

```

1      OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
NOTE: ODS statements in the SAS Studio environment may disable some output features.
73
74      %let UID= 660185526 ;
75      %let libpath=/folders/myfolders/Permlib ;
76      %let pdfpath=/folders/myfolders/Final Exercise ;
77
78      libname HW3 "&libpath." ;
NOTE: Libref HW3 was successfully assigned as follows:
      Engine:          V9
      Physical Name: /folders/myfolders/Permlib
79      ods pdf file="&pdfpath.\HW3-&UID..pdf" ;
NOTE: Writing ODS PDF output to DISK destination "/folders/myfolders/Final Exercise\HW3-660185526.pdf", printer "PDF".
80
81      title "&SYSUSERID. - &UID. - Final Exercise" ;
82
83
84
85      /*****
86      /*****
87      /***** Macroize Long Strings *****/
88      /*****
89      /*****
90
91      %let droprenamemv = (drop = CRSDepTime DepTime CRSArrTime ArrTime FirstDepTime WheelsOff WheelsOn Div1WheelsOn
91      ! Div1WheelsOff Div2WheelsOn
92      Div2WheelsOff Div3WheelsOn Div3WheelsOff Div4WheelsOn Div4WheelsOff Div5WheelsOn Div5WheelsOff
93      rename =(CRSDepTimeF=CRSDepTime DepTimeF=DepTime CRSArrTimeF=CRSArrTime ArrTimeF=ArrTime FirstDepTimeF=FirstDepTime
94      WheelsOffF=WheelsOff WheelsOnF=WheelsOn Div1WheelsOnF=Div1WheelsOn Div1WheelsOffF=Div1WheelsOff
94      ! Div2WheelsOnF=Div2WheelsOn
95      Div2WheelsOffF=Div2WheelsOff Div3WheelsOnF=Div3WheelsOn Div3WheelsOffF=Div3WheelsOff Div4WheelsOnF=Div4WheelsOn
96      Div4WheelsOffF=Div4WheelsOff Div5WheelsOnF=Div5WheelsOn Div5WheelsOffF=Div5WheelsOff) ) ;
97
98      %let lengthmv = length Year 4. Quarter 4. Month 4. DayofMonth 4. DayOfWeek 4. FlightDate 8. UniqueCarrier $8. AirlineID
98      ! $4.
99      Carrier $4. TailNum $10. FlightNum 4. OriginAirportID $8. OriginAirportSeqID $8. OriginCityMarketID $6. Origin
99      ! $32.
100     OriginCityName $32. OriginState $32. OriginStateFips $32. OriginStateName $32. OriginWac $32. DestAirportID $6.
101     DestAirportSeqID $6. DestCityMarketID $6. Dest $32. DestCityName $32. DestState $32. DestStateFips $32.
102     DestStateName $32. DestWac $32. CRSDepTime $8. CRSDepTimeF 8. DepTime $8. DepTimeF 8. DepDelay 4. DepDelayMinutes 4.
103     DepDel15 4. DepartureDelayGroups 4. DepTimeBlk $9. TaxiOut 4. WheelsOff $8. WheelsOffF 8. WheelsOn $8. WheelsOnF 8.
104     TaxiIn 4. CRSArrTime $8. CRSArrTimeF 8. ArrTime $8. ArrTimeF 8. ArrDelay 4. ArrDelayMinutes 4. ArrDel15 4.
105     ArrivalDelayGroups 4. ArrTimeBlk $9. Cancelled 4. CancellationCode $8. Diverted 4. CRSElapsedTime 4.
105     ! ActualElapsedTime 4.
106     AirTime 4. Flights 4. Distance 4. DistanceGroup 4. CarrierDelay 4. WeatherDelay 4. NASDelay 4. SecurityDelay 4.
106     ! LateAircraftDelay 4.
107     FirstDepTime $8. FirstDepTimeF 8. TotalAddGTime 4. LongestAddGTime 4. DivAirportLandings 4. DivReachedDest 4.
107     ! DivActualElapsedTime 4. DivArrDelay 4.
108     DivDistance 4. Div1Airport $8. Div1AirportSeqID $8. Div1WheelsOn $8. Div1WheelsOnF 8.
108     ! Div1TotalGTime 4. Div1LongestGTime 4.
109     Div1WheelsOff $8. Div1WheelsOffF 8. Div1TailNum $8. Div2Airport $8. Div2AirportID $8. Div2AirportSeqID $8.
109     ! Div2WheelsOn $8. Div2WheelsOnF 8. Div2TotalGTime 4.
110     Div2LongestGTime 4. Div2WheelsOff $8. Div2WheelsOffF 8. Div2TailNum $8. Div3Airport $8. Div3AirportID $8.
110     ! Div3AirportSeqID $8. Div3WheelsOn $8. Div3WheelsOnF 8.
111     Div3TotalGTime 4. Div3LongestGTime 4. Div3WheelsOff $8. Div3WheelsOffF 8. Div3TailNum $8. Div4Airport $8.
111     ! Div4AirportID $8. Div4AirportSeqID $8.
112     Div4WheelsOn $8. Div4WheelsOnF 8. Div4TotalGTime 4. Div4LongestGTime 4. Div4WheelsOff $8. Div4WheelsOffF 8.
112     ! Div4TailNum $8. Div5Airport $8. Div5AirportID $8.
113     Div5AirportSeqID $8. Div5WheelsOn $8. Div5WheelsOnF 8. Div5TotalGTime 4. Div5LongestGTime 4. Div5WheelsOff $8.
113     ! Div5WheelsOffF 8. Div5TailNum $8. ;
114
115     %let inputmv = input Year Quarter Month DayofMonth DayOfWeek FlightDate :ymmdd10. UniqueCarrier $ AirlineID $ Carrier $
115     ! TailNum $ FlightNum
116     OriginAirportID $ OriginAirportSeqID $ OriginCityMarketID $ Origin $ OriginCityName $ OriginState $ OriginStateFips $
117     OriginStateName $ OriginWac $ DestAirportID $ DestAirportSeqID $ DestCityMarketID $ Dest $ DestCityName $ DestState $
118     DestStateFips $ DestStateName $ DestWac $ CRSDepTime $ DepTime $ DepDelay DepDelayMinutes DepDel15 DepartureDelayGroups
119     DepTimeBlk $ TaxiOut WheelsOff $ WheelsOn $ TaxiIn CRSArrTime $ ArrTime $ ArrDelay ArrDelayMinutes ArrDel15
119     ! ArrivalDelayGroups
120     ArrTimeBlk $ Cancelled CancellationCode $ Diverted CRSElapsedTime ActualElapsedTime AirTime Flights Distance
120     ! DistanceGroup
121     CarrierDelay WeatherDelay NASDelay SecurityDelay LateAircraftDelay FirstDepTime $ TotalAddGTime LongestAddGTime
122     DivAirportLandings DivReachedDest DivActualElapsedTime DivArrDelay DivDistance Div1Airport $ Div1AirportID $
122     ! Div1AirportSeqID $
123     Div1WheelsOn $ Div1TotalGTime Div1LongestGTime Div1WheelsOff $ Div1TailNum $ Div2Airport $ Div2AirportID $
123     ! Div2AirportSeqID $
124     Div2WheelsOn $ Div2TotalGTime Div2LongestGTime Div2WheelsOff $ Div2TailNum $ Div3Airport $ Div3AirportID $
124     ! Div3AirportSeqID $
125     Div3WheelsOn $ Div3TotalGTime Div3LongestGTime Div3WheelsOff $ Div3TailNum $ Div4Airport $ Div4AirportID $
125     ! Div4AirportSeqID $
126     Div4WheelsOn $ Div4TotalGTime Div4LongestGTime Div4WheelsOff $ Div4TailNum $ Div5Airport $ Div5AirportID $
126     ! Div5AirportSeqID $
127     Div5WheelsOn $ Div5TotalGTime Div5LongestGTime Div5WheelsOff $ Div5TailNum $ ;

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```
128
129 %macro timevars ;
130 if CRSDepTime="2400" then do ;
131 CRSDepTimeF=input("23:59", time5.) ; end ;
132 else do ;
133 format CRSDepTimeF time5. ;
134 CRSDepTimeF=input(substr(CRSDepTime,1,2)||":"||substr(CRSDepTime,3,2), time5.) ; end ;
135 if DepTime="2400" then do ;
136 DepTimeF=input("23:59", time5.) ; end ;
137 else do ;
138 format DepTimeF time5. ;
139 DepTimeF=input(substr(DepTime,1,2)||":"||substr(DepTime,3,2), time5.) ; end ;
140 if CRSArrTime="2400" then do ;
141 CRSArrTimeF=input("23:59", time5.) ; end ;
142 else do ;
143 format CRSArrTimeF time5. ;
144 CRSArrTimeF=input(substr(CRSArrTime,1,2)||":"||substr(CRSArrTime,3,2), time5.) ; end ;
145 if ArrTime="2400" then do ;
146 ArrTimeF=input("23:59", time5.) ; end ;
147 else do ;
148 format ArrTimeF time5. ;
149 ArrTimeF=input(substr(ArrTime,1,2)||":"||substr(ArrTime,3,2), time5.) ; end ;
150 if FirstDepTime="2400" then do ;
151 FirstDepTimeF=input("23:59", time5.) ; end ;
152 else do ;
153 format FirstDepTimeF time5. ;
154 FirstDepTimeF=input(substr(FirstDepTime,1,2)||":"||substr(FirstDepTime,3,2), time5.) ; end ;
155 if WheelsOff="2400" then do ;
156 WheelsOffF=input("23:59", time5.) ; end ;
157 else do ;
158 format WheelsOffF time5. ;
159 WheelsOffF=input(substr(WheelsOff,1,2)||":"||substr(WheelsOff,3,2), time5.) ; end ;
160 if WheelsOn="2400" then do ;
161 WheelsOnF=input("23:59", time5.) ; end ;
162 else do ;
163 format WheelsOnF time5. ;
164 WheelsOnF=input(substr(WheelsOn,1,2)||":"||substr(WheelsOn,3,2), time5.) ; end ;
165 if Div1WheelsOn="2400" then do ;
166 Div1WheelsOnF=input("23:59", time5.) ; end ;
167 else do ;
168 format Div1WheelsOnF time5. ;
169 Div1WheelsOnF=input(substr(Div1WheelsOn,1,2)||":"||substr(Div1WheelsOn,3,2), time5.) ; end ;
170 if Div1WheelsOff="2400" then do ;
171 Div1WheelsOffF=input("23:59", time5.) ; end ;
172 else do ;
173 format Div1WheelsOffF time5. ;
174 Div1WheelsOffF=input(substr(Div1WheelsOff,1,2)||":"||substr(Div1WheelsOff,3,2), time5.) ; end ;
175 if Div2WheelsOn="2400" then do ;
176 Div2WheelsOnF=input("23:59", time5.) ; end ;
177 else do ;
178 format Div2WheelsOnF time5. ;
179 Div2WheelsOnF=input(substr(Div2WheelsOn,1,2)||":"||substr(Div2WheelsOn,3,2), time5.) ; end ;
180 if Div2WheelsOff="2400" then do ;
181 Div2WheelsOffF=input("23:59", time5.) ; end ;
182 else do ;
183 format Div2WheelsOffF time5. ;
184 Div2WheelsOffF=input(substr(Div2WheelsOff,1,2)||":"||substr(Div2WheelsOff,3,2), time5.) ; end ;
185 if Div3WheelsOn="2400" then do ;
186 Div3WheelsOnF=input("23:59", time5.) ; end ;
187 else do ;
188 format Div3WheelsOnF time5. ;
189 Div3WheelsOnF=input(substr(Div3WheelsOn,1,2)||":"||substr(Div3WheelsOn,3,2), time5.) ; end ;
190 if Div3WheelsOff="2400" then do ;
191 Div3WheelsOffF=input("23:59", time5.) ; end ;
192 else do ;
193 format Div3WheelsOffF time5. ;
194 Div3WheelsOffF=input(substr(Div3WheelsOff,1,2)||":"||substr(Div3WheelsOff,3,2), time5.) ; end ;
195 if Div4WheelsOn="2400" then do ;
196 Div4WheelsOnF=input("23:59", time5.) ; end ;
197 else do ;
198 format Div4WheelsOnF time5. ;
199 Div4WheelsOnF=input(substr(Div4WheelsOn,1,2)||":"||substr(Div4WheelsOn,3,2), time5.) ; end ;
200 if Div4WheelsOff="2400" then do ;
201 Div4WheelsOffF=input("23:59", time5.) ; end ;
202 else do ;
203 format Div4WheelsOffF time5. ;
204 Div4WheelsOffF=input(substr(Div4WheelsOff,1,2)||":"||substr(Div4WheelsOff,3,2), time5.) ; end ;
205 if Div5WheelsOn="2400" then do ;
206 Div5WheelsOnF=input("23:59", time5.) ; end ;
207 else do ;
208 format Div5WheelsOnF time5. ;
209 Div5WheelsOnF=input(substr(Div5WheelsOn,1,2)||":"||substr(Div5WheelsOn,3,2), time5.) ; end ;
210 if Div5WheelsOff="2400" then do ;
211 Div5WheelsOffF=input("23:59", time5.) ; end ;
```

```

212     else do ;
213         format Div5WheelsOffF time5. ;
214         Div5WheelsOffF=input(substr(Div5WheelsOff,1,2)||":"||substr(Div5WheelsOff,3,2), time5.) ; end ;
215     %mend ;
216
217
218     /*****
219     *****/
220     /***** Reference Multiple Files in a SAS Dataset Manifest *****/
221     /*****
222     *****/
223
224     filename IN1
225     "/folders/myfolders/Final Exercise/On_Time_On_Time_Performance_2015_5.csv" ;
226
227     data HW3.BTS201505 &droprenamemv. ;
228     infile IN1 dsd delimiter=',' firstobs=2 obs=max ;
229
230     &lengthmv. ;
231     format flightdate yymmdd10.;
232     &inputmv. ;
233     %timevars ;
234
235     run ;

```

NOTE: The infile IN1 is:

```

Filename=/folders/myfolders/Final Exercise/On_Time_On_Time_Performance_2015_5.csv,
Owner Name=root,Group Name=vboxsf,
Access Permission=-rwxrwx---,
Last Modified=03May2020:21:07:57,
File Size (bytes)=224003544

```

NOTE: Invalid argument to function INPUT at line 233 column 187.  
NOTE: Invalid argument to function INPUT at line 233 column 57.  
NOTE: Invalid argument to function INPUT at line 233 column 29.  
NOTE: Invalid argument to function INPUT at line 233 column 17.  
NOTE: Invalid argument to function INPUT at line 233 column 241.  
NOTE: Invalid argument to function INPUT at line 233 column 211.  
NOTE: Invalid argument to function INPUT at line 233 column 182.  
NOTE: Invalid argument to function INPUT at line 233 column 149.  
NOTE: Invalid argument to function INPUT at line 233 column 118.  
NOTE: Invalid argument to function INPUT at line 233 column 89.  
NOTE: Invalid argument to function INPUT at line 233 column 59.

```

RULE:  -----1-----2-----3-----4-----5-----6-----7-----8-----9-----0
2      2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N339NW","779",14869,1486903,34614,"SLC","Salt Lake City, U
101    T","UT","49","Utah",87,12889,1288903,32211,"LAS","Las Vegas, NV","NV","32","Nevada",85,"2025","2024"
201    ,,-1.00,0.00,0.00,-1,"2000-2059",13.00,"2037","2033",5.00,"2050","2038",-12.00,0.00,0.00,-1,"2000-205
301    9",0.00,"",0.00,85.00,74.00,56.00,1.00,368.00,2,,,,,"",0,,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",
401    ,,,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",
Year=2015 Quarter=2 Month=5 DayOfMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N339NW FlightNum=779 OriginAirportID=14869 OriginAirportSeqID=1486903 OriginCityMarketID=34614 Origin=SLC
OriginCityName=Salt Lake City, UT OriginState=UT OriginStateFips=49 OriginStateName=Utah OriginWac=87 DestAirportID=12889
DestAirportSeqID=128890 DestCityMarketID=32211 Dest=LAS DestCityName=Las Vegas, NV DestState=NV DestStateFips=32
DestStateName=Nevada DestWac=85 CRSDepTime=2025 CRSDepTimeF=20:25 DepTime=2024 DepTimeF=20:24 DepDelay=-1 DepDelayMinutes=0
DepDel15=0 DepartureDelayGroups=-1 DepTimeBlk=2000-2059 TaxiOut=13 WheelsOff=2037 WheelsOn=2033 WheelsOnF=20:33
TaxiIn=5 CRSArrTime=2050 CRSArrTimeF=20:50 ArrTime=2038 ArrTimeF=20:38 ArrDelay=-12 ArrDelayMinutes=0 ArrDel15=0
ArrivalDelayGroups=-1 ArrTimeBlk=2000-2059 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=85 ActualElapsedTime=74
AirTime=56 Flights=1 Distance=368 DistanceGroup=2 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=.
FirstDepTime= FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=.
DivArrDelay=. DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=.
Div1LongestGTime=. Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn=
Div2WheelsOnF=. Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID=
Div3AirportSeqID= Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum=
Div4Airport= Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_=1 _N_=1

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NOTE: Invalid argument to function INPUT at line 233 column 187.  
NOTE: Invalid argument to function INPUT at line 233 column 57.  
NOTE: Invalid argument to function INPUT at line 233 column 29.  
NOTE: Invalid argument to function INPUT at line 233 column 17.  
NOTE: Invalid argument to function INPUT at line 233 column 241.  
NOTE: Invalid argument to function INPUT at line 233 column 211.  
NOTE: Invalid argument to function INPUT at line 233 column 182.  
NOTE: Invalid argument to function INPUT at line 233 column 149.  
NOTE: Invalid argument to function INPUT at line 233 column 118.  
NOTE: Invalid argument to function INPUT at line 233 column 89.  
NOTE: Invalid argument to function INPUT at line 233 column 59.

```

RULE:  -----1-----2-----3-----4-----5-----6-----7-----8-----9-----0
3      2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N3759","780",11433,1143302,31295,"DTW","Detroit, MI","MI",
101    "26","Michigan",43,13487,1348702,31650,"MSP","Minneapolis, MN","MN","27","Minnesota",63,"0735","0735
201    ",0.00,0.00,0.00,0,"0700-0759",18.00,"0753","0820",6.00,"0826","0826",0.00,0.00,0.00,0,"0800-0859",0
301    .00,"",0.00,111.00,111.00,87.00,1.00,528.00,3,,,,,"",0,,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",
401    ,,,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",
Year=2015 Quarter=2 Month=5 DayOfMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL TailNum=N3759

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```

FlightNum=780 OriginAirportID=11433 OriginAirportSeqID=1143302 OriginCityMarketID=31295 Origin=DTW OriginCityName=Detroit, MI
OriginState=MI OriginStateFips=26 OriginStateName=Michigan OriginWac=43 DestAirportID=13487 DestAirportSeqID=134870
DestCityMarketID=31650 Dest=MSP DestCityName=Minneapolis, MN DestState=MN DestStateFips=27 DestStateName=Minnesota DestWac=63
CRSDepTime=0735 CRSDepTimeF=7:35 DepTime=0735 DepTimeF=7:35 DepDelay=0 DepDelayMinutes=0 DepDel15=0 DepartureDelayGroups=0
DepTimeBlk=0700-0759 TaxiOut=18 WheelsOff=0753 WheelsOffF=7:53 WheelsOn=0820 WheelsOnF=8:20 TaxiIn=6 CRSArrTime=0826
CRSArrTimeF=8:26 ArrTime=0826 ArrTimeF=8:26 ArrDelay=0 ArrDelayMinutes=0 ArrDel15=0 ArrivalDelayGroups=0 ArrTimeBlk=0800-0859
Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=111 ActualElapsedTime=111 AirTime=87 Flights=1 Distance=528 DistanceGroup=3
CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=. FirstDepTime= FirstDepTimeF=. TotalAddGTime=.
LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=. DivArrDelay=. DivDistance=. Div1Airport=
Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=. Div1LongestGTime=. Div1WheelsOff=
Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn= Div2WheelsOnF=. Div2TotalGTime=.
Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID= Div3AirportSeqID= Div3WheelsOn=
Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum= Div4Airport= Div4AirportID=
Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff= Div4WheelsOffF=. Div4TailNum=
Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=. Div5LongestGTime=. Div5WheelsOff=
Div5WheelsOffF=. Div5TailNum= _ERROR_=1 _N_=2
NOTE: Invalid argument to function INPUT at line 233 column 187.
NOTE: Invalid argument to function INPUT at line 233 column 57.
NOTE: Invalid argument to function INPUT at line 233 column 29.
NOTE: Invalid argument to function INPUT at line 233 column 17.
NOTE: Invalid argument to function INPUT at line 233 column 241.
NOTE: Invalid argument to function INPUT at line 233 column 211.
NOTE: Invalid argument to function INPUT at line 233 column 182.
NOTE: Invalid argument to function INPUT at line 233 column 149.
NOTE: Invalid argument to function INPUT at line 233 column 118.
NOTE: Invalid argument to function INPUT at line 233 column 89.
NOTE: Invalid argument to function INPUT at line 233 column 59.
4      2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N913DL","782",13303,1330303,32467,"MIA","Miami, FL","FL","
101 12","Florida",33,12478,1247802,31703,"JFK","New York, NY","NY","36","New York",22,"0710","0708",-2.0
201 0,0.00,0.00,-1,"0700-0759",18.00,"0726","0947",6.00,"1012","0953",-19.00,0.00,0.00,-2,"1000-1059",0.
301 00,"",0.00,182.00,165.00,141.00,1.00,1089.00,5,,,,,"",0,,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",
401 "","","","","","","","","","","","","","","","","","","",443
Year=2015 Quarter=2 Month=5 DayofMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N913DL FlightNum=782 OriginAirportID=13303 OriginAirportSeqID=1330303 OriginCityMarketID=32467 Origin=MIA
OriginCityName=Miami, FL OriginState=FL OriginStateFips=12 OriginStateName=Florida OriginWac=33 DestAirportID=12478
DestAirportSeqID=124780 DestCityMarketID=31703 Dest=JFK DestCityName=New York, NY DestState=NY DestStateFips=36
DestStateName=New York DestWac=22 CRSDepTime=0710 CRSDepTimeF=7:10 DepTime=0708 DepTimeF=7:08 DepDelay=-2 DepDelayMinutes=0
DepDel15=0 DepartureDelayGroups=-1 DepTimeBlk=0700-0759 TaxiOut=18 WheelsOff=0726 WheelsOffF=7:26 WheelsOn=0947 WheelsOnF=9:47
TaxiIn=6 CRSArrTime=1012 CRSArrTimeF=10:12 ArrTime=0953 ArrTimeF=9:53 ArrDelay=-19 ArrDelayMinutes=0 ArrDel15=0
ArrivalDelayGroups=-2 ArrTimeBlk=1000-1059 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=182 ActualElapsedTime=165
AirTime=141 Flights=1 Distance=1089 DistanceGroup=5 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=.
FirstDepTime= FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=.
DivArrDelay=. DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=.
Div1LongestGTime=. Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn=
Div2WheelsOnF=. Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID=
Div3AirportSeqID= Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum=
Div4Airport= Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_=1 _N_=3
NOTE: Invalid argument to function INPUT at line 233 column 187.
NOTE: Invalid argument to function INPUT at line 233 column 57.
NOTE: Invalid argument to function INPUT at line 233 column 29.
NOTE: Invalid argument to function INPUT at line 233 column 17.
NOTE: Invalid argument to function INPUT at line 233 column 241.
NOTE: Invalid argument to function INPUT at line 233 column 211.
NOTE: Invalid argument to function INPUT at line 233 column 182.
NOTE: Invalid argument to function INPUT at line 233 column 149.
NOTE: Invalid argument to function INPUT at line 233 column 118.
NOTE: Invalid argument to function INPUT at line 233 column 89.
NOTE: Invalid argument to function INPUT at line 233 column 59.
RULE: -----1-----2-----3-----4-----5-----6-----7-----8-----9-----
5      2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N349NW","783",10397,1039705,30397,"ATL","Atlanta, GA","GA"
101 13","Georgia",34,13487,1348702,31650,"MSP","Minneapolis, MN","MN","27","Minnesota",63,"1050","1048
201 ",-2.00,0.00,0.00,-1,"1000-1059",15.00,"1103","1212",10.00,"1226","1222",-4.00,0.00,0.00,-1,"1200-12
301 59",0.00,"",0.00,156.00,154.00,129.00,1.00,907.00,4,,,,,"",0,,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",
401 "","","","","","","","","","","","","","","","","","","",448
Year=2015 Quarter=2 Month=5 DayofMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N349NW FlightNum=783 OriginAirportID=10397 OriginAirportSeqID=1039705 OriginCityMarketID=30397 Origin=ATL
OriginCityName=Atlanta, GA OriginState=GA OriginStateFips=13 OriginStateName=Georgia OriginWac=34 DestAirportID=13487
DestAirportSeqID=134870 DestCityMarketID=31650 Dest=MSP DestCityName=Minneapolis, MN DestState=MN DestStateFips=27
DestStateName=Minnesota DestWac=63 CRSDepTime=1050 CRSDepTimeF=10:50 DepTime=1048 DepTimeF=10:48 DepDelay=-2 DepDelayMinutes=0
DepDel15=0 DepartureDelayGroups=-1 DepTimeBlk=1000-1059 TaxiOut=15 WheelsOff=1103 WheelsOffF=11:03 WheelsOn=1212 WheelsOnF=12:12
TaxiIn=10 CRSArrTime=1226 CRSArrTimeF=12:26 ArrTime=1222 ArrTimeF=12:22 ArrDelay=-4 ArrDelayMinutes=0 ArrDel15=0
ArrivalDelayGroups=-1 ArrTimeBlk=1200-1259 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=156 ActualElapsedTime=154
AirTime=129 Flights=1 Distance=907 DistanceGroup=4 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=.
FirstDepTime= FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=.
DivArrDelay=. DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=.
Div1LongestGTime=. Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn=
Div2WheelsOnF=. Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID=
Div3AirportSeqID= Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum=
Div4Airport= Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_=1 _N_=4
NOTE: Invalid argument to function INPUT at line 233 column 187.

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NOTE: Invalid argument to function INPUT at line 233 column 57.
NOTE: Invalid argument to function INPUT at line 233 column 29.
NOTE: Invalid argument to function INPUT at line 233 column 17.
NOTE: Invalid argument to function INPUT at line 233 column 241.
NOTE: Invalid argument to function INPUT at line 233 column 211.
NOTE: Invalid argument to function INPUT at line 233 column 182.
NOTE: Invalid argument to function INPUT at line 233 column 149.
NOTE: Invalid argument to function INPUT at line 233 column 118.
NOTE: Invalid argument to function INPUT at line 233 column 89.
NOTE: Invalid argument to function INPUT at line 233 column 59.
6      2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N6700","784",10397,1039705,30397,"ATL","Atlanta, GA","GA",
101    "13","Georgia",34,13487,1348702,31650,"MSP","Minneapolis, MN","MN","27","Minnesota",63,"0845","0843",
201    , -2.00,0.00,0.00,-1,"0800-0859",16.00,"0859","1007",6.00,"1020","1013",-7.00,0.00,0.00,-1,"1000-1059
301    ",0.00,"",0.00,155.00,150.00,128.00,1.00,907.00,4,,,,,"",0,,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",
RULE:  -----1-----2-----3-----4-----5-----6-----7-----8-----9-----0
401    ,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",
Year=2015 Quarter=2 Month=5 DayOfMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL TailNum=N6700
FlightNum=784 OriginAirportID=10397 OriginAirportSeqID=1039705 OriginCityMarketID=30397 Origin=ATL OriginCityName=Atlanta, GA
OriginState=GA OriginStateFips=13 OriginStateName=Georgia OriginWac=34 DestAirportID=13487 DestAirportSeqID=134870
DestCityMarketID=31650 Dest=MSP DestCityName=Minneapolis, MN DestState=MN DestStateFips=27 DestStateName=Minnesota DestWac=63
CRSDepTime=0845 CRSDepTimeF=8:45 DepTime=0843 DepTimeF=8:43 DepDelay=-2 DepDelayMinutes=0 DepDel15=0 DepartureDelayGroups=-1
DepTimeBlk=0800-0859 TaxiOut=16 WheelsOff=0859 WheelsOffF=8:59 WheelsOn=1007 WheelsOnF=10:07 TaxiIn=6 CRSArrTime=1020
CRSArrTimeF=10:20 ArrTime=1013 ArrTimeF=10:13 ArrDelay=-7 ArrDelayMinutes=0 ArrDel15=0 ArrivalDelayGroups=-1 ArrTimeBlk=1000-1059
Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=155 ActualElapsedTime=150 AirTime=128 Flights=1 Distance=907
DistanceGroup=4 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=. FirstDepTime= FirstDepTimeF=.
TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=. DivArrDelay=. DivDistance=.
Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=. Div1LongestGTime=. Div1WheelsOff=
Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn= Div2WheelsOnF=. Div2TotalGTime=.
Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID= Div3AirportSeqID= Div3WheelsOn=
Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum= Div4Airport= Div4AirportID=
Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff= Div4WheelsOffF=. Div4TailNum=
Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=. Div5LongestGTime=. Div5WheelsOff=
Div5WheelsOffF=. Div5TailNum= _ERROR_1 _N_=5
NOTE: Invalid argument to function INPUT at line 233 column 187.
NOTE: Invalid argument to function INPUT at line 233 column 57.
NOTE: Invalid argument to function INPUT at line 233 column 29.
NOTE: Invalid argument to function INPUT at line 233 column 17.
NOTE: Invalid argument to function INPUT at line 233 column 241.
NOTE: Invalid argument to function INPUT at line 233 column 211.
NOTE: Invalid argument to function INPUT at line 233 column 182.
NOTE: Invalid argument to function INPUT at line 233 column 149.
NOTE: Invalid argument to function INPUT at line 233 column 118.
NOTE: Invalid argument to function INPUT at line 233 column 89.
NOTE: Invalid argument to function INPUT at line 233 column 59.
7      2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N667DN","785",13487,1348702,31650,"MSP","Minneapolis, MN",
101    "MN","27","Minnesota",63,10397,1039705,30397,"ATL","Atlanta, GA","GA","13","Georgia",34,"1307","1304
201    ", -3.00,0.00,0.00,-1,"1300-1359",13.00,"1317","1610",8.00,"1635","1618",-17.00,0.00,0.00,-2,"1600-16
301    59",0.00,"",0.00,148.00,134.00,113.00,1.00,907.00,4,,,,,"",0,,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",
401    ,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",
Year=2015 Quarter=2 Month=5 DayOfMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N667DN FlightNum=785 OriginAirportID=13487 OriginAirportSeqID=1348702 OriginCityMarketID=31650 Origin=MSP
OriginCityName=Minneapolis, MN OriginState=MN OriginStateFips=27 OriginStateName=Minnesota OriginWac=63 DestAirportID=10397
DestAirportSeqID=103970 DestCityMarketID=30397 Dest=ATL DestCityName=Atlanta, GA DestState=GA DestStateFips=13 DestStateName=Georgia
DestWac=34 CRSDepTime=1307 CRSDepTimeF=13:07 DepTime=1304 DepTimeF=13:04 DepDelay=-3 DepDelayMinutes=0 DepDel15=0
DepartureDelayGroups=-1 DepTimeBlk=1300-1359 TaxiOut=13 WheelsOff=1317 WheelsOffF=13:17 WheelsOn=1610 WheelsOnF=16:10 TaxiIn=8
CRSArrTime=1635 CRSArrTimeF=16:35 ArrTime=1618 ArrTimeF=16:18 ArrDelay=-17 ArrDelayMinutes=0 ArrDel15=0 ArrivalDelayGroups=-2
ArrTimeBlk=1600-1659 CancellationCode= Diverted=0 CRSElapsedTime=148 ActualElapsedTime=134 AirTime=113 Flights=1
Distance=907 DistanceGroup=4 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=. FirstDepTime=
FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=. DivArrDelay=.
DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=. Div1LongestGTime=.
Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn= Div2WheelsOnF=.
Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID= Div3AirportSeqID=
Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum= Div4Airport=
Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_1 _N_=6
NOTE: Invalid argument to function INPUT at line 233 column 187.
NOTE: Invalid argument to function INPUT at line 233 column 57.
NOTE: Invalid argument to function INPUT at line 233 column 29.
NOTE: Invalid argument to function INPUT at line 233 column 17.
NOTE: Invalid argument to function INPUT at line 233 column 241.
NOTE: Invalid argument to function INPUT at line 233 column 211.
NOTE: Invalid argument to function INPUT at line 233 column 182.
NOTE: Invalid argument to function INPUT at line 233 column 149.
NOTE: Invalid argument to function INPUT at line 233 column 118.
NOTE: Invalid argument to function INPUT at line 233 column 89.
NOTE: Invalid argument to function INPUT at line 233 column 59.
RULE:  -----1-----2-----3-----4-----5-----6-----7-----8-----9-----0
8      2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N596NW","786",12889,1288903,32211,"LAS","Las Vegas, NV","N
101    V","32","Nevada",85,10397,1039705,30397,"ATL","Atlanta, GA","GA","13","Georgia",34,"2244","2238",-6.
201    00,0.00,0.00,-1,"2200-2259",14.00,"2252","0505",4.00,"0535","0509",-26.00,0.00,0.00,-2,"0001-0559",0
301    .00,"",0.00,231.00,211.00,193.00,1.00,1747.00,7,,,,,"",0,,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",
401    ,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",
Year=2015 Quarter=2 Month=5 DayOfMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL

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TailNum=N596NW FlightNum=786 OriginAirportID=12889 OriginAirportSeqID=1288903 OriginCityMarketID=32211 Origin=LAS
OriginCityName=Las Vegas, NV OriginState=NV OriginStateFips=32 OriginStateName=Nevada OriginWac=85 DestAirportID=10397
DestAirportSeqID=103970 DestCityMarketID=30397 Dest=ATL DestCityName=Atlanta, GA DestState=GA DestStateFips=13 DestStateName=Georgia
DestWac=34 CRSDepTime=2244 CRSDepTimeF=22:44 DepTime=2238 DepTimeF=22:38 DepDelay=-6 DepDelayMinutes=0 DepDel15=0
DepartureDelayGroups=-1 DepTimeBlk=2200-2259 TaxiOut=14 WheelsOff=2252 WheelsOffF=22:52 WheelsOn=0505 WheelsOnF=5:05 TaxiIn=4
CRSArrTime=0535 CRSArrTimeF=5:35 ArrTime=0509 ArrTimeF=5:09 ArrDelay=-26 ArrDelayMinutes=0 ArrDel15=0 ArrivalDelayGroups=-2
ArrTimeBlk=0001-0559 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=231 ActualElapsedTime=211 AirTime=193 Flights=1
Distance=1747 DistanceGroup=7 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=. FirstDepTime=
FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=. DivArrDelay=.
DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=. Div1LongestGTime=.
Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn= Div2WheelsOnF=.
Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID= Div3AirportSeqID=
Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum= Div4Airport=
Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR=1 _N=7
NOTE: Invalid argument to function INPUT at line 233 column 187.
NOTE: Invalid argument to function INPUT at line 233 column 57.
NOTE: Invalid argument to function INPUT at line 233 column 29.
NOTE: Invalid argument to function INPUT at line 233 column 17.
NOTE: Invalid argument to function INPUT at line 233 column 241.
NOTE: Invalid argument to function INPUT at line 233 column 211.
NOTE: Invalid argument to function INPUT at line 233 column 182.
NOTE: Invalid argument to function INPUT at line 233 column 149.
NOTE: Invalid argument to function INPUT at line 233 column 118.
NOTE: Invalid argument to function INPUT at line 233 column 89.
NOTE: Invalid argument to function INPUT at line 233 column 59.
9      2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N931DL","787",13204,1320402,31454,"MCO","Orlando, FL","FL"
101    ,"12","Florida",33,12478,1247802,31703,"JFK","New York, NY","NY",36,"New York",22,"1200","1158",-2
201    .00,0.00,0.00,-1,"1200-1259",13.00,"1211","1416",14.00,"1446","1430",-16.00,0.00,0.00,-2,"1400-1459"
301    ,0.00,"",0.00,166.00,152.00,125.00,1.00,944.00,4,,,,,"",0,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",
401    ,,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",
Year=2015 Quarter=2 Month=5 DayofMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N931DL FlightNum=787 OriginAirportID=13204 OriginAirportSeqID=1320402 OriginCityMarketID=31454 Origin=MCO
OriginCityName=Orlando, FL OriginState=FL OriginStateFips=12 OriginStateName=Florida OriginWac=33 DestAirportID=12478
DestAirportSeqID=1247802 DestCityMarketID=31703 Dest=JFK DestCityName=New York, NY DestState=NY DestStateFips=36
DestStateName=New York DestWac=22 CRSDepTime=1200 CRSDepTimeF=12:00 DepTime=1158 DepTimeF=11:58 DepDelay=-2 DepDelayMinutes=0
DepDel15=0 DepartureDelayGroups=-1 DepTimeBlk=1200-1259 TaxiOut=13 WheelsOff=1211 WheelsOffF=12:11 WheelsOn=1416 WheelsOnF=14:16
TaxiIn=14 CRSArrTime=1446 CRSArrTimeF=14:46 ArrTime=1430 ArrTimeF=14:30 ArrDelay=-16 ArrDelayMinutes=0 ArrDel15=0
ArrivalDelayGroups=-2 ArrTimeBlk=1400-1459 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=166 ActualElapsedTime=152
AirTime=125 Flights=1 Distance=944 DistanceGroup=4 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=.
FirstDepTime= FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=.
DivArrDelay=. DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=.
Div1LongestGTime=. Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn=
Div2WheelsOnF=. Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID=
Div3AirportSeqID= Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum=
Div4Airport= Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR=1 _N=8
NOTE: Invalid argument to function INPUT at line 233 column 187.
NOTE: Invalid argument to function INPUT at line 233 column 57.
NOTE: Invalid argument to function INPUT at line 233 column 29.
NOTE: Invalid argument to function INPUT at line 233 column 17.
NOTE: Invalid argument to function INPUT at line 233 column 241.
NOTE: Invalid argument to function INPUT at line 233 column 211.
NOTE: Invalid argument to function INPUT at line 233 column 182.
NOTE: Invalid argument to function INPUT at line 233 column 149.
NOTE: Invalid argument to function INPUT at line 233 column 118.
NOTE: Invalid argument to function INPUT at line 233 column 89.
NOTE: Invalid argument to function INPUT at line 233 column 59.
RULE:  -----1-----2-----3-----4-----5-----6-----7-----8-----9-----
10     2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N127DL","788",12892,1289203,32575,"LAX","Los Angeles, CA",
101    "CA","06","California",91,13487,1348702,31650,"MSP","Minneapolis, MN","MN",27,"Minnesota",63,"1300
201    ", "1258",-2.00,0.00,0.00,-1,"1300-1359",20.00,"1318","1821",5.00,"1833","1826",-7.00,0.00,0.00,-1,"1
301    800-1859",0.00,"",0.00,213.00,208.00,183.00,1.00,1535.00,7,,,,,"",0,,,,,"",,,,,,"",,,,,,"",,,,,,"",
401    ,,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",
Year=2015 Quarter=2 Month=5 DayofMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N127DL FlightNum=788 OriginAirportID=12892 OriginAirportSeqID=1289203 OriginCityMarketID=32575 Origin=LAX
OriginCityName=Los Angeles, CA OriginState=CA OriginStateFips=06 OriginStateName=California OriginWac=91 DestAirportID=13487
DestAirportSeqID=1348702 DestCityMarketID=31650 Dest=MSP DestCityName=Minneapolis, MN DestState=MN DestStateFips=27
DestStateName=Minnesota DestWac=63 CRSDepTime=1300 CRSDepTimeF=13:00 DepTime=1258 DepTimeF=12:58 DepDelay=-2 DepDelayMinutes=0
DepDel15=0 DepartureDelayGroups=-1 DepTimeBlk=1300-1359 TaxiOut=20 WheelsOff=1318 WheelsOffF=13:18 WheelsOn=1821 WheelsOnF=18:21
TaxiIn=5 CRSArrTime=1833 CRSArrTimeF=18:33 ArrTime=1826 ArrTimeF=18:26 ArrDelay=-7 ArrDelayMinutes=0 ArrDel15=0
ArrivalDelayGroups=-1 ArrTimeBlk=1800-1859 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=213 ActualElapsedTime=208
AirTime=183 Flights=1 Distance=1535 DistanceGroup=7 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=.
FirstDepTime= FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=.
DivArrDelay=. DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=.
Div1LongestGTime=. Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn=
Div2WheelsOnF=. Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID=
Div3AirportSeqID= Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum=
Div4Airport= Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR=1 _N=9
NOTE: Invalid argument to function INPUT at line 233 column 187.
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NOTE: Over 100 NOTES, additional NOTES suppressed.  
NOTE: Invalid argument to function INPUT at line 233 column 57.

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11      2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N945DL","789",13303,1330303,32467,"MIA","Miami, FL","FL","
    101 12","Florida",33,12953,1295302,31703,"LGA","New York, NY","NY","36","New York",22,"1720","1821",61.0
    201 0,61.00,1.00,4,"1700-1759",21.00,"1842","2125",8.00,"2028","2133",65.00,65.00,1.00,4,"2000-2059",0.0
    301 0,"",0.00,188.00,192.00,163.00,1.00,1096.00,5,5.00,0.00,8.00,0.00,52.00,"",0,,,,,"",,"",,"",,"",
    401 ",,,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",,"",
Year=2015 Quarter=2 Month=5 DayofMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N945DL FlightNum=789 OriginAirportID=13303 OriginAirportSeqID=1330303 OriginCityMarketID=32467 Origin=MIA
OriginCityName=Miami, FL OriginState=FL OriginStateFips=12 OriginStateName=Florida OriginWac=33 DestAirportID=12953
DestAirportSeqID=129530 DestCityMarketID=31703 Dest=LGA DestCityName=New York, NY DestState=NY DestStateFips=36
DestStateName=New York DestWac=22 CRSDepTime=1720 CRSDepTimeF=17:20 DepTime=1821 DepTimeF=18:21 DepDelay=61 DepDelayMinutes=61
DepDel15=1 DepartureDelayGroups=4 DepTimeBlk=1700-1759 TaxiOut=21 WheelsOff=1842 WheelsOffF=18:42 WheelsOn=2125 WheelsOnF=21:25
TaxiIn=8 CRSArrTime=2028 CRSArrTimeF=20:28 ArrTime=2133 ArrTimeF=21:33 ArrDelay=65 ArrDelayMinutes=65 ArrDel15=1
ArrivalDelayGroups=4 ArrTimeBlk=2000-2059 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=188 ActualElapsedTime=192
AirTime=163 Flights=1 Distance=1096 DistanceGroup=5 CarrierDelay=5 WeatherDelay=0 NASDelay=8 SecurityDelay=0 LateAircraftDelay=52
FirstDepTime= FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=.
DivArrDelay=. DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=.
Div1LongestGTime=. Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn=
Div2WheelsOnF=. Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID=
Div3AirportSeqID= Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum=
Div4Airport= Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_1 _N_=10
RULE: -----1-----2-----3-----4-----5-----6-----7-----8-----9-----0
12      2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N918DH","790",10397,1039705,30397,"ATL","Atlanta, GA","GA"
    101 ,"13","Georgia",34,15016,1501603,31123,"STL","St. Louis, MO","MO","29","Missouri",64,"1955","1953",-
    201 2.00,0.00,0.00,-1,"1900-1959",13.00,"2006","2015",4.00,"2040","2019",-21.00,0.00,0.00,-2,"2000-2059"
    301 0.00,"",0.00,105.00,86.00,69.00,1.00,484.00,2,,,,,"",0,,,,,"",,"",,"",,"",,"",,"",,"",,"",,"",
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TailNum=N918DH FlightNum=790 OriginAirportID=10397 OriginAirportSeqID=1039705 OriginCityMarketID=30397 Origin=ATL
OriginCityName=Atlanta, GA OriginState=GA OriginStateFips=13 OriginStateName=Georgia OriginWac=34 DestAirportID=15016
DestAirportSeqID=150160 DestCityMarketID=31123 Dest=STL DestCityName=St. Louis, MO DestState=MO DestStateFips=29
DestStateName=Missouri DestWac=64 CRSDepTime=1955 CRSDepTimeF=19:55 DepTime=1953 DepTimeF=19:53 DepDelay=-2 DepDelayMinutes=0
DepDel15=0 DepartureDelayGroups=-1 DepTimeBlk=1900-1959 TaxiOut=13 WheelsOff=2006 WheelsOffF=20:06 WheelsOn=2015 WheelsOnF=20:15
TaxiIn=4 CRSArrTime=2040 CRSArrTimeF=20:40 ArrTime=2019 ArrTimeF=20:19 ArrDelay=-21 ArrDelayMinutes=0 ArrDel15=0
ArrivalDelayGroups=-2 ArrTimeBlk=2000-2059 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=105 ActualElapsedTime=86
AirTime=69 Flights=1 Distance=484 DistanceGroup=2 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=.
FirstDepTime= FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=.
DivArrDelay=. DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=.
Div1LongestGTime=. Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn=
Div2WheelsOnF=. Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID=
Div3AirportSeqID= Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum=
Div4Airport= Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_1 _N_=11
13      2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N718TW","791",12892,1289203,32575,"LAX","Los Angeles, CA",
    101 "CA","06","California",91,12478,1247802,31703,"JFK","New York, NY","NY","36","New York",22,"0605","0
    201 616",11.00,11.00,0.00,0,"0600-0659",19.00,"0635","1414",8.00,"1441","1422",-19.00,0.00,0.00,-2,"1400
    301 -1459",0.00,"",0.00,336.00,306.00,279.00,1.00,2475.00,10,,,,,"",0,,,,,"",,"",,"",,"",,"",,"",,"",
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Year=2015 Quarter=2 Month=5 DayofMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N718TW FlightNum=791 OriginAirportID=12892 OriginAirportSeqID=1289203 OriginCityMarketID=32575 Origin=LAX
OriginCityName=Los Angeles, CA OriginState=CA OriginStateFips=06 OriginStateName=California OriginWac=91 DestAirportID=12478
DestAirportSeqID=124780 DestCityMarketID=31703 Dest=JFK DestCityName=New York, NY DestState=NY DestStateFips=36
DestStateName=New York DestWac=22 CRSDepTime=0605 CRSDepTimeF=6:05 DepTime=0616 DepTimeF=6:16 DepDelay=11 DepDelayMinutes=11
DepDel15=0 DepartureDelayGroups=0 DepTimeBlk=0600-0659 TaxiOut=19 WheelsOff=0635 WheelsOffF=6:35 WheelsOn=1414 WheelsOnF=14:14
TaxiIn=8 CRSArrTime=1441 CRSArrTimeF=14:41 ArrTime=1422 ArrTimeF=14:22 ArrDelay=-19 ArrDelayMinutes=0 ArrDel15=0
ArrivalDelayGroups=-2 ArrTimeBlk=1400-1459 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=336 ActualElapsedTime=306
AirTime=279 Flights=1 Distance=2475 DistanceGroup=10 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=.
FirstDepTime= FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=.
DivArrDelay=. DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=.
Div1LongestGTime=. Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn=
Div2WheelsOnF=. Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID=
Div3AirportSeqID= Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum=
Div4Airport= Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_1 _N_=12
14      2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N949DL","792",14027,1402702,34027,"PBI","West Palm Beach/P
    101 alm Beach, FL","FL","12","Florida",33,12478,1247802,31703,"JFK","New York, NY","NY","36","New York",
    201 22,"1200","1200",0.00,0.00,0.00,0,"1200-1259",20.00,"1220","1435",14.00,"1447","1449",2.00,2.00,0.00
    301 ,0,"1400-1459",0.00,"",0.00,167.00,169.00,135.00,1.00,1028.00,5,,,,,"",0,,,,,"",,"",,"",,"",,"",
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Year=2015 Quarter=2 Month=5 DayofMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N949DL FlightNum=792 OriginAirportID=14027 OriginAirportSeqID=1402702 OriginCityMarketID=34027 Origin=PBI
OriginCityName=West Palm Beach/Palm Beach, FL OriginState=FL OriginStateFips=12 OriginStateName=Florida OriginWac=33
DestAirportID=12478 DestAirportSeqID=124780 DestCityMarketID=31703 Dest=JFK DestCityName=New York, NY DestState=NY DestStateFips=36
DestStateName=New York DestWac=22 CRSDepTime=1200 CRSDepTimeF=12:00 DepTime=1200 DepTimeF=12:00 DepDelay=0 DepDelayMinutes=0
DepDel15=0 DepartureDelayGroups=0 DepTimeBlk=1200-1259 TaxiOut=20 WheelsOff=1220 WheelsOn=1435 WheelsOnF=14:35
TaxiIn=14 CRSArrTime=1447 CRSArrTimeF=14:47 ArrTime=1449 ArrTimeF=14:49 ArrDelay=2 ArrDelayMinutes=2 ArrDel15=0 ArrivalDelayGroups=0
ArrTimeBlk=1400-1459 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=167 ActualElapsedTime=169 AirTime=135 Flights=1
Distance=1028 DistanceGroup=5 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=. FirstDepTime=
FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=. DivArrDelay=.
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DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=. Div1LongestGTime=.
Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn= Div2WheelsOnF=.
Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID= Div3AirportSeqID=
Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum= Div4Airport=
Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_ =1 _N_ =13
RULE: -----1-----2-----3-----4-----5-----6-----7-----8-----9-----0
15 2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N671DN","793",10721,1072102,30721,"BOS","Boston, MA","MA",
101 "25","Massachusetts",13,12478,1247802,31703,"JFK","New York, NY","NY","36","New York",22,"1755","180
201 8","13.00,13.00,0.00,0","1700-1759",39.00,"1847","1932",9.00,"1929","1941",12.00,12.00,0.00,0,"1900-19
301 59",0.00,"",0.00,94.00,93.00,45.00,1.00,187.00,1,,,,,"",0,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",
401 ,,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",
Year=2015 Quarter=2 Month=5 DayOfMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N671DN FlightNum=793 OriginAirportID=10721 OriginAirportSeqID=1072102 OriginCityMarketID=30721 Origin=BOS
OriginCityName=Boston, MA OriginState=MA OriginStateFips=25 OriginStateName=Massachusetts OriginWac=13 DestAirportID=12478
DestAirportSeqID=1247802 DestCityMarketID=31703 Dest=JFK DestCityName=New York, NY DestState=NY DestStateFips=36
DestStateName=New York DestWac=22 CRSDEPTime=1755 CRSDEPTimeF=17:55 DepTime=1808 DepTimeF=18:08 DepDelay=13 DepDelayMinutes=13
DepDel15=0 DepartureDelayGroups=0 DepTimeBlk=1700-1759 TaxiOut=39 WheelsOff=1847 WheelsOn=1932 WheelsOnF=19:32
TaxiIn=9 CRSArrTime=1929 CRSArrTimeF=19:29 ArrTime=1941 ArrTimeF=19:41 ArrDelay=12 ArrDelayMinutes=12 ArrDel15=0
ArrivalDelayGroups=0 ArrTimeBlk=1900-1959 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=94 ActualElapsedTime=93
AirTime=45 Flights=1 Distance=187 DistanceGroup=1 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=.
FirstDepTime= FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=.
DivArrDelay=. DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=.
Div1LongestGTime=. Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn=
Div2WheelsOnF=. Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID=
Div3AirportSeqID= Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum=
Div4Airport= Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_ =1 _N_ =14
16 2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N363NW","794",13487,1348702,31650,"MSP","Minneapolis, MN",
101 "MN","27","Minnesota",63,14869,1486903,34614,"SLC","Salt Lake City, UT","UT","49","Utah",87,"0900",
201 0910",10.00,10.00,0.00,0,"0900-0959",13.00,"0923","1036",4.00,"1049","1040",-9.00,0.00,0.00,-1,"1000
301 -1059",0.00,"",0.00,169.00,150.00,133.00,1.00,991.00,4,,,,,"",0,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",
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Year=2015 Quarter=2 Month=5 DayOfMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N363NW FlightNum=794 OriginAirportID=13487 OriginAirportSeqID=1348702 OriginCityMarketID=31650 Origin=MSP
OriginCityName=Minneapolis, MN OriginState=MN OriginStateFips=27 OriginStateName=Minnesota OriginWac=63 DestAirportID=14869
DestAirportSeqID=1486902 DestCityMarketID=34614 Dest=SLC DestCityName=Salt Lake City, UT DestState=UT DestStateFips=49
DestStateName=Utah DestWac=87 CRSDEPTime=0900 CRSDEPTimeF=9:00 DepTime=0910 DepTimeF=9:10 DepDelay=10 DepDelayMinutes=10 DepDel15=0
DepartureDelayGroups=0 DepTimeBlk=0900-0959 TaxiOut=13 WheelsOff=0923 WheelsOn=1036 WheelsOnF=10:36 TaxiIn=4
CRSArrTime=1049 CRSArrTimeF=10:49 ArrTime=1040 ArrTimeF=10:40 ArrDelay=-9 ArrDelayMinutes=0 ArrDel15=0 ArrivalDelayGroups=-1
ArrTimeBlk=1000-1059 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=169 ActualElapsedTime=150 AirTime=133 Flights=1
Distance=991 DistanceGroup=4 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=. FirstDepTime=
FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=. DivArrDelay=.
DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=. Div1LongestGTime=.
Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn= Div2WheelsOnF=.
Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID= Div3AirportSeqID=
Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum= Div4Airport=
Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_ =1 _N_ =15
RULE: -----1-----2-----3-----4-----5-----6-----7-----8-----9-----0
17 2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N903DA","795",13487,1348702,31650,"MSP","Minneapolis, MN",
101 "MN","27","Minnesota",63,10397,1039705,30397,"ATL","Atlanta, GA","GA","13","Georgia",34,"0740","0735
201 ",-5.00,0.00,0.00,-1,"0700-0759",20.00,"0755","1052",6.00,"1109","1058",-11.00,0.00,0.00,-1,"1100-11
301 59",0.00,"",0.00,149.00,143.00,117.00,1.00,907.00,4,,,,,"",0,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",
401 ,,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",
Year=2015 Quarter=2 Month=5 DayOfMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N903DA FlightNum=795 OriginAirportID=13487 OriginAirportSeqID=1348702 OriginCityMarketID=31650 Origin=MSP
OriginCityName=Minneapolis, MN OriginState=MN OriginStateFips=27 OriginStateName=Minnesota OriginWac=63 DestAirportID=10397
DestAirportSeqID=1039702 DestCityMarketID=30397 Dest=ATL DestCityName=Atlanta, GA DestState=GA DestStateFips=13 DestStateName=Georgia
DestWac=34 CRSDEPTime=0740 CRSDEPTimeF=7:40 DepTime=0735 DepTimeF=7:35 DepDelay=-5 DepDelayMinutes=0 DepDel15=0
DepartureDelayGroups=-1 DepTimeBlk=0700-0759 TaxiOut=20 WheelsOff=0755 WheelsOffF=7:55 WheelsOn=1052 WheelsOnF=10:52 TaxiIn=6
CRSArrTime=1109 CRSArrTimeF=11:09 ArrTime=1058 ArrTimeF=10:58 ArrDelay=-11 ArrDelayMinutes=0 ArrDel15=0 ArrivalDelayGroups=-1
ArrTimeBlk=1100-1159 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=149 ActualElapsedTime=143 AirTime=117 Flights=1
Distance=907 DistanceGroup=4 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=. FirstDepTime=
FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=. DivArrDelay=.
DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=. Div1LongestGTime=.
Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn= Div2WheelsOnF=.
Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID= Div3AirportSeqID=
Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum= Div4Airport=
Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_ =1 _N_ =16
18 2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N927DN","796",10397,1039705,30397,"ATL","Atlanta, GA","GA",
101 "13","Georgia",34,12339,1233904,32337,"IND","Indianapolis, IN","IN","18","Indiana",42,"0735","0734"
201 ,,-1.00,0.00,0.00,-1,"0700-0759",13.00,"0747","0850",5.00,"0902","0855",-7.00,0.00,0.00,-1,"0900-0959
301 ",0.00,"",0.00,87.00,81.00,63.00,1.00,432.00,2,,,,,"",0,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",
401 ,,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",,,,,,"",
Year=2015 Quarter=2 Month=5 DayOfMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N927DN FlightNum=796 OriginAirportID=10397 OriginAirportSeqID=1039705 OriginCityMarketID=30397 Origin=ATL
OriginCityName=Atlanta, GA OriginState=GA OriginStateFips=13 OriginStateName=Georgia OriginWac=34 DestAirportID=12339
DestAirportSeqID=1233902 DestCityMarketID=32337 Dest=IND DestCityName=Indianapolis, IN DestState=IN DestStateFips=18

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DestStateName=Indiana DestWac=42 CRSDepTime=0735 CRSDepTimeF=7:35 DepTime=0734 DepTimeF=7:34 DepDelay=-1 DepDelayMinutes=0
DepDel15=0 DepartureDelayGroups=-1 DepTimeBlk=0700-0759 TaxiOut=13 WheelsOff=0747 WheelsOffF=7:47 WheelsOn=0850 WheelsOnF=8:50
TaxiIn=5 CRSArrTime=0902 CRSArrTimeF=9:02 ArrTime=0855 ArrTimeF=8:55 ArrDelay=-7 ArrDelayMinutes=0 ArrDel15=0 ArrivalDelayGroups=-1
ArrTimeBlk=0900-0959 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=87 ActualElapsedTime=81 AirTime=63 Flights=1
Distance=432 DistanceGroup=2 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=. FirstDepTime=
FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=. DivArrDelay=.
DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=. Div1LongestGTime=.
Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn= Div2WheelsOnF=.
Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID= Div3AirportSeqID=
Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum= Div4Airport=
Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_1 _N_=17
19 2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N927DN","796",12339,1233904,32337,"IND","Indianapolis, IN"
101 ", "IN", "18", "Indiana", 42,10397,1039705,30397,"ATL", "Atlanta, GA", "GA", "13", "Georgia", 34, "0945", "0941"
201 ", -4.00,0.00,0.00,-1,"0900-0959",11.00,"0952", "1057", 5.00, "1117", "1102", -15.00,0.00,0.00,-1, "1100-115
301 9", 0.00, "", 0.00,92.00,81.00,65.00,1.00,432.00,2,,,,, "",0,,,,, "", "", "", "", "", "", "", "", "", "", "",
401 ", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "",
Year=2015 Quarter=2 Month=5 DayofMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N927DN FlightNum=796 OriginAirportID=12339 OriginAirportSeqID=1233904 OriginCityMarketID=32337 Origin=IND
OriginCityName=Indianapolis, IN OriginState=IN OriginStateFips=18 OriginStateName=Indiana OriginWac=42 DestAirportID=10397
DestAirportSeqID=103970 DestCityMarketID=30397 Dest=ATL DestCityName=Atlanta, GA DestState=GA DestStateFips=13 DestStateName=Georgia
DestWac=34 CRSDepTime=0945 CRSDepTimeF=9:45 DepTime=0941 DepTimeF=9:41 DepDelay=-4 DepDelayMinutes=0 DepDel15=0
DepartureDelayGroups=-1 DepTimeBlk=0900-0959 TaxiOut=11 WheelsOff=0952 WheelsOffF=9:52 WheelsOn=1057 WheelsOnF=10:57 TaxiIn=5
CRSArrTime=1117 CRSArrTimeF=11:17 ArrTime=1102 ArrTimeF=11:02 ArrDelay=-15 ArrDelayMinutes=0 ArrDel15=0 ArrivalDelayGroups=-1
ArrTimeBlk=1100-1159 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=92 ActualElapsedTime=81 AirTime=65 Flights=1
Distance=432 DistanceGroup=2 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=. FirstDepTime=
FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=. DivArrDelay=.
DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=. Div1LongestGTime=.
Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn= Div2WheelsOnF=.
Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID= Div3AirportSeqID=
Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum= Div4Airport=
Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_1 _N_=18
RULE:
-----1-----2-----3-----4-----5-----6-----7-----8-----9-----
20 2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N946DN","797",10529,1052904,30529,"BDL","Hartford, CT","CT
101 ", "09", "Connecticut", 11,13487,1348702,31650,"MSP", "Minneapolis, MN", "MN", "27", "Minnesota", 63,"0830",
201 "0827", -3.00,0.00,0.00,-1,"0800-0859",12.00,"0839", "1013", 5.00, "1029", "1018", -11.00,0.00,0.00,-1, "10
301 00-1059", 0.00, "", 0.00,179.00,171.00,154.00,1.00,1050.00,5,,,,, "",0,,,,, "", "", "", "", "", "", "", "",
401 ", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "",
Year=2015 Quarter=2 Month=5 DayofMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N946DN FlightNum=797 OriginAirportID=10529 OriginAirportSeqID=1052904 OriginCityMarketID=30529 Origin=BDL
OriginCityName=Hartford, CT OriginState=CT OriginStateFips=09 OriginStateName=Connecticut OriginWac=11 DestAirportID=13487
DestAirportSeqID=134870 DestCityMarketID=31650 Dest=MSP DestCityName=Minneapolis, MN DestState=MN DestStateFips=27
DestStateName=Minnesota DestWac=63 CRSDepTime=0830 CRSDepTimeF=8:30 DepTime=0827 DepTimeF=8:27 DepDelay=-3 DepDelayMinutes=0
DepDel15=0 DepartureDelayGroups=-1 DepTimeBlk=0800-0859 TaxiOut=12 WheelsOff=0839 WheelsOffF=8:39 WheelsOn=1013 WheelsOnF=10:13
TaxiIn=5 CRSArrTime=1029 CRSArrTimeF=10:29 ArrTime=1018 ArrTimeF=10:18 ArrDelay=-11 ArrDelayMinutes=0 ArrDel15=0
ArrivalDelayGroups=-1 ArrTimeBlk=1000-1059 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=179 ActualElapsedTime=171
AirTime=154 Flights=1 Distance=1050 DistanceGroup=5 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=.
FirstDepTime= FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=.
DivArrDelay=. DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=.
Div1LongestGTime=. Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn=
Div2WheelsOnF=. Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID=
Div3AirportSeqID= Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum=
Div4Airport= Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_1 _N_=19
WARNING: Limit set by ERRORS= option reached. Further errors of this type will not be printed.
21 2015,2,5,19,2,2015-05-19,"DL",19790,"DL","N927DN","798",10397,1039705,30397,"ATL", "Atlanta, GA", "GA"
101 ", "13", "Georgia", 34,11292,1129202,30325,"DEN", "Denver, CO", "CO", "08", "Colorado", 82,"1825", "1825", 0.00
201 ", 0.00,0.00,0,"1800-1859",15.00, "1840", "1919", 5.00, "1948", "1924", -24.00,0.00,0.00,-2, "1900-1959", 0.00
301 ", "0.00,203.00,179.00,159.00,1.00,1199.00,5,,,,, "",0,,,,, "", "", "", "", "", "", "", "", "", "", "",
401 ", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "",
Year=2015 Quarter=2 Month=5 DayofMonth=19 DayOfWeek=2 FlightDate=2015-05-19 UniqueCarrier=DL AirlineID=1979 Carrier=DL
TailNum=N927DN FlightNum=798 OriginAirportID=10397 OriginAirportSeqID=1039705 OriginCityMarketID=30397 Origin=ATL
OriginCityName=Atlanta, GA OriginState=GA OriginStateFips=13 OriginStateName=Georgia OriginWac=34 DestAirportID=11292
DestAirportSeqID=112920 DestCityMarketID=30325 Dest=DEN DestCityName=Denver, CO DestState=CO DestStateFips=08 DestStateName=Colorado
DestWac=82 CRSDepTime=1825 CRSDepTimeF=18:25 DepTime=1825 DepTimeF=18:25 DepDelay=0 DepDelayMinutes=0 DepDel15=0
DepartureDelayGroups=0 DepTimeBlk=1800-1859 TaxiOut=15 WheelsOff=1840 WheelsOffF=18:40 WheelsOn=1919 WheelsOnF=19:19 TaxiIn=5
CRSArrTime=1948 CRSArrTimeF=19:48 ArrTime=1924 ArrTimeF=19:24 ArrDelay=-24 ArrDelayMinutes=0 ArrDel15=0 ArrivalDelayGroups=-2
ArrTimeBlk=1900-1959 Cancelled=0 CancellationCode= Diverted=0 CRSElapsedTime=203 ActualElapsedTime=179 AirTime=159 Flights=1
Distance=1199 DistanceGroup=5 CarrierDelay=. WeatherDelay=. NASDelay=. SecurityDelay=. LateAircraftDelay=. FirstDepTime=
FirstDepTimeF=. TotalAddGTime=. LongestAddGTime=. DivAirportLandings=0 DivReachedDest=. DivActualElapsedTime=. DivArrDelay=.
DivDistance=. Div1Airport= Div1AirportID= Div1AirportSeqID= Div1WheelsOn= Div1WheelsOnF=. Div1TotalGTime=. Div1LongestGTime=.
Div1WheelsOff= Div1WheelsOffF=. Div1TailNum= Div2Airport= Div2AirportID= Div2AirportSeqID= Div2WheelsOn= Div2WheelsOnF=.
Div2TotalGTime=. Div2LongestGTime=. Div2WheelsOff= Div2WheelsOffF=. Div2TailNum= Div3Airport= Div3AirportID= Div3AirportSeqID=
Div3WheelsOn= Div3WheelsOnF=. Div3TotalGTime=. Div3LongestGTime=. Div3WheelsOff= Div3WheelsOffF=. Div3TailNum= Div4Airport=
Div4AirportID= Div4AirportSeqID= Div4WheelsOn= Div4WheelsOnF=. Div4TotalGTime=. Div4LongestGTime=. Div4WheelsOff=
Div4WheelsOffF=. Div4TailNum= Div5Airport= Div5AirportID= Div5AirportSeqID= Div5WheelsOn= Div5WheelsOnF=. Div5TotalGTime=.
Div5LongestGTime=. Div5WheelsOff= Div5WheelsOffF=. Div5TailNum= _ERROR_1 _N_=20
NOTE: 496993 records were read from the infile IN1.
The minimum record length was 361.
The maximum record length was 541.

```

NOTE: Mathematical operations could not be performed at the following places. The results of the operations have been set to missing values.

Each place is given by: (Number of times) at (Line):(Column).

5336 at 233:79      5920 at 233:222      493751 at 233:187      5636 at 233:147      5920 at 233:98      495277 at 233:57  
 495550 at 233:29      496978 at 233:17      496989 at 233:241      496993 at 233:211      496993 at 233:182      496993 at 233:149  
 496993 at 233:118      496993 at 233:89      496993 at 233:59

NOTE: The data set HW3.BTS201505 has 496993 observations and 109 variables.

NOTE: DATA statement used (Total process time):

real time            18.72 seconds  
 cpu time            11.99 seconds

```
236
237
238          /*****
239          /*****
240          /***** Use PROC SQL to Generate a random subset of the BTS file *****/
241          /*****
242          /*****
243          proc sql ;
244          * <Randomly subset monthly file here.> ;
245          create table HW3.BTS201505_subids as
246          select carrier , tailnum , flightdate , count(*) as NN , ranuni(&UID.) as random
247          from HW3.BTS201505
248          group by carrier , tailnum , flightdate
249          having random>.2 ;
```

NOTE: Table HW3.BTS201505\_SUBIDS created, with 92347 rows and 5 columns.

```
250
251
252          create table HW3.BTS201505_&uid. as
253          select a.*
254          from HW3.BTS201505 a inner join HW3.BTS201505_subids b
255          on a.carrier=b.carrier and a.flightdate=b.flightdate and a.tailnum=b.tailnum ;
```

NOTE: Table HW3.BTS201505\_660185526 created, with 395896 rows and 109 columns.

```
256
257          drop table HW3.BTS201505_subids ;
NOTE: Table HW3.BTS201505_SUBIDS has been dropped.
```

```
258
259          quit ;
NOTE: PROCEDURE SQL used (Total process time):
real time            12.00 seconds
cpu time            4.78 seconds
```

```
260
261          /***** Replace MNAR Missing Values by Rule *****/
262
263          PROC STDIZE data=HW3.BTS201505_&uid. out=HW3.BTS201505_&uid. reponly missing=0 ;
264          VAR DepDelay ArrDelay Distance ;
265          run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526.

NOTE: The data set HW3.BTS201505\_660185526 has 395896 observations and 109 variables.

NOTE: PROCEDURE STDIZE used (Total process time):

real time            9.30 seconds  
 cpu time            3.26 seconds

```
266
267          /***** END / Replace MNAR Missing Values by Rule *****/
268
269
270
271
272          /***** Create Lag Variables:
273          ArrDelayLag ArrDelayLagInd ArrDelayLagCum ArrDelayLag2 CancelledLag DistanceLag
274          *****/
275
276          proc sort data=HW3.BTS201505_&uid. ;
277          by Carrier TailNum FlightDate ;
278          run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526.

NOTE: The data set HW3.BTS201505\_660185526 has 395896 observations and 109 variables.

NOTE: PROCEDURE SORT used (Total process time):

real time            6.38 seconds  
 cpu time            2.98 seconds

```
279
280
281          data HW3.BTS201505_&uid.;
```

```

282 retain ArrDelayLag ArrDelayLagCum 0 CancelledLag 0 ArrDelayLag2 0 DistanceLag 0 ;
283 format flightdate yymmdd10. SeqNum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2Ind 4. ;
284 set HW3.BTS201505_&uid.;
285 by Carrier TailNum FlightDate ;
286 if first.FlightDate=1 then do ;
287
288   ArrDelayLag=0 ;
289   ArrDelayLagInd=0 ;
290   ArrDelayLagCum=0 ;
291
292   ArrDelayLag2=0 ;
293   ArrDelayLag2Ind=0 ;
294
295   CancelledLag = 0 ;
296   DistanceLag = 0 ;
297
298   SeqNum=1 ;
299   end ;
300
301   else do ;
302     SeqNum+1 ;
303
304     ArrDelayLagInd=(ArrDelayLag>0) ;
305     ArrDelayLagCum+ArrDelayLag ;
306
307     ArrDelayLag2Ind=(ArrDelayLag2>0) ;
308
309   end ;
310
311   output ;
312
313   ArrDelayLag2=ArrDelayLag ;
314
315   ArrDelayLag=ArrDelay ;
316
317   CancelledLag = Cancelled ;
318   DistanceLag = Distance ;
319
320   run ;

```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526.  
 NOTE: The data set HW3.BTS201505\_660185526 has 395896 observations and 117 variables.  
 NOTE: DATA statement used (Total process time):  
     real time          6.50 seconds  
     cpu time           2.35 seconds

```

321
322 /***** END / Create Lag Variables *****/
323
324
325
326
327 /***** Generate OLS estimates of model:
328
329 DepDelay = Carrier CRSDepTime seqnum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2 CancelledLag DistanceLag
330
331 *****/
332
333
334 proc glm data=HW3.BTS201505_&uid.;
335 class Carrier ;
336 model DepDelay = Carrier CRSDepTime seqnum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2 ArrDelayLag2Ind
336 ! CancelledLag DistanceLag ;
337 run ;
338
339 ! quit ;

```

NOTE: PROCEDURE GLM used (Total process time):  
     real time          7.37 seconds  
     cpu time           3.05 seconds

```

338
339 proc reg data=HW3.BTS201505_&uid.;
340 model DepDelay = CRSDepTime seqnum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2 ArrDelayLag2Ind CancelledLag
340 ! DistanceLag ;
341 run ;

```

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

```

342
343
344 /***** END / Generate OLS estimates of OLS model *****/

```

```
345
346
347
348      /***** Read the O'Hare 2015 weather file (Weather_ord_2015_miss.txt) into a SAS dataset.
349      Variables are Flight Date, Weather Station Name, Daily Precipitation (PRCP), Snow Depth on Ground (SNWD), Daily Snowfall
349      ! (SNOW),
350      Daily Low Temp (TEMPMIN), and Daily High Temp (TEMPMAX).
351
352      1.a. Note that the weather file includes missing values.
353      *****/
354      FILENAME IN1 "/folders/myfolders/Final Exercise/Weather_ord_2015_miss_prpc.csv" ;
355
```

NOTE: PROCEDURE REG used (Total process time):

```
real time      6.87 seconds
cpu time       2.79 seconds
```

```
356      data HW3.Weather_ORD ;
357      infile IN1 dsd delimiter="," dlmstr=' ' missover firstobs=2 ;
358      length FlightDate 8. WeatherStation $36. PRCP 4. SNWD 4. SNOW 4. TempMAX 4. TempMin 4. MonthNum 4.;
359      format FlightDate mmdyy10. ;
360      input FlightDate :ymmdd10. WeatherStation $ PRCP SNWD SNOW TempMAX TempMin MonthNum ;
361
362      run ;
```

NOTE: The infile IN1 is:

```
Filename=/folders/myfolders/Final Exercise/Weather_ord_2015_miss_prpc.csv,
Owner Name=root,Group Name=vboxsf,
Access Permission=-rwxrwx---,
Last Modified=03May2020:21:07:03,
File Size (bytes)=55084
```

NOTE: 792 records were read from the infile IN1.

```
The minimum record length was 64.
The maximum record length was 74.
```

NOTE: The data set HW3.WEATHER\_ORD has 792 observations and 8 variables.

NOTE: DATA statement used (Total process time):

```
real time      0.05 seconds
cpu time       0.01 seconds
```

```
363
364      /** Sorting the Weather file by FlightDate **/
365      proc sort data=HW3.Weather_ORD ;
366      by FlightDate ;
367      run ;
```

NOTE: There were 792 observations read from the data set HW3.WEATHER\_ORD.

NOTE: The data set HW3.WEATHER\_ORD has 792 observations and 8 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      0.05 seconds
cpu time       0.01 seconds
```

```
368
369      /** Filtering the Weather file for the month of May **/
370
371      data HW3.Weather_ORD ;
372      set HW3.Weather_ORD;
373      if '01May2015'd <= FlightDate <= '31May2015'd ;
374      run ;
```

NOTE: There were 792 observations read from the data set HW3.WEATHER\_ORD.

NOTE: The data set HW3.WEATHER\_ORD has 31 observations and 8 variables.

NOTE: DATA statement used (Total process time):

```
real time      0.04 seconds
cpu time       0.02 seconds
```

```
375
376
377      /** Sorting the May 2015 BTS file by FlightDate **/
378      proc sort data=HW3.BTS201505_&uid. ;
379      by flightdate;
380      run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526.

NOTE: The data set HW3.BTS201505\_660185526 has 395896 observations and 117 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      6.88 seconds
cpu time       2.95 seconds
```

```
381
382
383 /*****
384 1.b. Create a new dataset named BTS201505WTHR that MERGES the partial weather file to the May, 2015 BTS file in a DATA
385 ! step-Include only observations with ORIGIN="ORD" in the new dataset.
386 *****/
387
388 data HW3.BTS201505WTHR (drop=div:) ;
389 merge HW3.BTS201505_&uid.
390 HW3.Weather_ORD(keep= WeatherStation FlightDate PRCP SNWD SNOW TempMAX TempMin MonthNum);
391 by FlightDate ;
392 if Origin='ORD' ;
393 run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526.

NOTE: There were 31 observations read from the data set HW3.WEATHER\_ORD.

NOTE: The data set HW3.BTS201505WTHR has 21287 observations and 78 variables.

NOTE: DATA statement used (Total process time):

```
real time      3.85 seconds
cpu time       1.35 seconds
```

```
394
395 /*****
396
397 1.c. Create a new dataset named BTS201505WTHRIMP with 12 iterations of multiple imputation values for missing values of
398 ! prcp, tempmin, and tempmax.
399 *****/
400
401 /** Looking at the missing values */
402 proc reg data=HW3.BTS201505WTHR outest=HW3.BTS201505WTHR_reg ;
403 model DepDelay = CRSDepTime seqnum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2Ind ArrDelayLag2
404 CancelledLag DistanceLag PRCP SNWD SNOW TempMAX TempMin ;
405 where cancelled=0 ;
406 run ;
```

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

```
405 ! quit ;
```

NOTE: The data set HW3.BTS201505WTHR\_REG has 1 observations and 20 variables.

NOTE: PROCEDURE REG used (Total process time):

```
real time      0.46 seconds
cpu time       0.24 seconds
```

```
406
407 proc means N NMISS data=HW3.BTS201505WTHR ;
408 var SNWD SNOW TempMin PRCP TempMAX ;
409 run ;
```

NOTE: There were 21287 observations read from the data set HW3.BTS201505WTHR.

NOTE: PROCEDURE MEANS used (Total process time):

```
real time      0.24 seconds
cpu time       0.11 seconds
```

```
410
411 /** Multiple imputation to replace missing values of PRCP, TempMax and TempMin */
412
413 proc mi data= HW3.BTS201505WTHR nimpute=12 out=HW3.BTS201505WTHRIMP seed=54321;
414 fcs;
415 var PRCP TempMAX TempMin;
416 run;
```

NOTE: The data set HW3.BTS201505WTHRIMP has 255444 observations and 79 variables.

NOTE: PROCEDURE MI used (Total process time):

```
real time      17.66 seconds
cpu time       15.42 seconds
```

```
417
418 proc sort data=HW3.BTS201505WTHRIMP ;
419 by _imputation_ ;
420 run ;
```

NOTE: There were 255444 observations read from the data set HW3.BTS201505WTHRIMP.

NOTE: The data set HW3.BTS201505WTHRIMP has 255444 observations and 79 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      3.70 seconds
cpu time       1.32 seconds
```



```

421
422      /** Checking missing values after imputation **/
423      proc means data = HW3.BTS201505WTHRIMP n nmiss;
424          var _numeric_;
425      run;

```

NOTE: There were 255444 observations read from the data set HW3.BTS201505WTHRIMP.

NOTE: PROCEDURE MEANS used (Total process time):

```

real time      2.12 seconds
cpu time       1.02 seconds

```

```

426
427
428      /*****
429      1.d. Estimate an OLS regression model for DepDelay, using the following input variables:
430
431      CRSDepTime
432      seqnum
433      ArrDelayLagInd
434      ArrDelayLag
435      ArrDelayLagCum
436      ArrDelayLag2
437      DistanceLag
438      CancelledLag
439      Tempmin (from the Weather file)
440      Tempmax (from the Weather file)
441      PRCP (from the Weather file)
442
443      1.e. Use only observations where CANCELLED=0 and ORIGIN="ORD".
444
445      *****/
446
447      PROC glm DATA=HW3.BTS201505WTHRIMP;
448      model DepDelay = CRSDepTime SeqNum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2 DistanceLag CancelledLag PRCP
449      ! TempMAX TempMin;
450      *by Carrier;
451      where cancelled=0 and Origin = "ORD";
452      run;
453
454      quit;

```

NOTE: PROCEDURE GLM used (Total process time):

```

real time      3.73 seconds
cpu time       1.85 seconds

```

```

454
455      proc reg data=HW3.BTS201505WTHRIMP outest=HW3.BTS201505WTHRIMP_mimp COVOUT ;
456      model DepDelay = CRSDepTime SeqNum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2 DistanceLag CancelledLag PRCP
457      ! TempMAX TempMin;
458      where cancelled=0 and Origin = "ORD";
459      by _imputation_ ; /* We estimate unique parameters for each set of imputed values */
460      *title 'Regular OLS regression model for each carrier with DepDelay as the DV using all non-cancelled flights in
461      ! BTS201505WTHRIMP';
462      run;

```

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Imputation Number=1

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Imputation Number=2

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Imputation Number=3

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Imputation Number=4

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Imputation Number=5

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Imputation Number=6

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Imputation Number=7

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Imputation Number=8

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Imputation Number=9

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Imputation Number=10

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Imputation Number=11

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Imputation Number=12

NOTE: Interactivity disabled with BY processing.

NOTE: PROCEDURE REG used (Total process time):

real time 5.12 seconds

cpu time 2.79 seconds

NOTE: The data set HW3.BTS201505WTHRIMP\_MIMP has 156 observations and 19 variables.

```
461      quit ;
462
463      /*****
464      1.f. Use an appropriate SAS proc to evaluate the Multiple Imputation parameter estimates for tempmin, tempmax, and prcp.
465
466      *****/
467
468      proc mianalyze data=HW3.BTS201505WTHRIMP_mimp ;
469      modeleffects PRCP TempMAX TempMin ;
470      run ;
```

NOTE: PROCEDURE MIANALYZE used (Total process time):

real time 0.08 seconds

cpu time 0.07 seconds

```
471
472
473
474
475      /*****
476      Part 2
477      *****/
478
479
480      /*****
481      - Use an appropriate SAS PROC to impute missing values for MNAR variables DepDelay, ArrDelay, and Distance in
481      ! HW3.BTS201505_&UID.
482      (Do NOT rename HW3.BTS201505_&UID. Simply replace missing values without changing the name of HW3.BTS201505_&UID.)
483
484
485
486      - Create Lag1 variables for ArrDelay, Distance, and Cancelled
487
488      - Create variables ArrDelayLagInd and ArrDelayLagCum
489
490      - Create Lag2 variables from ArrDelay (ArrDelayLag2 and ArrDelayLag2Ind)
491      *****/
492
493      /** Replacing missing values for DepDelay, ArrDelay and Distance **/
494      proc stdize data=HW3.BTS201505_&uid. out=HW3.BTS201505_&uid. reponly missing=0 ;
495      var DepDelay ArrDelay Distance ;
496      run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526.

NOTE: The data set HW3.BTS201505\_660185526 has 395896 observations and 117 variables.

NOTE: PROCEDURE STDIZE used (Total process time):

real time 11.22 seconds

cpu time 3.65 seconds

```
497
498      /** Sorting BTS dataset by Carrier TailNum FlightDate **/
499      proc sort data=HW3.BTS201505_&uid. ;
500      by Carrier TailNum FlightDate ;
```

501 run ;

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526.  
 NOTE: The data set HW3.BTS201505\_660185526 has 395896 observations and 117 variables.  
 NOTE: PROCEDURE SORT used (Total process time):  
     real time           7.55 seconds  
     cpu time            3.12 seconds

```

502
503  /** Creating Lag Variables **/
504  data HW3.BTS201505_&uid.;
505  retain ArrDelayLag ArrDelayLagCum 0 CancelledLag 0 ArrDelayLag2 0 DistanceLag 0 ;
506  format flightdate yymmdd10. SeqNum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2Ind 4. ;
507  set HW3.BTS201505_&uid.;
508  by Carrier TailNum FlightDate ;
509  if first.FlightDate=1 then do ;
510
511      ArrDelayLag=0 ;
512      ArrDelayLagInd=0 ;
513      ArrDelayLagCum=0 ;
514
515      ArrDelayLag2=0 ;
516      ArrDelayLag2Ind=0 ;
517
518      CancelledLag = 0 ;
519      DistanceLag = 0 ;
520
521      SeqNum=1 ;
522      end ;
523
524      else do ;
525          SeqNum+1 ;
526
527          ArrDelayLagInd=(ArrDelayLag>0) ;
528          ArrDelayLagCum+ArrDelayLag ;
529
530          ArrDelayLag2Ind=(ArrDelayLag2>0) ;
531
532      end ;
533
534      output ;
535
536      ArrDelayLag2=ArrDelayLag ;
537
538      ArrDelayLag=ArrDelay ;
539
540      CancelledLag = Cancelled ;
541      DistanceLag = Distance ;
542
543  run ;

```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526.  
 NOTE: The data set HW3.BTS201505\_660185526 has 395896 observations and 117 variables.  
 NOTE: DATA statement used (Total process time):  
     real time           7.15 seconds  
     cpu time            2.62 seconds

```

544
545  /*****
546  Generate standard OLS parameter estimates from the HW3.BTS201505_&UID. dataset for the following MODEL specification:
547
548  DepDelay=Carrier CRSDepTime seqnum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2 ArrDelayLag2Ind CancelledLag
549  ! DistanceLag
550
551  Generate standard OLS parameter estimates from the HW3.BTS201505_&UID. dataset for the following MODEL specification BY
552  ! CARRIER:
553
554  Use an appropriate PROC option to output the parameter estimates for each BY GROUP to a SAS dataset
555  The dataset with parameter estimates will be created with each BY model in a separate row.
556  TRANPOSE that table so that each model appears in a column.
557  In the TRANSPOSEd table create new variables that compare the percent difference in parameter estimates for each Carrier
558  ! against the parameter estimates for the "AA" BY group
559
560  *****/
561
562  proc glm data=HW3.BTS201505_&uid.; *outstat = HW3.glm_result ;
563  class Carrier ;
564  model DepDelay = Carrier CRSDepTime seqnum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2 ArrDelayLag2Ind
565  ! CancelledLag DistanceLag ;
566  run ;

```

```
564      !      quit ;
```

```
NOTE: PROCEDURE GLM used (Total process time):
      real time      7.70 seconds
      cpu time       3.13 seconds
```

```
565
566      proc reg data=HW3.BTS201505_&uid. outest = HW3.reg_result;
567      by Carrier ;
568      model DepDelay = CRSDepTime seqnum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2 ArrDelayLag2Ind CancelledLag
569      ! DistanceLag ;
569      run ;
```

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Carrier=AA

WARNING: Most ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: Heat maps are displayed instead of scatter plots when residual plots or fit plots are produced.

NOTE: The above message was for the following BY group:

Carrier=AS

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Carrier=B6

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Carrier=DL

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Carrier=EV

WARNING: Most ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: Heat maps are displayed instead of scatter plots when residual plots or fit plots are produced.

NOTE: The above message was for the following BY group:

Carrier=F9

WARNING: Most ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: Heat maps are displayed instead of scatter plots when residual plots or fit plots are produced.

NOTE: The above message was for the following BY group:

Carrier=HA

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Carrier=MQ

WARNING: Most ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: Heat maps are displayed instead of scatter plots when residual plots or fit plots are produced.

NOTE: The above message was for the following BY group:

Carrier=NK

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Carrier=OO

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Carrier=UA

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Carrier=US

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

NOTE: The above message was for the following BY group:

Carrier=WN

NOTE: Interactivity disabled with BY processing.

```
NOTE: PROCEDURE REG used (Total process time):
      real time      28.77 seconds
      cpu time       17.13 seconds
```

NOTE: The data set HW3.REG\_RESULT has 14 observations and 16 variables.

```
570
571      proc transpose data = HW3.reg_result out = HW3.transposed_reg_results (drop = AA AS B6 DL EV F9 HA MQ NK OO UA US VX WN
572      rename = (Col1 = AA Col2 = AS Col3 = B6 Col4 = DL Col5 = EV
573      Col6 = F9 Col7 = HA Col8 = MQ Col9 = NK Col10 = OO Col11 = UA Col12 = US Col13 = VX Col14 = WN)) ;
574      by _Model_;
575      run;
```

WARNING: The variable AA in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable AS in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable B6 in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable DL in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable EV in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable F9 in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable HA in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable MQ in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable NK in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable OO in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable UA in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable US in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable VX in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable WN in the DROP, KEEP, or RENAME list has never been referenced.

NOTE: There were 14 observations read from the data set HW3.REG\_RESULT.

NOTE: The data set HW3.TRANSPOSED\_REG\_RESULTS has 12 observations and 17 variables.

NOTE: PROCEDURE TRANSPOSE used (Total process time):

real time 0.06 seconds  
 cpu time 0.01 seconds

```
576
577     proc print data = HW3.transposed_reg_results;
578     run;
```

NOTE: There were 12 observations read from the data set HW3.TRANSPOSED\_REG\_RESULTS.

NOTE: PROCEDURE PRINT used (Total process time):

real time 0.18 seconds  
 cpu time 0.17 seconds

```
579
580     data HW3.parameter_diff (drop=_Label_ _Model_ ) ;
581     set HW3.transposed_reg_results ;
582     format delta_AS delta_B6 delta_DL delta_EV delta_F9 delta_HA delta_MQ delta_NK delta_OO delta_UA delta_US delta_VX
583     ! delta_WN percent10.4;
584     delta_AS=1-(AS/AA);
585     delta_B6=1- (B6/AA) ;
586     delta_DL=1- (DL/AA);
587     delta_EV=1-(EV/AA) ;
588     delta_F9=1-(F9/AA) ;
589     delta_HA=1-(HA/AA) ;
590     delta_MQ=1-(MQ/AA) ;
591     delta_NK=1-(NK/AA) ;
592     delta_OO=1-(OO/AA);
593     delta_UA=1-(UA/AA);
594     delta_US=1-(US/AA) ;
595     delta_VX=1-(VX/AA) ;
596     delta_WN=1-(WN/AA) ;
597     run;
```

NOTE: There were 12 observations read from the data set HW3.TRANSPOSED\_REG\_RESULTS.

NOTE: The data set HW3.PARAMETER\_DIFF has 12 observations and 28 variables.

NOTE: DATA statement used (Total process time):

real time 0.04 seconds  
 cpu time 0.01 seconds

```
597
598     proc print data = HW3.parameter_diff;
599     run;
```

NOTE: There were 12 observations read from the data set HW3.PARAMETER\_DIFF.

NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST" format.

NOTE: PROCEDURE PRINT used (Total process time):

real time 0.30 seconds  
 cpu time 0.30 seconds

```
600
601
602
603     /***** Create CARRIER/TAILNUM/FLIGHTDATE summary data set *****/
604
605     proc stdize data=HW3.BTS201505_&uid. out=HW3.BTS201505_&uid. reponly missing=0 ;
606     var DepDelay ArrDelay Distance ;
607     run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526.

NOTE: The data set HW3.BTS201505\_660185526 has 395896 observations and 117 variables.

NOTE: PROCEDURE STDIZE used (Total process time):

real time 10.15 seconds  
 cpu time 3.56 seconds



```
608
609     proc sort data=HW3.BTS201505_&uid. ;
610     by Carrier TailNum FlightDate ;
611     run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526.  
NOTE: The data set HW3.BTS201505\_660185526 has 395896 observations and 117 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 7.88 seconds  
cpu time 3.63 seconds

```
612
613     data HW3.BTS201505_&UID._DEL15S;
614     retain DelayCt 0 MaxCRSDepTime 0 DistanceCum 0 CancelledCt 0;
615     format MaxCRSDepTime time5.;
616     set HW3.BTS201505_&UID.;
617
618     by Carrier TailNum FlightDate;
619
620     if first.FlightDate = 1 and DepDelay > 15 then do;
621     DelayCt = 1 ;
622     end;
623
624     else if first.FlightDate = 1 and DepDelay <= 15 then do;
625     DelayCt = 0;
626     end;
627
628     else if DepDelay > 15 then do;
629     DelayCt = DelayCt + 1;
630     end;
631
632     else do;
633     DelayCt = DelayCt;
634     end;
635
636     if first.FlightDate = 1 then do;
637     count = 1;
638     MaxCRSDepTime = max(CRSDepTime);
639     DistanceCum = Distance;
640     end;
641     else do;
642     count + 1;
643     MaxCRSDepTime = MaxCRSDepTime;
644     DistanceCum = DistanceCum + Distance;
645     end;
646
647     if first.FlightDate = 1 and Cancelled = 1 then do;
648     CancelledCt = 1;
649     end;
650     else if first.FlightDate = 1 and Cancelled = 0 then do;
651     CancelledCt = 0;
652     end;
653     else do;
654     CancelledCt = CancelledCt + Cancelled;
655     end;
656     output ;
657
658     run;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526.  
NOTE: The data set HW3.BTS201505\_660185526\_DEL15S has 395896 observations and 122 variables.  
NOTE: DATA statement used (Total process time):  
real time 7.15 seconds  
cpu time 2.57 seconds

```
659
660
661     proc sort data = HW3.BTS201505_&UID._DEL15S;
662     by Carrier TailNum FlightDate Descending SeqNum;
663     run;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526\_DEL15S.  
NOTE: The data set HW3.BTS201505\_660185526\_DEL15S has 395896 observations and 122 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 7.62 seconds  
cpu time 3.19 seconds

```
664
665     data HW3.BTS201505_&UID._DEL15S (drop = SeqNum rename = SeqNum1 = SeqNum);
```

```
666      retain LnSeqNUM 0 SeqNum1 0;
667      set HW3.BTS201505_&UID._DEL15S;
668      by Carrier TailNum FlightDate;
669      if first.FlightDate = 1 then do;
670          SeqNum1 = SeqNum;
671          LnSeqNUM = log(SeqNum);
672      end;
673      else do;
674          SeqNum1 = SeqNum1;
675          LnSeqNUM = LnSeqNUM;
676      end;
677      run;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526\_DEL15S.

NOTE: The data set HW3.BTS201505\_660185526\_DEL15S has 395896 observations and 123 variables.

NOTE: DATA statement used (Total process time):

```
real time      8.07 seconds
cpu time       2.74 seconds
```

```
678
679      proc sort data = HW3.BTS201505_&UID._DEL15S;
680      by Carrier TailNum FlightDate Descending CancelledCt;
681      run;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526\_DEL15S.

NOTE: The data set HW3.BTS201505\_660185526\_DEL15S has 395896 observations and 123 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      7.67 seconds
cpu time       3.20 seconds
```

```
682
683      data HW3.BTS201505_&UID._DEL15S (drop = CancelledCt);
684      retain CancelledCount 0;
685      set HW3.BTS201505_&UID._DEL15S;
686      by Carrier TailNum FlightDate;
687      if first.FlightDate = 1 then do;
688          CancelledCount = max(CancelledCt);
689      end;
690      else do;
691          CancelledCount = CancelledCount;
692      end;
693      run;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526\_DEL15S.

NOTE: The data set HW3.BTS201505\_660185526\_DEL15S has 395896 observations and 123 variables.

NOTE: DATA statement used (Total process time):

```
real time      7.22 seconds
cpu time       2.62 seconds
```

```
694
695      proc sort data = HW3.BTS201505_&UID._DEL15S;
696      by Carrier TailNum FlightDate count;
697      run;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526\_DEL15S.

NOTE: The data set HW3.BTS201505\_660185526\_DEL15S has 395896 observations and 123 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      8.93 seconds
cpu time       3.41 seconds
```

```
698
699
700      proc sort data = HW3.BTS201505_&UID._DEL15S;
701      by Carrier TailNum FlightDate Descending DelayCt;
702      run;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526\_DEL15S.

NOTE: The data set HW3.BTS201505\_660185526\_DEL15S has 395896 observations and 123 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      8.29 seconds
cpu time       3.37 seconds
```

```
703
704      data HW3.BTS201505_&UID._DEL15S; *(drop = DelayCount rename = DelayCt = DelayCount);
705      retain DelayCount 0;
706      set HW3.BTS201505_&UID._DEL15S;
707      by Carrier TailNum FlightDate;
708      if first.FlightDate = 1 then do;
709          DelayCount = max(DelayCt);
```

```
710      end;
711      else do;
712          DelayCount = DelayCount;
713      end;
714      run;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526\_DEL15S.  
NOTE: The data set HW3.BTS201505\_660185526\_DEL15S has 395896 observations and 124 variables.  
NOTE: DATA statement used (Total process time):  
real time 7.69 seconds  
cpu time 2.72 seconds

```
715
716      proc sort data = HW3.BTS201505_&UID._DEL15S;
717          by Carrier TailNum FlightDate count;
718      run;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526\_DEL15S.  
NOTE: The data set HW3.BTS201505\_660185526\_DEL15S has 395896 observations and 124 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 7.46 seconds  
cpu time 3.11 seconds

```
719
720
721      /***** END / Create CARRIER/TAILNUM/FLIGHTDATE summary data set *****/
722
723
724
725
726
727      /***** Estimate POISSON model parameters for CARRIER/TAILNUM/FLIGHTDATE summary data set *****/
728
729      proc genmod data = HW3.BTS201505_&UID._DEL15S;
730          class Carrier;
731          model DelayCt = Carrier MaxCRSDepTime DistanceCum CancelledCount / dist=poisson link=log;
732          offset = log(SeqNum);
733      run;
```

NOTE: Algorithm converged.  
NOTE: The scale parameter was held fixed.  
NOTE: PROCEDURE GENMOD used (Total process time):  
real time 13.96 seconds  
cpu time 5.59 seconds

```
734      quit;
735
736
737      proc genmod data = HW3.BTS201505_&UID._DEL15S;
738          by Carrier;
739          model DelayCt = MaxCRSDepTime DistanceCum CancelledCount / dist=poisson link=log;
740          offset = LnSeqNUM;
741      run;
```

NOTE: Algorithm converged.  
NOTE: The scale parameter was held fixed.  
NOTE: The above message was for the following BY group:  
Carrier=AA  
NOTE: Algorithm converged.  
NOTE: The scale parameter was held fixed.  
NOTE: The above message was for the following BY group:  
Carrier=AS  
NOTE: Algorithm converged.  
NOTE: The scale parameter was held fixed.  
NOTE: The above message was for the following BY group:  
Carrier=B6  
NOTE: Algorithm converged.  
NOTE: The scale parameter was held fixed.  
NOTE: The above message was for the following BY group:  
Carrier=DL  
NOTE: Algorithm converged.  
NOTE: The scale parameter was held fixed.  
NOTE: The above message was for the following BY group:  
Carrier=EV  
NOTE: Algorithm converged.  
NOTE: The scale parameter was held fixed.  
NOTE: The above message was for the following BY group:  
Carrier=F9  
NOTE: Algorithm converged.  
NOTE: The scale parameter was held fixed.  
NOTE: The above message was for the following BY group:

```

Carrier=HA
NOTE: Algorithm converged.
NOTE: The scale parameter was held fixed.
NOTE: The above message was for the following BY group:
Carrier=MQ
NOTE: Algorithm converged.
NOTE: The scale parameter was held fixed.
NOTE: The above message was for the following BY group:
Carrier=NK
NOTE: Algorithm converged.
NOTE: The scale parameter was held fixed.
NOTE: The above message was for the following BY group:
Carrier=OO
NOTE: Algorithm converged.
NOTE: The scale parameter was held fixed.
NOTE: The above message was for the following BY group:
Carrier=UA
NOTE: Algorithm converged.
NOTE: The scale parameter was held fixed.
NOTE: The above message was for the following BY group:
Carrier=US
NOTE: Algorithm converged.
NOTE: The scale parameter was held fixed.
NOTE: The above message was for the following BY group:
Carrier=VX
NOTE: Algorithm converged.
NOTE: The scale parameter was held fixed.
NOTE: The above message was for the following BY group:
Carrier=WN
NOTE: PROCEDURE GENMOD used (Total process time):
      real time      16.97 seconds
      cpu time       7.08 seconds

742      quit;
743
744      /***** END / Estimate POISSON model parameters for CARRIER/TAILNUM/FLIGHTDATE summary data set *****/
745
746
747
748
749      /***** Easter Egg 1 *****/
750
751      proc sql ;
752      * <Randomly subset monthly file here.> ;
753      create table HW3.BTS201505_subids as
754      select carrier , tailnum , flightdate , count(*) as NN , ranuni(&UID.) as random
755      from HW3.BTS201505
756      group by carrier , tailnum , flightdate
757      having random>.2 ;
NOTE: Table HW3.BTS201505_SUBIDS created, with 92347 rows and 5 columns.

758
759
760      create table HW3.BTS201505_&uid. as
761      select a.*
762      from HW3.BTS201505 a inner join HW3.BTS201505_subids b
763      on a.carrier=b.carrier and a.flightdate=b.flightdate and a.tailnum=b.tailnum ;
NOTE: Table HW3.BTS201505_660185526 created, with 395896 rows and 109 columns.

764
765      drop table HW3.BTS201505_subids ;
NOTE: Table HW3.BTS201505_SUBIDS has been dropped.
766
767      quit ;
NOTE: PROCEDURE SQL used (Total process time):
      real time      11.25 seconds
      cpu time       4.74 seconds

768
769      /** Adding variable FlightNumChar **/
770      data HW3.BTS201505_easter;
771      set HW3.BTS201505_&UID.;
772      FlightNumChar = put(FlightNum , $4. -1);
WARNING: Variable FlightNum has already been defined as numeric.
773      run ;

NOTE: There were 395896 observations read from the data set HW3.BTS201505_660185526.
NOTE: The data set HW3.BTS201505_EASTER has 395896 observations and 110 variables.
NOTE: DATA statement used (Total process time):
      real time      5.75 seconds
      cpu time       2.16 seconds

```

```
774
775      /** Replacing Missing Values **/
776      proc stdize data=HW3.BTS201505_easter out=HW3.BTS201505_easter reponly missing=0 ;
777      var DepDelay ArrDelay ;
778      run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_EASTER.  
NOTE: The data set HW3.BTS201505\_EASTER has 395896 observations and 110 variables.  
NOTE: PROCEDURE STDIIZE used (Total process time):  
real time 8.71 seconds  
cpu time 3.21 seconds

```
779
780      /** Creating a data step HW3.BTS201505_1 by Sorting the SAS dataset by Carrier, TailNum, FlightDate, CRSDepTime,
780      ! FlightNum **/
781
782      data HW3.BTS201505_1;
783      set HW3.BTS201505_easter ;
784      run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_EASTER.  
NOTE: The data set HW3.BTS201505\_1 has 395896 observations and 110 variables.  
NOTE: DATA statement used (Total process time):  
real time 5.23 seconds  
cpu time 2.08 seconds

```
785
786      proc sort data = HW3.BTS201505_1;
787      by Carrier TailNum FlightDate CRSDepTime FlightNum;
788      run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_1.  
NOTE: The data set HW3.BTS201505\_1 has 395896 observations and 110 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
real time 6.45 seconds  
cpu time 3.04 seconds

```
789
790      /** Creating Lag Variables **/
791      data HW3.BTS201505_1 ;
792      retain ArrDelayLag ArrDelayLagCum 0 CancelledLag 0 ArrDelayLag2 0 DistanceLag 0 ArrDelayLagInd 0 ;
793      format flightdate yymmdd10. SeqNum ArrDelayLagInd ArrDelayLag ArrDelayLagCum 4. ;
794      set HW3.BTS201505_1 ;
795      by Carrier TailNum FlightDate CRSDepTime FlightNum ;
796      if first.FlightDate=1 then do ;
797
798          ArrDelayLag=0 ;
799          ArrDelayLagInd=0 ;
800          ArrDelayLagCum=0 ;
801
802          ArrDelayLag2=0 ;
803
804          CancelledLag = 0 ;
805          DistanceLag = 0 ;
806
807          SeqNum=1 ;
808          end ;
809
810      else do ;
811          SeqNum+1 ;
812
813          ArrDelayLagInd=(ArrDelayLag>0) ;
814          ArrDelayLagCum+ArrDelayLag ;
815
816      end ;
817
818      output ;
819
820      ArrDelayLag2=ArrDelayLag ;
821
822      ArrDelayLag=ArrDelay ;
823
824      CancelledLag = Cancelled ;
825      DistanceLag = Distance ;
826
827      run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_1.  
NOTE: The data set HW3.BTS201505\_1 has 395896 observations and 117 variables.  
NOTE: DATA statement used (Total process time):



```
real time      6.44 seconds
cpu time       2.50 seconds
```

```
828
829   proc reg data=HW3.BTS201505_1 outest = HW3.easter1;
830   model DepDelay = CRSDepTime seqnum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2 CancelledLag DistanceLag ;
831   run ;
```

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

```
832
833   /** END **/
834
835   /**Creating a data step HW3.BTS201505_2 by sorting the SAS dataset by Carrier,TailNum,
836   ! FlightDate,CRSDepTime,FlightNumChar**/
```

NOTE: The data set HW3.EASTER1 has 1 observations and 14 variables.

NOTE: PROCEDURE REG used (Total process time):

```
real time      7.68 seconds
cpu time       2.98 seconds
```

```
836   data HW3.BTS201505_2;
837   set HW3.BTS201505_easter ;
838   run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_EASTER.

NOTE: The data set HW3.BTS201505\_2 has 395896 observations and 110 variables.

NOTE: DATA statement used (Total process time):

```
real time      5.17 seconds
cpu time       2.13 seconds
```

```
839
840   proc sort data = HW3.BTS201505_2;
841   by Carrier TailNum FlightDate CRSDepTime FlightNumChar;
842   run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_2.

NOTE: The data set HW3.BTS201505\_2 has 395896 observations and 110 variables.

NOTE: PROCEDURE SORT used (Total process time):

```
real time      6.59 seconds
cpu time       3.03 seconds
```

```
843
844   /** Creating Lag Variables **/
845   data HW3.BTS201505_2 ;
846   retain ArrDelayLag ArrDelayLagCum 0 CancelledLag 0 ArrDelayLag2 0 DistanceLag 0 ;
847   format flightdate yymmdd10. SeqNum ArrDelayLagInd ArrDelayLag ArrDelayLagCum 4. ;
848   set HW3.BTS201505_2 ;
849   by Carrier TailNum FlightDate CRSDepTime FlightNumChar ;
850   if first.FlightDate=1 then do ;
851
852   ArrDelayLag=0 ;
853   ArrDelayLagInd=0 ;
854   ArrDelayLagCum=0 ;
855   ArrDelayLag2=0 ;
856   CancelledLag = 0 ;
857   DistanceLag = 0 ;
858   SeqNum=1 ;
859   end ;
860
861   else do ;
862   SeqNum+1 ;
863
864   ArrDelayLagInd=(ArrDelayLag>0) ;
865   ArrDelayLagCum+ArrDelayLag ;
866
867   end ;
868
869   output ;
870
871   ArrDelayLag2=ArrDelayLag ;
872
873   ArrDelayLag=ArrDelay ;
874
875   CancelledLag = Cancelled ;
876   DistanceLag = Distance ;
877
878   run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_2.

NOTE: The data set HW3.BTS201505\_2 has 395896 observations and 117 variables.

NOTE: DATA statement used (Total process time):

real time	6.64 seconds
cpu time	2.53 seconds

```
879
880
881
882      /**Compare the regression model estimates from the two different sorts**/
883      proc reg data=HW3.BTS201505_2 outest = HW3.easter2;
884      model DepDelay = CRSDepTime seqnum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2 CancelledLag DistanceLag ;
885      run ;
```

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

886

NOTE: The data set HW3.EASTER2 has 1 observations and 14 variables.

NOTE: PROCEDURE REG used (Total process time):

real time	6.99 seconds
cpu time	2.82 seconds

```
887      proc append base = HW3.easter1 data = HW3.easter2;
888      run;
```

NOTE: Appending HW3.EASTER2 to HW3.EASTER1.

NOTE: There were 1 observations read from the data set HW3.EASTER2.

NOTE: 1 observations added.

NOTE: The data set HW3.EASTER1 has 2 observations and 14 variables.

NOTE: PROCEDURE APPEND used (Total process time):

real time	0.03 seconds
cpu time	0.02 seconds

```
889
890      /**Use appropriate SAS syntax to identify the source of any differences between the two sets of regression estimates**/
891      proc transpose data = HW3.easter1 out = HW3.easter_results (drop = easter1 easter2
892      rename = (Col1 = easter1 Col2 = easter2 )) ;
893      by _Model_;
894      run;
```

WARNING: The variable easter1 in the DROP, KEEP, or RENAME list has never been referenced.

WARNING: The variable easter2 in the DROP, KEEP, or RENAME list has never been referenced.

NOTE: There were 2 observations read from the data set HW3.EASTER1.

NOTE: The data set HW3.EASTER\_RESULTS has 11 observations and 5 variables.

NOTE: PROCEDURE TRANSPOSE used (Total process time):

real time	0.06 seconds
cpu time	0.01 seconds

```
895
896      data HW3.easter_parameter_diff (drop=_Label_ _Model_ ) ;
897      set HW3.easter_results ;
898      format delta percent10.4;
899      delta= 1-(easter2/easter1);
900      run;
```

NOTE: There were 11 observations read from the data set HW3.EASTER\_RESULTS.

NOTE: The data set HW3.EASTER\_PARAMETER\_DIFF has 11 observations and 4 variables.

NOTE: DATA statement used (Total process time):

real time	0.04 seconds
cpu time	0.01 seconds

```
901
902      proc print data = HW3.easter_parameter_diff;
903      run;
```

NOTE: There were 11 observations read from the data set HW3.EASTER\_PARAMETER\_DIFF.

NOTE: PROCEDURE PRINT used (Total process time):

real time	0.05 seconds
cpu time	0.04 seconds

```
904
905
906      /** The parameter estimates differ due to the difference in sort order of the numeric variable FlightNum and
907      the non-numeric variable FlightNumChar.
908      To resolve the differences in the two sets of regression estimates we will change
909      the position of variables FlightNum and FlightNumChar in the sort order. We will change it to
910      FlightNum/FlightNumChar Carrier TailNum FlightDate CRSDepTime instead of
911      Carrier TailNum FlightDate CRSDepTime FlightNum/FlightNumChar **/
```

```
912
913 proc sql ;
914 * <Randomly subset monthly file here.> ;
915 create table HW3.BTS201505_subids as
916 select carrier , tailnum , flightdate , count(*) as NN , ranuni(&UID.) as random
917 from HW3.BTS201505
918 group by carrier , tailnum , flightdate
919 having random>.2 ;
```

NOTE: Table HW3.BTS201505\_SUBIDS created, with 92347 rows and 5 columns.

```
920
921
922 create table HW3.BTS201505_&uid. as
923 select a.*
924 from HW3.BTS201505 a inner join HW3.BTS201505_subids b
925 on a.carrier=b.carrier and a.flightdate=b.flightdate and a.tailnum=b.tailnum ;
```

NOTE: Table HW3.BTS201505\_660185526 created, with 395896 rows and 109 columns.

```
926
927 drop table HW3.BTS201505_subids ;
NOTE: Table HW3.BTS201505_SUBIDS has been dropped.
```

```
928
929 quit ;
NOTE: PROCEDURE SQL used (Total process time):
      real time          11.54 seconds
      cpu time           4.51 seconds
```

```
930
931
932 data HW3.BTS201505_neweaster;
933 set HW3.BTS201505_&UID.;
934 FlightNumChar = put(FlightNum , $4. -1);
WARNING: Variable FlightNum has already been defined as numeric.
935 run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_660185526.  
NOTE: The data set HW3.BTS201505\_NEWEASTER has 395896 observations and 110 variables.  
NOTE: DATA statement used (Total process time):  
 real time 6.76 seconds  
 cpu time 2.28 seconds

```
936
937 proc stdize data=HW3.BTS201505_neweaster out=HW3.BTS201505_neweaster reponly missing=0 ;
938 var DepDelay ArrDelay ;
939 run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_NEWEASTER.  
NOTE: The data set HW3.BTS201505\_NEWEASTER has 395896 observations and 110 variables.  
NOTE: PROCEDURE STDIZE used (Total process time):  
 real time 9.52 seconds  
 cpu time 3.23 seconds

```
940
941 data HW3.BTS201505_new1;
942 set HW3.BTS201505_neweaster ;
943 run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_NEWEASTER.  
NOTE: The data set HW3.BTS201505\_NEW1 has 395896 observations and 110 variables.  
NOTE: DATA statement used (Total process time):  
 real time 6.54 seconds  
 cpu time 2.25 seconds

```
944
945 proc sort data = HW3.BTS201505_new1;
946 by FlightNum Carrier TailNum FlightDate CRSDepTime;
947 run ;
```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_NEW1.  
NOTE: The data set HW3.BTS201505\_NEW1 has 395896 observations and 110 variables.  
NOTE: PROCEDURE SORT used (Total process time):  
 real time 7.25 seconds  
 cpu time 2.97 seconds

```
948
949
950 data HW3.BTS201505_new1 ;
951 retain ArrDelayLag ArrDelayLagCum 0 CancelledLag 0 ArrDelayLag2 0 DistanceLag 0 ArrDelayLagInd 0 ;
952 format flightdate yymmdd10. SeqNum ArrDelayLagInd ArrDelayLag ArrDelayLagCum 4. ;
```

```

953      set HW3.BTS201505_new1 ;
954      by FlightNum Carrier TailNum FlightDate CRSDepTime ;
955      if first.FlightDate=1 then do ;
956
957          ArrDelayLag=0 ;
958          ArrDelayLagInd=0 ;
959          ArrDelayLagCum=0 ;
960
961          ArrDelayLag2=0 ;
962
963          CancelledLag = 0 ;
964          DistanceLag = 0 ;
965
966          SeqNum=1 ;
967          end ;
968
969          else do ;
970              SeqNum+1 ;
971
972              ArrDelayLagInd=(ArrDelayLag>0) ;
973              ArrDelayLagCum+ArrDelayLag ;
974
975          end ;
976
977          output ;
978
979          ArrDelayLag2=ArrDelayLag ;
980
981          ArrDelayLag=ArrDelay ;
982
983          CancelledLag = Cancelled ;
984          DistanceLag = Distance ;
985
986      run ;

```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_NEW1.

NOTE: The data set HW3.BTS201505\_NEW1 has 395896 observations and 117 variables.

NOTE: DATA statement used (Total process time):

```

real time      6.59 seconds
cpu time       2.48 seconds

```

```

987
988
989      /** END **/
990
991      /***** Sort your SAS dataset by Carrier, TailNum, FlightDate, CRSDepTime, FlightNumChar*****/
992      data HW3.BTS201505_new2;
993      set HW3.BTS201505_neweaster ;
994      run ;

```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_NEWEASTER.

NOTE: The data set HW3.BTS201505\_NEW2 has 395896 observations and 110 variables.

NOTE: DATA statement used (Total process time):

```

real time      6.13 seconds
cpu time       2.24 seconds

```

```

995
996      proc sort data = HW3.BTS201505_new2;
997      by FlightNumChar Carrier TailNum FlightDate CRSDepTime ;
998      run ;

```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_NEW2.

NOTE: The data set HW3.BTS201505\_NEW2 has 395896 observations and 110 variables.

NOTE: PROCEDURE SORT used (Total process time):

```

real time      6.68 seconds
cpu time       2.91 seconds

```

```

999
1000     data HW3.BTS201505_new2 ;
1001     retain ArrDelayLag ArrDelayLagCum 0 CancelledLag 0 ArrDelayLag2 0 DistanceLag 0 ;
1002     format flightdate yymmdd10. SeqNum ArrDelayLagInd ArrDelayLag ArrDelayLagCum 4. ;
1003     set HW3.BTS201505_new2 ;
1004     by FlightNumChar Carrier TailNum FlightDate CRSDepTime ;
1005     if first.FlightDate=1 then do ;
1006
1007         ArrDelayLag=0 ;
1008         ArrDelayLagInd=0 ;
1009         ArrDelayLagCum=0 ;
1010         ArrDelayLag2=0 ;
1011         CancelledLag = 0 ;
1012         DistanceLag = 0 ;

```

```

1013      SeqNum=1 ;
1014      end ;
1015
1016      else do ;
1017          SeqNum+1 ;
1018
1019          ArrDelayLagInd=(ArrDelayLag>0) ;
1020          ArrDelayLagCum+ArrDelayLag ;
1021
1022      end ;
1023
1024      output ;
1025
1026      ArrDelayLag2=ArrDelayLag ;
1027
1028      ArrDelayLag=ArrDelay ;
1029
1030      CancelledLag = Cancelled ;
1031      DistanceLag = Distance ;
1032
1033      run ;

```

NOTE: There were 395896 observations read from the data set HW3.BTS201505\_NEW2.  
 NOTE: The data set HW3.BTS201505\_NEW2 has 395896 observations and 117 variables.  
 NOTE: DATA statement used (Total process time):  
     real time          5.99 seconds  
     cpu time           2.37 seconds

```

1034
1035
1036      proc reg data=HW3.BTS201505_new1 outest = HW3.newEaster1;
1037          model DepDelay = CRSDepTime seqnum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2 CancelledLag DistanceLag ;
1038      run ;

```

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

```

1039

NOTE: The data set HW3.NEWEASTER1 has 1 observations and 14 variables.
NOTE: PROCEDURE REG used (Total process time):
      real time          6.42 seconds
      cpu time           2.72 seconds

```

```

1040      proc reg data=HW3.BTS201505_new2 outest = HW3.newEaster2;
1041          model DepDelay = CRSDepTime seqnum ArrDelayLagInd ArrDelayLag ArrDelayLagCum ArrDelayLag2 CancelledLag DistanceLag ;
1042      run ;

```

WARNING: ODS graphics with more than 5000 points have been suppressed. Use the PLOTS(MAXPOINTS= ) option in the PROC REG statement to change or override the cutoff.

```

1043

NOTE: The data set HW3.NEWEASTER2 has 1 observations and 14 variables.
NOTE: PROCEDURE REG used (Total process time):
      real time          7.44 seconds
      cpu time           2.95 seconds

```

```

1044      proc append base = HW3.newEaster1 data = HW3.newEaster2;
1045      run;

```

NOTE: Appending HW3.NEWEASTER2 to HW3.NEWEASTER1.  
 NOTE: There were 1 observations read from the data set HW3.NEWEASTER2.  
 NOTE: 1 observations added.  
 NOTE: The data set HW3.NEWEASTER1 has 2 observations and 14 variables.  
 NOTE: PROCEDURE APPEND used (Total process time):  
     real time          0.02 seconds  
     cpu time           0.01 seconds

```

1046
1047      proc transpose data = HW3.newEaster1 out = HW3.NewEaster_results (drop = easter1 easter2
1048          rename = (Col1 = easter1 Col2 = easter2 )) ;
1049      by _Model_;
1050      run;

```

WARNING: The variable easter1 in the DROP, KEEP, or RENAME list has never been referenced.  
 WARNING: The variable easter2 in the DROP, KEEP, or RENAME list has never been referenced.  
 NOTE: There were 2 observations read from the data set HW3.NEWEASTER1.  
 NOTE: The data set HW3.NEWEASTER\_RESULTS has 11 observations and 5 variables.  
 NOTE: PROCEDURE TRANSPOSE used (Total process time):  
     real time          0.05 seconds  
     cpu time           0.01 seconds



```
1051
1052     data HW3.NewEaster_parameter_diff (drop=_Label_ _Model_ ) ;
1053     set HW3.NewEaster_results ;
1054     format delta percent10.4;
1055     delta= 1-(easter2/easter1);
1056     run;
```

NOTE: There were 11 observations read from the data set HW3.NEWEASTER\_RESULTS.

NOTE: The data set HW3.NEWEASTER\_PARAMETER\_DIFF has 11 observations and 4 variables.

NOTE: DATA statement used (Total process time):

```
    real time          0.04 seconds
    cpu time           0.02 seconds
```

```
1057
1058
1059     proc print data = HW3.NewEaster_parameter_diff;
1060     run;
```

NOTE: There were 11 observations read from the data set HW3.NEWEASTER\_PARAMETER\_DIFF.

NOTE: PROCEDURE PRINT used (Total process time):

```
    real time          0.05 seconds
    cpu time           0.05 seconds
```

```
1061
1062
1063     ods pdf close ;
NOTE: ODS PDF printed 76 pages to /folders/myfolders/Final Exercise\HW3-660185526.pdf.
1064
1065
1066
1067
1068     OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
1080
```