```
1         OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
NOTE: ODS statements in the SAS Studio environment may disable some output features.
69
70        /*****************************************************************************/
71        /* Program Name: STAT 604 HW#10   */
72        /* Date Created: 10/26/2021    */
73        /* Author: Jack Rodoni    */
74        /* Purpose: STAT 604 HW#10    */
75        /* Date Modified: 10/28/2021     */
76        /* Location: /home/u59649056/Homeworks/JRodoni_Homework10.sas    */
77        /*****************************************************************************/
78
79        /* 1.) Housekeeping to clear any titles and footnotes and to turn off the printing of procedure titles*/
80
81        TITLE;
82        FOOTNOTE;
83        ods noproctitle;
84
85        /* 2.) Assign a libref to the mylib folder containing your permanent data sets. If you are going to use */
86        /*     the professor's data set on SAS Studio, assign a separate library to the Fall2021 folder and add */
87        /*     access=readonly to the end of the libname statement. Create a fileref to the pdf file for output.*/
88
89        libname mylib "/home/u59649056/Homeworks/mylib";
NOTE: Libref MYLIB refers to the same physical library as _TEMP0.
NOTE: Libref MYLIB was successfully assigned as follows:
      Engine:        V9
      Physical Name: /home/u59649056/Homeworks/mylib
90        filename pdfCovid "/home/u59649056/Homeworks/mylib/JRodoni_HW10_Output.pdf";
91
92        /* 3.) Write a single SAS step that will use the Covid permanent data setas input and create three data sets */
93        /*     as described in more detail below.Everything in this step must be done as efficiently as possible    */
94        /*     based on the information you have available.                                                        */
95
96        /*(a) Use a conditional statement that will write out a blue note and the contents of the PDV before */
97        /*the set statement on only the first two iterations of the data step.  The message in the note  */
98        /*should read "PDV Before Set Statement".    */
99        /*      (b) The three data sets will only contain rows from the state of Texas.                          */
100
101       /*(c) Since all rows will be from Texas, the state and continent variables are not needed.  The data source name */
102       /*    is not to be included in the output data sets.  Exclude any column whose name begins with country.() */
103
104       /*(d) The first data set will be a temporary dataset of pre-covid data based on a POSITIVE_CASES_COUNTvalue of 0. */
105
106       /*(e) The second data set will be a permanent data set of covid data where POSITIVE_CASES_COUNT is not 0. */
107
108       /*(f) The third data set will be a permanent data set of all Texas covid data. */
109
110       /*(g) Create a variable of the percent of cases that are fatal by dividing the value of DEATH_COUNT by the value */
111       /*    of POSITIVE_CASES_COUNT. NOTE: Since the pre-covid data set will not have any values to compute, when the  */
112       /*    positive cases count is 0, do not process the assignment of this variable or the variable created in the next */
112     ! step. */
113
114       /*(h) Create a character variable containing a fatality group value based on the percent of fatal cases.  About half of
114     !  */
115       /*    the observations have a fatality rate of two percent (.02) or less. Give this group a value of Low.  The majority
115     !  of */
116       /*    remaining observations have a value less than 5 percent (.05).  Give this group a value of Medium.  The rest of
116     ! */
117       /*    the observations(with a fatality percent of 5percent or more)will be in the High group. */
118
119       /*(i) Use a conditional statement that will write out a blue note and the contents of the PDV immediately before the */
120       /*    run statement on only the first iteration of the data step.  The message in the note should read "PDV Before
120     ! Run Statement". */
121
122       data covid_sub1 mylib.covid_sub2 mylib.covid_sub3;
123       IF _N_ <= 2 Then put "NOTE- PDV Before Set Statement";
124       set mylib.covid;
125
126       where PROVINCE_STATE_NAME = "Texas";
127
128       drop CONTINENT_NAME
129        PROVINCE_STATE_NAME
130        DATA_SOURCE_NAME
131        COUNTRY_SHORT_NAME
132        COUNTRY_ALPHA_2_CODE
133        COUNTRY_ALPHA_3_CODE;
134
135       IF POSITIVE_CASES_COUNT ^= 0 THEN DEATH_PERCENT = DEATH_COUNT/POSITIVE_CASES_COUNT;
136
```

```
137          Length DEATH_GROUP $25;
138          IF DEATH_PERCENT <= 0.02 then DEATH_GROUP="Low";
139          ELSE IF 0.02 < DEATH_PERCENT < 0.05 then DEATH_GROUP = "Medium";
140          ELSE IF DEATH_PERCENT >= 0.05 then DEATH_GROUP = "High";
141
142
143          IF POSITIVE_CASES_COUNT = 0 Then OUTPUT covid_sub1;
144          IF POSITIVE_CASES_COUNT ^= 0 Then OUTPUT mylib.covid_sub2;
145          IF POSITIVE_CASES_COUNT ^= ' ' Then OUTPUT mylib.covid_sub3;
146
147          IF _N_ = 1 Then put "NOTE- PDV Before Run Statement";
148          RUN;
```

NOTE: Character values have been converted to numeric values at the places given by: (Line):(Column).
       145:29
       PDV Before Set Statement
       PDV Before Run Statement
       PDV Before Set Statement
NOTE: There were 153255 observations read from the data set MYLIB.COVID.
       WHERE PROVINCE_STATE_NAME='Texas';
NOTE: The data set WORK.COVID_SUB1 has 21484 observations and 9 variables.
NOTE: The data set MYLIB.COVID_SUB2 has 131771 observations and 9 variables.
NOTE: The data set MYLIB.COVID_SUB3 has 153255 observations and 9 variables.
NOTE: DATA statement used (Total process time):
       real time   0.40 seconds
       user cpu time   0.08 seconds
       system cpu time   0.19 seconds
       memory   6657.62k
       OS Memory   36016.00k
       Timestamp   10/28/2021 06:22:46 PM
       Step Count   81 Switch Count 11
       Page Faults   0
       Page Reclaims   1337
       Page Swaps   0
       Voluntary Context Switches   966
       Involuntary Context Switches 0
       Block Input Operations   32
       Block Output Operations   72216


```
149
150          /* 4.) Open a PDF destination to receive your output. */
151
152          ods pdf file=pdfCovid;
```
NOTE: Writing ODS PDF output to DISK destination "PDFCOVID", printer "PDF".
```
153
154          /* 5.) Write a PROC step that will report a list of data sets in the mylib library without  */
155          /*     reporting the descriptor portion of the data sets. Supply an appropriate title.    */
156
157          proc contents DATA=mylib._All_ NODS;
158          title1 "Mylib Data";
159          RUN;
```

NOTE: PROCEDURE CONTENTS used (Total process time):
       real time   0.03 seconds
       user cpu time   0.03 seconds
       system cpu time   0.00 seconds
       memory   2364.65k
       OS Memory   31656.00k
       Timestamp   10/28/2021 06:22:46 PM
       Step Count   82 Switch Count 1
       Page Faults   0
       Page Reclaims   229
       Page Swaps   0
       Voluntary Context Switches   8
       Involuntary Context Switches 0
       Block Input Operations   0
       Block Output Operations   16


```
160
161          /* 6.) Write another PROC step that will report the descriptor portion of the temporary data set created above.    */
162          /*     Supply an appropriate title.  */
163
164          proc contents data=covid_sub1;
165          title1 "Covid Subset 1 Table Data";
166          RUN;
```

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

```
        system cpu time      0.00 seconds
        memory               2461.03k
        OS Memory            32684.00k
        Timestamp            10/28/2021 06:22:46 PM
        Step Count                        83  Switch Count  1
        Page Faults                       0
        Page Reclaims                     309
        Page Swaps                        0
        Voluntary Context Switches        8
        Involuntary Context Switches      0
        Block Input Operations            0
        Block Output Operations           40


167
168        /*  7.) Local media outlets often refer to the area between Baylor University and TAMU as the Brazos  */
169        /*      Valley.  This area encompasses McLennan, Falls, Robertson,and Brazos counties.  Write a PROC  */
170        /*      step that will report the data portion of the permanent data set from step 3efor the Brazos  */
171        /*      Valley counties on a specific day.  Supply a title like Brazos Valley Covid Data as of 01Sep2020  */
172        /*      but use a macro variable instead of hard coding the date.  Construct the subsetting statement  */
173        /*      so it can use the same macro variable that is used inthe title.  Ahead of the Title statement  */
174        /*      and PROC step, write two assignment statements for the macro variable.  The first assignment  */
175        /*      will supply a value for September1, 2020,and the second a value of September1, 2021.  Execute  */
176        /*      the first macro assignment statement then execute the Title statement and PROC step.  Execute  */
177        /*      the second assignment statement along withthe Title statement and PROC step again.  Each execution  */
178        /*      should produce a page in the output with data from 4 observations.  Be sure you capture the log  */
179        /*      from each execution. */
180
181        %let reportdate=01Sep2020;
182        TITLE  "Brazos Valley Covid Data as of &reportdate";
183        proc print data=mylib.covid_sub2;
184        where COUNTY_NAME in ("McLennan", "Falls", "Robertson", "Brazos") and REPORT_DATE = " &reportdate"d;
185        RUN;

NOTE: There were 4 observations read from the data set MYLIB.COVID_SUB2.
      WHERE COUNTY_NAME in ('Brazos', 'Falls', 'McLennan', 'Robertson') and (REPORT_DATE='01SEP2020'D);
NOTE: PROCEDURE PRINT used (Total process time):
        real time            0.07 seconds
        user cpu time        0.04 seconds
        system cpu time      0.01 seconds
        memory               2280.65k
        OS Memory            33196.00k
        Timestamp            10/28/2021 06:22:46 PM
        Step Count                        84  Switch Count  1
        Page Faults                       0
        Page Reclaims                     329
        Page Swaps                        0
        Voluntary Context Switches        365
        Involuntary Context Switches      0
        Block Input Operations            31008
        Block Output Operations           8


186
187        OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
197
```

```
1          OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
NOTE: ODS statements in the SAS Studio environment may disable some output features.
69
70         %let reportdate=01Sep2021;
71         TITLE  "Brazos Valley Covid Data as of &reportdate";
72         proc print data=mylib.covid_sub2;
73         where COUNTY_NAME in ("McLennan", "Falls", "Robertson", "Brazos") and REPORT_DATE = " &reportdate"d;
74         RUN;

NOTE: There were 4 observations read from the data set MYLIB.COVID_SUB2.
      WHERE COUNTY_NAME in ('Brazos', 'Falls', 'McLennan', 'Robertson') and (REPORT_DATE='01SEP2021'D);
NOTE: PROCEDURE PRINT used (Total process time):
      real time              0.03 seconds
      user cpu time          0.03 seconds
      system cpu time        0.01 seconds
      memory                 2996.18k
      OS Memory              33196.00k
      Timestamp              10/28/2021 06:23:29 PM
      Step Count                        90  Switch Count  1
      Page Faults                       0
      Page Reclaims                     289
      Page Swaps                        0
      Voluntary Context Switches        11
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           40


75
76         /* 8.) Close the pdf destination */
77
78         ods pdf close;
NOTE: ODS PDF printed 5 pages to /home/u59649056/Homeworks/mylib/JRodoni_HW10_Output.pdf.
79
80
81         OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
91
```