```
NOTE: This session is executing on the X64_10PRO  platform.



NOTE: Updated analytical products:

      SAS/STAT 14.3
      SAS/ETS 14.3
      SAS/OR 14.3
      SAS/IML 14.3
      SAS/QC 14.3

NOTE: Additional host information:

 X64_10PRO WIN 10.0.17763  Workstation

NOTE: SAS initialization used:
      real time           4.37 seconds
      cpu time            1.37 seconds

WARNING: One or more libraries specified in the concatenated library
SASHELP
WARNING: do not exist.  These libraries were removed from the
concatenation.
1
/*****************************************************************/
2    /* Date Last Submitted: 6/4/2019
*/
3    /* Program Name:
*/
4    /* Program Location: C:\Users\dsingh\Dropbox\Stat_604\Homework\HW3
*/
5    /* Date Created:
*/
6    /* Author: Dhruv Singh
*/
7    /* Purpose:
*/
8
9    /* Step 2: creating libref to tx_schools dataset */
10   libname txsch
'C:\Users\dsingh\Dropbox\Tamu\Stat_604\Homework\hwdata' access =
10 ! readonly;
NOTE: Libref TXSCH was successfully assigned as follows:
      Engine:        V9
      Physical Name:
C:\Users\dsingh\Dropbox\Tamu\Stat_604\Homework\hwdata
11
12   * reading in tx_schools dataset;
13   data texas_hs;
14       set txsch.tx_schools;
15   run;

NOTE: There were 10534 observations read from the data set
TXSCH.TX_SCHOOLS.
NOTE: The data set WORK.TEXAS_HS has 10534 observations and 17 variables.
NOTE: DATA statement used (Total process time):
      real time           0.07 seconds
      cpu time            0.03 seconds
```

```
16
17   /* Step 3: creating libref to permanent data directory */
18   libname my_lib 'C:\Users\dsingh\Dropbox\Tamu\Stat_604\Homework\HW4';
NOTE: Libref MY_LIB was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\dsingh\Dropbox\Tamu\Stat_604\Homework\HW4
19
20   /* Step 4: pdf fileref */
21   filename dns
21 !
'C:\Users\dsingh\Dropbox\Tamu\Stat_604\Homework\HW4\DSingh_HW04_output.pd
f';
22
23   /* Step 5: subsetting to relevant observations */
24   data my_lib.texas_hs;
25       set work.texas_hs;
26       where (sr>=1) or (jr>=1) or (so>=1) or (fr>=1);
27       drop state type level f16 f17;
28       label fte_teachers = 'Teachers (FTE)'
29             ptr = 'Student/Teacher Ratio'
30             control = 'School Type'
31             gr8 = 'Eighth Graders'
32             fr = 'Freshmen'
33             so = 'Sophomores'
34             jr = 'Juniors'
35             sr = 'Seniors';
36   run;

NOTE: There were 2735 observations read from the data set WORK.TEXAS_HS.
      WHERE (sr>=1) or (jr>=1) or (so>=1) or (fr>=1);
NOTE: The data set MY_LIB.TEXAS_HS has 2735 observations and 12
variables.
NOTE: DATA statement used (Total process time):
      real time           0.07 seconds
      cpu time            0.03 seconds


37
38   * creating new variable to compute enrollment;
39   data my_lib.texas_hs;
40       set my_lib.texas_hs;
41       enrollment = sum(fr, so, jr, sr);
42       label enrollment = 'HS Enrolment';
43   run;

NOTE: There were 2735 observations read from the data set
MY_LIB.TEXAS_HS.
NOTE: The data set MY_LIB.TEXAS_HS has 2735 observations and 13
variables.
NOTE: DATA statement used (Total process time):
      real time           1.05 seconds
      cpu time            0.01 seconds


44
45   * creating new variable to compute current date;
46   data my_lib.texas_hs;
47       set my_lib.texas_hs;
48       origin_date = today();
```

```
49        label origin_date = 'Origin Date';
50        format origin_date MMDDYY10.;
51    run;

NOTE: There were 2735 observations read from the data set
MY_LIB.TEXAS_HS.
NOTE: The data set MY_LIB.TEXAS_HS has 2735 observations and 14
variables.
NOTE: DATA statement used (Total process time):
      real time           0.06 seconds
      cpu time            0.01 seconds


52
53
54    /* ods */
55    ods pdf file= dns notoc;
NOTE: Writing ODS PDF output to DISK destination "DNS", printer "PDF".
56
57    /* Step 6: ods, printing the descriptor portion */
58    title 'Step 6: Descriptor Portion of Revised Texas High School Data
Set';
59
60    proc contents data = my_lib.texas_hs;
NOTE: Writing HTML Body file: sashtml.htm
61    run;

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.89 seconds
      cpu time            0.39 seconds


62
63    /* Step 7: printing the first 10 observations */
64    title 'Step 7: First 10 Observations of Revised Texas High School
Data Set';
65
66    proc print data = my_lib.texas_hs(obs=10) label;
67    run;

NOTE: There were 10 observations read from the data set MY_LIB.TEXAS_HS.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.05 seconds
      cpu time            0.01 seconds


68
69    /* Step 8: creating temporary data set for academy list */
70    data work.academy_list;
71        set my_lib.texas_hs;
72        keep school enrollment county control;
73        where school contains 'ACADEMY' and school not eq 'ACADEMY H S';
74    run;

NOTE: There were 364 observations read from the data set MY_LIB.TEXAS_HS.
      WHERE school contains 'ACADEMY' and (school not = 'ACADEMY H S');
NOTE: The data set WORK.ACADEMY_LIST has 364 observations and 4
variables.
NOTE: DATA statement used (Total process time):
      real time           0.04 seconds
```

```
      cpu time            0.03 seconds


75
76   /* Step 9: printing academy list */
77   title 'Step 9: List of Academies';
78
79   proc print data = work.academy_list label;
80   var school enrollment county control;
81   run;

NOTE: There were 364 observations read from the data set
WORK.ACADEMY_LIST.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.28 seconds
      cpu time            0.25 seconds


82
83
84   /* Step 10: creating temporary data set for seniors proportion */
85   data work.seniors;
86       set my_lib.texas_hs;
87       keep school county gr8 fr so jr sr enrollment;
88       where sr > .25*(enrollment) and not(fr=. & jr=. & so=.);
89   run;

NOTE: There were 675 observations read from the data set MY_LIB.TEXAS_HS.
      WHERE (sr>(0.25*enrollment)) and ((fr not = .) or (jr not = .) or
(so not = .));
NOTE: The data set WORK.SENIORS has 675 observations and 8 variables.
NOTE: DATA statement used (Total process time):
      real time           0.04 seconds
      cpu time            0.01 seconds


90
91   /* Step 11: printing academy list */
92   title 'Step 11: Schools with Larger Senior Class';
93
94   proc print data = work.seniors label noobs;
95   var school enrollment sr jr so fr gr8 county;
96   run;

NOTE: There were 675 observations read from the data set WORK.SENIORS.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.73 seconds
      cpu time            0.57 seconds


97
98   /* Step 12: creating multiple temp datasets */
99   data SixA (drop = Division) TAPS3 (drop = Division County) Align19;
100      set my_lib.texas_hs;
101      drop control fte_teachers ptr;
102      where (sr >= 1) and (jr >= 1) and (so >= 1) and (fr >= 1);
103      Division = 'TAPS0';
104      if Control = 'Public' and (Enrollment < 81) then Division = '1A'
;
```

```
105      else if Control = 'Public' and (81 <= Enrollment <= 200) then
Division = '2A';
106      else if Control = 'Public' and (201 <= Enrollment <= 400) then
Division = '3A';
107      else if Control = 'Public' and (401 <= Enrollment <= 800) then
Division = '4A';
108      else if Control = 'Public' and (801 <= Enrollment <= 1600) then
Division = '5A';
109      else if Control = 'Public' and (1601 <= Enrollment) then
Division = '6A';
110
111      if Control = 'Private' and (Enrollment <= 55) then Division =
'TAPS1';
112      else if Control = 'Private' and (56 <= Enrollment <= 110) then
Division = 'TAPS2'
112! ;
113      else if Control = 'Private' and (111 <= Enrollment) then
Division = 'TAPS3';
114
115      select (Division);
116          when ('6A') output SixA;
117          when ('TAPS3') output TAPS3;
118          when ('1A', '2A', '3A', '4A', '5A', '6A', 'TAPS1', 'TAPS2',
'TAPS3') output
118! Align19;
119          otherwise;
120      end;
121  run;

NOTE: There were 2120 observations read from the data set
MY_LIB.TEXAS_HS.
      WHERE (sr>=1) and (jr>=1) and (so>=1) and (fr>=1);
NOTE: The data set WORK.SIXA has 339 observations and 11 variables.
NOTE: The data set WORK.TAPS3 has 115 observations and 10 variables.
NOTE: The data set WORK.ALIGN19 has 1666 observations and 12 variables.
NOTE: DATA statement used (Total process time):
      real time           0.09 seconds
      cpu time            0.03 seconds


122
123  /* Step 13: creating GradeCount dataset */
124  data GradeCount (keep = school division grade students);
125      set align19;
126      if gr8 ne 0 | gr8 ne . then do;
127          grade = 'Eighth';
128          students = gr8;
129      end;
130      output;
131      if fr ne 0 | fr ne . then do;
132          grade = 'Freshman';
133          students = fr;
134      end;
135      output;
136      if so ne 0 | so ne . then do;
137          grade = 'Sophomore';
138          students = so;
139      end;
140      output;
141      if jr ne 0 | jr ne . then do;
```

```
142          grade = 'Junior';
143          students = jr;
144      end;
145      output;
146      if sr ne 0 | sr ne . then do;
147          grade = 'Senior';
148          students = sr;
149      end;
150      output;
151  run;

NOTE: There were 1666 observations read from the data set WORK.ALIGN19.
NOTE: The data set WORK.GRADECOUNT has 8330 observations and 4 variables.
NOTE: DATA statement used (Total process time):
      real time           0.03 seconds
      cpu time            0.04 seconds


152
153  /* Step 14: displaying proc contents for all temp datasets*/
154  title 'Step 14: List of Data Sets in Work Library';
155
156  proc contents data = work._ALL_ nods;
157  run;

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.05 seconds
      cpu time            0.01 seconds


158
159  /* Step 15: printing from firstobs = b f terry onward */
160  title 'Step 15: Sample of Align19 Data Set';
161
162  proc print data = work.align19 (firstobs = 50 obs=50) noobs;
163  run;

NOTE: There were 1 observations read from the data set WORK.ALIGN19.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.03 seconds
      cpu time            0.03 seconds
```