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NOTE: SAS (r) Proprietary Software 9.4 (TS1M2)
      Licensed to TEXAS A&M UNIVERSITY - SFA T&R, Site 70080787.
NOTE: This session is executing on the X64_8PRO  platform.



NOTE: Updated analytical products:

      SAS/STAT 13.2
      SAS/ETS 13.2
      SAS/OR 13.2
      SAS/IML 13.2
      SAS/QC 13.2

WARNING: Your system is scheduled to expire on November 29, 2016, which is 44 days from now. The
         SAS System will no longer function on or after that date. Please contact your SAS
         Installation Representative to obtain your updated SAS Installation Data (SID) file,
         which includes SETINIT information.
To locate the name of your SAS Installation Representative go to http://support.sas.com/repfinder
and provide your site number 70080787 and company name as TEXAS A&M UNIVERSITY - SFA T&R. On the
SAS REP list provided, locate the REP for operating system Windows.
NOTE: Additional host information:

 X64_8PRO WIN 6.2.9200  Workstation

NOTE: SAS initialization used:
      real time           0.89 seconds
      cpu time            0.56 seconds

WARNING: The Base SAS Software product with which RESULTS is associated will be expiring soon, and
WARNING: is currently in warning mode to indicate this upcoming expiration. Please run PROC
WARNING: SETINIT to obtain more information on your warning period.
1    /*******************************************************************************
2     Program Name: jblubau1_hw09_script
3     Date Created: 10/16/2016
4     Author: Joseph Blubaugh
5     Purpose: Homework Assignment 9
6    ******************************************************************************* */
7
8    libname datadb 'C:\Users\Joseph\Projects\learning\Statistics\STAT_604\Materials'
8  ! access=readonly;
NOTE: Libref DATADB was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\Joseph\Projects\learning\Statistics\STAT_604\Materials
9    libname output 'C:\Users\Joseph\Projects\learning\Statistics\STAT_604\Data';
NOTE: Libref OUTPUT was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\Joseph\Projects\learning\Statistics\STAT_604\Data
10
11   * 3) Step output file name;
12   filename outpdf
12 ! 'C:\Users\Joseph\Projects\learning\Statistics\STAT_604\Homework\jblubau1_hw09_output.pdf';
13
14   * 4) Read in data into permanent library;
15   data output.bls;
16       set datadb.tabled1x2016;
```

```
17      * a) Get rid of blank rows;
18      where state is not null;
19      * b) Relabel months;
20      label Aug__2015 = 'August 2015'
21            Sept__2015 = 'September 2015'
22            Oct__2015 = 'Octoboer 2015'
23            Nov__2015 = 'November 2015'
24            Dec__2015 = 'December 2015'
25            Jan__2016 = 'January 2016'
26            Feb__2016 = 'February 2016'
27            Mar__2016 = 'March 2016'
28            Apr__2016 = 'April 2016'
29            May_2016 = 'May 2016'
30            June_2016 = 'June 2016'
31            July_2016 = 'July 2016'
32            Aug__2016 = 'August 2016'
33            report_date = 'Report Date'
34            annual_change = 'Annual Change';
35      * c) Create Report Date Column;
36      report_date = '08oct2016'd;
37      format report_date MMDDYY10.
38             annual_change percent8.1;
39      * d) Create percent change Aug15 to Aug16;
40      annual_change = (Aug__2016 - Aug__2015)/Aug__2015;
41    run;

NOTE: Missing values were generated as a result of performing an operation on missing values.
      Each place is given by: (Number of times) at (Line):(Column).
      7 at 40:32
NOTE: There were 424 observations read from the data set DATADB.TABLED1X2016.
      WHERE state is not null;
NOTE: The data set OUTPUT.BLS has 424 observations and 17 variables.
NOTE: DATA statement used (Total process time):
      real time          0.03 seconds
      cpu time           0.03 seconds


42
43    * 5) Create a subset where year over year chnages are > 10%;
44    data bigchange;
45      set output.bls;
46      where (annual_change >= .1 or annual_change < -.1) and annual_change is not missing;
47      keep industry state aug__2015 aug__2016 report_date annual_change;
48    run;

NOTE: There were 4 observations read from the data set OUTPUT.BLS.
      WHERE  not (annual_change>=-0.1 and annual_change<0.1) and (annual_change is not null);
NOTE: The data set WORK.BIGCHANGE has 4 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time          0.00 seconds
      cpu time           0.00 seconds


49
50    * 6) Create subset where jobs in Aug16 are greater than Aug15;
51    data growth;
52      set output.bls;
```

```
53      drop Aug__2015 Sept__2015 Oct__2015 Nov__2015 Dec__2015 report_date annual_change;
54      where (Aug__2016 - July_2016) >= 1;
55   run;

NOTE: There were 102 observations read from the data set OUTPUT.BLS.
      WHERE (Aug__2016-July_2016)>=1;
NOTE: The data set WORK.GROWTH has 102 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      cpu time            0.01 seconds


56
57   * 7) Create subset of August15/16 for services;
58   data services;
59      set output.bls;
60      keep Industry State Aug__2015 Aug__2016 annual_change report_date;
61      where annual_change is not null and industry like '%SERVICES%';
62      format Aug__2015 Aug__2016 comma8.;
63   run;

NOTE: There were 104 observations read from the data set OUTPUT.BLS.
      WHERE (annual_change is not null) and industry like '%SERVICES%';
NOTE: The data set WORK.SERVICES has 104 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      cpu time            0.00 seconds


64
65   * 8) Create subset of southern states;
66   data southern;
67      set output.bls;
68      where (state in ('Texas' 'Oklahoma' 'Arkansas' 'Louisiana' 'Mississippi' 'Kentucky'
69                  'Florida' 'Georgia' 'South Carolina' 'North Carolina' 'Virginia')
70            or state like 'Alabama%'
71            or state like 'Tennessee%'
72            or state like 'District of Columbia%')
73            and Industry ne 'GOVERNMENT';
74      drop Aug__2015 Sept__2015 Oct__2015 Nov__2015 Dec__2015 report_date;
75   run;

NOTE: There were 98 observations read from the data set OUTPUT.BLS.
      WHERE (state in ('Arkansas', 'Florida', 'Georgia', 'Kentucky', 'Louisiana', 'Mississippi',
      'North Carolina', 'Oklahoma', 'South Carolina', 'Texas', 'Virginia') or state like
      'Alabama%' or state like 'Tennessee%' or state like 'District of Columbia%') and (Industry
      not = 'GOVERNMENT');
NOTE: The data set WORK.SOUTHERN has 98 observations and 11 variables.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      cpu time            0.01 seconds


76
77   * 9) Create pdf output with no bookmarks;
78   ods pdf file=outpdf bookmarkgen=no startpage=never;
NOTE: Writing ODS PDF output to DISK destination "OUTPDF", printer "PDF".
```

```
79
80   * 10) Print descriptor portion of bls;
81   proc contents data=output.bls nods;
NOTE: Writing HTML Body file: sashtml.htm
82   run;

WARNING: Option NODS can only be used with _ALL_.
NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.29 seconds
      cpu time            0.18 seconds


83
84   * 11) Print the contents of the work directory;
85   proc contents data=work._all_ nods;
86   run;

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.03 seconds
      cpu time            0.00 seconds


87
88   * 12) Print data portion of big change dataset;
89   proc print data=bigchange noobs label;
90       var /*report_date */ annual_change state industry aug__2016 aug__2015;
91   run;

NOTE: There were 4 observations read from the data set WORK.BIGCHANGE.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.04 seconds
      cpu time            0.01 seconds


92
93   * 13) Print Growth datset;
94   proc print data=growth noobs label;
95   run;

NOTE: There were 102 observations read from the data set WORK.GROWTH.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.23 seconds
      cpu time            0.09 seconds


96
97   proc print data=services label;
98       var state aug__2015 aug__2016 annual_change industry report_date;
99   run;

NOTE: There were 104 observations read from the data set WORK.SERVICES.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.09 seconds
      cpu time            0.06 seconds


100
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```
101  proc print data=southern noobs label;
102  run;

NOTE: There were 98 observations read from the data set WORK.SOUTHERN.
NOTE: PROCEDURE PRINT used (Total process time):
      real time          0.10 seconds
      cpu time           0.06 seconds


103
104  ods pdf close;
NOTE: ODS PDF printed 12 pages to
      C:\Users\Joseph\Projects\learning\Statistics\STAT_604\Homework\jblubau1_hw09_output.pdf.
```