This code implement Traffic control through Monte Carlo Tree Search(UCT)
This code is designed to work with JAVA SWING for visualization. So, there are packages called listener and painting, which are used to do animation. If you are not interested in the virtualization of this project, please ignore them. The simulator of traffic is independent with those packages.

To check visual traffic control on four intersection network, please run mains.MainForTrafficNetwork.java. If you need to switch the control methods, please see listener.TrafficNetworkListener.java and select the method by 'comment' others

To see CTM simulation, please run mains.MainForSingleRoad. It will display the traffic flow for single freeway.

The UCT method is implemented in the package uct and it includes two classes: TreeNode and UpperConfidenceTree.java

The Simulator.java in package simulator is used to simulate the traffic state transition for certain horizon under certain light settings. It is used discrete the continuous state transition and allows UCT method work on the discrete state.