BLACK BOX TEST PLAN

These are the black-box test cases which will be utilized to test the functionality of the TransportationManager application. For these black-box test cases, we will be using two test input files, **input-1.txt** and **input-2.txt,** which contain the following text:

- **input-1.txt**
  - `1 2 7.0 159.0`
    `3 2 12.0 212.0`
    `1 0 14.0 415.0`
- **input-2.txt**
  - `0 1 7.0 159.0`
    `0 1 7.0 159.0`

With more time, a fully functional GUI black box test would be conducted, but limited time has forced me to create a faux-black-box test as a white-box test case within the test/manager package.

Test ID	Description	Expected Results	Actual Results
readingInvalidFile (DT - trying to read a non-existent file)	Preconditions: ● TransportationManagerGUI has been loaded successfully ● missing-input.txt does not exist Steps: 1. Click “Load Highway Information” 2. Enter “missing-input.txt” and click Open 3. Quit	Pop-Up displays: “<Path to file for your OS>”/missing-input.txt (The system cannot find the file specified)	Pop-Up displays: “<Path to file for your OS>”/missing-input.txt (The system cannot find the file specified)

minimizeCost(ECP - Minimizing cost using highways from a valid file)	Preconditions: ● TransportationManagerGUI loaded successfully ● input-1.txt exists Steps: 1. Click “Load Highway Information” 2. Enter “input-1.txt” and click Open 3. Click “Minimize Cost” 4. Quit	There is no error reported. Output text field contains: “Heap[Highway[city1=1, city2=2, cost=7.0, asphalt=159.0], Highway[city1=3, city2=2, cost=12.0, asphalt=159.0], Highway[city1=1, city2=0, cost=14.0, asphalt=415.0]] List[Highway[city1=1, city2=0, cost=14.0, asphalt=415.0], Highway[city1=1, city2=2, cost=7.0, asphalt=159.0], Highway[city1=3, city2=2, cost=12.0, asphalt=159.0]] AdjacencyList[City 0: -> Highway[city1=1, city2=0, cost=14.0, asphalt=415.0] City 1: -> Highway[city1=1, city2=0, cost=14.0, asphalt=415.0] -> Highway[city1=1,	No error reported. Output text field contains: “Heap[Highway[city1=1, city2=2, cost=7.0, asphalt=159.0], Highway[city1=3, city2=2, cost=12.0, asphalt=212.0], Highway[city1=1, city2=0, cost=14.0, asphalt=415.0]] List[Highway[city1=1, city2=0, cost=14.0, asphalt=415.0], Highway[city1=1, city2=2, cost=7.0, asphalt=159.0], Highway[city1=3, city2=2, cost=12.0, asphalt=212.0]] AdjacencyList[City 0: -> Highway[city1=1, city2=0, cost=14.0, asphalt=415.0] City 1: -> Highway[city1=1, city2=0, cost=14.0, asphalt=415.0] -> Highway[city1=1,

		city2=2, cost=7.0, asphalt=159.0] City 2: -> Highway[city1=1, city2=2, cost=7.0, asphalt=159.0] -> Highway[city1=3, city2=2, cost=12.0, asphalt=212.0] City 3: -> Highway[city1=3, city2=2, cost=12.0, asphalt=212.0]]"	city2=2, cost=7.0, asphalt=159.0] City 2: -> Highway[city1=1, city2=2, cost=7.0, asphalt=159.0] -> Highway[city1=3, city2=2, cost=12.0, asphalt=212.0] City 3: -> Highway[city1=3, city2=2, cost=12.0, asphalt=212.0]]"
duplicateHighways(Minimizing cost on a set of highways which only contains duplicates)	Preconditions: ● TransportationManagerGUI has been loaded successfully ● input-2.txt exists Steps: 1. Click "Load Highway Information" 2. Enter "input-2.txt" and click Open 3. Click "Minimize Asphalt"	There is no error reported. Output text field contains: " Heap[Highway[city1=0, city2=1, cost=7.0, asphalt=159.0],Highway[city1=0, city2=1, cost=7.0, asphalt=159.0] List[Highway[city1=0, city2=1, cost=7.0, asphalt=159.0]] AdjacencyList[City 0 -> Highway[city1=0, city2=1, cost=7.0, asphalt=159.0] ->	There is no error reported. Output field contains: " Heap[Highway[city1=0, city2=1, cost=7.0, asphalt=159.0], Highway[city1=0, city2=1, cost=7.0, asphalt=159.0]] List[Highway[city1=0, city2=1, cost=7.0, asphalt=159.0]]

	4. Quit	Highway[city1=0, city2=1, cost=7.0, asphalt=159.0] City 1 -> Highway[city1=0, city2=1, cost=7.0, asphalt=159.0] -> Highway[city1=0, city2=1, cost=7.0, asphalt=159.0]]”	AdjacencyList[City 0: -> Highway[city1=0, city2=1, cost=7.0, asphalt=159.0] -> Highway[city1=0, city2=1, cost=7.0, asphalt=159.0] City 1: -> Highway[city1=0, city2=1, cost=7.0, asphalt=159.0] -> Highway[city1=0, city2=1, cost=7.0, asphalt=159.0]]