Dijkstra's Algorithm

```
Strat → set cost of source vertex to 0
```

Does source have any neighbors?
- No → Exit
- Yes ↓

```
index = 0
visit source vertex neighbors
```

is adj[source][index] + prevcost < infinity and adj[source][index] + pevcost < cost[index] ?
- Yes →
```
cost[index] = adj[source][index] + prevcost
path[index] = curPath + "," + building[index]
```
→ Dijkstra(index, cost[index], path[index])

- No ↓

```
index = 0
curEdges = edges of source vertex
visit neighbors of neighbors
```

Is index < number of edges in curEdges ?
- No → Stop loop
- Yes ↓

```
curEdge = value of the vertex[index] in curEdges
neighborIndex = destination of curEdge
```

is cost[index] + curEdge.weight + prevcost < infinity and cost[index] + curEdge.weight + pevcost < cost[neighborIndex] ?
- No → index++
- Yes ↓

```
cost[neighborIndex] = cost[index] + curEdge.weight + prevcost
path[neighborIndex] = path[index] + "," + building[neighborIndex]
```

```
Dijkstra(neighborIndex, cost[neighborIndex], path[neighborIndex])
```

→ index++