

Prim's Algorithm

```
procedure prim(G,W,s)

  for each vertex  $v \in V[G]$  do
     $d[v] \leftarrow \infty$ 
     $\pi[v] \leftarrow \text{NIL}$ 
  end for
  outside  $\leftarrow V[G]$ 

   $d[s] \leftarrow 0$ 
  while outside  $\neq \phi$  do
     $u \leftarrow \text{Extract\_Min}(\text{outside})$ 
    for each  $v$  adjacent to  $u$  do
      if  $v \in \text{outside}$  and  $W[u,v] < d[v]$  then
         $d[v] \leftarrow W[u,v]$ 
         $\pi[v] \leftarrow u$ 
      end if
    end for
  end while

end procedure
```