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NOTE: SAS (r) Proprietary Software 9.4 (TS1M3)

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NOTE: This session is executing on the X64_8PRO platform.

NOTE: Updated analytical products:

SAS/STAT 14.1
SAS/ETS 14.1
SAS/OR 14.1
SAS/IML 14.1
SAS/QC 14.1

NOTE: Additional host information:

X64_8PRO WIN 6.2.9200 Workstation

NOTE: SAS initialization used:

real time 1.11 seconds
cpu time 0.96 seconds

```
1  *STEP 0 ;
2  /*****
2  ! *****/
3  /*1. Program Name:Vivek235_HW08_Program.sas
3  ! */
4  /* Program Location: C:\Users\vigupta\OneDrive\Learning\DataScience\Statistics Texas A&M
4  ! University\657\Homework\Assignment08\Vivek235_HW08_Program.sas */
5  /* Date Created: 3/18/17
5  ! */
6  /* Author: Vivek Kumar Gupta
6  ! */
7  /* Purpose:The objective of this assignment is to practice using outer joins and creating SQL
7  ! views. It will also
8  reinforce the concepts of subqueries and inline views to create a complex query. All of the
9  information necessary to complete this assignment was covered by the end of Lecture 11.
9  ! */
10 /*****
10 ! *****/
```

```

11
12 *STEP 0 - Setup of libraries and filerefs. Use a filename statement to define the path to the
12 ! PDF output file.;
13
14 *1.Create the necessary library references for data sources and destination and file references
14 ! for output.;
15 libname mydata 'C:\Users\vigupta\OneDrive\Learning\DataScience\Statistics Texas A&M
15 ! University\657\Homework\Assignment08\mydata' ;
NOTE: Libref MYDATA was successfully assigned as follows:
      Engine:          V9
      Physical Name: C:\Users\vigupta\OneDrive\Learning\DataScience\Statistics Texas A&M
      University\657\Homework\Assignment08\mydata
16 filename pdfdev 'C:\Users\vigupta\OneDrive\Learning\DataScience\Statistics Texas A&M
16 ! University\657\Homework\Assignment08\Vivek235_HW08_Output.pdf';
17
18 * Turn off page numbering and date printing to match the output formatting;
19 option nonumber nodate;
20
21 /*Open destination device, set no bookmarks to be generated per the output*/
22 ods pdf file=pdfdev bookmarkgen=no ;
NOTE: Writing ODS PDF output to DISK destination "PDFDEV", printer "PDF".
23
24 /*STEP 1. Use a single PROC SQL statement to create a permanent and portable view in the library
24 ! as directed in the instructions*/
25
26 proc sql ;
27 create view mydata.femdonors
28 as
29 select ep.employee_id label = 'ID'
30        ,edd.employee_name label = 'Name'
31        , ep.salary format dollar8.
32        ,ed.Qtr1
33        ,ed.Qtr2
34        ,ed.Qtr3
35        ,ed.Qtr4
36        ,sum(ed.Qtr1,ed.Qtr2,ed.Qtr3,ed.Qtr4) as tot_donation label = 'Ann. Donation'
37 from orion.employee_payroll as ep
38 join orion.employee_addresses as edd
39     on ep.employee_id=edd.employee_id
40 left join orion.employee_donations as ed
41     on ep.employee_id=ed.employee_id

```

```

42  where ep.employee_gender='F'
43         and not ep.employee_term_date
44         and ep.employee_hire_date between '01Jan2006'd and '31Dec2006'd
45  order by employee_id
46  using libname orion 'C:\Users\vigupta\OneDrive\Learning\DataScience\Statistics Texas A&M
46 ! University\657\SQL Files';
NOTE: SQL view MYDATA.FEMDONORS has been defined.
47  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time          0.03 seconds
      cpu time           0.03 seconds

48
49  /*STEP 2. Use the CONTENTS procedure to display the contents of your permanent library without
50  showing the descriptor portion of each data set*/
51  proc contents data=mydata._all_ nods;
NOTE: Writing HTML Body file: sashtml.htm
52  run;

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time          0.37 seconds
      cpu time           0.26 seconds

53
54  /*STEP 3. Run a second CONTENTS procedure to show the ||descriptor portion= of the view created
54 ! above.*/
55  proc contents data=mydata.femdonors;
56  run;

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time          0.15 seconds
      cpu time           0.04 seconds

57
58  /*Add appropriate title*/
59  title "Donations by Active Female Employees Hired in 2006";
60
61  /*STEP 4. Run a SQL statement that writes the definition of the view to the SAS Log*/

```

```
62  proc sql ;
63  describe view mydata.femdonors;
NOTE: SQL view MYDATA.FEMDONORS is defined as:
```

```
        select ep.employee_id label='ID', edd.employee_name label='Name', ep.salary format=DOLLAR8.0,
ed.Qtr1, ed.Qtr2, ed.Qtr3, ed.Qtr4, SUM(ed.Qtr1, ed.Qtr2, ed.Qtr3, ed.Qtr4) as tot_donation
label='Ann. Donation'
        from ORION.employee_payroll ep inner join ORION.employee_addresses edd on ep.employee_id =
edd.employee_id left outer join ORION.employee_donations ed on ep.employee_id = ed.employee_id
        where (ep.employee_gender = 'F') and (not ep.employee_term_date) and ep.employee_hire_date
between '01JAN2006'D and '31DEC2006'D
        order by employee_id asc
        using libname orion 'C:\Users\vigupta\OneDrive\Learning\DataScience\Statistics Texas A&M
University\657\SQL Files';
```

```
64  quit;
NOTE: PROCEDURE SQL used (Total process time):
        real time          0.12 seconds
        cpu time            0.09 seconds
```

```
65
66  /*STEP 5. Use a SQL statement to access the view and print all the data returned by the view.
66 ! Create a
67  footnote indicating the source as SQL.*/
68  footnote "Output from SQL";
69  proc sql ;
70  select  aed.employee_id
71          ,aed.employee_name
72          ,aed.salary
73          ,aed.qtr1
74          ,aed.qtr2
75          ,aed.qtr3
76          ,aed.qtr4
77          ,aed.tot_donation
78  from mydata.femdonors as aed;
NOTE: Invalid (or missing) arguments to the SUM function have caused the function to return a missing
value.
79
80  quit;
NOTE: PROCEDURE SQL used (Total process time):
```

```
real time      0.17 seconds
cpu time       0.14 seconds
```

```
81
82 /*STEP 6.Use Proc Print to print the data returned by the view. Use a footnote to indicate source
82 ! as Proc
83 Print.*/
84 footnote "Output from Proc Print";
85 proc print data=mydata.femdonors label noobs;
86 run;
```

NOTE: Invalid (or missing) arguments to the SUM function have caused the function to return a missing value.

NOTE: There were 35 observations read from the data set ORION.EMPLOYEE_PAYROLL.
WHERE (Employee_Gender='F') and (not Employee_Term_Date) and (Employee_Hire_Date>='01JAN2006'D
and Employee_Hire_Date<='31DEC2006'D);

NOTE: There were 424 observations read from the data set ORION.EMPLOYEE_ADDRESSES.

NOTE: There were 124 observations read from the data set ORION.EMPLOYEE_DONATIONS.

NOTE: There were 35 observations read from the data set MYDATA.FEMDONORS.

NOTE: PROCEDURE PRINT used (Total process time):

```
real time      0.17 seconds
cpu time       0.12 seconds
```

```
87
88
89
90 /*Hosuse keeping. Resetting defaults*/
91 title;
92 footnote;
93 option number date;
94
95 /**Close the device*/
96 ods pdf close;
```

NOTE: ODS PDF printed 4 pages to C:\Users\vigupta\OneDrive\Learning\DataScience\Statistics Texas A&M
University\657\Homework\Assignment08\Vivek235_HW08_Output.pdf.