```
1          OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
NOTE: ODS statements in the SAS Studio environment may disable some output features.
69
70         /* 1.) Housekeeping to clear any titles and footnotes and to turn off the printing of procedure titles*/
71
72         TITLE;
73         FOOTNOTE;
74         ods noproctitle;
75
76         /* 2.) Assign a libref to the mylib folder containing your permanent data sets. If you are going to use */
77         /*     the professor's data set on SAS Studio, assign a separate library to the Fall2021 folder and add */
78         /*     access=readonly to the end of the libname statement. Create a fileref to the pdf file for output.*/
79
80         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
81         filename pdfCovid "/home/u59649056/Homeworks/mylib/JRodoni_HW10_Output.pdf";
82
83         /* 3.) Write a single SAS step that will use the Covid permanent data setas input and create three data sets */
84         /*     as described in more detail below.Everything in this step must be done as efficiently as possible   */
85         /*     based on the information you have available.                                                        */
86
87         /*(a) Use a conditional statement that will write out a blue note and the contents of the PDV before */
88         /*the set statement on only the first two iterations of the data step.  The message in the note  */
89         /*should read "PDV Before Set Statement".   */
90         /*      (b) The three data sets will only contain rows from the state of Texas.                       */
91
92         /*(c) Since all rows will be from Texas, the state and continent variables are not needed.  The data source name */
93         /*    is not to be included in the output data sets.  Exclude any column whose name begins with country.() */
94
95         /*(d) The first data set will be a temporary dataset of pre-covid data based on a POSITIVE_CASES_COUNTvalue of 0. */
96
97         /*(e) The second data set will be a permanent data set of covid data where POSITIVE_CASES_COUNT is not 0. */
98
99         /*(f) The third data set will be a permanent data set of all Texas covid data. */
100
101        /*(g) Create a variable of the percent of cases that are fatal by dividing the value of DEATH_COUNT by the value */
102        /*    of POSITIVE_CASES_COUNT. NOTE: Since the pre-covid data set will not have any values to compute, when the  */
103        /*    positive cases count is 0, do not process the assignment of this variable or the variable created in the next
103    ! step. */
104
105        /*(h) Create a character variable containing a fatality group value based on the percent of fatal cases.  About half of
105    !  */
106        /*    the observations have a fatality rate of two percent (.02) or less. Give this group a value of Low.  The majority
106    !  of  */
107        /*    remaining observations have a value less than 5 percent (.05).  Give this group a value of Medium.  The rest of
107    ! */
108        /*    the observations(with a fatality percent of 5percent or more)will be in the High group. */
109
110        /*(i) Use a conditional statement that will write out a blue note and the contents of the PDV immediately before the */
111        /*    run statement on only the first iteration of the data step.  The message in the note should read "PDV Before
111    ! Run Statement". */
112
113        data covid_sub1 mylib.covid_sub2 mylib.covid_sub3;
114        IF _N_ <= 2 Then put "NOTE- PDV Before Set Statement";
115        set mylib.covid;
116
117        where PROVINCE_STATE_NAME = "Texas";
118
119        drop CONTINENT_NAME
120         PROVINCE_STATE_NAME
121         DATA_SOURCE_NAME
122         COUNTRY_SHORT_NAME
123         COUNTRY_ALPHA_2_CODE
124         COUNTRY_ALPHA_3_CODE;
125
126        IF POSITIVE_CASES_COUNT ^= 0 THEN DEATH_PERCENT = DEATH_COUNT/POSITIVE_CASES_COUNT;
127
128        Length DEATH_GROUP $25;
129        IF DEATH_PERCENT <= 0.02 then DEATH_GROUP="Low";
130        ELSE IF 0.02 < DEATH_PERCENT < 0.05 then DEATH_GROUP = "Medium";
131        ELSE IF DEATH_PERCENT >= 0.05 then DEATH_GROUP = "High";
132
133
134        IF POSITIVE_CASES_COUNT = 0 Then OUTPUT covid_sub1;
135        IF POSITIVE_CASES_COUNT ^= 0 Then OUTPUT mylib.covid_sub2;
136        IF POSITIVE_CASES_COUNT ^= ' ' Then OUTPUT mylib.covid_sub3;
```

```
137
138         IF _N_ = 1 Then put "NOTE- PDV Before Run Statement";
139         RUN;

NOTE: Character values have been converted to numeric values at the places given by: (Line):(Column).
      136:29
      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       0.09 seconds
      system cpu time     0.19 seconds
      memory              6662.71k
      OS Memory           33968.00k
      Timestamp           10/28/2021 05:44:36 PM
      Step Count                        46  Switch Count  11
      Page Faults                       0
      Page Reclaims                     1304
      Page Swaps                        0
      Voluntary Context Switches        869
      Involuntary Context Switches      2
      Block Input Operations            32
      Block Output Operations           72216


140
141         /* 4.) Open a PDF destination to receive your output. */
142
143         ods pdf file=pdfCovid
144         STARTPAGE=NO
145         CONTENTS=YES
146         BOOKMARKLIST=none
147         style= Styles.Default;
NOTE: Writing ODS PDF output to DISK destination "PDFCOVID", printer "PDF".
148
149         /* 5.) Write a PROC step that will report a list of data sets in the mylib library without  */
150         /*     reporting the descriptor portion of the data sets. Supply an appropriate title.   */
151
152         proc contents DATA=mylib._All_ NODS;
153         title1 "Mylib Data";
154         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              2146.18k
      OS Memory           30636.00k
      Timestamp           10/28/2021 05:44:37 PM
      Step Count                        47  Switch Count  1
      Page Faults                       0
      Page Reclaims                     783
      Page Swaps                        0
      Voluntary Context Switches        9
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           16


155
156         /* 6.) Write another PROC step that will report the descriptor portion of the temporary data set created above.   */
157         /*     Supply an appropriate title.  */
158
159         proc contents data=covid_sub1;
160         title1 "Covid Subset 1 Table Data";
161         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              2391.78k
      OS Memory           31920.00k
      Timestamp           10/28/2021 05:44:37 PM
      Step Count                        48  Switch Count  1
```

```
      Page Faults                      0
      Page Reclaims                    372
      Page Swaps                       0
      Voluntary Context Switches       14
      Involuntary Context Switches     0
      Block Input Operations           0
      Block Output Operations          24


162
163       /*  7.) Local media outlets often refer to the area between Baylor University and TAMU as the Brazos  */
164       /*      Valley.  This area encompasses McLennan, Falls, Robertson,and Brazos counties.  Write a PROC  */
165       /*      step that will report the data portion of the permanent data set from step 3efor the Brazos  */
166       /*      Valley counties on a specific day.  Supply a title like Brazos Valley Covid Data as of 01Sep2020  */
167       /*      but use a macro variable instead of hard coding the date.  Construct the subsetting statement  */
168       /*      so it can use the same macro variable that is used inthe title.  Ahead of the Title statement  */
169       /*      and PROC step, write two assignment statements for the macro variable.  The first assignment  */
170       /*      will supply a value for September1, 2020,and the second a value of September1, 2021.  Execute  */
171       /*      the first macro assignment statement then execute the Title statement and PROC step.  Execute  */
172       /*      the second assignment statement along withthe Title statement and PROC step again.  Each execution  */
173       /*      should produce a page in the output with data from 4 observations.  Be sure you capture the log  */
174       /*      from each execution. */
175
176       %let reportdate=01Sep2020;
177       TITLE  "Brazos Valley Covid Data as of &reportdate";
178       proc print data=mylib.covid_sub2;
179       where COUNTY_NAME in ("McLennan", "Falls", "Robertson", "Brazos") and REPORT_DATE = " &reportdate"d;
180       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       0.03 seconds
      system cpu time     0.02 seconds
      memory              2264.34k
      OS Memory           32176.00k
      Timestamp           10/28/2021 05:44:37 PM
      Step Count                       49  Switch Count  1
      Page Faults                      0
      Page Reclaims                    440
      Page Swaps                       0
      Voluntary Context Switches       306
      Involuntary Context Switches     1
      Block Input Operations           31008
      Block Output Operations          8


181
182       OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
192
```