In this question your goal is to implement Dijkstra algorithm to find all shortest paths from a source node.

The attached zip file contains a CSV file named “Assignment2\_Data.csv”, which contains a list of weighted edges. The first column is the “from node”, the second column is the “to node”, and the third column is the weight of the edge.

In the zip file you can find some starting java code that helps you read the CSV file and create a Network data structure that represent the weighted directed network.

You need to do the following:

1. Implement function Network.visualize, which visualize the weighted network using JUNG. Include the visualization in your report.
2. Implement the function Network.applyDijkstra, which takes a source node as an input and apply the dijkstra algorithm. Note that your implementation of the dijkstra algorithm should correctly update variables Node.parent and Node. ShortestPathCost
3. Test your dijkstra implementation by calling applyDijkstra(“22”)
4. Use JUNG to highlight the shortest paths from the source. Include the visualization in your report.