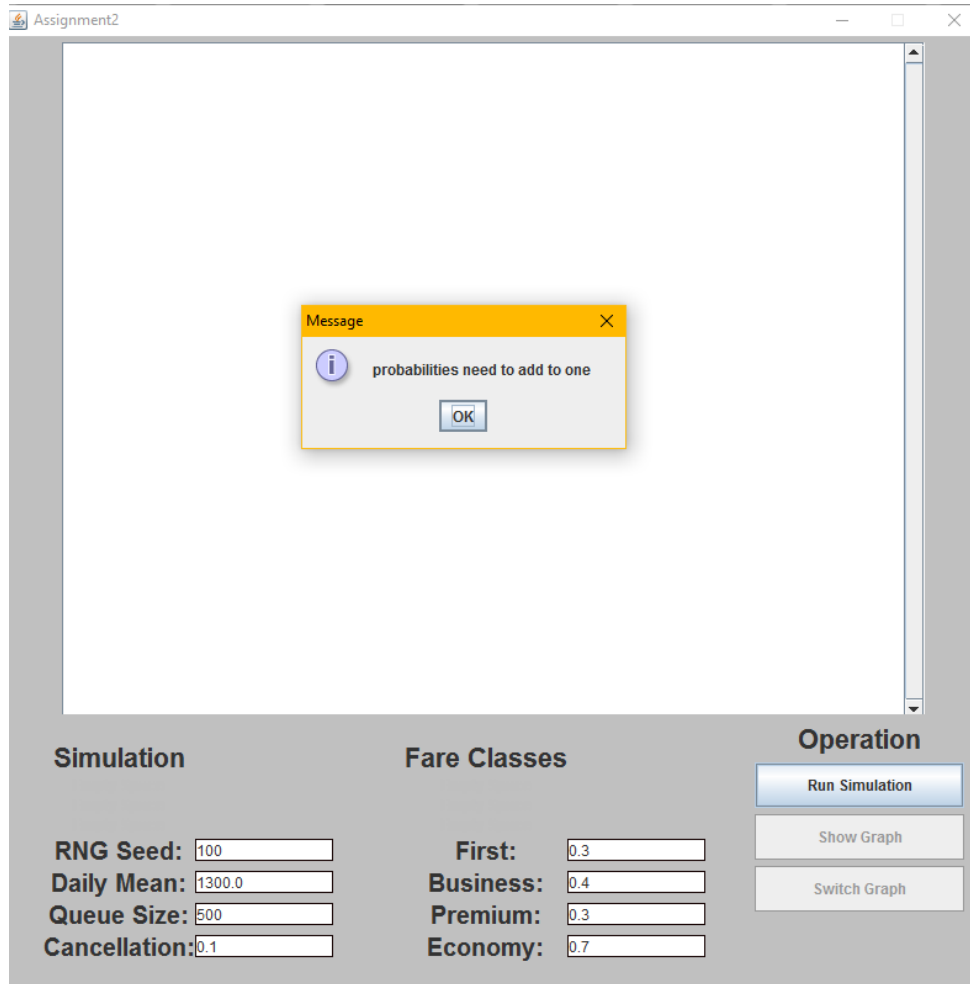
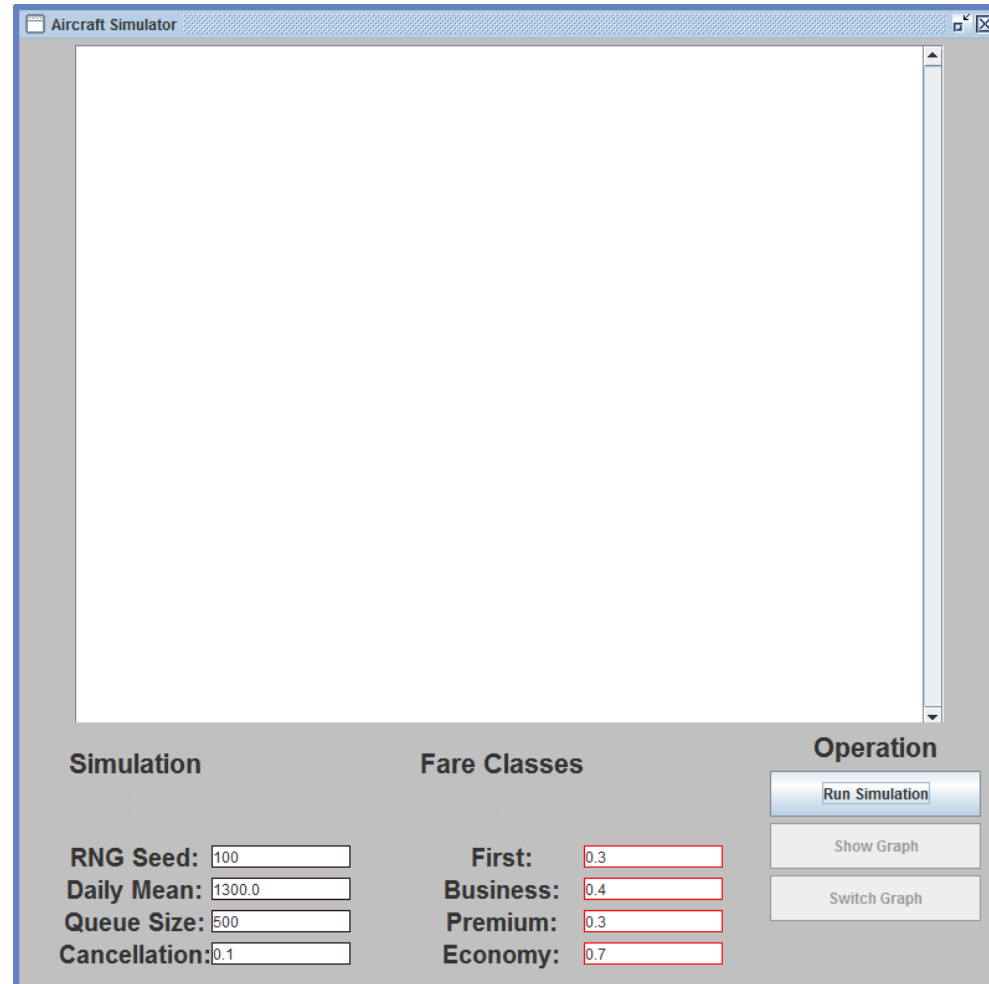


Test 1: Invalid probability values. Error message displayed and invalid fields are change to red to show the user what to fix.



The screenshot shows a window titled "Assignment2". In the center, a yellow "Message" dialog box is displayed with the text "probabilities need to add to one" and an "OK" button. Below the dialog, the window is divided into three sections: "Simulation", "Fare Classes", and "Operation".

Simulation		Fare Classes		Operation
RNG Seed:	100	First:	0.3	Run Simulation Show Graph Switch Graph
Daily Mean:	1300.0	Business:	0.4	
Queue Size:	500	Premium:	0.3	
Cancellation:	0.1	Economy:	0.7	



The screenshot shows a window titled "Aircraft Simulator". The layout is identical to the "Assignment2" window, but the "Fare Classes" section has the probability input fields highlighted with red borders, indicating they are invalid.

Simulation		Fare Classes		Operation
RNG Seed:	100	First:	0.3	Run Simulation Show Graph Switch Graph
Daily Mean:	1300.0	Business:	0.4	
Queue Size:	500	Premium:	0.3	
Cancellation:	0.1	Economy:	0.7	

BorderLayout

20160601\_144001: Start of Simulation  
Simulator [meanDailyBookings=1300.0, sdDailyBookings=429.0, seed=100, firstProb=0.03, businessProb=0.14, premiumPr  
ob=0.13, economyProb=0.7]  
A380:QF11:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]  
A380:QF93:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]  
B747:QF15:21 Capacity: 353 [F: 14 J: 52 P: 32 Y: 255]  
0:1567:Q0:R0  
1:931:Q0:R0  
2:1112:Q0:R0  
3:1153:Q0:R0  
4:875:Q0:R0  
5:1418:Q0:R0  
6:2494:Q0:R0  
7:1072:Q0:R0  
8:300:Q0:R0  
9:1601:Q0:R0  
10:1444:Q0:R0  
11:1987:Q0:R0  
12:1194:Q0:R0  
13:1821:Q0:R0  
14:664:Q0:R0  
15:692:Q0:R0  
16:1346:Q0:R0  
17:1200:Q0:R0  
18:1170:Q70:R0  
19:1317:Q165:R0  
20:1469:Q272:R0  
21:1803:F28:J82:P70:Y260:T440:E881:Q402:R0  
22:1048:F28:J145:P70:Y492:T735:E586:Q489:R0  
23:1214:F42:J177:P70:Y581:T870:E451:Q495:R92  
24:1363:F42:J168:P70:Y661:T941:E380:Q497:R189  
25:955:F42:J170:P70:Y598:T880:E441:Q496:R284  
26:1046:F42:J180:P102:Y686:T1010:E311:Q493:R346  
27:1776:F42:J180:P102:Y673:T997:E324:Q498:R495

**Simulation**

RNG Seed: 100  
Daily Mean: 1300.0  
Queue Size: 500  
Cancellation: 0.1

**Fare Classes**

First: 0.03  
Business: 0.14  
Premium: 0.13  
Economy: 0.7

**Operation**

Run Simulation  
Show Graph  
Switch Graph

Log on the gui shows that Seed of 100, mean of 1300, queue size of 500, probability of cancellation 0.1, probability of first class 0.03, probability of business class 0.14 probability of premium class 0.13 and probability of economy class 0.7 have all been set. After simulation is run gui out put is equal to the supplied logs.

C:\Users\jhaye\_000\Downloads\logSummary - Sublime Text (UNREGISTERED)

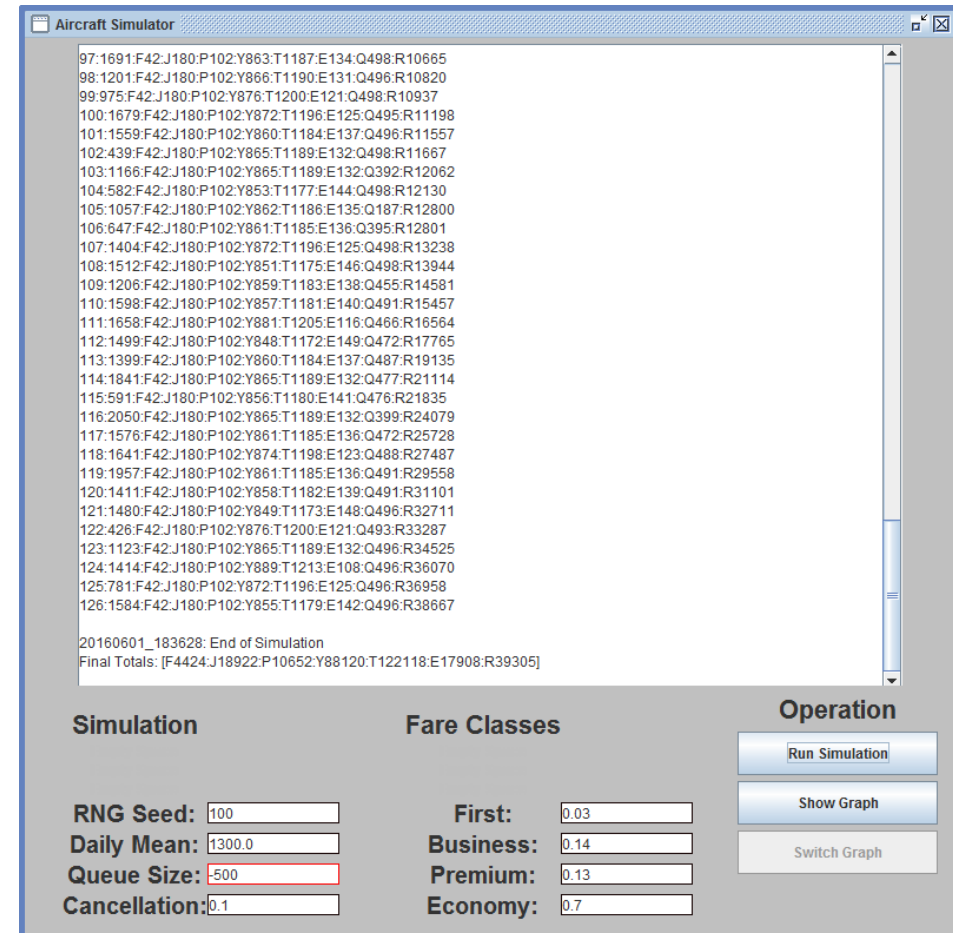
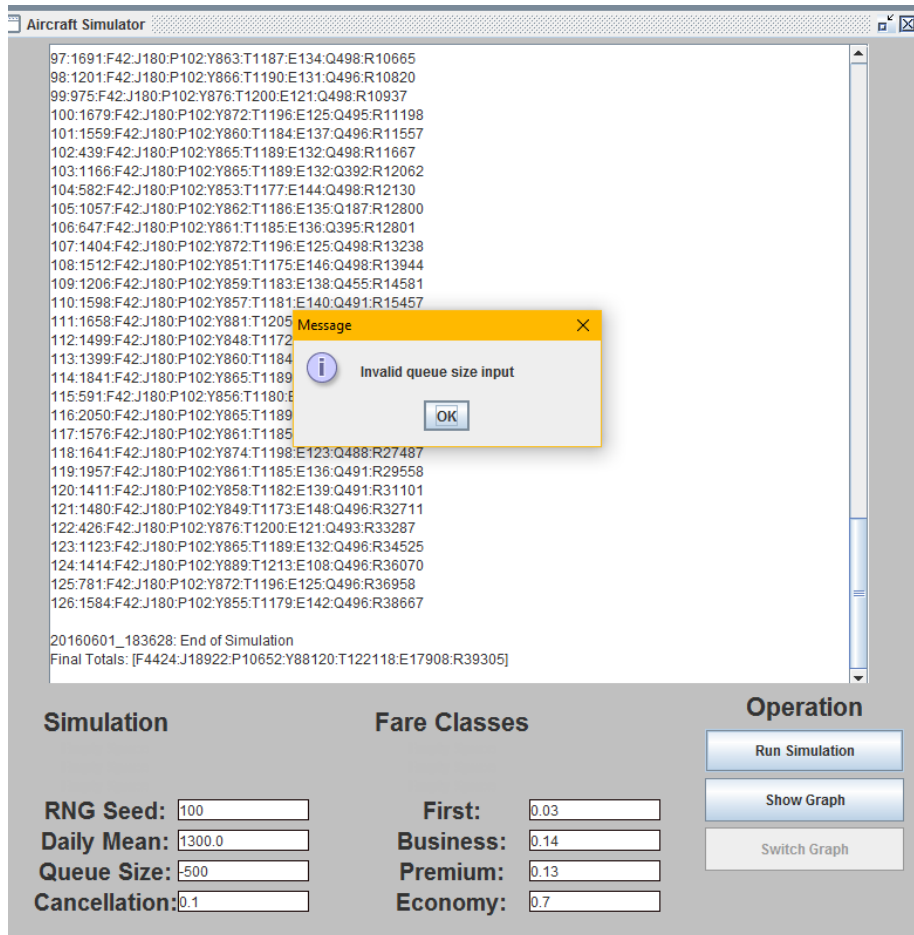
File Edit Selection Find View Goto Tools Project Preferences Help

logSummary x 20160530\_212447 x

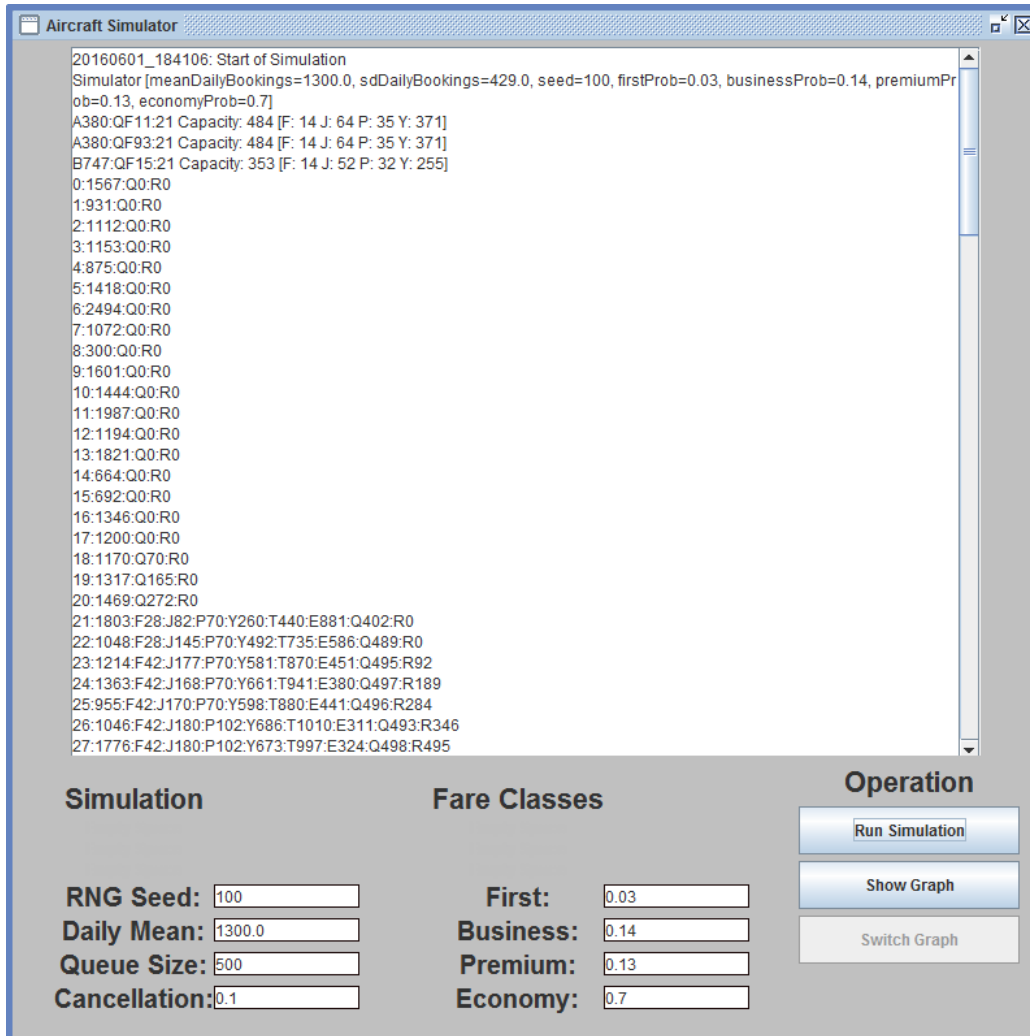
```
1 20160525_203004: Start of Simulation
2 Simulator [meanDailyBookings=1300.0, sdDailyBookings=429.0, seed=100,
   firstProb=0.03, businessProb=0.14, premiumProb=0.13, economyProb=0.7,
   maxQueueSize=500, cancellationProb=0.1]
3 A380:QF11:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]
4 A380:QF93:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]
5 B747:QF15:21 Capacity: 353 [F: 14 J: 52 P: 32 Y: 255]
6 0:1567:Q0:R0
7 1:931:Q0:R0
8 2:1112:Q0:R0
9 3:1153:Q0:R0
10 4:875:Q0:R0
11 ...
12 120:1411:F42:J180:P102:Y858:T1182:E139:Q491:R31101
13 121:1480:F42:J180:P102:Y849:T1173:E148:Q496:R32711
14 122:426:F42:J180:P102:Y876:T1200:E121:Q493:R33287
15 123:1123:F42:J180:P102:Y865:T1189:E132:Q496:R34525
16 124:1414:F42:J180:P102:Y889:T1213:E108:Q496:R36070
17 125:781:F42:J180:P102:Y872:T1196:E125:Q496:R36958
18 126:1584:F42:J180:P102:Y855:T1179:E142:Q496:R38667
19
20 20160525_203007: End of Simulation
21 Final Totals: [F4424:J18922:P10652:Y88120:T122118:E17908:R39305]
22
23
24 20160525_203419: Start of Simulation
25 Simulator [meanDailyBookings=1300.0, sdDailyBookings=429.0, seed=100,
   firstProb=0.03, businessProb=0.14, premiumProb=0.13, economyProb=0.7,
```

Line 18, Column 46 Tab Size: 4 Plain Text

Test 2: Negative queue size input was into the gui and an error message was shown. Highlights area that was wrong and gives the user a chance to try again.



User gets another chance an inputs all valid data.  
All values are set and simulation runs as it should.



**Aircraft Simulator**

20160601\_184106: Start of Simulation  
Simulator [meanDailyBookings=1300.0, sdDailyBookings=429.0, seed=100, firstProb=0.03, businessProb=0.14, premiumPr  
ob=0.13, economyProb=0.7]  
A380:QF11:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]  
A380:QF93:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]  
B747:QF15:21 Capacity: 353 [F: 14 J: 52 P: 32 Y: 255]  
0:1567:Q0:R0  
1:931:Q0:R0  
2:1112:Q0:R0  
3:1153:Q0:R0  
4:875:Q0:R0  
5:1418:Q0:R0  
6:2494:Q0:R0  
7:1072:Q0:R0  
8:300:Q0:R0  
9:1601:Q0:R0  
10:1444:Q0:R0  
11:1987:Q0:R0  
12:1194:Q0:R0  
13:1821:Q0:R0  
14:664:Q0:R0  
15:692:Q0:R0  
16:1346:Q0:R0  
17:1200:Q0:R0  
18:1170:Q0:R0  
19:1317:Q165:R0  
20:1469:Q272:R0  
21:1803:F28:J82:P70:Y260:T440:E881:Q402:R0  
22:1048:F28:J145:P70:Y492:T735:E586:Q489:R0  
23:1214:F42:J177:P70:Y581:T870:E451:Q495:R92  
24:1363:F42:J168:P70:Y661:T941:E380:Q497:R189  
25:955:F42:J170:P70:Y598:T880:E441:Q496:R284  
26:1046:F42:J180:P102:Y686:T1010:E311:Q493:R346  
27:1776:F42:J180:P102:Y673:T997:E324:Q498:R495

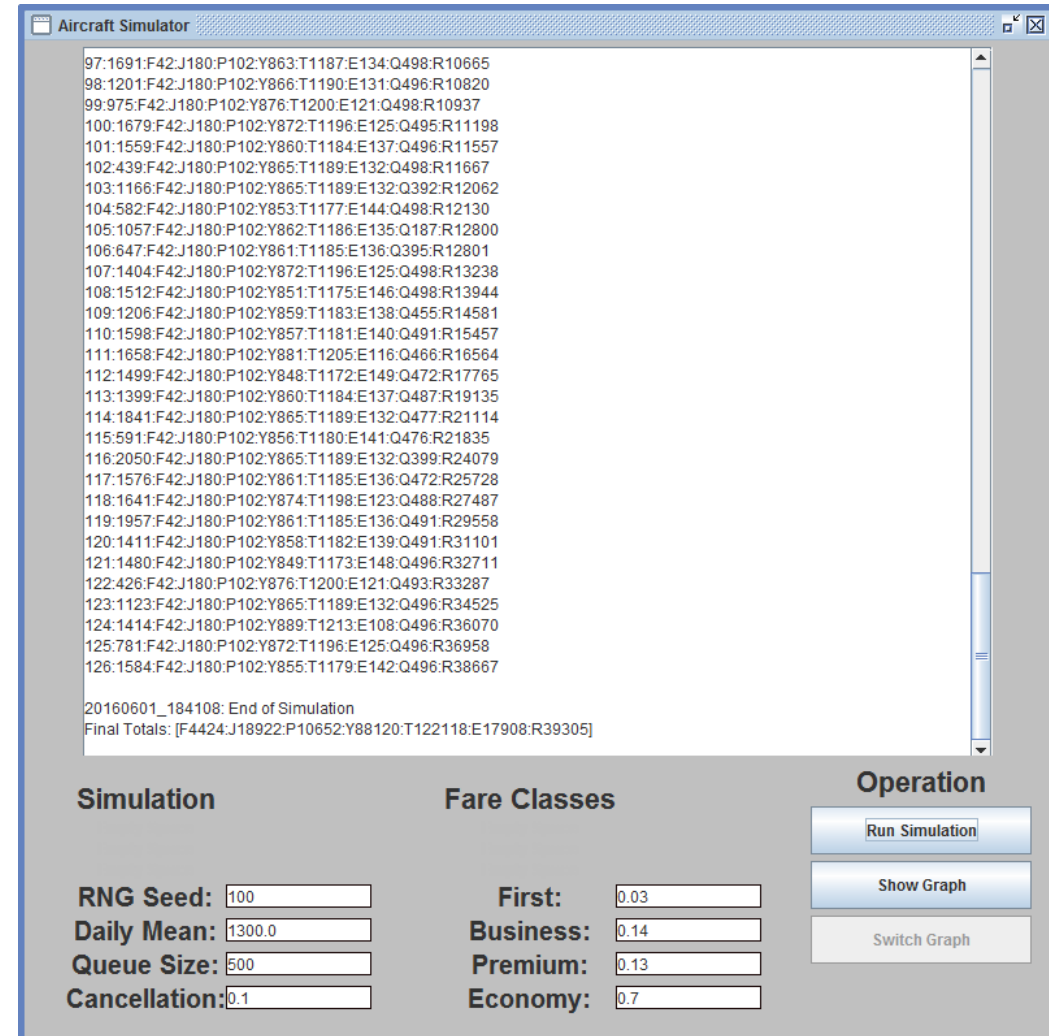
**Simulation**      **Fare Classes**      **Operation**

RNG Seed: 100      First: 0.03     

Daily Mean: 1300.0      Business: 0.14     

Queue Size: 500      Premium: 0.13     

Cancellation: 0.1      Economy: 0.7



**Aircraft Simulator**

97:1691:F42:J180:P102:Y863:T1187:E134:Q498:R10665  
98:1201:F42:J180:P102:Y866:T1190:E131:Q496:R10820  
99:975:F42:J180:P102:Y876:T1200:E121:Q498:R10937  
100:1679:F42:J180:P102:Y872:T1196:E125:Q495:R11198  
101:1559:F42:J180:P102:Y860:T1184:E137:Q496:R11557  
102:439:F42:J180:P102:Y865:T1189:E132:Q498:R11667  
103:1166:F42:J180:P102:Y865:T1189:E132:Q392:R12062  
104:582:F42:J180:P102:Y853:T1177:E144:Q498:R12130  
105:1057:F42:J180:P102:Y862:T1186:E135:Q187:R12800  
106:647:F42:J180:P102:Y861:T1185:E136:Q395:R12801  
107:1404:F42:J180:P102:Y872:T1196:E125:Q498:R13238  
108:1512:F42:J180:P102:Y851:T1175:E146:Q498:R13944  
109:1206:F42:J180:P102:Y859:T1183:E138:Q455:R14581  
110:1598:F42:J180:P102:Y857:T1181:E140:Q491:R15457  
111:1658:F42:J180:P102:Y881:T1205:E116:Q466:R16564  
112:1499:F42:J180:P102:Y848:T1172:E149:Q472:R17765  
113:1399:F42:J180:P102:Y860:T1184:E137:Q487:R19135  
114:1841:F42:J180:P102:Y865:T1189:E132:Q477:R21114  
115:591:F42:J180:P102:Y856:T1180:E141:Q476:R21835  
116:2050:F42:J180:P102:Y865:T1189:E132:Q399:R24079  
117:1576:F42:J180:P102:Y861:T1185:E136:Q472:R25728  
118:1641:F42:J180:P102:Y874:T1198:E123:Q488:R27487  
119:1957:F42:J180:P102:Y861:T1185:E136:Q491:R29558  
120:1411:F42:J180:P102:Y858:T1182:E139:Q491:R31101  
121:1480:F42:J180:P102:Y849:T1173:E148:Q496:R32711  
122:426:F42:J180:P102:Y876:T1200:E121:Q493:R33287  
123:1123:F42:J180:P102:Y865:T1189:E132:Q496:R34525  
124:1414:F42:J180:P102:Y889:T1213:E108:Q496:R36070  
125:781:F42:J180:P102:Y872:T1196:E125:Q496:R36958  
126:1584:F42:J180:P102:Y855:T1179:E142:Q496:R38667

20160601\_184108: End of Simulation  
Final Totals: [F4424:J18922:P10652:Y88120:T122118:E17908:R39305]

**Simulation**      **Fare Classes**      **Operation**

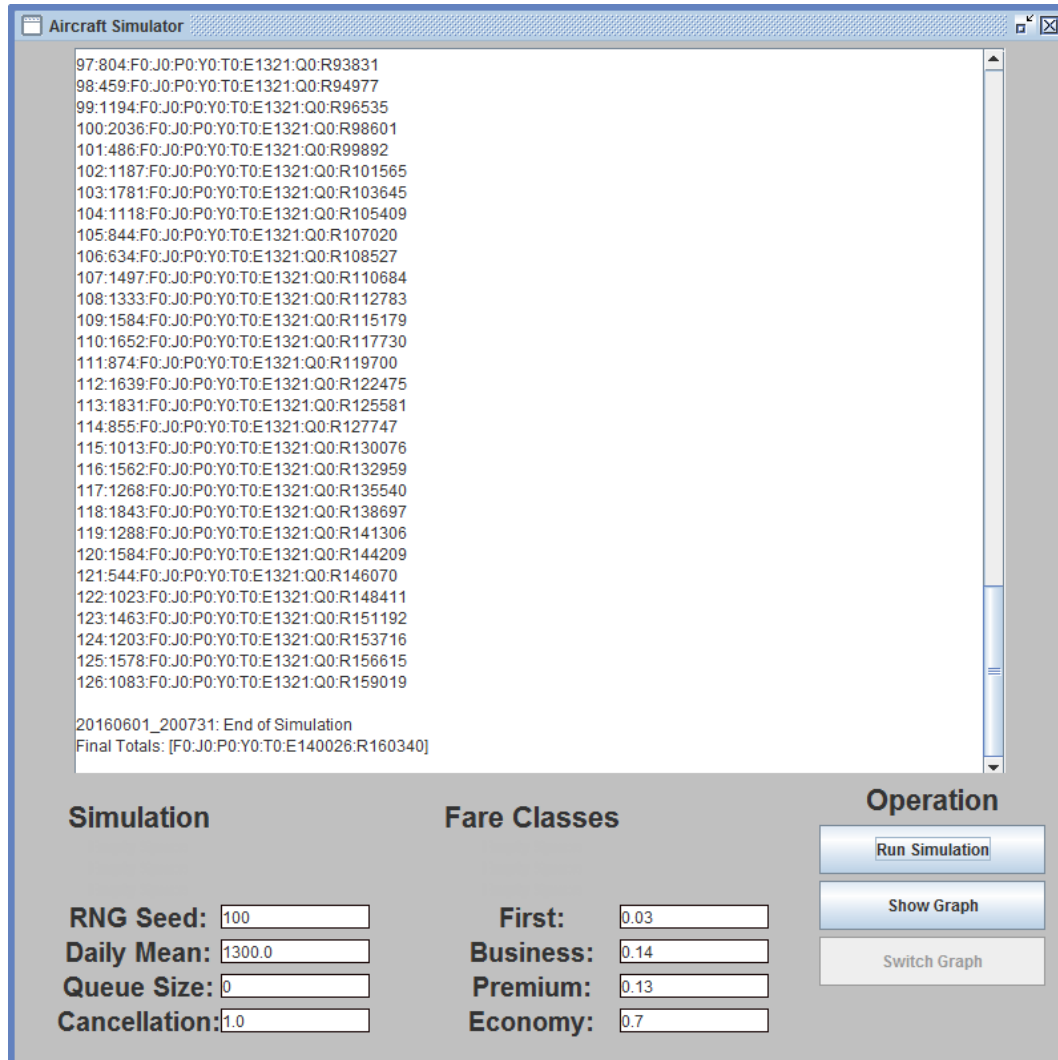
RNG Seed: 100      First: 0.03     

Daily Mean: 1300.0      Business: 0.14     

Queue Size: 500      Premium: 0.13     

Cancellation: 0.1      Economy: 0.7

# Values set as they should be and the end of the log is shown bellow as well



Aircraft Simulator

```
97:804:F0:J0:P0:Y0:T0:E1321:Q0:R93831
98:459:F0:J0:P0:Y0:T0:E1321:Q0:R94977
99:1194:F0:J0:P0:Y0:T0:E1321:Q0:R96535
100:2036:F0:J0:P0:Y0:T0:E1321:Q0:R98601
101:486:F0:J0:P0:Y0:T0:E1321:Q0:R99892
102:1187:F0:J0:P0:Y0:T0:E1321:Q0:R101565
103:1781:F0:J0:P0:Y0:T0:E1321:Q0:R103645
104:1118:F0:J0:P0:Y0:T0:E1321:Q0:R105409
105:844:F0:J0:P0:Y0:T0:E1321:Q0:R107020
106:634:F0:J0:P0:Y0:T0:E1321:Q0:R108527
107:1497:F0:J0:P0:Y0:T0:E1321:Q0:R110684
108:1333:F0:J0:P0:Y0:T0:E1321:Q0:R112783
109:1584:F0:J0:P0:Y0:T0:E1321:Q0:R115179
110:1652:F0:J0:P0:Y0:T0:E1321:Q0:R117730
111:874:F0:J0:P0:Y0:T0:E1321:Q0:R119700
112:1639:F0:J0:P0:Y0:T0:E1321:Q0:R122475
113:1831:F0:J0:P0:Y0:T0:E1321:Q0:R125581
114:855:F0:J0:P0:Y0:T0:E1321:Q0:R127747
115:1013:F0:J0:P0:Y0:T0:E1321:Q0:R130076
116:1562:F0:J0:P0:Y0:T0:E1321:Q0:R132959
117:1268:F0:J0:P0:Y0:T0:E1321:Q0:R135540
118:1843:F0:J0:P0:Y0:T0:E1321:Q0:R138697
119:1288:F0:J0:P0:Y0:T0:E1321:Q0:R141306
120:1584:F0:J0:P0:Y0:T0:E1321:Q0:R144209
121:544:F0:J0:P0:Y0:T0:E1321:Q0:R146070
122:1023:F0:J0:P0:Y0:T0:E1321:Q0:R148411
123:1463:F0:J0:P0:Y0:T0:E1321:Q0:R151192
124:1203:F0:J0:P0:Y0:T0:E1321:Q0:R153716
125:1578:F0:J0:P0:Y0:T0:E1321:Q0:R156615
126:1083:F0:J0:P0:Y0:T0:E1321:Q0:R159019

20160601_200731: End of Simulation
Final Totals: [F0:J0:P0:Y0:T0:E140026:R160340]
```

**Simulation**

RNG Seed:

Daily Mean:

Queue Size:

Cancellation:

**Fare Classes**

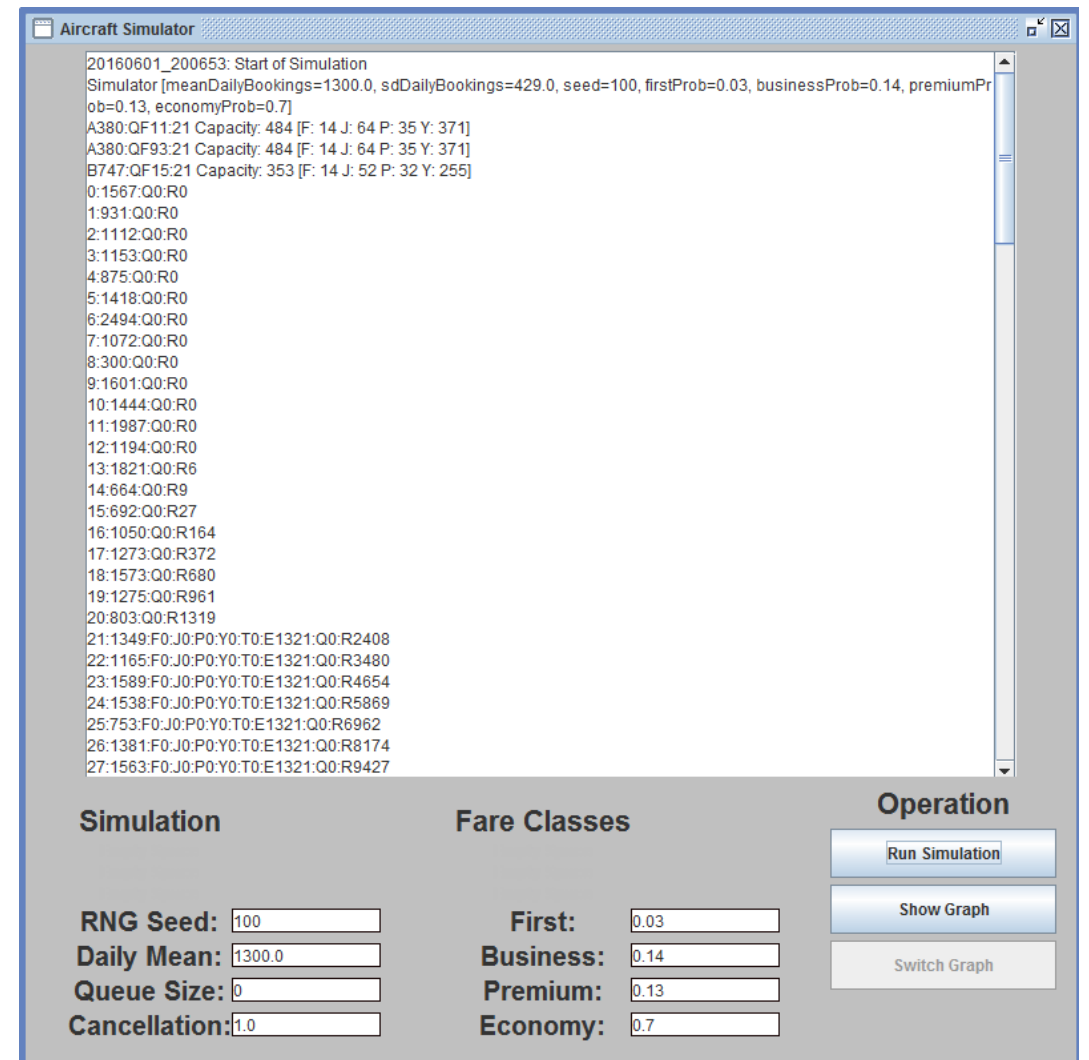
First:

Business:

Premium:

Economy:

**Operation**



Aircraft Simulator

```
20160601_200653: Start of Simulation
Simulator [meanDailyBookings=1300.0, sdDailyBookings=429.0, seed=100, firstProb=0.03, businessProb=0.14, premiumPr
ob=0.13, economyProb=0.7]
A380:QF11:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]
A380:QF93:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]
B747:QF15:21 Capacity: 353 [F: 14 J: 52 P: 32 Y: 255]
0:1567:Q0:R0
1:931:Q0:R0
2:1112:Q0:R0
3:1153:Q0:R0
4:875:Q0:R0
5:1418:Q0:R0
6:2494:Q0:R0
7:1072:Q0:R0
8:300:Q0:R0
9:1601:Q0:R0
10:1444:Q0:R0
11:1987:Q0:R0
12:1194:Q0:R0
13:1821:Q0:R6
14:664:Q0:R9
15:692:Q0:R27
16:1050:Q0:R164
17:1273:Q0:R372
18:1573:Q0:R680
19:1275:Q0:R961
20:803:Q0:R1319
21:1349:F0:J0:P0:Y0:T0:E1321:Q0:R2408
22:1165:F0:J0:P0:Y0:T0:E1321:Q0:R3480
23:1589:F0:J0:P0:Y0:T0:E1321:Q0:R4654
24:1538:F0:J0:P0:Y0:T0:E1321:Q0:R5869
25:753:F0:J0:P0:Y0:T0:E1321:Q0:R6962
26:1381:F0:J0:P0:Y0:T0:E1321:Q0:R8174
27:1563:F0:J0:P0:Y0:T0:E1321:Q0:R9427
```

**Simulation**

RNG Seed:

Daily Mean:

Queue Size:

Cancellation:

**Fare Classes**

First:

Business:

Premium:

Economy:

**Operation**



# Test 3: Values set as they should be and logs match the given example.

20160601\_201245: Start of Simulation  
Simulator [meanDailyBookings=1300.0, sdDailyBookings=429.0, seed=100, firstProb=0.03, businessProb=0.14, premiumProb=0.13, economyProb=0.7]  
A380:QF11:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]  
A380:QF93:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]  
B747:QF15:21 Capacity: 353 [F: 14 J: 52 P: 32 Y: 255]  
0:1567:Q0:R0  
1:931:Q0:R0  
2:1112:Q0:R0  
3:1153:Q0:R0  
4:875:Q0:R0  
5:1418:Q0:R0  
6:2494:Q0:R0  
7:1072:Q0:R0  
8:300:Q0:R0  
9:1601:Q0:R0  
10:1444:Q0:R0  
11:1987:Q0:R0  
12:1194:Q0:R0  
13:1821:Q0:R0  
14:664:Q0:R0  
15:692:Q0:R0  
16:1190:Q0:R0  
17:1768:Q0:R0  
18:727:Q48:R0  
19:1699:Q165:R0  
20:1117:Q238:R0  
21:1261:F31:J158:P70:Y633:T892:E429:Q332:R0  
22:812:F28:J160:P70:Y627:T885:E436:Q394:R0  
23:1825:F39:J160:P70:Y663:T932:E389:Q500:R18  
24:721:F39:J160:P70:Y665:T935:E386:Q500:R82  
25:962:F42:J179:P72:Y685:T978:E343:Q498:R140  
26:1773:F42:J180:P85:Y703:T1010:E311:Q499:R228  
27:744:F42:J163:P70:Y731:T1006:E315:Q500:R262

20160601\_201246: End of Simulation  
Final Totals: [F4420:J18854:P10576:Y90533:T124383:E15643:R28320]

Simulation

Fare Classes

Operation

Run Simulation

Show Graph

Switch Graph

RNG Seed: 100

Daily Mean: 1300.0

Queue Size: 500

Cancellation: 0

First: 0.03

Business: 0.14

Premium: 0.13

Economy: 0.7

20160601\_203716: Start of Simulation  
Simulator [meanDailyBookings=1300.0, sdDailyBookings=429.0, seed=100, firstProb=0.03, businessProb=0.14, premiumProb=0.13, economyProb=0.7]  
A380:QF11:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]  
A380:QF93:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]  
B747:QF15:21 Capacity: 353 [F: 14 J: 52 P: 32 Y: 255]  
0:1567:Q0:R0  
1:931:Q0:R0  
2:1112:Q0:R0  
3:1153:Q0:R0  
4:875:Q0:R0  
5:1418:Q0:R0  
6:2494:Q0:R0  
7:1072:Q0:R0  
8:300:Q0:R0  
9:1601:Q0:R0  
10:1444:Q0:R0  
11:1987:Q0:R0  
12:1194:Q0:R0  
13:1821:Q0:R0  
14:664:Q0:R0  
15:692:Q0:R0  
16:1190:Q0:R0  
17:1768:Q0:R0  
18:727:Q48:R0  
19:1699:Q165:R0  
20:1117:Q238:R0  
21:1261:F31:J158:P70:Y633:T892:E429:Q332:R0  
22:812:F28:J160:P70:Y627:T885:E436:Q394:R0  
23:1825:F39:J160:P70:Y663:T932:E389:Q500:R18  
24:721:F39:J160:P70:Y665:T935:E386:Q500:R82  
25:962:F42:J179:P72:Y685:T978:E343:Q498:R140  
26:1773:F42:J180:P85:Y703:T1010:E311:Q499:R228  
27:744:F42:J163:P70:Y731:T1006:E315:Q500:R262

20160601\_203717: End of Simulation  
Final Totals: [F4420:J18854:P10576:Y90533:T124383:E15643:R28320]

Simulation

Fare Classes

Operation

Run Simulation

Show Graph

Switch Graph

RNG Seed: 100

Daily Mean: 1300.0

Queue Size: 500

Cancellation: 0

First: 0.03

Business: 0.14

Premium: 0.13

Economy: 0.7

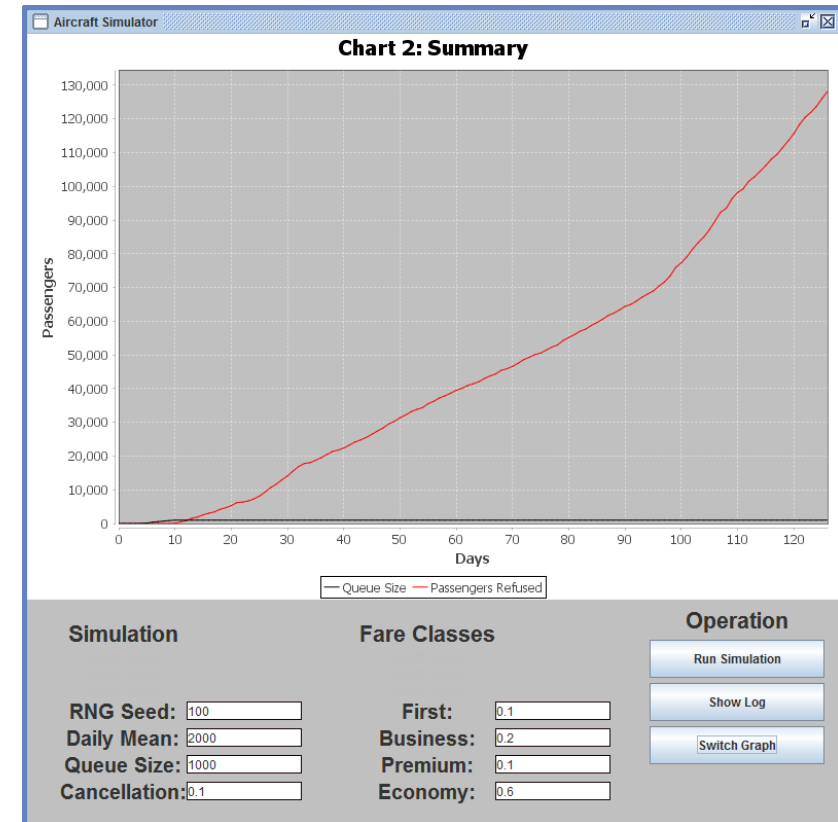
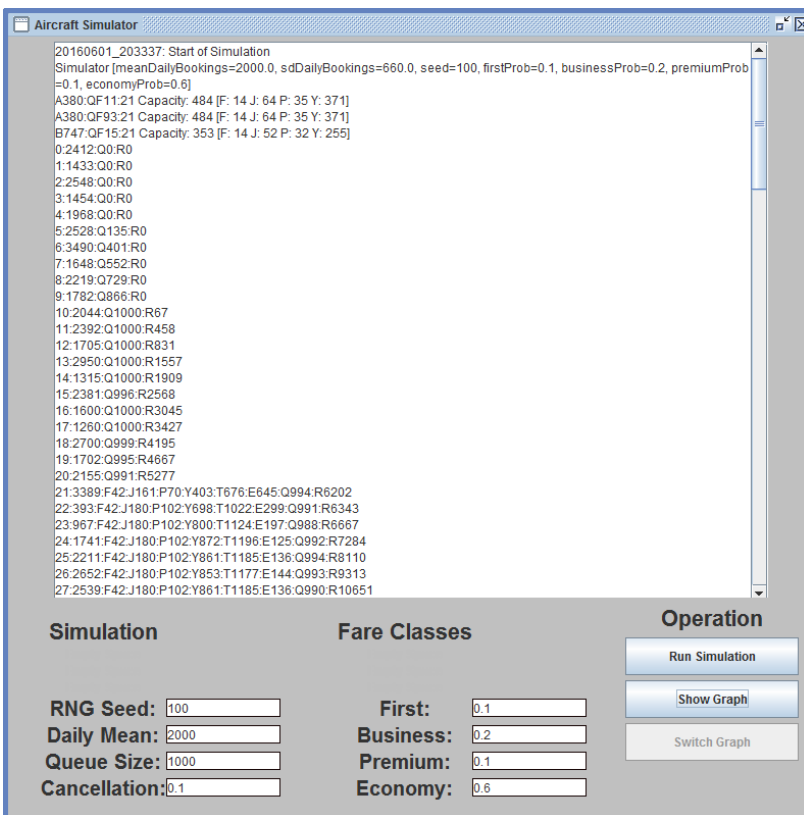
C:\Users\jhaye\_000\Downloads\logSummary • - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

logSummary 20160601\_180841 20160601\_181436 20160530\_212447

70 20160525\_203716: Start of Simulation  
71 Simulator [meanDailyBookings=1300.0, sdDailyBookings=429.0, seed=100, firstProb=0.03, businessProb=0.14, premiumProb=0.13, economyProb=0.7, maxQueueSize=500, cancellationProb=0.0]  
72 A380:QF11:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]  
73 A380:QF93:21 Capacity: 484 [F: 14 J: 64 P: 35 Y: 371]  
74 B747:QF15:21 Capacity: 353 [F: 14 J: 52 P: 32 Y: 255]  
75 0:1567:Q0:R0  
76 1:931:Q0:R0  
77 2:1112:Q0:R0  
78 3:1153:Q0:R0  
79 4:875:Q0:R0  
80 ....  
81 120:1014:F42:J180:P102:Y997:T1321:E0:Q248:R20586  
82 121:1068:F42:J180:P102:Y997:T1321:E0:Q492:R21410  
83 122:1402:F42:J180:P102:Y997:T1321:E0:Q487:R22815  
84 123:1246:F42:J180:P102:Y997:T1321:E0:Q487:R24059  
85 124:1207:F42:J180:P102:Y997:T1321:E0:Q488:R25264  
86 125:1066:F42:J180:P102:Y997:T1321:E0:Q492:R26326  
87 126:1502:F42:J180:P102:Y997:T1321:E0:Q492:R27828  
88  
89 20160525\_203717: End of Simulation  
90 Final Totals: [F4420:J18854:P10576:Y90533:T124383:E15643:R28320]  
91  
92  
93 20160525\_203716: Start of Simulation

# Test 4: Shows, both graphs and the values being set



# Test 5: show values and graphs

