

```
from collections import defaultdict
```

```
class Graph:
```

```
    def __init__(self):
```

```
        self.edges = defaultdict(list)
```

```
        self.weights = {}
```

```
    def addEdge(self, from_node, to_node, weight):
```

```
        self.edges[from_node].append(to_node)
```

```
        self.weights[(from_node, to_node)] = weight
```

```
    def dijkstra(self, initial, end):
```

```
        shortest_paths = {initial: (None, 0)}
```

```
        current_node = initial
```

```
        while current_node != end:
```

```
            visited.add(current_node)
```

```
            dist = graph.edges[current_node]
```

```
            for next in dist:
```

```
                weight = graph.weights[(current_node, next_node)] + weight to cur_node
```

```
                if next not in shortest_paths:
```

```
                    shortest_paths[next] = (current_node, weight)
```

```
                else:
                    cur_shortest_weight = shortest_paths[next_node]
```

```
            next_dist = {node: shortest_path_node for node in shortest_paths
                        if node not in visited}
```

```
            path = []
```

```
            while cur_node not None:
```

```
                path.append(cur_node)
```

```
                next = shortest_paths[cur_node][0]
```

```
                cur_node = next
```

```
            path = path[::-1]
```

```
            print(path)
```