Problem 1a Test Plan

Part b: Y

Part c: Y

Part d: Y

The expected output and the actual output match up.

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| --- | --- | --- |
| Test input | Expected result | Actual result |
| //create graph and read verticies from the .txt file  Graph myGraph;  myGraph.readGraph("C:\\Temp\\test.txt",-999);  //myGraph.readGraph("C:\\Temp\\test.txt", -999);  myGraph.printGraph();  cout<<endl<<endl;    //test the depth first traversal  cout<<"Depth First Traversal: ";  //myGraph.depthFirstTraversal();  cout<<endl;  cout << "Total Cost: " << myGraph.depthFirstTraversal() << endl;  //test the breadth first traversal  cout<<"Breadth First Traversal: ";  //myGraph.breadthFirstTraversal();  cout<<endl;  cout << "Total Cost: " << myGraph.breadthFirstTraversal() << endl;  //test dftAtVertex() for ever vertex in the graph  cout << "dftAtVertex 0: ";  cout << "Total Cost " << myGraph.dftAtVertex\_(0);  cout << endl;  cout << "dftAtVertex 1: ";  cout << "Total Cost " << myGraph.dftAtVertex\_(1);  cout << endl;  cout << "dftAtVertex 2: ";  cout << "Total Cost " << myGraph.dftAtVertex\_(2);  cout << endl;  cout << "dftAtVertex 3: ";  cout << "Total Cost " << myGraph.dftAtVertex\_(3);  cout << endl;  cout << "dftAtVertex 4: ";  cout << "Total Cost " << myGraph.dftAtVertex\_(4);  cout << endl | Graph size 5  Vertex 0: 1 0.5 2 0.8 4 2  Vertex 1: 0 0.5 3 0.9 2 0.25  Vertex 2: 0 0.8 1 0.25 3 0.25  Vertex 3: 2 0.25 1 0.9 4 0.5  Vertex 4: 0 2 3 0.5  Depth First Traversal:  0 1 2 3 4 Total Cost: 1.5  Breadth First Traversal:  0 1 2 4 3 Total Cost: 4.2  dftAtVertex 0: 0 1 2 3 4 Total Cost 1.5  dftAtVertex 1: 1 2 3 4 0 Total Cost 3  dftAtVertex 2: 2 1 0 4 3 Total Cost 3.25  dftAtVertex 3: 3 2 1 0 4 Total Cost 3  dftAtVertex 4: 4 3 2 1 0 Total Cost 1.5 | Graph size 5  Vertex 0: 1 0.5 2 0.8 4 2  Vertex 1: 0 0.5 3 0.9 2 0.25  Vertex 2: 0 0.8 1 0.25 3 0.25  Vertex 3: 2 0.25 1 0.9 4 0.5  Vertex 4: 0 2 3 0.5  Depth First Traversal:  0 1 2 3 4 Total Cost: 1.5  Breadth First Traversal:  0 1 2 4 3 Total Cost: 4.2  dftAtVertex 0: 0 1 2 3 4 Total Cost 1.5  dftAtVertex 1: 1 2 3 4 0 Total Cost 3  dftAtVertex 2: 2 1 0 4 3 Total Cost 3.25  dftAtVertex 3: 3 2 1 0 4 Total Cost 3  dftAtVertex 4: 4 3 2 1 0 Total Cost 1.5 |