Assignment 2 - Q2 Report

First, I defined the function for the Dijkstra algorithm. This time, I used set instead of priority queue because set was apparently faster, and it did not give any time limit error.
Sets work similarly, where elements are sorted in ascending order with respect to distance, and popping(erasing) out an element gives the adjacent vertex with the least distance.

The given question can be solved using graphs and Dijkstra algorithm.
Each place is assigned a vertex in the graph, and by that, we can construct a graph and its adjacency list.
By converting the data to a graph, we obtain a directed graph.

We start by inputting the number of vertices and edges. Then, an adjacency list is constructed along with the distance.
Then, the Dijkstra algorithm is applied to this adjacency list, and we get the shortest distance of each vertex from the source.