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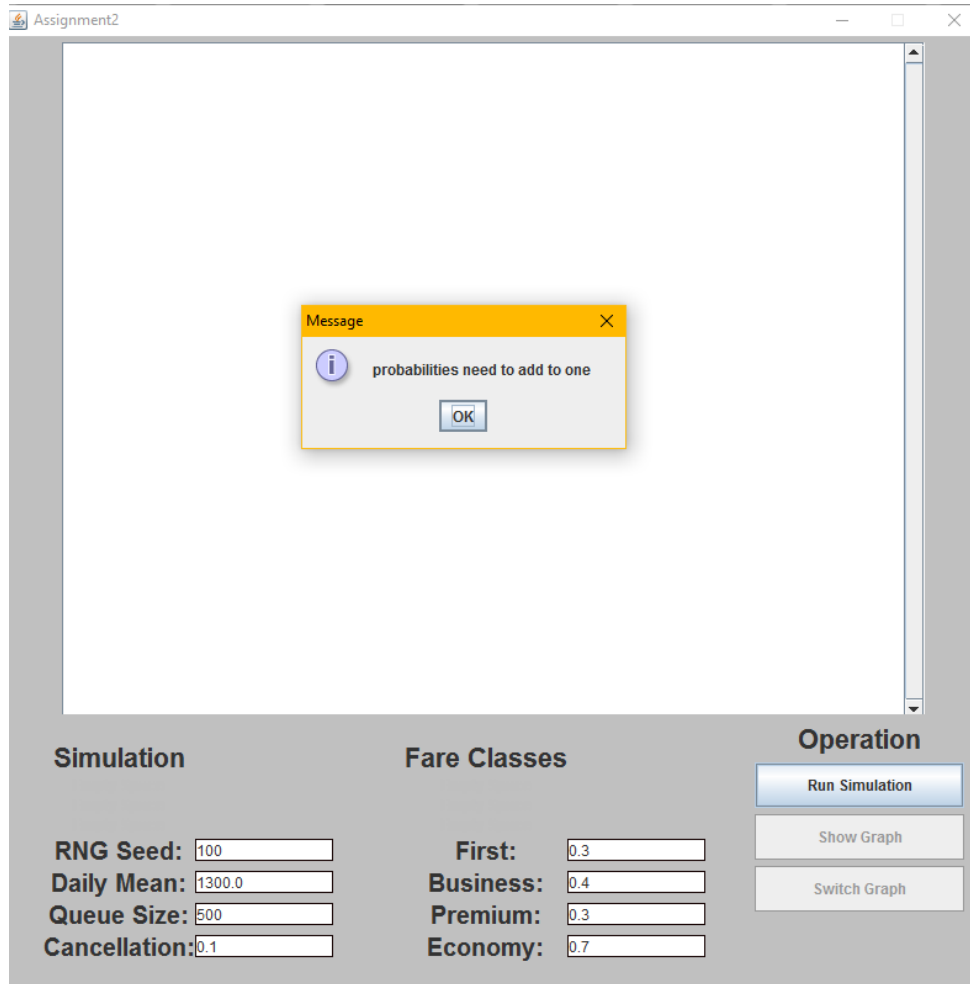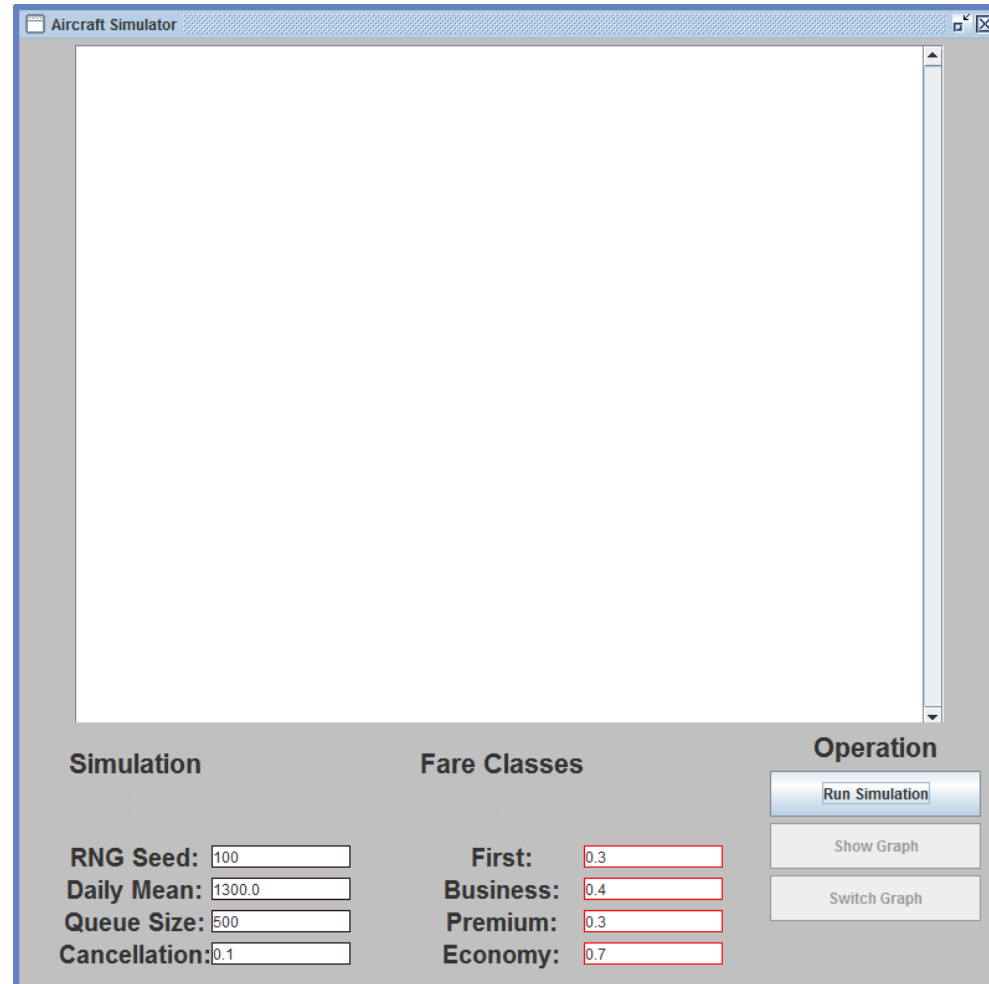 Test 1: Invalid probability values. Error message displayed and invalid fields are change to red to show the user what to fix.

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.

BorderLayout

```
20160601_144001: 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
16:1346: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
```

Operation

Run Simulation

Show Graph

Switch Graph

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

C:\Users\jhaye_000\Downloads\logSummary - Sublime Text (UNREGISTERED)

File   Edit   Selection   Find   View   Goto   Tools   Project   Preferences   Help

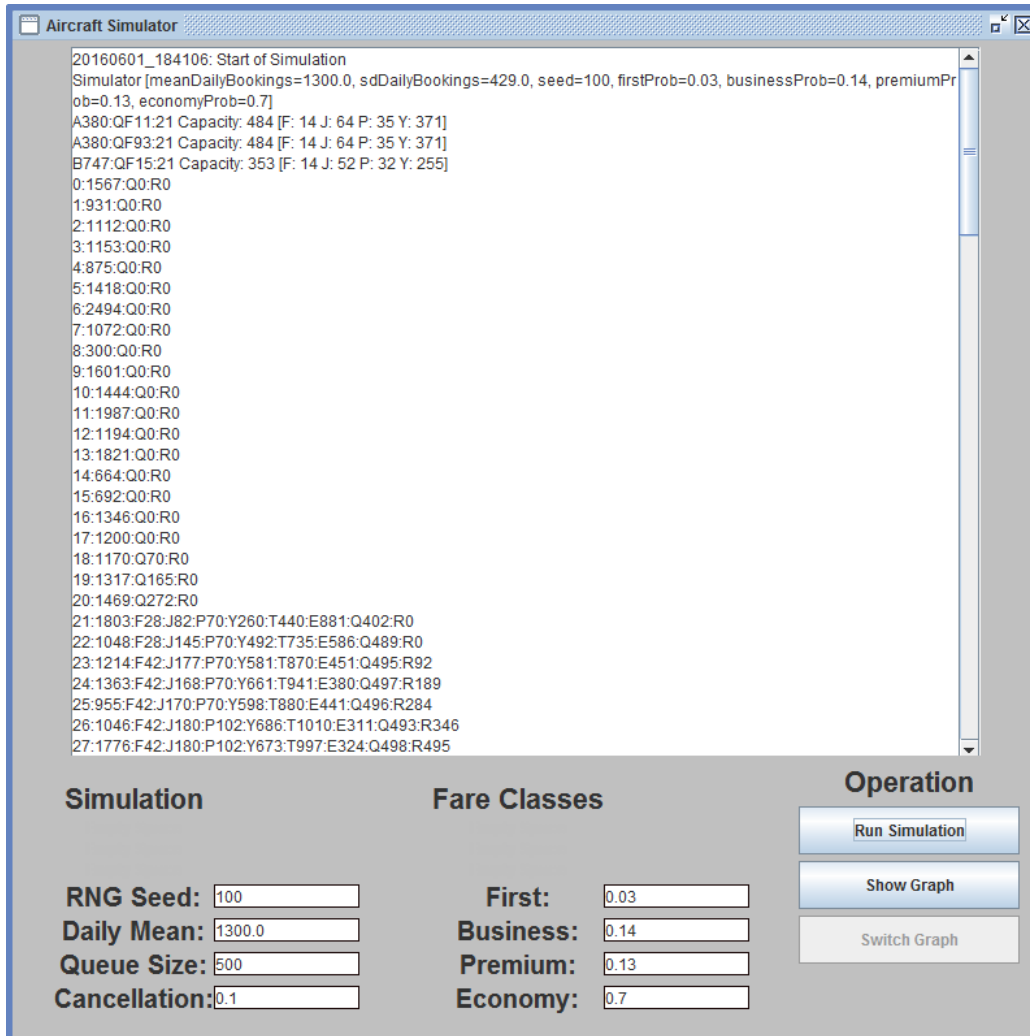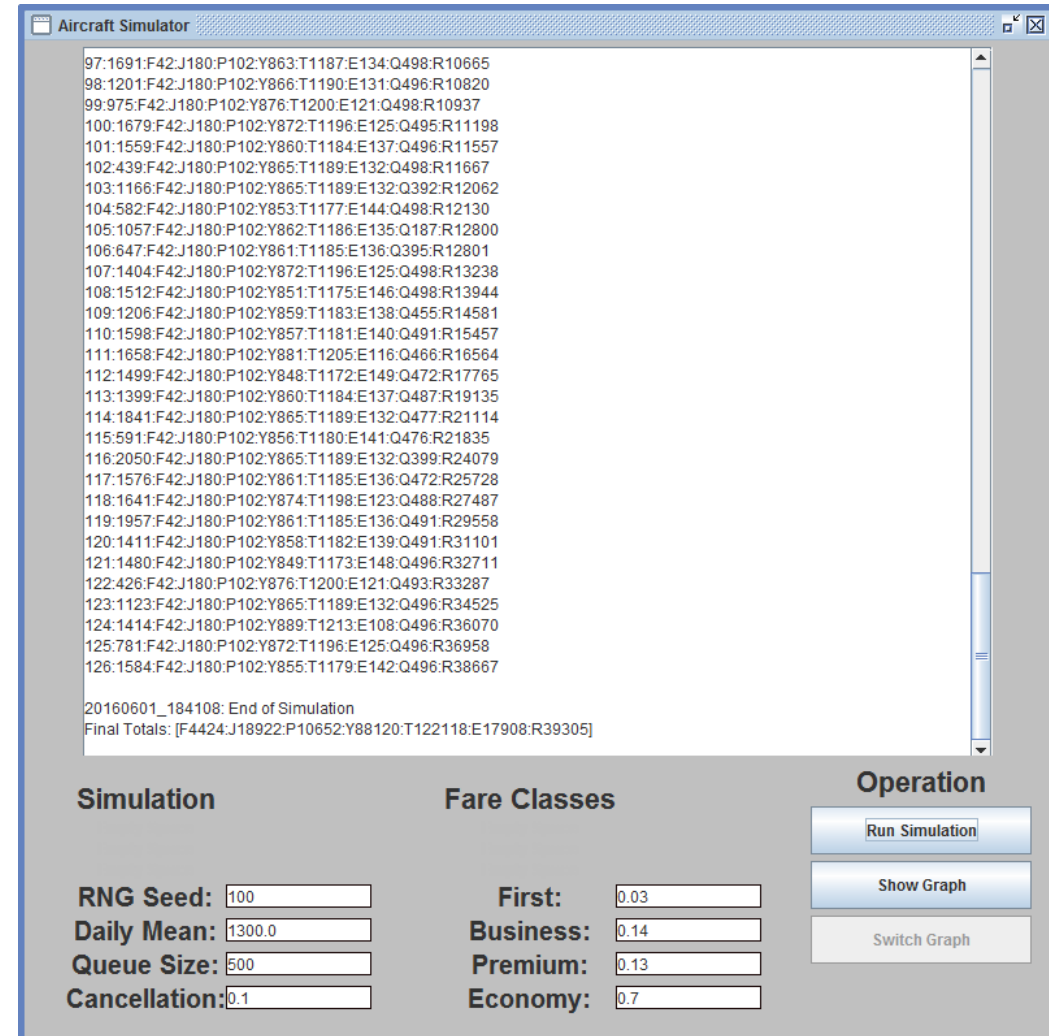logSummary   ×   20160530_212447   ×

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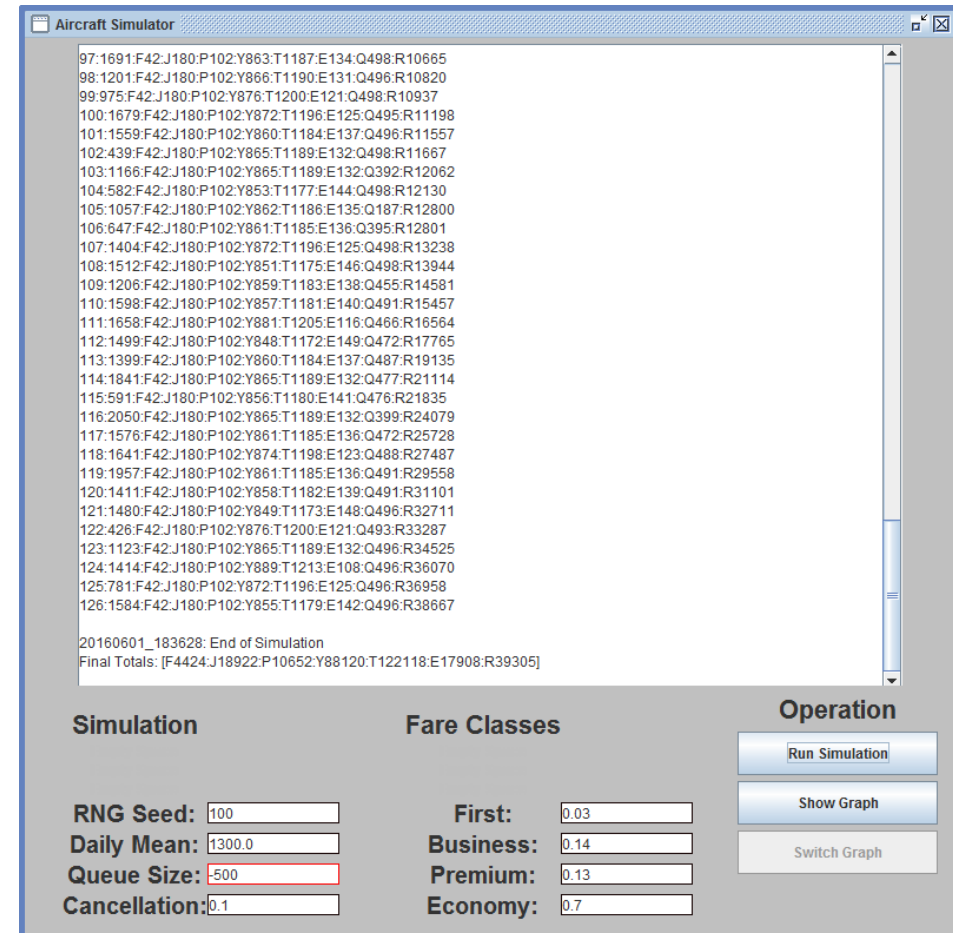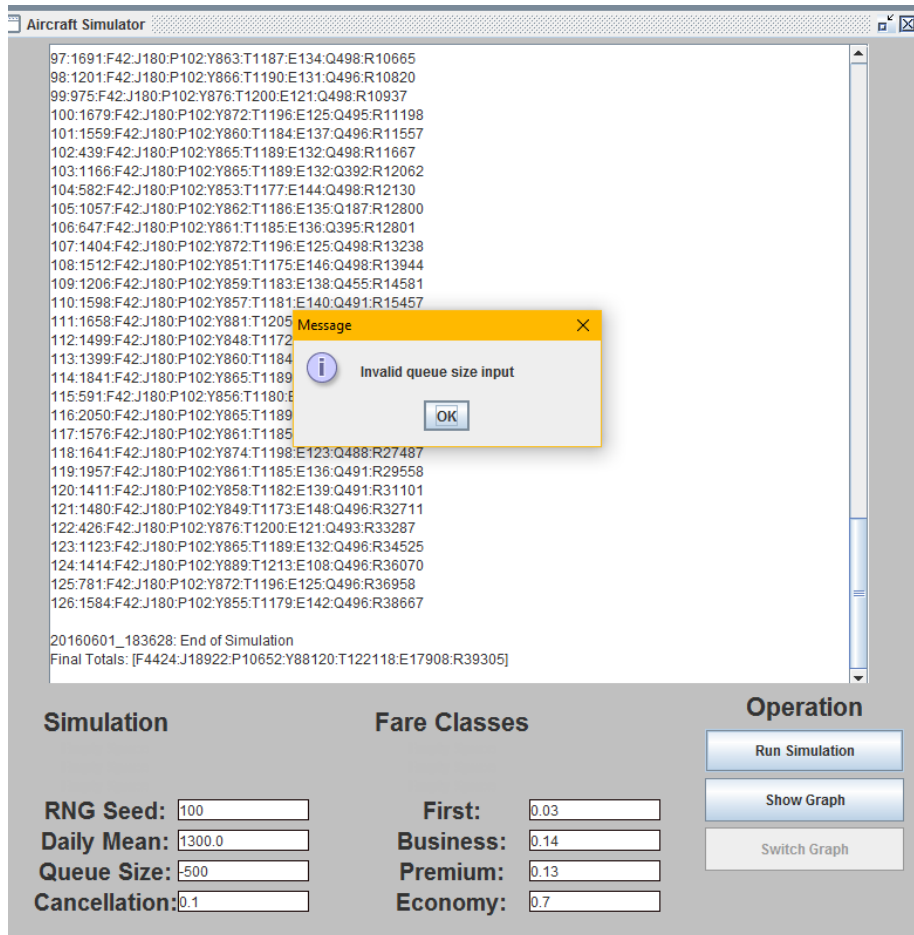
User gets another chance an inputs all valid data. All values are set and simulation runs as it should.

Left window — Aircraft Simulator

```
20160601_184106: 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
16:1346: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

Right window — 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
102:1799: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

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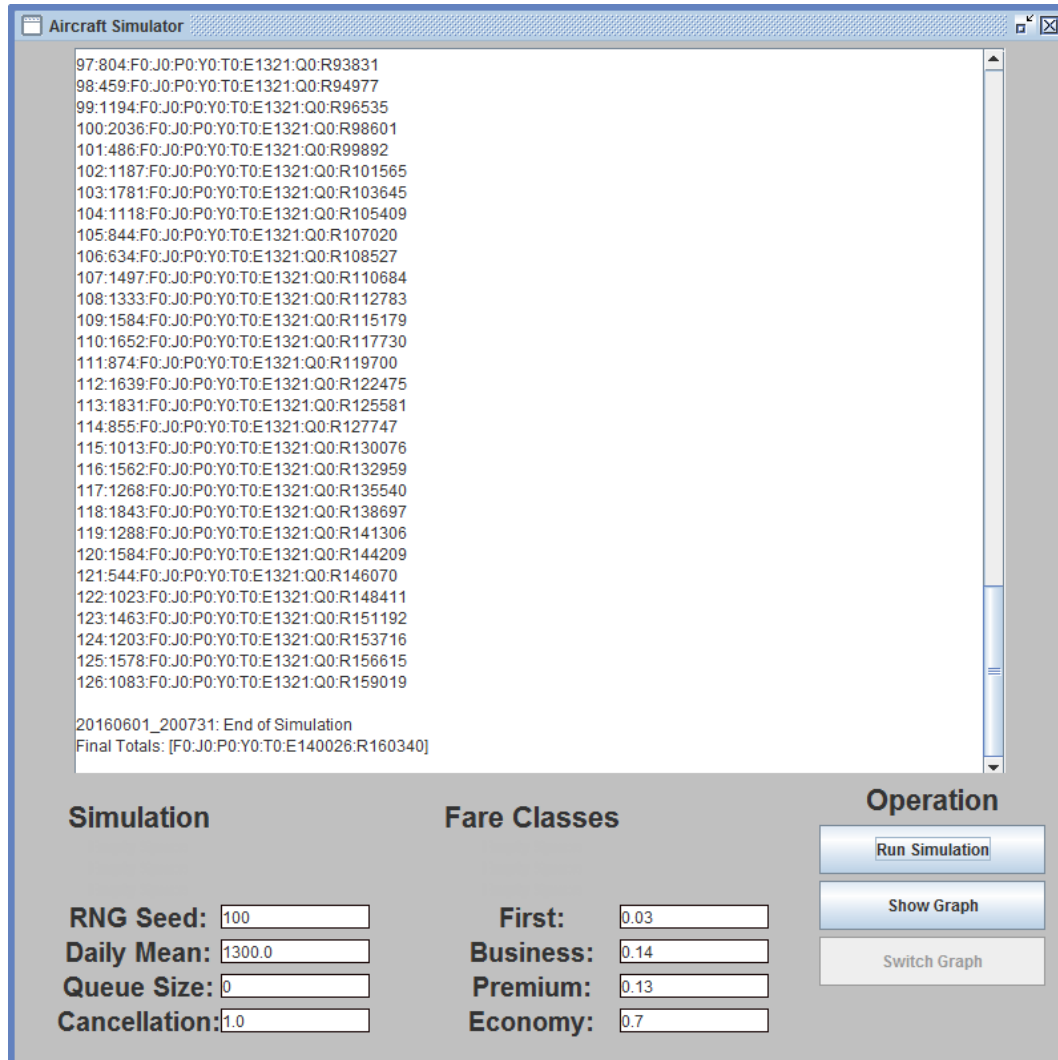Queue Size: 500
Cancellation: 0.1

Fare Classes

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

Operation

Run Simulation
Show Graph
Switch Graph

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

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

Test 4: Shows, both graphs and the values being set
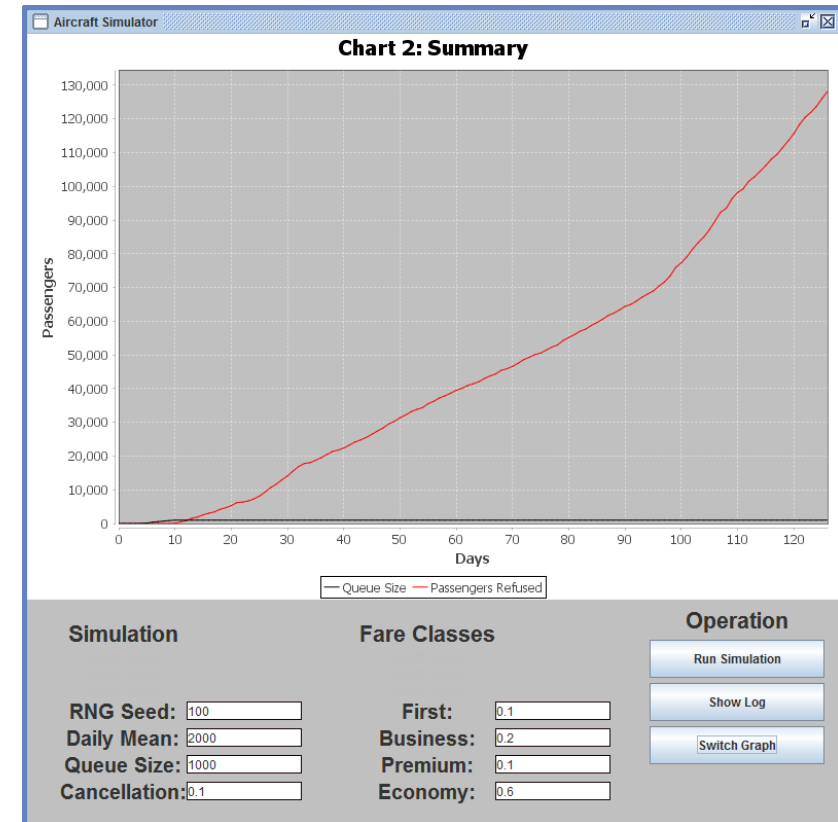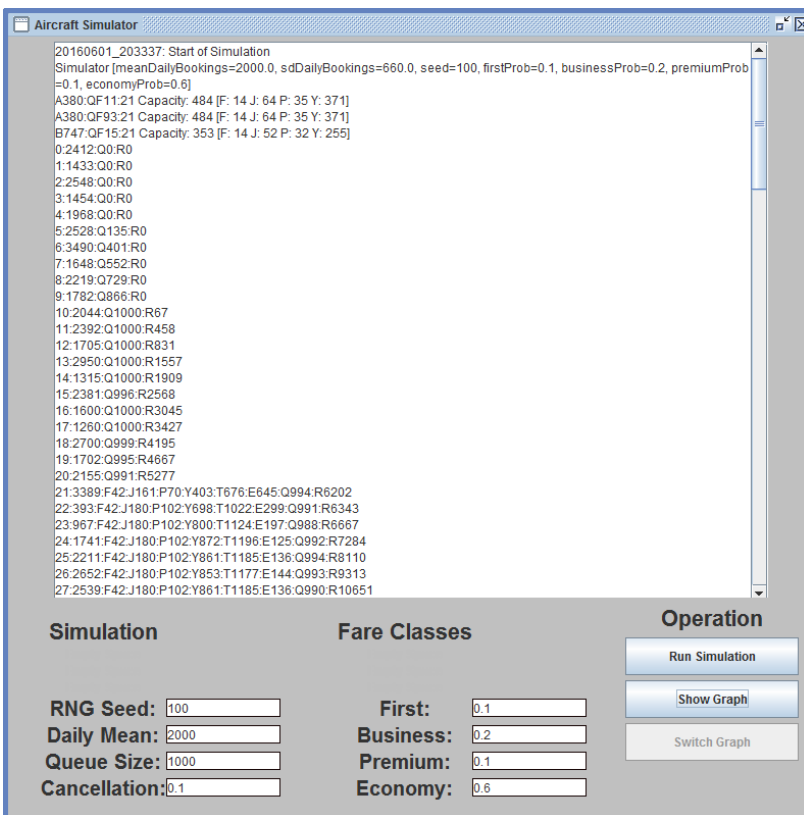
Test 5: show values and graphs