

3.1)

The only data structure is a graph which is used to represent the cities and its neighbors, the code works like this.

First it looks the first neighbor from the initial node, and it goes there, this is done until we get to the final node, when it gets there it saves the distance that took getting to the final node.

Then it goes back a node and looks at the second neighbor, and then the third and this is done until every way of getting to the final node is considered and stored in an array.

Then we find which way of getting to the final node is the shortest and that's the best solution.

3.2)greedy algorithm is most likely not going to return the best possible solution because it selects the best apparent solution every step, in this case it selects the nearest neighbor, but that might not be the right choice for the best solution.

For the greedy algorithm to choose the best solution the graph has to have a shortest path tree for the greedy algorithm to guarantee the best possible solution.

Simulacro

1) b

2)  $i=j$

3)  $\min > \text{adjacencyMatrix}[\text{element}][i]$

5) a-b-f-c-d-g