```
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#9   */
72         /* Date Created: 10/18/2021   */
73         /* Author: Jack Rodoni   */
74         /* Purpose: STAT 604 HW#8   */
75         /* Date Modified: 10/21/2021    */
76         /* Location: /home/u59649056/Homeworks/JRodoni_Homework09.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 librefnamed mylibto thenew foldercreated above.  Assign a libref to a */
86         /* new Excel file with a name of your choosing that will also be located in the mylib folder.*/
87         /* Create a file ref to the COVID Activity csv file.  Create filerefs to the two PDF output */
88         /* files.  The files will have names like FKincheloe_HW09_OutputA.pdf and FKincheloe_HW09_OutputB.pdf. */
89         /* Create another file ref for an xlsx file that will contain your output.  Use a name for the file */
90         /* like FKincheloe_HW09_outputx.xlsx.  (Use your own initial and name in place of FKincheloe.)*/
91         /* File refs must containthe full path and name of the file.*/
92
93         libname mylib "/home/u59649056/Homeworks/mylib";
NOTE: Libref MYLIB was successfully assigned as follows:
      Engine:        V9
      Physical Name: /home/u59649056/Homeworks/mylib
94         libname coviddat XLSX "/home/u59649056/Homeworks/mylib/coviddata.xlsx";
NOTE: Libref COVIDDAT was successfully assigned as follows:
      Engine:        XLSX
      Physical Name: /home/u59649056/Homeworks/mylib/coviddata.xlsx
95         filename covidact "/home/u59649056/my_shared_file_links/fkincheloe/stat604/Fall2021/COVID Activity.csv";
96         filename pdfA "/home/u59649056/Homeworks/mylib/JRodoni_HW09_OutputA.pdf";
97         filename pdfB "/home/u59649056/Homeworks/mylib/JRodoni_HW09_OutputB.pdf";
98         filename covidOut "/home/u59649056/Homeworks/mylib/JRodoni_HW09_output.xlsx";
99
100        /* 3.) Write a SAS step that will use the csv file as input and create a permanent data set in the mylib*/
101        /*     library.  Write the step so that it will overwrite the data set if it already exists.  */
102        /*     NOTE:  Due to the size of the file, it could take a minute or more for this step to run.*/
103
104        options obs=max;
105        proc import datafile= "/home/u59649056/my_shared_file_links/fkincheloe/stat604/Fall2021/COVID Activity.csv"
106        DBMS = CSV
107        OUT = mylib.covid
108        Replace;
109        Guessingrows=MAX;
110        Run;

NOTE: Unable to open parameter catalog: SASUSER.PARMS.PARMS.SLIST in update mode. Temporary parameter values will be saved to
WORK.PARMS.PARMS.SLIST.
110      !
111         /*---------------------------------------------------------------*
112         *   PRODUCT:   SAS
113         *   VERSION:   9.4
114         *   CREATOR:   External File Interface
115         *   DATE:      21OCT21
116         *   DESC:      Generated SAS Datastep Code
117         *   TEMPLATE SOURCE:  (None Specified.)
118         *---------------------------------------------------------------*/
119            data MYLIB.COVID    ;
120            %let _EFIERR_ = 0; /* set the ERROR detection macro variable */
121            infile '/home/u59649056/my_shared_file_links/fkincheloe/stat604/Fall2021/COVID Activity.csv' delimiter = ',' MISSOVER
121      !  DSD lrecl=32767 firstobs=2 ;
122              informat POSITIVE_CASES_COUNT best32. ;
123              informat COUNTY_NAME $35. ;
124              informat PROVINCE_STATE_NAME $28. ;
125              informat REPORT_DATE yymmdd10. ;
126              informat CONTINENT_NAME $7. ;
127              informat DATA_SOURCE_NAME $26. ;
128              informat DEATH_NEW_COUNT best32. ;
129              informat COUNTY_FIPS_NUMBER best32. ;
130              informat COUNTRY_ALPHA_3_CODE $3. ;
131              informat COUNTRY_SHORT_NAME $46. ;
132              informat COUNTRY_ALPHA_2_CODE $2. ;
133              informat POSITIVE_NEW_CASES_COUNT best32. ;
134              informat DEATH_COUNT best32. ;
135              format POSITIVE_CASES_COUNT best12. ;
```

```
136               format COUNTY_NAME $35. ;
137               format PROVINCE_STATE_NAME $28. ;
138               format REPORT_DATE yymmdd10. ;
139               format CONTINENT_NAME $7. ;
140               format DATA_SOURCE_NAME $26. ;
141               format DEATH_NEW_COUNT best12. ;
142               format COUNTY_FIPS_NUMBER best12. ;
143               format COUNTRY_ALPHA_3_CODE $3. ;
144               format COUNTRY_SHORT_NAME $46. ;
145               format COUNTRY_ALPHA_2_CODE $2. ;
146               format POSITIVE_NEW_CASES_COUNT best12. ;
147               format DEATH_COUNT best12. ;
148            input
149                        POSITIVE_CASES_COUNT
150                        COUNTY_NAME  $
151                        PROVINCE_STATE_NAME  $
152                        REPORT_DATE
153                        CONTINENT_NAME  $
154                        DATA_SOURCE_NAME  $
155                        DEATH_NEW_COUNT
156                        COUNTY_FIPS_NUMBER
157                        COUNTRY_ALPHA_3_CODE  $
158                        COUNTRY_SHORT_NAME  $
159                        COUNTRY_ALPHA_2_CODE  $
160                        POSITIVE_NEW_CASES_COUNT
161                        DEATH_COUNT
162            ;
163            if _ERROR_ then call symputx('_EFIERR_',1);  /* set ERROR detection macro variable */
164            run;

NOTE: The infile '/home/u59649056/my_shared_file_links/fkincheloe/stat604/Fall2021/COVID Activity.csv' is:
      Filename=/home/u59649056/my_shared_file_links/fkincheloe/stat604/Fall2021/COVID Activity.csv,
      Owner Name=fkincheloe,Group Name=nobody,
      Access Permission=-rw-r--r--,
      Last Modified=12Oct2021:20:41:13,
      File Size (bytes)=188839264

NOTE: 2132949 records were read from the infile '/home/u59649056/my_shared_file_links/fkincheloe/stat604/Fall2021/COVID
      Activity.csv'.
      The minimum record length was 57.
      The maximum record length was 119.
NOTE: The data set MYLIB.COVID has 2132949 observations and 13 variables.
NOTE: DATA statement used (Total process time):
      real time           6.46 seconds
      user cpu time       2.48 seconds
      system cpu time     0.54 seconds
      memory              16649.78k
      OS Memory           40484.00k
      Timestamp           10/21/2021 09:48:50 PM
      Step Count                        24  Switch Count  1
      Page Faults                       0
      Page Reclaims                     486
      Page Swaps                        0
      Voluntary Context Switches        10588
      Involuntary Context Switches      43
      Block Input Operations            0
      Block Output Operations           835352


2132949 rows created in MYLIB.COVID from /home/u59649056/my_shared_file_links/fkincheloe/stat604/Fall2021/COVID Activity.csv.



NOTE: MYLIB.COVID data set was successfully created.
NOTE: The data set MYLIB.COVID has 2132949 observations and 13 variables.
NOTE: PROCEDURE IMPORT used (Total process time):
      real time           14:06.30
      user cpu time       13:57.19
      system cpu time     5.57 seconds
      memory              16649.78k
      OS Memory           40744.00k
      Timestamp           10/21/2021 09:48:50 PM
      Step Count                        24  Switch Count  8
      Page Faults                       0
      Page Reclaims                     895766
      Page Swaps                        0
      Voluntary Context Switches        10725
      Involuntary Context Switches      3677
      Block Input Operations            288
      Block Output Operations           835472
```

```
165
166         /* 4.) Close all active ODS destinations and open the PDF Output A destination that you will use capture */
167         /*     the output from all procedures in this assignment.  This PDF will include a table of contents page */
168         /*     but no bookmarks.  Apply a style of your choice.  Open the second PDF Output B destination that */
169         /*     will contain ONLY the output from the procedure in the next step.  This output will use the default */
170         /*     style.  Since it will contain the output from only one procedure, it is to have no contents or */
171         /*     bookmarks. You may want to delay implementing the ODS statements until you have everything else */
172         /*     working correctly in your program. */
173
174         ods _all_ close;
175
176         ods pdf (ID=A) file=pdfA
177         STARTPAGE=NO
178         CONTENTS=YES
179         BOOKMARKLIST=none
180         style= Styles.daisy;
NOTE: Writing ODS PDF(A) output to DISK destination "PDFA", printer "PDF".
181
182         ods pdf (ID=B) file=pdfB
183         STARTPAGE=NO
184         CONTENTS=NO
185         BOOKMARKLIST=none
186         style= Styles.Default;
NOTE: Writing ODS PDF(B) output to DISK destination "PDFB", printer "PDF".
187
188
189         /* 5.) Write a PROC step that will report the descriptor portion of the permanent data set created from the */
190         /*   CSV file. Supply an appropriate title and an appropriate proc label.  If the length of the COUNTY_NAME */
191         /*   column is less than 17, you still have work to do on the process that reads the csv file. */
192
193         Title "Covid Data Description";
194         proc contents data = mylib.covid;
195         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              3754.87k
      OS Memory           33216.00k
      Timestamp           10/21/2021 09:48:50 PM
      Step Count                        25  Switch Count  0
      Page Faults                       0
      Page Reclaims                     1138
      Page Swaps                        0
      Voluntary Context Switches        1
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           16


196         ods proclabel "Descrition of DataSet";
197
198         ods pdf (ID = B) close;
NOTE: ODS PDF(B) printed 2 pages to /home/u59649056/Homeworks/mylib/JRodoni_HW09_OutputB.pdf.
199
200         /* 6.) Use the permanent data set as input to create a temporary data set having only those rows where the county */
201         /*     name is Brazos. */
202
203         data temp;
204         set mylib.covid;
205         where COUNTY_NAME= "Brazos";
206         run;

NOTE: There were 601 observations read from the data set MYLIB.COVID.
      WHERE COUNTY_NAME='Brazos';
NOTE: The data set WORK.TEMP has 601 observations and 13 variables.
NOTE: DATA statement used (Total process time):
      real time           1.38 seconds
      user cpu time       0.32 seconds
      system cpu time     0.24 seconds
      memory              2312.90k
      OS Memory           31932.00k
      Timestamp           10/21/2021 09:48:52 PM
      Step Count                        26  Switch Count  23
      Page Faults                       0
      Page Reclaims                     324
      Page Swaps                        0
      Voluntary Context Switches        10638
      Involuntary Context Switches      1322
      Block Input Operations            834816
      Block Output Operations           264
```

```
207
208         /* 7.) */
209         data coviddat.NewDeaths;
210         set mylib.covid;
211         where DEATH_NEW_COUNT > 4000;
212         run;

NOTE: There were 18 observations read from the data set MYLIB.COVID.
      WHERE DEATH_NEW_COUNT>4000;
NOTE: The data set COVIDDAT.NewDeaths has 18 observations and 13 variables.
NOTE: The export data set has 18 observations and 13 variables.
NOTE: DATA statement used (Total process time):
      real time           0.19 seconds
      user cpu time       0.06 seconds
      system cpu time     0.12 seconds
      memory              4060.81k
      OS Memory           32880.00k
      Timestamp           10/21/2021 09:48:52 PM
      Step Count                        27  Switch Count  4
      Page Faults                       0
      Page Reclaims                     785
      Page Swaps                        0
      Voluntary Context Switches        31
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           16


213
214         /* 8.) Use the permanent data set as input to create a table of “Corrections” in the Excel “library”based on the
214       ! value
215         /*     of positive_new_cases_countbeinglessthan 0. */
216         data coviddat.Corrections;
217         set mylib.covid;
218         where POSITIVE_NEW_CASES_COUNT < 0;
219         run;

NOTE: There were 31929 observations read from the data set MYLIB.COVID.
      WHERE POSITIVE_NEW_CASES_COUNT<0;
NOTE: The data set COVIDDAT.Corrections has 31929 observations and 13 variables.
NOTE: The export data set has 31929 observations and 13 variables.
NOTE: DATA statement used (Total process time):
      real time           1.90 seconds
      user cpu time       1.76 seconds
      system cpu time     0.13 seconds
      memory              4448.81k
      OS Memory           33648.00k
      Timestamp           10/21/2021 09:48:54 PM
      Step Count                        28  Switch Count  4
      Page Faults                       0
      Page Reclaims                     859
      Page Swaps                        0
      Voluntary Context Switches        65
      Involuntary Context Switches      9
      Block Input Operations            16
      Block Output Operations           3088


220
221         /* 9.) Use a system option to limit processing to 10 observations to print a sample of the data from the Brazos */
222         /*     County data.  Supply an appropriate title.  Since this output is still going to a PDF file, supply an */
223         /*     appropriate proc label.  Be sure to reset the option when this step is completed. */
224
225         options obs = 10;
226         proc print data = temp;
227         title1 "Brazos Covid Data";
228         ods proclabel = "description of Covid Data set for brazos";
229         run;

NOTE: There were 10 observations read from the data set WORK.TEMP.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.02 seconds
      user cpu time       0.02 seconds
      system cpu time     0.01 seconds
      memory              840.25k
      OS Memory           30392.00k
      Timestamp           10/21/2021 09:48:54 PM
      Step Count                        29  Switch Count  2
      Page Faults                       0
      Page Reclaims                     128
```

```
      Page Swaps                       0
      Voluntary Context Switches       13
      Involuntary Context Switches     1
      Block Input Operations           0
      Block Output Operations          0


230         options obs = MAX;
231
232         /* 10.) Open the Excel destination to capture the output from the procedures that follow.  You may need to refer */
233         /*      to SAS Help documentation to find the option values that will produce the desired output.  Your titles */
234         /*      must appear within the worksheets so you can see them whenever you open the Excel file. */
235
236         ods excel file = covidOut
237         OPTIONS(EMBEDDED_TITLES='on' sheet_interval='proc');
238
239
240         /* 11.) Use a PROC step to list all of the worksheets in the Excel library without printing their descriptorportions.
241           All the output tables from this step must be in a single Excel tab named Covid Table List. Supply anappropriate
242           title and proc label.*/
243
244         ods excel OPTIONS(SHEET_NAME='Covid Table List');
245         Title "Covid Tables";
246         proc contents data = coviddat._ALL_ NODS;
247         run;

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.02 seconds
      user cpu time       0.02 seconds
      system cpu time     0.01 seconds
      memory              4175.75k
      OS Memory           39900.00k
      Timestamp           10/21/2021 09:48:54 PM
      Step Count                       30  Switch Count  0
      Page Faults                      0
      Page Reclaims                    1056
      Page Swaps                       0
      Voluntary Context Switches       8
      Involuntary Context Switches     0
      Block Input Operations           24
      Block Output Operations          8


248         ODS PROCLABEL = "Data";
249
250         /* 12.) Print the data portion of the table of high death count to a new sheet named High Covid Deaths.  Supply
251         an appropriate title and proc label.*/
252
253         ods excel Options(SHEET_NAME = 'High Covid Deaths');
254         Title "High Covid Deaths";
255         proc print data= coviddat.newdeaths;
256         run;

NOTE: Access by observation number not available. Observation numbers will be counted by PROC PRINT.
NOTE: The import data set has 18 observations and 13 variables.
NOTE: The import data set has 18 observations and 13 variables.
NOTE: There were 18 observations read from the data set COVIDDAT.newdeaths.
NOTE: PROCEDURE PRINT used (Total process time):
      real time           0.13 seconds
      user cpu time       0.13 seconds
      system cpu time     0.00 seconds
      memory              4846.96k
      OS Memory           41944.00k
      Timestamp           10/21/2021 09:48:54 PM
      Step Count                       31  Switch Count  0
      Page Faults                      0
      Page Reclaims                    1018
      Page Swaps                       0
      Voluntary Context Switches       5
      Involuntary Context Switches     0
      Block Input Operations           48
      Block Output Operations          24


257         ods proclabel = "Deaths";
258
259         /* 13.) Print the descriptor portion of the Corrections table in a single new sheetnamed Corrections Descriptor.
260         Supply an appropriatetitle and proc label.*/
261
262         ods excel Options(SHEET_NAME = 'Corrections');
263         Title "Corrections";
264         proc contents data= coviddat.Corrections;
```

```
265        run;

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           2.00 seconds
      user cpu time       2.00 seconds
      system cpu time     0.01 seconds
      memory              3294.28k
      OS Memory           42204.00k
      Timestamp           10/21/2021 09:48:56 PM
      Step Count                        32  Switch Count  0
      Page Faults                       0
      Page Reclaims                     560
      Page Swaps                        0
      Voluntary Context Switches        5
      Involuntary Context Switches      2
      Block Input Operations            3016
      Block Output Operations           48


266        ods proclabel = "Corrections";
267
268        /* 14.) Close the Excel destination. It should contain three tabs.  Close the PDF destination.  Include a line of
269        code that will reopen the default HTML destination.  This line of code was supplied in one of the demo programs
270        used in the lectures.*/
271
272        ods _ALL_ close;
NOTE: ODS PDF(A) printed 4 pages to /home/u59649056/Homeworks/mylib/JRodoni_HW09_OutputA.pdf.
NOTE: Writing EXCEL file: /home/u59649056/Homeworks/mylib/JRodoni_HW09_output.xlsx
273        ODS HTML PATH = "%qsysfunc(pathname(work))";
NOTE: Writing HTML Body file: sashtml2.htm
274
275        /* 16.)
276        (a) After we run the mylib statement mylib shows up as one of our libraries. Under my lib we have the covid data table.
277            The brazos county data has only the brazos county data in it.
278        (b) The engine used is V9
279        (c) num, YYMMDD10., 8 ;
280        (d) 31,930
281        (e) 16
282
283
284
285
286
287
288
289
290        OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
291        ODS HTML CLOSE;
292        &GRAPHTERM; ;*';*";*/;RUN;QUIT;
293        QUIT;RUN;
294        ODS HTML5 (ID=WEB) CLOSE;
295
296        FILENAME _GSFNAME;
NOTE: Fileref _GSFNAME has been deassigned.
297        DATA _NULL_;
298        RUN;

NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              474.84k
      OS Memory           30380.00k
      Timestamp           10/21/2021 09:48:56 PM
      Step Count                        33  Switch Count  0
      Page Faults                       0
      Page Reclaims                     30
      Page Swaps                        0
      Voluntary Context Switches        1
      Involuntary Context Switches      0
      Block Input Operations            0
      Block Output Operations           0


299        OPTIONS NOTES STIMER SOURCE SYNTAXCHECK;
300
```