

Name: Pranto Roy  
ID: 22301261

Lab-06

CSE221

①

After making the adjacency list with the weight of each edge, we create a list for distance for each instance and another list of visited to keep track.

In the dijkstra function we use ~~the queue~~ Priority queue which ~~is a~~ works as extracting the minimum node from queue everytime. So we use another function called find min to get it. Then we simply add the weights of ~~each~~ each edge after visiting.

②

Similarly in this we run dijkstra algorithm for two nodes and store their respective times. We also take a counter to count the node in which they meet.

③

Here also we use dijkstra algorithm but it is a bit modified. The main loop iterates as long as the Priority queue is not empty. Find minimum function is used to find the unvisited node with minimum weight. If the new distance is less than the previous it indicates a shorter path, lastly we print the calculated distance.