Dijkstra's Algorithm (SSSP)
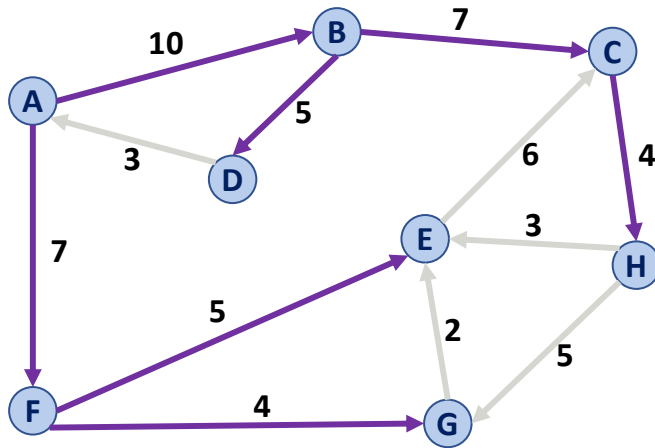


```
     DijkstraSSSP(G, s):
6      foreach (Vertex v : G):
7        d[v] = +inf
8        p[v] = NULL
9      d[s] = 0
10
11     PriorityQueue Q // min distance, defined by d[v]
12     Q.buildHeap(G.vertices())
13     Graph T           // "labeled set"
14
15     repeat n times:
16       Vertex u = Q.removeMin()
17       T.add(u)
18       foreach (Vertex v : neighbors of u not in T):
19         if cost(u, v) + d[u] < d[v]:
20           d[v] = cost(u, v) + d[u]
21           p[v] = m
```