## **HELPER DOCUMENT**

## DHRUV GUPTA 2020A7PS1680P

In the code I have four classes:- The main class, Node class, Node1 class and Edge1 class. Also the node class implements the comparator interface and represents a node in the graph. The first part of the code is based on dijkstra's algorithm and it uses priority queue data structure(it gives priority to the element with least weight). Also it uses the main class and the node class to give the output.

The second part of the code gives the output based on A\* algorithm and it is based on a heuristic function which gives priority to nodes. It also uses node1, edge1 and main class methods to give output.

Here if we want to give distance between two cities then we have to give distance for both ways for eg. for city 0 and city 1 and city 1 and city 0. Here the order matters.

## **Test Cases:-**

- 1.3 cities in which distance is 0-1 is 5, 1-2 is 5 and 0-2 is 10.
- 2. 3 cities in which distance is 0-1 is 2, 1-2 is 4 and 0-2 is 10.