Date	Height	Weight	ActLevel	Fee	1	2458	Murray, W	M	27	1	72	168	HIGH	85.20	2	2462	Almers, C	F	34	3	66	152	HIGH	124.80	3	2501	Bonaventure, T	F	31	17	61	123	LOW	149.75	4	2523	Johnson, R	F	43	31	63	137	MOD	149.75	5	2539	LaMance, K	M	51	4	71	158	LOW	124.80	6	2544	Jones, M	M	29	6	76	193	HIGH	124.80	7	2552	Reberson, P	F	32	9	67	151	MOD	149.75	8	2555	King, E	M	35	13	70	173	MOD	149.75	9	2563	Pitts, D	M	34	22	73	154	LOW	124.80	10	2568	Eberhardt, S	F	49	27	64	172	LOW	124.80	11	2571	Nunnelly, A	F	44	19	66	140	HIGH	149.75	12	2572	Oberon, M	F	28	17	62	118	LOW	85.20	13	2574	Peterson, V	M	30	6	69	147	LOW	149.75	14	2575	Quigley, M	F	40	8	69	163	HIGH	124.80	15	2578	Cameron, L	M	47	5	72	173	NA	124.80	16	2579	Underwood, K	M	60	22	71	191	LOW	149.75	17	2584	Takahashi, Y	F	43	29	65	123	MODY	124.80	18	2586	Derber, B	M	25	23	75	188	HIGH	85.20	19	2588	Ivan, H	F	22	20	63	139	LOW	85.20	20	2589	Wilcox, E	F	41	16	67	141	HIGH	149.75	21	2595	Warren, C	M	54	7	71	183	MOD	149.75
	ID	Name	Sex	Age	Date	Height	Weight	ActLevel	Fee																																																																																																																																																																																																																				
1	2458	Murray, W	M	27	1	72	168	HIGH	85.20																																																																																																																																																																																																																				
2	2462	Almers, C	F	34	3	66	152	HIGH	124.80																																																																																																																																																																																																																				
3	2501	Bonaventure, T	F	31	17	61	123	LOW	149.75																																																																																																																																																																																																																				
4	2523	Johnson, R	F	43	31	63	137	MOD	149.75																																																																																																																																																																																																																				
5	2539	LaMance, K	M	51	4	71	158	LOW	124.80																																																																																																																																																																																																																				
6	2544	Jones, M	M	29	6	76	193	HIGH	124.80																																																																																																																																																																																																																				
7	2552	Reberson, P	F	32	9	67	151	MOD	149.75																																																																																																																																																																																																																				
8	2555	King, E	M	35	13	70	173	MOD	149.75																																																																																																																																																																																																																				
9	2563	Pitts, D	M	34	22	73	154	LOW	124.80																																																																																																																																																																																																																				
10	2568	Eberhardt, S	F	49	27	64	172	LOW	124.80																																																																																																																																																																																																																				
11	2571	Nunnelly, A	F	44	19	66	140	HIGH	149.75																																																																																																																																																																																																																				
12	2572	Oberon, M	F	28	17	62	118	LOW	85.20																																																																																																																																																																																																																				
13	2574	Peterson, V	M	30	6	69	147	LOW	149.75																																																																																																																																																																																																																				
14	2575	Quigley, M	F	40	8	69	163	HIGH	124.80																																																																																																																																																																																																																				
15	2578	Cameron, L	M	47	5	72	173	NA	124.80																																																																																																																																																																																																																				
16	2579	Underwood, K	M	60	22	71	191	LOW	149.75																																																																																																																																																																																																																				
17	2584	Takahashi, Y	F	43	29	65	123	MODY	124.80																																																																																																																																																																																																																				
18	2586	Derber, B	M	25	23	75	188	HIGH	85.20																																																																																																																																																																																																																				
19	2588	Ivan, H	F	22	20	63	139	LOW	85.20																																																																																																																																																																																																																				
20	2589	Wilcox, E	F	41	16	67	141	HIGH	149.75																																																																																																																																																																																																																				
21	2595	Warren, C	M	54	7	71	183	MOD	149.75																																																																																																																																																																																																																				

Code 3

```

%macro a(type=, name=);

ods &type file= "C:\Documents and
Settings\sasadm\Desktop\2\&name..&type";
proc print data= sasuser.admit;
run;

ods &type close;

%mend a;

%a (type=pdf, name=yo);
%a (type=html, name=test);

```

Explained: 1st Macro call creates a file yo.pdf from S.A
2nd Macro call creates file test.html from S.A

Output / Log display

```

71 %a (type=pdf, name=yo);
NOTE: Writing ODS PDF output to DISK destination
      "C:\Documents and Settings\sasadm\Desktop\2\yo.pdf", printer "PDF".

NOTE: There were 21 observations read from the data set SASUSER.ADMIT.
NOTE: PROCEDURE PRINT used (Total process time):
      real time          0.03 seconds
      cpu time           0.03 seconds

NOTE: ODS PDF printed 1 page to C:\Documents and Settings\sasadm\Desktop\2\yo.pdf.
72
73 %a (type=html, name=test);
NOTE: Writing HTML Body file: C:\Documents and Settings\sasadm\Desktop\2\test.html

NOTE: There were 21 observations read from the data set SASUSER.ADMIT.
NOTE: PROCEDURE PRINT used (Total process time):
      real time          0.01 seconds
      cpu time           0.01 seconds

```

Do loop: 3rd way to create a Macro variable

- In this method, every keyword of the do-loop has a % sign at the prefix.
- Loop starts just after the macro definition and before the datastep, not inside the datastep, like in base sas.
- Counter variable in the Do-loop becomes a Macro variable.

Code 4	Output / Log Display

<pre>%macro loopy; %do i=1 %to 3; data a; set sasuser.admit; run; %end; %mend loopy; %loopy;</pre>	<pre>NOTE: There were 21 observations read from the data set SASUSER.ADMIT NOTE: The data set WORK.A has 21 observations and 9 variables. NOTE: DATA statement used (Total process time): real time 0.00 seconds cpu time 0.00 seconds NOTE: There were 21 observations read from the data set SASUSER.ADMIT NOTE: The data set WORK.A has 21 observations and 9 variables. NOTE: DATA statement used (Total process time): real time 0.01 seconds cpu time 0.01 seconds NOTE: There were 21 observations read from the data set SASUSER.ADMIT NOTE: The data set WORK.A has 21 observations and 9 variables. NOTE: DATA statement used (Total process time): real time 0.00 seconds cpu time 0.00 seconds</pre>
Explained:	The do loop runs thrice in the macro call and everytime dataset "a" is overwritten with S.A

Code 5	Output / Log Display
<pre>%macro loopy; %do i=1 %to 3; data a&i; set sasuser.admit; run; %end; %mend loopy; %loopy;</pre>	<pre>NOTE: There were 21 observations read from the data set SASUSER.ADMIT NOTE: The data set WORK.A1 has 21 observations and 9 variables. NOTE: DATA statement used (Total process time): real time 0.01 seconds cpu time 0.01 seconds NOTE: There were 21 observations read from the data set SASUSER.ADMIT NOTE: The data set WORK.A2 has 21 observations and 9 variables. NOTE: DATA statement used (Total process time): real time 0.00 seconds cpu time 0.00 seconds NOTE: There were 21 observations read from the data set SASUSER.ADMIT NOTE: The data set WORK.A3 has 21 observations and 9 variables. NOTE: DATA statement used (Total process time): real time 0.00 seconds cpu time 0.00 seconds</pre>
Explained:	<p>The do loop runs thrice in the macro call and 3 datasets "a1, a2, a3" are created.</p> <p>Note here, using prefix with macro variable.</p>

Code 6	Output / Log Display
<pre>%macro loopy; %do i=1 %to 3; data a&i&i; set sasuser.admit; run; %end; %mend loopy; %loopy;</pre>	<pre>NOTE: There were 21 observations read from the data set SASUSER.ADMIT. NOTE: The data set WORK.A11 has 21 observations and 9 variables. NOTE: DATA statement used (Total process time): real time 0.00 seconds cpu time 0.00 seconds NOTE: There were 21 observations read from the data set SASUSER.ADMIT. NOTE: The data set WORK.A22 has 21 observations and 9 variables. NOTE: DATA statement used (Total process time): real time 0.01 seconds cpu time 0.01 seconds NOTE: There were 21 observations read from the data set SASUSER.ADMIT. NOTE: The data set WORK.A33 has 21 observations and 9 variables. NOTE: DATA statement used (Total process time): real time 0.01 seconds cpu time 0.01 seconds</pre>
Explained:	The do loop runs thrice in the macro call and 3 datasets "a11, a22, a33" are created.

Code 7: Importing an excel file with multiple sheets

```

%macro importy;
%do i=1 %to 3;

proc import out= S&i datafile= "C:\Documents and
Settings\sasadm\Desktop\2\database.xls"
DBMS=excel replace;
sheet="sheet&i.$";
getnames=yes;
mixed=no;
run;

%end;

%mend importy;

%importy;

```

Log Display

```

NOTE: .S1 was successfully created.
NOTE: PROCEDURE IMPORT used (Total process time):
      real time           1.35 seconds
      cpu time            1.21 seconds

NOTE: .S2 was successfully created.
NOTE: PROCEDURE IMPORT used (Total process time):
      real time           0.17 seconds
      cpu time            0.09 seconds

NOTE: .S3 was successfully created.
NOTE: PROCEDURE IMPORT used (Total process time):
      real time           0.14 seconds
      cpu time            0.06 seconds

```

Explained: This creates 3 different datasets S1, S2, S3 by importing excel file- “database.xls” with 3 sheets in it.

Code 8: Dynamic declaration of a Macro for a file with "n" no. of sheets

```

%macro importy(n=);
%do i=1 %to &n;

proc import out= S&i datafile= "C:\Documents and
Settings\sasadm\Desktop\2\database.xls"
DBMS=excel replace;
sheet="sheet&i.$";
getnames=yes;
mixed=no;
run;

%end;

%mend importy;

%importy(n=3);           \\ loop runs 3 times, 3 sheets are read from database.xls.
%importy(n=25);          \\ loop runs 25 times, 25 sheets are read from database.xls, if present.

```

Explained: This is similar to code 7 above, with just a difference of macro variable (n=) defined in the macro, making it dynamic as to what number of sheets from the file imported are to be read.

Code 9: Exporting to an excel with multiple sheets

```

%macro exporty;
%do i=1 %to 3;

proc export data= S&i outfile= "C:\Documents and
Settings\sasadm\Desktop\2\databass.xls"
DBMS=excel replace;
sheet="sheet&i";
run;

%end;
%mend exporty;

%exporty;

```

Log Display :

```

NOTE: New file "C:\Documents and Settings\sasadm\Desktop\2\databass.xls" will be created
      if the export process succeeds.
NOTE: "sheet1" was successfully created.
NOTE: PROCEDURE EXPORT used (Total process time):
      real time          0.68 seconds
      cpu time           0.24 seconds

NOTE: "sheet2" was successfully created.
NOTE: PROCEDURE EXPORT used (Total process time):
      real time          0.23 seconds
      cpu time           0.14 seconds

NOTE: "sheet3" was successfully created.
NOTE: PROCEDURE EXPORT used (Total process time):
      real time          0.14 seconds
      cpu time           0.06 seconds

```

Explained: This results into a file “databass.xls” with 3 sheets in it.

Code 10: Exporting as multiple excel files .

```

%macro exporty;
%do i=1 %to 3;

proc export data= S&i outfile= "C:\Documents and
Settings\sasadm\Desktop\2\database&i..xls"
DBMS=excel replace;
sheet="data&i";
run;

%end;
%mend exporty;

%exporty;

```

Log Display :

```

NOTE: New file "C:\Documents and Settings\sasadm\Desktop\2\database1.xls" will be created
      if the export process succeeds.
NOTE: "data1" was successfully created.
NOTE: PROCEDURE EXPORT used (Total process time):
      real time      0.26 seconds
      cpu time       0.07 seconds

NOTE: New file "C:\Documents and Settings\sasadm\Desktop\2\database2.xls" will be created
      if the export process succeeds.
NOTE: "data2" was successfully created.
NOTE: PROCEDURE EXPORT used (Total process time):
      real time      0.23 seconds
      cpu time       0.06 seconds

NOTE: New file "C:\Documents and Settings\sasadm\Desktop\2\database3.xls" will be created
      if the export process succeeds.
NOTE: "data3" was successfully created.
NOTE: PROCEDURE EXPORT used (Total process time):
      real time      0.18 seconds
      cpu time       0.06 seconds

```

Explained: This results into 3 files “Database1.xls, Database2.xls, Database3.xls” with tab name as “Data1, Data2, Data3” respectively .

Code 11: Exporting as excel file with multiple sheets based on different values of a variable .

```

%macro exporty;

%let act=HIGH@LOW@MOD;

%do i=1 %to 3;
%let ac=%scan(&act,&i,"@");
data &ac;
set sasuser.admit;
where actlevel="&ac";
run;

proc export data= &ac outfile= "C:\Documents and
Settings\sasadm\Desktop\2\admit.xls"
DBMS=excel replace;
sheet="&ac";
run;
%end;

%mend exporty;
%exporty;

```

Explained: Here, we create an excel file with, HIGH, LOW, MOD as 3 different sheets for 3 values of variable- "Actlevel" from "sasuser.admit" dataset, resulting into excel file “admit.xls”.

Log Display :

```

NOTE: There were 7 observations read from the data set SASUSER.ADMIT.
      WHERE actlevel='HIGH';
NOTE: The data set WORK.HIGH has 7 observations and 9 variables.
NOTE: DATA statement used (Total process time):
      real time           0.15 seconds
      cpu time            0.14 seconds

NOTE: New file "C:\Documents and Settings\sasadm\Desktop\2\admit.xls" will be created.
NOTE: The export process succeeds.
NOTE: "HIGH" was successfully created.
NOTE: PROCEDURE EXPORT used (Total process time):
      real time           0.28 seconds
      cpu time            0.18 seconds

NOTE: There were 8 observations read from the data set SASUSER.ADMIT.
      WHERE actlevel='LOW';
NOTE: The data set WORK.LOW has 8 observations and 9 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      cpu time            0.00 seconds
NOTE: "LOW" was successfully created.
NOTE: PROCEDURE EXPORT used (Total process time):
      real time           0.17 seconds
      cpu time            0.10 seconds

NOTE: There were 4 observations read from the data set SASUSER.ADMIT.
      WHERE actlevel='MOD';
NOTE: The data set WORK.MOD has 4 observations and 9 variables.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      cpu time            0.01 seconds

NOTE: "MOD" was successfully created.
NOTE: PROCEDURE EXPORT used (Total process time):
      real time           0.15 seconds
      cpu time            0.07 seconds

```

Code 12: From "Cargorev" dataset, creating 1 excel file with different sheets as per different routes.

```

%macro exporty;
%let act=Route1@Route2@Route3@Route4@Route5@Route6;

%do i=1 %to 6;
%let ac=%scan(&act,&i,"@");

data &ac;
set sasuser.cargorev;
where route="&ac";
run;

proc export data= &ac outfile= "C:\Documents and
Settings\sasadm\Desktop\2\route.xls"
DBMS=excel replace;
sheet="&ac";
run;

%end;
%mend exporty;
%exporty;

```

Explained: Like Code 11, it first creates 6 datasets according to 6 different route and then export it altogether under 1 excel file "route.xls" with 6 sheets in it.

Code 13: From "Cargorev" dataset, creating 6 different excel files as per different routes.


```

%macro exporty;
%let act=Route1@Route2@Route3@Route4@Route5@Route6;

%do i=1 %to 6;
%let ac=%scan(&act,&i,"@");

data &ac;
set sasuser.cargorev;
where route="&ac";
run;

proc export data= &ac outfile= "C:\Documents and
Settings\sasadm\Desktop\2\&ac..xls" /* path */
DBMS=excel replace;
sheet="&ac";
run;

%end;
%mend exporty;

%exporty;

```

Code 14: Creating different excel files as per the values (here: Audi & BMW) of a variable (here: Make) from a dataset (sasuser.cars).

```

%macro exporty;
%let act= Audi@BMW;

%do i=1 %to 2;
%let ac=%scan(&act,&i,"@");

data &ac;
set sasuser.cars;
where make="&ac";
run;

proc export data= &ac outfile= "C:\Documents and
Settings\sasadm\Desktop\2\&ac..xls" /* path */
DBMS=excel replace;
sheet="&ac";
run;

%end;
%mend exporty;

%exporty;

```

%include : is a utility which reduces the effort to open, copy, paste for the execution of any code saved as text. we just have to give the path and the code will execute remotely.

Syntax: %include "path\filename.type";

Example: %include "c:documents and settings\sasdm\desktop\B82\code.txt";

Batch Processing: for the execution of multiple codes saved as text files.

```
%include "c:documents and settings\sasdm\desktop\B82\code.txt";  
%include "c:documents and settings\sasdm\desktop\B82\code1.txt";  
%include "c:documents and settings\sasdm\desktop\B82\code2.txt";  
%include "c:documents and settings\sasdm\desktop\B82\code3.txt";
```

Processing more efficiently, by placing multiple files, under 1 single file as given below:

```
%include "c:documents and settings\sasdm\desktop\B82\all.txt";  
  
/* "all.txt" here contains "code.txt,code1.txt,code2.txt,code3.txt".*/
```