BLACK BOX TEST PLAN

For our black-box tests, we will use the following test file named: airline.txt.

The contents of in the file are as follows:

AIRPORT_CODE,LATITUDE,LONGITUDE
DFW,32.89680099487305,-97.03800201416016
MIA,25.79319953918457,-80.29060363769531
ORH,42.26729965209961,-71.87570190429688
RDU,35.877601623535156,-78.7874984741211
SEA,47.44900131225586,-122.30899810791016
SFO,37.61899948120117,-122.375

We will also use an empty text file- empty.txt as well as a hypothetical test file- unavailable.txt

To start the program, run AirlineHubManagerUI.

Test ID	Description	Expected Results	Actual Results
testLoadInvalidFile **(DT-trying to load an invalid file)**	**Preconditions:** • AirlineHubManagerUI.java has loaded successfully • The file unavailable.txt does not exist **Steps:** Enter file name: unavailable.txt	User is re-prompted to enter a filename: "File does not exist! please enter re-enter valid filename: ".	User is re-prompted to enter a filename: "File does not exist! please enter re-enter valid filename: ".
testLoadValidFile **(ECP- loading input from file)**	**Preconditions:** • AirlineHubManagerUI.java has loaded successfully. • The file airline.txt exists **Steps:** Enter file name: airline.txt	The file is successfully loaded into the program.	The file is successfully loaded into the program.
testValidFlightConnections **(ECP - trying to generate list of flight connections)**	**Preconditions:** • AirlineHubManagerUI.java has loaded successfully. • The file airline.txt exists and has been loaded into the program. **Steps:** Choose option 'g' to	FlightList[Flight[airport1=ORH, airport2=RDU, distance=576.4], Flight[airport1=SEA, airport2=SFO, distance=679.6], Flight[airport1=MIA, airport2=RDU, distance=702.8], Flight[airport1=DFW,	FlightList[Flight[airport1=ORH, airport2=RDU, distance=576.4], Flight[airport1=SEA, airport2=SFO, distance=679.6], Flight[airport1=MIA, airport2=RDU, distance=702.8], Flight[airport1=DFW,

	generate the list of flights that minimize distance required to connect all of the airports in the input file.	airport2=RDU, distance=1059.7], Flight[airport1=DFW, airport2=SFO, distance=1462.3]]	airport2=RDU, distance=1059.7], Flight[airport1=DFW, airport2=SFO, distance=1462.3]]
testGetInvalidReport **(BVA- trying to get report from empty file)**	**Preconditions:** • AirlineHubManagerUI.java has loaded successfully. • The file empty.txt exists and has been loaded into the program. **Steps:** Choose option 'r' to produce a list of airports that could be considered hubs.	An error message saying "No airports have at least 3 connecting flights" is displayed.	An error message saying "No airports have at least 3 connecting flights" is displayed.
testInvalidHubReport **(ECP-trying to generate an airport hub report)**	**Preconditions:** • AirlineHubManagerUI.java has loaded successfully. • The file airline.txt exists and has been loaded into the program. **Steps:** Choose option 'r' to produce a list of airports that could be considered hubs.	HubReport[RDU has 3 connections.]	HubReport[RDU has 3 connections.]