

(**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  $u \leftarrow S.deleteMin$ 
         $b[u] \leftarrow$  falso

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