

(**int**[], **int**[]) CamminiMinimi(**GRAPH** G , **NODE** s)

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(1)  PRIORITYQUEUE  $S \leftarrow$  PriorityQueue //  $\mathcal{O}(n) \cdot 1$ 
     $S.inserisci(s, 0)$ 

    while not  $S.isEmpty$  do //  $\mathcal{O}(n)$ 
(2)      //  $\mathcal{O}(n)$  vettore ordinato /  $\mathcal{O}(\log n)$  heap binario
        int  $u \leftarrow S.deleteMin$ 
         $b[u] \leftarrow$  false

        foreach  $v \in G.adj(u)$  do
            if  $d[u] + G.w(u, v) < d[v]$  then
                if not  $b[v]$  then
(3)                  //  $\mathcal{O}(1) \cdot n$  vettore ordinato /  $\mathcal{O}(\log n) \cdot n$  heap binario
                     $S.inserisci(v, d[u] + G.w(u, v))$ 
                     $b[v] \leftarrow$  true
                else
(4)                  //  $\mathcal{O}(1) \cdot m$  vettore ordinato /  $\mathcal{O}(\log n) \cdot m$  heap binario
                     $S.decrease(v, d[u] + G.w(u, v))$ 

             $T[v] \leftarrow u$ 
             $d[v] \leftarrow d[u] + G.w(u, v)$ 

    return ( $T, d$ )
```