Dijkstra

Given a graph G with set of vertices V and edges E
Given a source vertex s

Each vertex will have 2 properties parent (p) and distance (d)

```
for each vertex v{
      parent [v] = null
      distance [v] = infinity
}

distance [s] = 0
put all the vertices in Q

while Q not empty{
      u = remove vertex with minimum distance
      for each neighbor v of u{
            if v is in Q{
                  if (distance[v] > distance[u] + weight (u, v){
                        distance[v] > distance[u] + weight (u, v)
                        parent[v] = u
                  }
            }
      }
}
```