

TASS Interfaces Posed Question

March 2013

OBJECTIVE:

The posed question focuses on using the SAS EG task wizard to generate a report based on user requirements.

QUESTION:

What is the easiest way to obtain a report listing shown below using SAS EG and without writing a single piece of code?

		Region			
		ALBERTA		ONTARIO	
		No of Products	Revenue	No of Products	Revenue
		Average	Sum	Average	Sum
Year	Quarter				
2010	01	3.50	269424.61	2.50	195484.55
	02	2.50	174858.53	2.00	131525.48
	03	3.50	259788.78	3.00	235805.12
	04	2.50	180258.66	2.00	159830.81
	Total	3.00	884330.58	2.38	722645.96
2011	Quarter				
	01	3.00	214885.31	1.00	13853.16
	02	2.50	162308.97	3.00	185730.79
	03	2.50	182149.06	1.00	46994.01
	04	1.00	11866.74	3.00	97142.22
Total	2.43	571210.08	1.86	343720.18	
2012	Quarter				
	01	1.50	72610.87	3.00	209510.15
	02	1.50	56343.33	2.50	170002.20
	03	1.50	100002.41	1.50	57456.19
	04	1.67	187287.38	2.33	246973.78
Total	1.56	416244.00	2.33	683942.33	
Total		2.29	1871784.65	2.21	1750308.47

DATA:

*Use the data provided in the file
Posed_Question_Data_20130301.xls with the
following variables.*

Client No	Year	Quarter	Region	No of Products	Revenue
79877014	2010	1	ALBERTA	3	\$121,413.06
81579052	2010	1	ONTARIO	3	\$124,000.16
45121805	2010	2	ALBERTA	2	\$68,585.14
78494145	2010	2	ONTARIO	3	\$119,311.10
80085421	2010	3	ALBERTA	3	\$121,729.84
72184206	2010	3	ONTARIO	3	\$109,719.99
34855818	2010	4	ALBERTA	2	\$52,980.84
46596586	2010	4	ONTARIO	2	\$70,826.81
97376018	2010	1	ALBERTA	4	\$148,011.55
47029204	2010	1	ONTARIO	2	\$71,484.39
69916700	2010	2	ALBERTA	3	\$106,273.38
8035775	2010	2	ONTARIO	1	\$12,214.38
90828252	2010	3	ALBERTA	4	\$138,058.94
82950742	2010	3	ONTARIO	3	\$126,085.13

RESPONDENTS:

Gabriela Nanau

Lavanya Vangala

Art Tabachneck

Stephen Litovitz

SUMMARY OF TECHNIQUES:

- *Imported into SAS from excel.*
- *Some used the Summary Table Task to create a summarized report.*
 - *Summary Table Task Wizard from within an open dataset*
 - *Summary Table Task from the Task Window*
- *Alternate solutions included :*
 - *the use of the List Report Task to generate a Summarized Table*
 - *Mainframe Approach using Proc Tabulate*
- *All entrants produced the output as requested by the customer.*

Well Done!

TASS POSED QUESTION SOLUTION

Entry from Gabriela Nanau

SAS Enterprise Guide - Posed_Question_Data_20130301.egp

File Edit View Tasks Program Tools Help

PROBLEM ▾

Filter and Sort Query Builder Data Describe Graph Analyze Export Send To

	ClientNo	year	
1	79877014	2010	01
2	81579052	2010	01
3	45121805	2010	02
4	78494145	2010	02
5	80085421	2010	03
6	72184206	2010	03
7	34855818	2010	04
8	46596586	2010	04

- List Data...
- Summary Statistics Wizard...
- Summary Statistics...
- Summary Tables Wizard...
- Summary Tables...
- List Report Wizard...

Summary Tables3 for SASApp:WORK.PROBLEM

2 of 6 Select analysis variables and statistics

Analysis variables:

Variable	Statistic
NoOfProducts	Average
Revenue	Sum

Preview:

NoOfProducts	Revenue
Average	Sum
999	999

Analysis variable labels: in columns

Statistics labels: in columns

Select table format

Browse...

Summary Tables3 for SASApp:WORK.PROBLEM

3 of 6 Select classification variables

Columns: Region

Rows: year, Quarter

Pages: (Optional) Click Add to insert a page variable.

Preview:

		Region				Total	
		NoOfProducts	Revenue	NoOfProducts	Revenue	NoOfProducts	Revenue
year	Quarter	Average	Sum	Average	Sum	Average	Sum
		Quarter	999	999	999	999	999
	Quarter	999	999	999	999	999	999
	Quarter	999	999	999	999	999	999
Total		999	999	999	999	999	999

More Options

<Back Next> Finish Cancel Help

Summary Tables3 for SASApp:WORK.PROBLEM

4 of 6 Specify totals

Columns: None

Rows: Totals at each level

Pages: Grand total only

Page totals: First Last

Label for totals: Total

		Region			
		NoOfProducts	Revenue	NoOfProducts	Revenue
year	Quarter	Average	Sum	Average	Sum
				999	999
	Total	999	999	999	999
	Quarter	999	999	999	999
	Total	999	999	999	999
Total		999	999	999	999

<Back Next> Finish Cancel

Summary Tables3 for SASApp:WORK.PROBLEM

5 of 6 Optionally select additional output

Save results to a data set

SASApp:WORK.STABSummaryTablesPROBLEM

Summary Tables3 for SASApp:WORK.PROBLEM

6 of 6 Provide a title and footnote

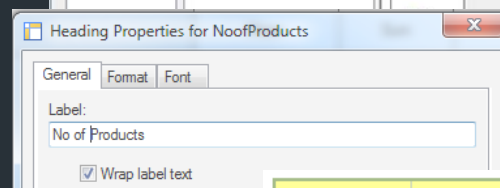
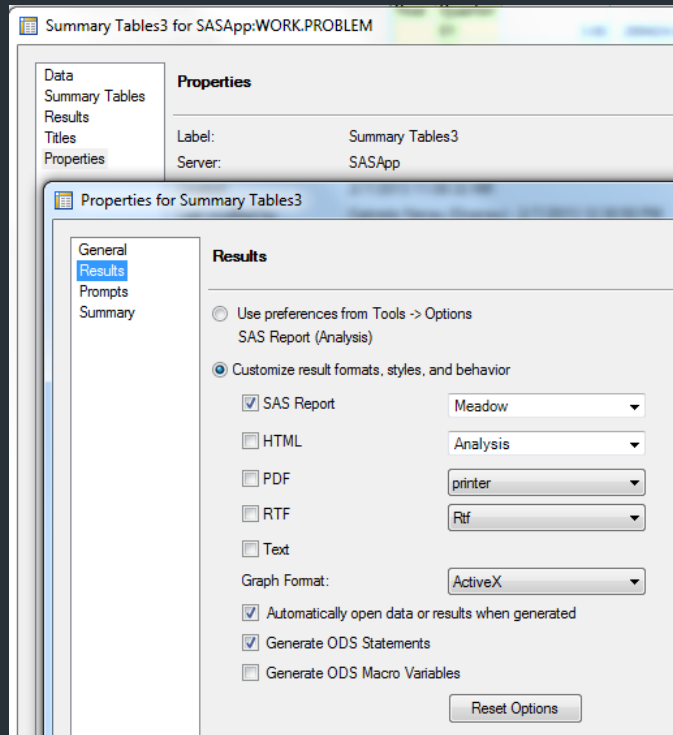
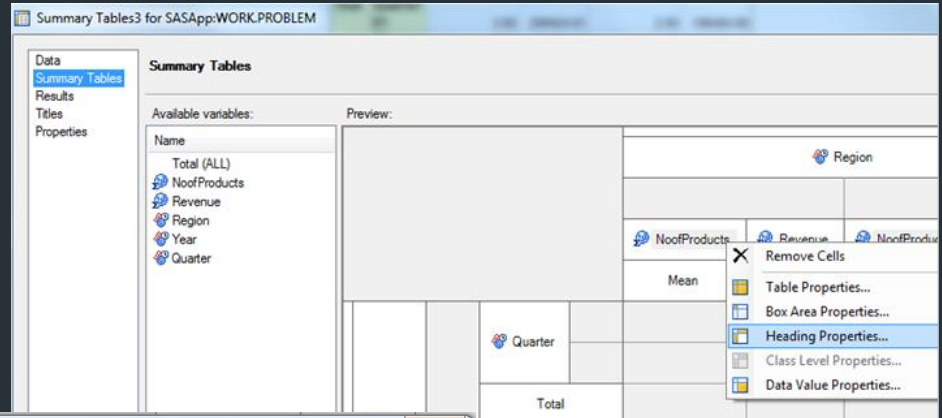
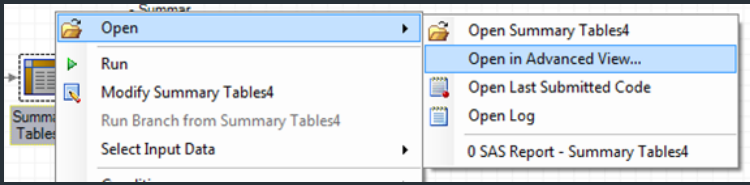
Table Titles: Posed_Question_20130301

Footnote: Solution from Gabriela Nanau, CORNERSTONE Group of Companies, T.O.

Posed_Question_20130301

		Region			
		ALBERTA		ONTARIO	
		NoofProducts	Revenue	NoofProducts	Revenue
Year	Quarter	Average	Sum	Average	Sum
2010	01	3.50	269424.61	2.50	195484.55
	02	2.50	174858.52	2.00	131525.48
	03	3.50	259788.78	3.00	235805.12
	04	2.50	180258.65	2.00	159830.81
	Total	3.00	884330.56	2.38	722645.96
2011	Quarter				
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	03	2.50	182149.06	1.00	46994.02
	04	1.00	11866.74	3.00	97142.22
Total	2.43	571210.08	1.86	343720.18	
2012	Quarter				
	01	1.50	72610.87	3.00	209510.15
	02	1.50	56343.33	2.50	170002.20
	03	1.50	100002.42	1.50	57456.19
	04	1.67	187287.38	2.33	246973.78
Total	1.56	416244.00	2.33	683942.32	
Total		2.29	1871784.64	2.21	1750308.46

Solution from Gabriela Nanau, CORNERSTONE Group of Companies, T.O.



		Region			
		ALBERTA		ONTARIO	
Year	Quarter	NoofProducts	Revenue	NoofProducts	Revenue
		Average	Sum	Average	Sum
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TASS POSED QUESTION SOLUTION

Entry from Lavanya Vangala

Once the data is imported select Tasks->Describe->Summary Tables. Add Analysis and classification variables for Data tab.

The image shows the SAS Enterprise Guide interface. The 'Tasks' menu is open, showing the path: Tasks > Describe > Summary Tables... Two arrows point to these menu items. The 'Summary Tables for Local:WORK.POSE_QUESTION_DATA_20130301' dialog box is open, showing the configuration for the 'Data' role. The 'Variables to assign' list includes Client No, Year, Quarter, Region, No of Products, and Revenue. The 'Task roles' list includes Analysis variables (No of Products, Revenue), Classification variables (Year, Quarter, Region), Pages, Relative weight (Limit: 1), and Frequency count (Limit: 1). The 'Region' variable is selected under Classification variables. The 'Class level "Region"' settings are shown on the right, with 'Sort by' set to 'Uniformate...' and 'Order' set to 'Ascending'. The 'Missing val...' is set to 'Include', 'Restrict lev...' is 'Disabled', 'Multi-label f...' is 'Disabled', and 'Heading for...' is empty. A text box at the bottom explains that the variables assigned to this role are character or discrete numeric variables used to divide the input data into categories.

Summary Tables for Local:WORK.POSE_QUESTION_DATA_20130301

Data source: Local:WORK.POSE_QUESTION_DATA_20130301
Task filter: None

Variables to assign:

Name
Client No
Year
Quarter
Region
No of Products
Revenue

Task roles:

- Analysis variables
 - No of Products
 - Revenue
- Classification variables
 - Year
 - Quarter
 - Region
- Pages
- Relative weight (Limit: 1)
- Frequency count (Limit: 1)

Class level "Region"

Sort by	Uniformate...
Order	Ascending
Missing val...	Include
Restrict lev...	Disabled
Multi-label f...	Disabled
Heading for...	

The variables that you assign to this role are character or discrete numeric variables that are used to divide the input data into categories. The statistics will be calculated on all selected analysis variables for each unique combination of classification variables. You must assign at least one variable to either this role or the Analysis variables role.

Preview code Run Save Cancel Help

Add the variables as given in the preview to the summary tables tab and press 'Run' shown

Summary Tables for Local:WORK.POSED_QUESTION_DATA_20130301

Data
Summary Tables
Results
Titles
Properties

Summary Tables

Available variables:

Name
Total (ALL)
No of Products
Revenue
Year
Quarter
Region

Available statistics:

Name	Description
CSS	Corrected sum of squares
CV	Coefficient of variation
Max	Maximum value
Mean	Mean (average)
Min	Minimum value
N	Number of rows (excluding missing v...
NMiss	Number of rows containing missing v...
PctN	Report based percentage of frequen...
PctSum	Report based percentage of sum (sa...
Probt	2-tailed p-value (Prt)
Range	Range (Max - Min)
Std	Standard deviation (Std)

Preview:

Region			
		No of Products	Revenue
		Mean	Sum
Year	Quarter		
	Total		
Quarter	Quarter		
	Total		
Total			

Page by: <none>

The selection pane enables you to choose different sets of options for the task.

Preview code

Run Save Cancel Help

Yes. We have arrived at the solution. -

		Region			
		ALBERTA		ONTARIO	
		No of Products	Revenue	No of Products	Revenue
		Average	Sum	Average	Sum
Year	Quarter				
2010	01	3.50	269424.61	2.50	195484.55
	02	2.50	174858.53	2.00	131525.48
	03	3.50	259788.78	3.00	235805.12
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	Total	1.56	416244.00	2.33	683942.33
Total		2.29	1871784.65	2.21	1750308.47

- Lavanya Vangala Sr.Analyst Cancer care Ontario

TASS POSED QUESTION SOLUTION

Entry from Art Tabachneck

Only changes made to EG code

```

proc report data=WORK.POSEQ_QUESTION_DATA_20130301 nowd;
  column Year Quarter Region, ('No of Products'n,
    MEAN='No of Products_MEAN'n Revenue, SUM=Revenue_SUM);
  define Region / across 'Region' format=$CHAR7. missing order=formatted;
  define 'No of Products'n / analysis MEAN 'No of Products' format=5.2 missing;
  define 'No of Products_MEAN'n / 'Average' format=5.2;
  define Revenue / analysis SUM 'Revenue' format=12.2 missing;
  define Revenue_SUM / 'Sum' format=12.2;
  define Year / group 'Year' format=$CHAR5. missing order=internal;
  compute Year;
    if upcase(_break_) eq "YEAR" then do;
      end;
    if upcase(_break_)="YEAR" then do;
      call define("Year", 'style', 'style=[pretext=""]');
      year='';
    end;
    if _break_='_RBREAK_' then do;
      call define("Year", 'style', 'style=[pretext=""]');
      year='Total';
      quarter=' ';
    end;
  endcomp;
  define Quarter / group 'Quarter' format=$CHAR5. missing order=internal;
  compute Quarter;
    if _break_ eq ' ' then do;
      if Quarter ne ' ' then hold1=Quarter;
    end;
    else if _break_ ne '_RBREAK_' then quarter='Total';
    else quarter=' ';
  endcomp;
  break after Year / summarize;
  rbreak after / summarize;
run;
quit;

```


Problem Solution – Result

The one discrepancy: I Couldn't figure out how to center years across the rows

		No of				
Year	Quarter	Average	Sum	Average	Sum	
2010	Q1	3.50	269424.61	2.50	195484.55	
	Q2	2.50	174858.53	2.00	131525.48	
	Q3	3.50	259788.78	3.00	235805.12	
	Q4	2.50	180258.66	2.00	159830.81	
	<i>Total</i>	3.00	884330.58	2.38	722645.96	
2011	Q1	3.00	214885.31	1.00	13853.16	
	Q2	2.50	162308.97	3.00	185730.79	
	Q3	2.50	182149.06	1.00	46994.01	
	Q4	1.00	11866.74	3.00	97142.22	
	<i>Total</i>	2.43	571210.08	1.86	343720.18	
2012	Q1	1.50	72610.87	3.00	209510.15	
	Q2	1.50	56343.33	2.50	170002.20	
	Q3	1.50	100002.41	1.50	57456.19	
	Q4	1.67	187287.38	2.33	246973.78	
	<i>Total</i>	1.56	416244.00	2.33	683942.33	
Total		2.29	1871784.65	2.21	1750308.47	

Problem Solution – Repaired Result

with the help of that other EG product: MS Paint

List Report

		Region			
		ALBERTA		ONTARIO	
		No of Products	Revenue	No of Products	Revenue
Year	Quarter	Average	Sum	Average	Sum
2010	01	3.50	269424.61	2.50	195484.55
	02	2.50	174858.53	2.00	131525.48
	03	3.50	259788.78	3.00	235805.12
	04	2.50	180258.66	2.00	159830.81
	<i>Total</i>	3.00	884330.58	2.38	722645.96
2011	01	3.00	214885.31	1.00	13853.16
	02	2.50	162308.97	3.00	185730.79
	03	2.50	182149.06	1.00	46994.01
	04	1.00	11866.74	3.00	97142.22
	<i>Total</i>	2.43	571210.08	1.86	343720.18
2012	01	1.50	72610.87	3.00	209510.15
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	03	1.50	100002.41	1.50	57456.19
	04	1.67	187287.38	2.33	246973.78
	<i>Total</i>	1.56	416244.00	2.33	683942.33
Total		2.29	1871784.65	2.21	1750308.47

TASS POSED QUESTION SOLUTION

Solution from Stephen Litovitz

SAS SOLUTION USING TABULATE PROC

Excel file – Will be saved as tab delimited txt file for uploading to host.

<i>Client No</i>	<i>Year</i>	<i>Quarter</i>	<i>Region</i>	<i>No of Products</i>	<i>Revenue</i>
79877014	2010	01	ALBERTA	3	"\$121,413.06"
81579052	2010	01	ONTARIO	3	"\$124,000.16"
45121805	2010	02	ALBERTA	2	"\$68,585.14"
78494145	2010	02	ONTARIO	3	"\$119,311.10"
80085421	2010	03	ALBERTA	3	"\$121,729.84"
72184206	2010	03	ONTARIO	3	"\$109,719.99"

After uploading tab delimited txt file to mainframe.

- *-IPT- BROWSE DDST.SAS.POSTED.INPUT.DT130222.V*
- *Command ==>*
- ****** Top of Data ***
- *79877014.2010.01.ALBERTA.3."121,413.06"*
- *81579052.2010.01.ONTARIO.3."124,000.16"*
- *45121805.2010.02.ALBERTA.2."68,585.14"*
- *-----*
- *Client No.Year.Quarter.Region.No of Products.Revenue*
- *C9889A4D90E8890DA89A890D888990D94984D998A8AA0D8A89A8*
- *3395530565851958419359595796555606607964433259555545*
- *-----*
- *79877014.2010.01.ALBERTA.3."\$121,413.06"*
- *FFFFFFFF0FFF0FF0CDCDEC0F075FFF6FFF4FF7*
- *798770145201050151325931535FB121B413B06F*

Submit batch job.

```
//STEP010 EXEC SAS, SORT=6
//WORK      DD UNIT=(,4),SPACE=(CYL,(2,1))
//*****
//***      INPUT DATASETS
//*****
//IFILE1    DD DISP=SHR,DSN=DDST.SAS.POSTED.INPUT.DT130222.V2
//*****
//***      OUTPUT DATASETS
//*****
//SASLOG    DD DSN=DDST.SAS.POSTED.QUESTION.D130222.LOG.V1,
//          UNIT=TSS1,
//          DISP=(NEW,CATLG,DELETE),
//          SPACE=(CYL,(1,1),RLSE),
//          LRECL=133,RECFM=FB
//SASRPT    DD DSN=DDST.SAS.POSTED.QUESTION.D130222.RPT.V1,
//          DISP=(NEW,CATLG,DELETE),
//          UNIT=TSS1,SPACE=(CYL,(1,1),RLSE),
//          RECFM=FB,LRECL=100
```

Reading text delimited file.

(Cont'd)

```
//SYSIN DD *
  OPTIONS ERRORS = 0 NOCENTER;
  PROC PRINTTO PRINT=SASRPT;
  PROC PRINTTO LOG=SASLOG;

  DATA SAS_QUESTION(DROP=RECTYPE);
  LENGTH RECTYPE $1.;
  INFILE IFILE1 END = EOF1 DSD DLM='05'X;
  INPUT
      CLIENT
      YEAR
      QUARTER
      REGION          :   $CHAR7.
      NUMB_OF_PRODS
      REVENUE         :   DOLLAR12.2
      ;
  RECTYPE = SUBSTR(CLIENT,1,1);
  IF ANYDIGIT(RECTYPE) = 0 THEN
      OUTPUT SAS_QUESTION;
```

SORT and TABULATE PROC.

(Cont'd)

```
PROC SORT DATA=SAS_QUESTION OUT=SORTED_SAS_QUESTION;  
  BY REGION YEAR QUARTER;
```

```
PROC TABULATE DATA=SORTED_SAS_QUESTION;  
  CLASS YEAR QUARTER REGION;  
  VAR NUMB_OF_PRODS REVENUE;  
  TABLE YEAR*(QUARTER ALL='TOTAL'),  
          REGION*(NUMB_OF_PRODS*MEAN*F=14.2  
                 REVENUE*SUM='SUM')
```

```
  ;
```

```
  KEYLABEL MEAN = 'AVERAGE';
```

```
  LABEL NUMB_OF_PRODS = 'NO OF PRODUCTS'
```

```
  ;
```

```
//
```

```
//***** end of job *****
```


Downloaded of DDST.SAS.POSTED.QUESTION.D130222.RPT.V1 to LAN drive as txt file.

		REGION			
		ALBERTA		ONTARIO	
		NO OF PRODUCTS	REVENUE	NO OF PRODUCTS	REVENUE
YEAR	QUARTER	AVERAGE	SUM	AVERAGE	SUM
2010	1	3.50	269424.61	2.50	195484.55
	2	2.50	174858.52	2.00	131525.48
	3	3.50	259788.78	3.00	235805.12
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	4	1.67	187287.38	2.33	246973.78
	TOTAL	1.56	416244.00	2.33	683942.32

Thanks to all the participants !

PQ Ideas for the Next TASS-I should be
sent to Jburkhardt.Consulting@Bell.net