

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

PRIORITYQUEUE $S \leftarrow$ PriorityQueue // $\mathcal{O}(n) \cdot 1$

$S.\text{inserisci}(s, 0)$

while not $S.\text{isEmpty}$ **do** // $\mathcal{O}(n)$

// $\mathcal{O}(n)$ vettore ordinato / $\mathcal{O}(\log n)$ heap binario

int $u \leftarrow S.\text{deleteMin}$ $b[u] \leftarrow \text{false}$

foreach $v \in G.\text{adj}(u)$ **do**

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

$S.\text{inserisci}(v, d[u] + G.w(u, v))$ $b[v] \leftarrow \text{true}$

else

// $\mathcal{O}(1) \cdot m$ vettore ordinato / $\mathcal{O}(\log n) \cdot m$ heap binario

$S.\text{decrease}(v, d[u] + G.w(u, v))$

// aggiorno i vettori

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

return (T, d)