

```
1      OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
```

NOTE: ODS statements in the SAS Studio environment may disable some output features.

```
69
```

```
70      /* Total Code */
```

```
71      /* 2 */
```

```
72      /* importing the data to create a temp library file to work on */
```

```
73      PROC IMPORT OUT=WORK.import DATAFILE="/home/u60766313/my_shared_file_links/u50396654/citibike-tripdata.xlsx"
```

```
74      DBMS=XLSX REPLACE;
```

```
75      GETNAMES=YES;
```

```
76      run;
```

NOTE: One or more variables were converted because the data type is not supported by the V9 engine. For more details, run with options MSGLEVEL=I.

NOTE: The import data set has 48021 observations and 12 variables.

NOTE: WORK.IMPORT data set was successfully created.

NOTE: PROCEDURE IMPORT used (Total process time):

real time	7.06 seconds
user cpu time	6.99 seconds
system cpu time	0.07 seconds
memory	12778.03k
OS Memory	41760.00k
Timestamp	06/05/2022 09:01:30 AM
Step Count	95
Page Faults	0
Page Reclaims	2703
Page Swaps	0
Voluntary Context Switches	40
Involuntary Context Switches	23
Block Input Operations	0
Block Output Operations	16648

```
77
```

```
78      /* 2i doing an sql procedure step to delete end station id and end station name that are null */
```

```
79      PROC SQL;
```

```
80      DELETE FROM import where (end_station_id='' AND end_station_name='');
```

NOTE: 359 rows were deleted from WORK.IMPORT.

```
81      QUIT;
```

NOTE: PROCEDURE SQL used (Total process time):

real time	0.01 seconds
user cpu time	0.01 seconds
system cpu time	0.00 seconds
memory	6925.75k

OS Memory	36264.00k
Timestamp	06/05/2022 09:01:30 AM
Step Count	96 Switch Count 3
Page Faults	0
Page Reclaims	278
Page Swaps	0
Voluntary Context Switches	8
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	16

```

82
83      /* 2ii formating data to have different columns for date and time */
84      Data CitiBike;
85      set import;
86      format started_at DATETIME16.;
87      format ended_at DATETIME16.;
88      Startdate=datepart(started_at);
89      Starttime=timepart(started_at);
90      Enddate=datepart(ended_at);
91      Endtime=timepart(ended_at);
92      Format Startdate mmddyy10.;
93      Format Starttime TIME8.;
94      Format Enddate mmddyy10.;
95      Format Endtime TIME8.;
96
97      /* doing if statement to have a new column that displays evening morning and afternoon */
98      if Starttime <'12:00't then
99      Starttimes='Morning';
100     else if Starttime <'18:00't then
101     Starttimes='Afternoon';
102     else
103     Starttimes='Evening';
104
105     if Endtime <'12:00't then
106     EndTimes='Morning';
107     else if Endtime <'18:00't then
108     EndTimes='Afternoon';
109     else
110     EndTimes='Evening';
111     run;

```

NOTE: There were 47662 observations read from the data set WORK.IMPORT.  
 NOTE: The data set WORK.CITIBIKE has 47662 observations and 18 variables.  
 NOTE: DATA statement used (Total process time):

```

real time          0.02 seconds
user cpu time      0.01 seconds
system cpu time    0.01 seconds
memory             3585.37k
OS Memory          33192.00k
Timestamp          06/05/2022 09:01:30 AM
Step Count         97  Switch Count  3
Page Faults        0
Page Reclaims      532
Page Swaps          0
Voluntary Context Switches 14
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 21000

```

```

112
113      /* 3a */
114      ods graphics / reset width=10in height=6in imagemap;
115      Title "3a";
116
117      /* Finding out the frequency in the data of start stations */
118      Title2 "Frequency for Start Station Name";
119
120      proc freq data=work.citibike order=freq;
121      tables start_station_name / plots=freqplot(twoway=stacked orient=horizontal);
122      run;

```

NOTE: There were 47662 observations read from the data set WORK.CITIBIKE.

NOTE: PROCEDURE FREQ used (Total process time):

```

real time          0.27 seconds
user cpu time      0.19 seconds
system cpu time    0.01 seconds
memory             11563.15k
OS Memory          37544.00k
Timestamp          06/05/2022 09:01:30 AM
Step Count         98  Switch Count  3
Page Faults        0
Page Reclaims      2295
Page Swaps          0
Voluntary Context Switches 405
Involuntary Context Switches 0
Block Input Operations 0
Block Output Operations 984

```

```

123
124     Title;
125     ods graphics / reset;
126
127     /* 3b */
128     ods graphics / reset width=10in height=6in imagemap;
129     Title "3b";
130
131     /* Finding out the frequency in the data of start stations */
132     Title2 "Frequency for end Station Name";
133
134     proc freq data=work.citibike order=freq;
135     tables end_station_name / plots=freqplot(twoway=stacked orient=horizontal);
136     run;

```

NOTE: There were 47662 observations read from the data set WORK.CITIBIKE.

NOTE: PROCEDURE FREQ used (Total process time):

real time	0.24 seconds
user cpu time	0.16 seconds
system cpu time	0.02 seconds
memory	4801.62k
OS Memory	38912.00k
Timestamp	06/05/2022 09:01:30 AM
Step Count	99    Switch Count    3
Page Faults	0
Page Reclaims	1118
Page Swaps	0
Voluntary Context Switches	464
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	952

```

137
138     Title;
139     ods graphics / reset;
140
141     /* 3c */
142     ods graphics / reset width=10in height=6in imagemap;
143     Title "3c";
144
145     /* Finding out the frequency in the data of customers/member_casual */
146     Title2 "Frequency for Member_Casual";
147
148     proc freq data=work.citibike order=freq;
149     tables member_casual / plots=freqplot(twoway=stacked orient=vertical);

```

150       run;

NOTE: There were 47662 observations read from the data set WORK.CITIBIKE.

NOTE: PROCEDURE FREQ used (Total process time):

real time	0.11 seconds
user cpu time	0.06 seconds
system cpu time	0.00 seconds
memory	4602.56k
OS Memory	38912.00k
Timestamp	06/05/2022 09:01:30 AM
Step Count	100   Switch Count   3
Page Faults	0
Page Reclaims	745
Page Swaps	0
Voluntary Context Switches	173
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	624

151

Title;

152       ods graphics / reset;

153

/\* 3d \*/

154       Title "3d";

155

/\* Finding out the difference with start time and end time in minutesa\*/

156       data work.citibiketime;

157       set work.citibike;

158       DurationMin=intck('minute', starttime, endtime);

159       run;

NOTE: There were 47662 observations read from the data set WORK.CITIBIKE.

NOTE: The data set WORK.CITIBIKETIME has 47662 observations and 19 variables.

NOTE: DATA statement used (Total process time):

real time	0.02 seconds
user cpu time	0.01 seconds
system cpu time	0.01 seconds
memory	3566.71k
OS Memory	39080.00k
Timestamp	06/05/2022 09:01:30 AM
Step Count	101   Switch Count   3
Page Faults	0
Page Reclaims	535
Page Swaps	0

Voluntary Context Switches	21
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	21768

```
163
164     ods graphics / reset width=10in height=6in imagemap;
165
166     /* Finding out the frequency in the data of Duration between start and end time in minutes*/
167     Title2 "Frequency for DurationMin";
168
169     proc freq data=work.citibiketime order=freq;
170     tables DurationMin / plots=freqplot(twoway=stacked orient=horizontal);
171     run;
```

NOTE: There were 47662 observations read from the data set WORK.CITIBIKETIME.

NOTE: PROCEDURE FREQ used (Total process time):

real time	0.45 seconds
user cpu time	0.35 seconds
system cpu time	0.01 seconds
memory	4682.46k
OS Memory	38912.00k
Timestamp	06/05/2022 09:01:31 AM
Step Count	102
Page Faults	0
Page Reclaims	762
Page Swaps	0
Voluntary Context Switches	1112
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	936

```
172
173     Title;
174     ods graphics / reset;
175
176     /* 3e */
177     ods graphics / reset width=10in height=6in imagemap;
178     Title "3e";
179
180     /* Plotting the x= start lat and y = start lng using sgplot with scatter */
181     Title2 "x= start lat and y = start lng";
182
183     proc sgplot data=work.citibike;
```

```
184     scatter x=start_lat y=start_lng;
185     run;
```

NOTE: PROCEDURE SGPLOT used (Total process time):

real time	0.20 seconds
user cpu time	0.05 seconds
system cpu time	0.01 seconds
memory	3647.43k
OS Memory	38652.00k
Timestamp	06/05/2022 09:01:31 AM
Step Count	103 Switch Count 2
Page Faults	0
Page Reclaims	879
Page Swaps	0
Voluntary Context Switches	151
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	1880

NOTE: Marker and line antialiasing has been disabled for at least one plot because the threshold has been reached. You can set ANTIALIASMAX=47700 in the ODS GRAPHICS statement to enable antialiasing for all plots.

NOTE: HTML data tips have been disabled for at least one plot because the threshold has been reached. You can set TIPMAX=47700 in the ODS GRAPHICS statement to produce data tips for all plots.

NOTE: There were 47662 observations read from the data set WORK.CITIBIKE.

```
186
187     Title;
188     Title "3e";
189
190     /* Plotting the x= End lat and y = End lng using sgplot with scatter */
191     Title2 "x= End lat and y = End lng";
192
193     proc sgplot data=work.citibike;
194     scatter x=end_lat y=end_lng;
195     run;
```

NOTE: PROCEDURE SGPLOT used (Total process time):

real time	0.16 seconds
user cpu time	0.06 seconds
system cpu time	0.01 seconds
memory	4062.09k
OS Memory	38652.00k
Timestamp	06/05/2022 09:01:31 AM
Step Count	104 Switch Count 2
Page Faults	0
Page Reclaims	849

Page Swaps	0
Voluntary Context Switches	152
Involuntary Context Switches	1
Block Input Operations	0
Block Output Operations	1888

NOTE: Marker and line antialiasing has been disabled for at least one plot because the threshold has been reached. You can set ANTIALIASMAX=47700 in the ODS GRAPHICS statement to enable antialiasing for all plots.

NOTE: HTML data tips have been disabled for at least one plot because the threshold has been reached. You can set TIPMAX=47700 in the ODS GRAPHICS statement to produce data tips for all plots.

NOTE: There were 47662 observations read from the data set WORK.CITIBIKE.

```

196
197     Title;
198     Title "3e";
199
200     /* Using gmap to create map of newyork and its counties */
201     Title2 "Map of newyork and its counties";
202     pattern c=black v=e r=62;
203
204     proc gmap data=maps.counties map=maps.counties;
205     id county;
206     choro county / nolegend;
207     where state eq 36;
208     run;

```

WARNING: Some observations were discarded when charting COUNTY. Only first matching observation was used. Use STATISTIC= option for summary statistics.

```

209     Title;
210     Title "3e";
211
212     /* Using sgplot to scatter start lat and start lng */
213     Title2 "X= start lat and y = start lng";
214

```

NOTE: PROCEDURE GMAP used (Total process time):

real time	0.17 seconds
user cpu time	0.15 seconds
system cpu time	0.02 seconds
memory	8588.43k
OS Memory	40476.00k
Timestamp	06/05/2022 09:01:31 AM
Step Count	105
Page Faults	0
Page Reclaims	1592
Page Swaps	0



Voluntary Context Switches	51
Involuntary Context Switches	20
Block Input Operations	0
Block Output Operations	984

```

215      proc sgplot data=work.citibike noborder noautolegend;
216      polygon x=Start_lat y=Start_lng id=Start_Station_name / fill outline tip=none
217      lineattrs=(color=gray99) fillattrs=(color=cxe8edd5);
218      scatter x=Start_lat y=Start_lng / datalabel=Start_Station_ID
219      markerattrs=(symbol=circlefilled size=13) markerfillattrs=(color=yellow)
220      markeroutlineattrs=(color=purple);
221      xaxis display=none;
222      yaxis display=none;
223      run;

```

NOTE: PROCEDURE SGPLOT used (Total process time):

real time	10.27 seconds
user cpu time	5.56 seconds
system cpu time	0.51 seconds
memory	3833.62k
OS Memory	39676.00k
Timestamp	06/05/2022 09:01:42 AM
Step Count	106
Page Faults	0
Page Reclaims	885
Page Swaps	0
Voluntary Context Switches	286097
Involuntary Context Switches	6
Block Input Operations	0
Block Output Operations	1880

NOTE: Data label collision avoidance has been disabled because the threshold has been reached. You can set LABELMAX=47700 in the ODS GRAPHICS statement to restore collision avoidance.

NOTE: Marker and line antialiasing has been disabled for at least one plot because the threshold has been reached. You can set ANTIALIASMAX=47700 in the ODS GRAPHICS statement to enable antialiasing for all plots.

NOTE: HTML data tips have been disabled for at least one plot because the threshold has been reached. You can set TIPMAX=47700 in the ODS GRAPHICS statement to produce data tips for all plots.

NOTE: There were 47662 observations read from the data set WORK.CITIBIKE.

```

224
225      Title;
226      Title "3e";
227
228      /* Using sgplot to scatter end lat and end lng */
229      Title2 "x= end lat and y = end lng";

```

```

230
231     proc sgplot data=work.citibike noborder noautolegend;
232     polygon x=end_lat y=end_lng id=End_Station_name / fill outline tip=none
233     lineattrs=(color=gray99) fillattrs=(color=cxe8edd5);
234     scatter x=end_lat y=end_lng / datalabel=Start_Station_ID
235     markerattrs=(symbol=circlefilled size=13) markerfillattrs=(color=yellow)
236     markeroutlineattrs=(color=purple);
237     xaxis display=none;
238     yaxis display=none;
239     run;

```

NOTE: PROCEDURE SGPLOT used (Total process time):

```

real time          9.75 seconds
user cpu time      5.67 seconds
system cpu time    0.31 seconds
memory            4155.12k
OS Memory          39676.00k
Timestamp          06/05/2022 09:01:51 AM
Step Count                     107  Switch Count  2
Page Faults                     0
Page Reclaims                  849
Page Swaps                      0
Voluntary Context Switches     286133
Involuntary Context Switches    3
Block Input Operations         0
Block Output Operations        1896

```

NOTE: Data label collision avoidance has been disabled because the threshold has been reached. You can set LABELMAX=47700 in the ODS GRAPHICS statement to restore collision avoidance.

NOTE: Marker and line antialiasing has been disabled for at least one plot because the threshold has been reached. You can set ANTIALIASMAX=47700 in the ODS GRAPHICS statement to enable antialiasing for all plots.

NOTE: HTML data tips have been disabled for at least one plot because the threshold has been reached. You can set TIPMAX=47700 in the ODS GRAPHICS statement to produce data tips for all plots.

NOTE: There were 47662 observations read from the data set WORK.CITIBIKE.

```

240
241     Title;
242     Title "3e";
243
244     /* Plotting the x= End lat and y = end lng using statgraph with scatter */
245     Title2 "x= End lat and y = end lng";
246
247     proc template;
248     define statgraph classscatter;
249     begingraph;
250     entrytitle 'End Lat and End Lang';

```

```

251 layout overlay /;
252 scatterplot y=end_lat x=end_lng / datalabel=Start_Station_ID
253 markerattrs=(symbol=circlefilled color=black size=3px);
254 endlayout;
255 endgraph;
256 end;

```

NOTE: STATGRAPH 'Classscatter' has been saved to: WORK.TEMPLAT

```

257 run;

```

NOTE: PROCEDURE TEMPLATE used (Total process time):

```

real time          0.00 seconds
user cpu time      0.01 seconds
system cpu time    0.00 seconds
memory            397.03k
OS Memory          37024.00k
Timestamp          06/05/2022 09:01:51 AM
Step Count                108  Switch Count  2
Page Faults                0
Page Reclaims             25
Page Swaps                 0
Voluntary Context Switches 10
Involuntary Context Switches 0
Block Input Operations     0
Block Output Operations    128

```

```

258
259 proc sgrender data=work.citibike template=classscatter;
260 run;

```

NOTE: Data label collision avoidance has been disabled because the threshold has been reached. You can set LABELMAX=47700 in the ODS GRAPHICS statement to restore collision avoidance.

NOTE: Marker and line antialiasing has been disabled for at least one plot because the threshold has been reached. You can set ANTIALIASMAX=47700 in the ODS GRAPHICS statement to enable antialiasing for all plots.

NOTE: HTML data tips have been disabled for at least one plot because the threshold has been reached. You can set TIPMAX=47700 in the ODS GRAPHICS statement to produce data tips for all plots.

NOTE: There were 47662 observations read from the data set WORK.CITIBIKE.

NOTE: PROCEDURE SGRENDER used (Total process time):

```

real time          4.92 seconds
user cpu time      2.80 seconds
system cpu time    0.19 seconds
memory            5415.43k
OS Memory          41644.00k
Timestamp          06/05/2022 09:01:56 AM
Step Count                109  Switch Count  10
Page Faults                0
Page Reclaims          2033

```

Page Swaps	0
Voluntary Context Switches	143197
Involuntary Context Switches	1
Block Input Operations	0
Block Output Operations	25200

```

261
262     Title;
263     ods graphics / reset;
264
265     /* 3f */
266     ods graphics / reset width=10in height=6in imagemap;
267     Title "3f";
268
269     /* Sorting out the data to remove duplicate data in the dataset*/
270     proc sort data=work.citibike;
271     by member_casual;
272     run;

```

NOTE: There were 47662 observations read from the data set WORK.CITIBIKE.

NOTE: The data set WORK.CITIBIKE has 47662 observations and 18 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	0.03 seconds
user cpu time	0.01 seconds
system cpu time	0.03 seconds
memory	15224.28k
OS Memory	51260.00k
Timestamp	06/05/2022 09:01:56 AM
Step Count	110    Switch Count    3
Page Faults	0
Page Reclaims	3243
Page Swaps	0
Voluntary Context Switches	14
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	21000

```

273
274     /* Finding the Frequency for start_station_name by member_casual = member*/
275     Title2 "Frequency for start_station_name by member";
276
277     proc freq data=work.citibike order=freq;
278     tables start_station_name / out=CustomersMem plots=freqplot(twoway=stacked
279     orient=horizontal);

```

```

280     by member_casual;
281     where (member_casual='member');
282     run;

```

NOTE: There were 32789 observations read from the data set WORK.CITIBIKE.

WHERE member\_casual='member';

NOTE: The data set WORK.CUSTOMERSMEM has 78 observations and 4 variables.

NOTE: PROCEDURE FREQ used (Total process time):

```

real time          0.21 seconds
user cpu time      0.13 seconds
system cpu time    0.01 seconds
memory             5119.81k
OS Memory          40196.00k
Timestamp          06/05/2022 09:01:56 AM
Step Count                    111  Switch Count  5
Page Faults                   0
Page Reclaims                 843
Page Swaps                    0
Voluntary Context Switches    426
Involuntary Context Switches  0
Block Input Operations        0
Block Output Operations       1168

```

```

283
284     Title;
285     ods graphics / reset;
286
287     /* 3g */
288     ods graphics / reset width=10in height=6in imagemap;
289     Title "3g";
290
291     /* Sorting out the data to remove duplicate data in the dataset*/
292     proc sort data=work.citibike;
293     by member_casual;
294     run;

```

NOTE: Input data set is already sorted, no sorting done.

NOTE: PROCEDURE SORT used (Total process time):

```

real time          0.00 seconds
user cpu time      0.00 seconds
system cpu time    0.00 seconds
memory             1878.06k
OS Memory          37796.00k
Timestamp          06/05/2022 09:01:56 AM
Step Count                    112  Switch Count  0

```

Page Faults	0
Page Reclaims	279
Page Swaps	0
Voluntary Context Switches	0
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	0

```
295
296      /* Finding the Frequency for start_station_name by member_casual = Casual*/
297      Title2 "Frequency for start_station_name by Casual";
298
299      proc freq data=work.citibike order=freq;
300      tables start_station_name / out=CustomersCas plots=freqplot(twoway=stacked
301      orient=horizontal);
302      by member_casual;
303      where (member_casual='casual');
304      run;
```

NOTE: There were 14873 observations read from the data set WORK.CITIBIKE.

WHERE member\_casual='casual';

NOTE: The data set WORK.CUSTOMERSCAS has 78 observations and 4 variables.

NOTE: PROCEDURE FREQ used (Total process time):

real time	0.20 seconds		
user cpu time	0.14 seconds		
system cpu time	0.00 seconds		
memory	4702.93k		
OS Memory	39684.00k		
Timestamp	06/05/2022 09:01:57 AM		
Step Count	113	Switch Count	4
Page Faults	0		
Page Reclaims	1030		
Page Swaps	0		
Voluntary Context Switches	412		
Involuntary Context Switches	0		
Block Input Operations	0		
Block Output Operations	1152		

```
305
306      Title;
307      ods graphics / reset;
308
309      /* 3h */
310      Title "3h";
```

```

311      Title2 "Member Customers commonly return or dock bikes";
312
313      /* To enable coloring theme for evening, morning and afternoon */
314      proc format;
315
316      !   value $ EndingTimes "Evening"="RED" "Morning"="BLUE" "Afternoon"="SNOW";
NOTE: Format $ENDINGTIMES is already on the library WORK.FORMATS.
NOTE: Format $ENDINGTIMES has been output.
316      run;

```

NOTE: PROCEDURE FORMAT used (Total process time):

real time	0.00 seconds
user cpu time	0.00 seconds
system cpu time	0.01 seconds
memory	234.21k
OS Memory	37024.00k
Timestamp	06/05/2022 09:01:57 AM
Step Count	114 Switch Count 0
Page Faults	0
Page Reclaims	15
Page Swaps	0
Voluntary Context Switches	0
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	32

```

317
318      /* To eliminate duplicate records and have a new dataset accordingly */
319      proc sort data=work.citibike;
320      by member_casual;
321      where (member_casual='member');
322
323      /* To find the frequency of the Enddate where member_casual = member */

```

NOTE: Input data set is already sorted, no sorting done.

NOTE: There were 32789 observations read from the data set WORK.CITIBIKE.  
WHERE member\_casual='member';

NOTE: The data set WORK.CITIBIKE has 32789 observations and 18 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time	0.01 seconds
user cpu time	0.00 seconds
system cpu time	0.01 seconds
memory	3429.43k
OS Memory	39848.00k
Timestamp	06/05/2022 09:01:57 AM

Step Count	115	Switch Count	7
Page Faults	0		
Page Reclaims	485		
Page Swaps	0		
Voluntary Context Switches	26		
Involuntary Context Switches	0		
Block Input Operations	0		
Block Output Operations	14600		

```

324      proc freq data=work.citibike order=freq;
325      tables EndDate / out=EndDate plots=freqplot(twoway=stacked orient=horizontal);
326      by member_casual;
327      where (member_casual='member');
328      run;

```

NOTE: There were 32789 observations read from the data set WORK.CITIBIKE.

WHERE member\_casual='member';

NOTE: The data set WORK.ENDDATE has 32 observations and 4 variables.

NOTE: PROCEDURE FREQ used (Total process time):

real time	0.12 seconds		
user cpu time	0.06 seconds		
system cpu time	0.02 seconds		
memory	4033.15k		
OS Memory	39220.00k		
Timestamp	06/05/2022 09:01:57 AM		
Step Count	116	Switch Count	4
Page Faults	0		
Page Reclaims	685		
Page Swaps	0		
Voluntary Context Switches	261		
Involuntary Context Switches	0		
Block Input Operations	0		
Block Output Operations	944		

```

329
330      Title "3h";
331
332      /* To find the frequency of the Endtimes where member_casual = member */
333      title2 'Frequency for ending times';
334
335      proc freq data=work.citibike order=freq;
336      tables EndTimes / out=EndTimes plots=freqplot(twoway=stacked
337      orient=horizontal);
338      by member_casual;

```



```
339     where (member_casual='member');
340     run;
```

NOTE: There were 32789 observations read from the data set WORK.CITIBIKE.

WHERE member\_casual='member';

NOTE: The data set WORK.ENDTIMES has 3 observations and 4 variables.

NOTE: PROCEDURE FREQ used (Total process time):

real time	0.09 seconds
user cpu time	0.04 seconds
system cpu time	0.01 seconds
memory	4246.18k
OS Memory	39476.00k
Timestamp	06/05/2022 09:01:57 AM
Step Count	117
Page Faults	0
Page Reclaims	691
Page Swaps	0
Voluntary Context Switches	210
Involuntary Context Switches	0
Block Input Operations	0
Block Output Operations	880

```
341
342     Title "3h";
343
344     /* To find the density of the Enddate where member_casual = member */
345     title2 'Histogram for Ending Dates';
346
347     proc sgplot data=work.citibike;
348     histogram EndDate;
349     density EndDate;
350     run;
```

NOTE: PROCEDURE SGPLOT used (Total process time):

real time	0.15 seconds
user cpu time	0.08 seconds
system cpu time	0.01 seconds
memory	4461.43k
OS Memory	40492.00k
Timestamp	06/05/2022 09:01:57 AM
Step Count	118
Page Faults	0
Page Reclaims	1431
Page Swaps	0
Voluntary Context Switches	223

```
Involuntary Context Switches      0
Block Input Operations             0
Block Output Operations            4208
```

NOTE: The column format MMDDYY10 is replaced by an auto-generated format on the axis.

NOTE: There were 32789 observations read from the data set WORK.CITIBIKE.

```
351
352      /* 3i */
353      ods graphics / reset width=10in height=6in imagemap;
354      Title "3i";
355
356      /* Finding the Frequency for start_station_name by member_casual*/
357      Title2 "Difference of member_casual in start_station_name";
358
359      proc freq data=work.citibike;
360      tables member_casual * start_station_name / plots(only)=freqplot
361      (twoway=grouphorizontal scale=percent type=Bar);
362      run;
```

NOTE: There were 32789 observations read from the data set WORK.CITIBIKE.

NOTE: PROCEDURE FREQ used (Total process time):

```
real time          2.47 seconds
user cpu time       1.11 seconds
system cpu time     0.14 seconds
memory             5626.40k
OS Memory           40452.00k
Timestamp           06/05/2022 09:02:00 AM
Step Count          119  Switch Count  4
Page Faults         0
Page Reclaims       8528
Page Swaps          0
Voluntary Context Switches 11918
Involuntary Context Switches 10
Block Input Operations 0
Block Output Operations 3600
```

```
363
364      Title;
365      ods graphics off;
366
367      OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
377
```