For this project, our developing environment is Eclipse + Tomcat. So to run this project, you need to configure Tomcat with Eclipse.

Before you run the project on Tomcat, in order to read the initial data files, you need to change the absolute direction of Nodes.txt and Edges.txt in *LoadData.java* file.

Our main files include two parts, front-end and back-end. Here’s some simple explanation of some main functions in our project. For more details, please check the notations in the code.

* Front-end

*Default.jsp*

* Written in HTML and JavaScript. Send requests to the back-end, analyze received data and display the results on the screen.
* Back-end
* Servlet
  + *WazeAppServlet.java*
* Analyze different requests sent from front end, and call different functions from different files.
* Send back the calculated data to the front-end.
* To realize functionalities
  + *LoadData.java*

LoadNodes() - Read txt file and store nodes info into cache

LoadEdges() - Read txt file and store edges info into cache

* + *FindAdjacentNodes.java*

FindAdjacentEdges() – Find adjacent nodes of certain node

* + *ShortestPaths.java*

DijkstraAlgorithm() - Implement Dijkstra’s Algorithm.

- Called by KthShortestPath()

KthShortestPath() - Implement Yen’s Algorithm.

- Called by ShortestPaths()

ShortestPaths() - Call KthShortestPath() function.

* Classes
  + *Node.java*
  + *Edge.java*
  + *DijkstraVertex.java*
  + *PathLenght.java*