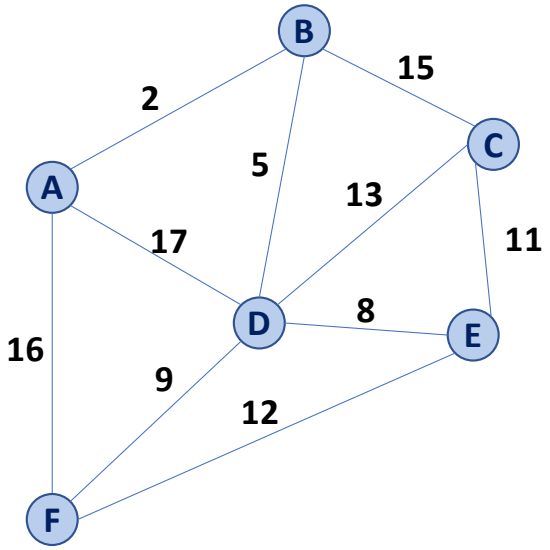
Prim's Algorithm




```
 1  PrimMST(G, s):
 2    Input: G, Graph;
 3           s, vertex in G, starting vertex
 4    Output: T, a minimum spanning tree (MST) of G
 5
 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 m = Q.removeMin()
17      T.add(m)
18      foreach (Vertex v : neighbors of m not in T):
19        if cost(v, m) < d[v]:
20          d[v] = cost(v, m)
21          p[v] = m
22
23    return T
```