Dijkstra's Shortest Path Algorithm

Find shortest path from s to t.

S = { }  PQ = { s, 2, 3, 4, 5, 6, 7, t }

delmin

distance label

S = { s }  PQ = { 2, 3, 4, 5, 6, 7, t }

decrease key

distance label
Dijkstra's Shortest Path Algorithm

$S = \{ s \}$
$PQ = \{ 2, 3, 4, 5, 6, 7, t \}$

Dijkstra's Shortest Path Algorithm

$S = \{ s, 2 \}$
$PQ = \{ 3, 4, 5, 6, 7, t \}$

Dijkstra's Shortest Path Algorithm

$S = \{ s, 2 \}$
$PQ = \{ 3, 4, 5, 6, 7, t \}$

Dijkstra's Shortest Path Algorithm

$S = \{ s, 2 \}$
$PQ = \{ 3, 4, 5, 6, 7, t \}$
Dijkstra's Shortest Path Algorithm

\[ S = \{ s, 2, 6 \} \]
\[ PQ = \{ 3, 4, 5, 7, t \} \]
Dijkstra's Shortest Path Algorithm

\[ S = \{ s, 2, 3, 4, 5, 6, 7 \} \]
\[ PQ = \{ t \} \]