Design and Time analysis

We have used Graph data structure using adjacency list; to represent building and network of roads between those building.

In order to calculate shortest distance between hospital and airport, we have used Dijkstra algorithm. This algorithm helps us in finding shortest distance of source node from all the other nodes in a given graph, it is a greedy algorithm that’s why it will choose for best available solution at every step.

Runt time of Dijkstra for a graph represented as adjacency list is **O((n+e)lg(n))**, where n is the number of nodes and e is the number of edges.