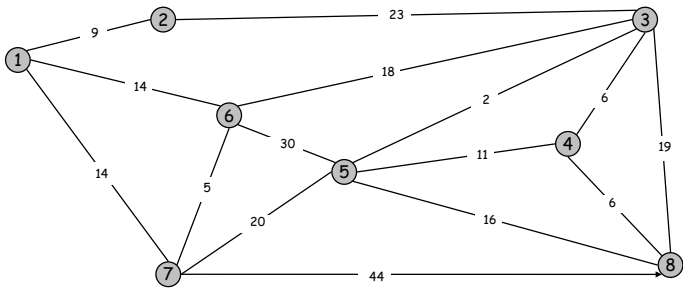


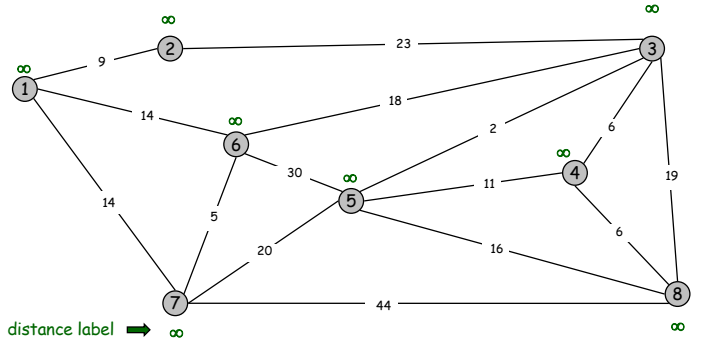
Prim's Minimum Spanning Tree Algorithm



1

Prim's Minimum Spanning Tree Algorithm

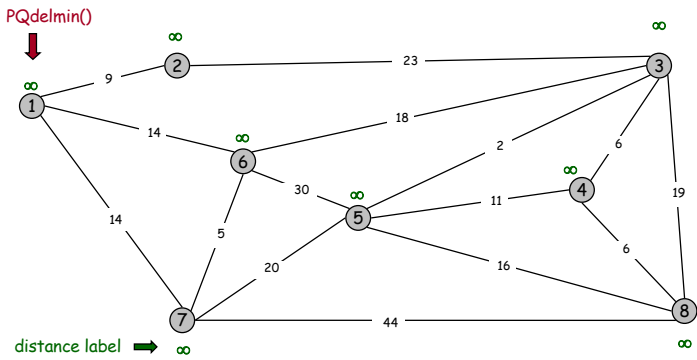
$S = \{ \}$
 $PQ = (1, 2, 3, 4, 5, 6, 7, 8)$



2

Prim's Minimum Spanning Tree Algorithm

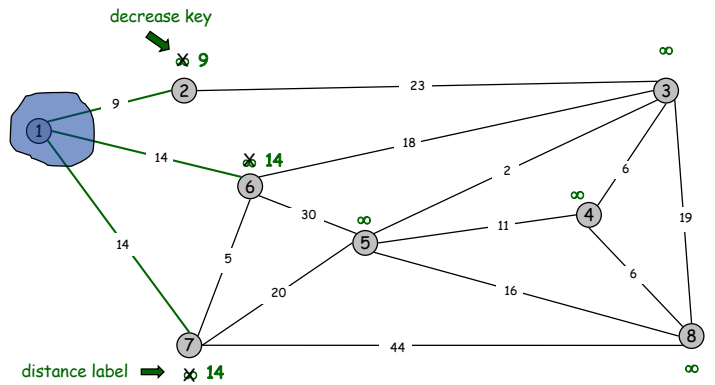
$S = \{ 1 \}$
 $PQ = (2, 3, 4, 5, 6, 7, 8)$



3

Prim's Minimum Spanning Tree Algorithm

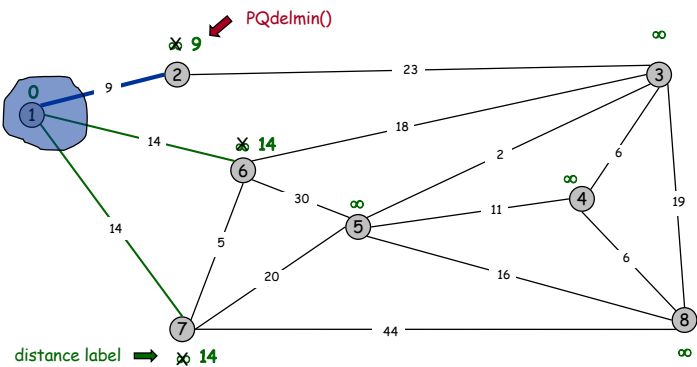
$S = \{ 1 \}$
 $PQ = (2, 6, 7, 3, 4, 5, 8)$



4

Prim's Minimum Spanning Tree Algorithm

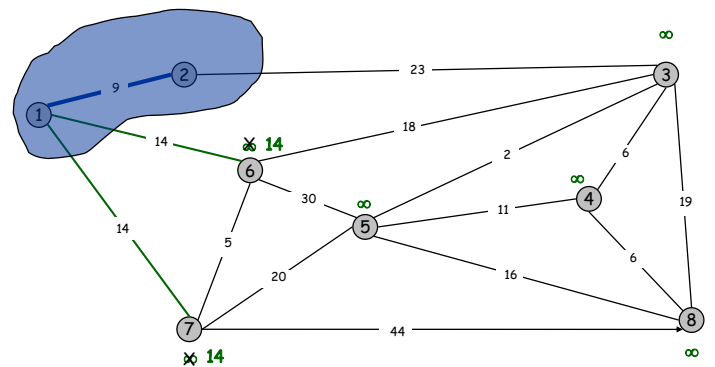
$S = \{ 1 \}$
 $PQ = (2, 6, 7, 3, 4, 5, 8)$



5

Prim's Minimum Spanning Tree Algorithm

$S = \{ 1, 2 \}$
 $PQ = (6, 7, 3, 4, 5, 8)$

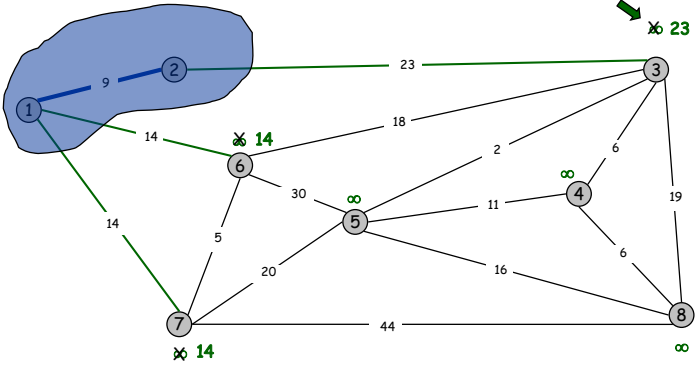


6

Prim's Minimum Spanning Tree Algorithm

$S = \{1, 2\}$
 $PQ = (6, 7, 3, 4, 5, 8)$

decrease key

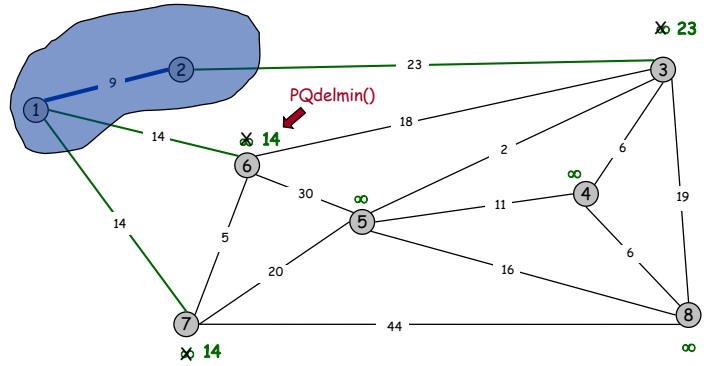


7

Prim's Minimum Spanning Tree Algorithm

$S = \{1, 2\}$
 $PQ = (6, 7, 3, 4, 5, 8)$

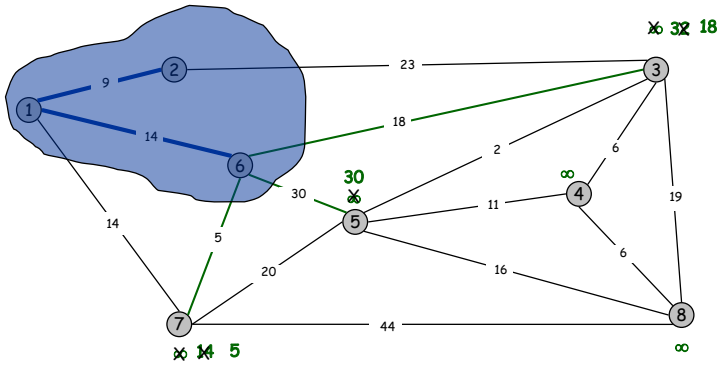
PQdelmin()



8

Prim's Minimum Spanning Tree Algorithm

$S = \{1, 2, 6\}$
 $PQ = (7, 3, 5, 4, 8)$

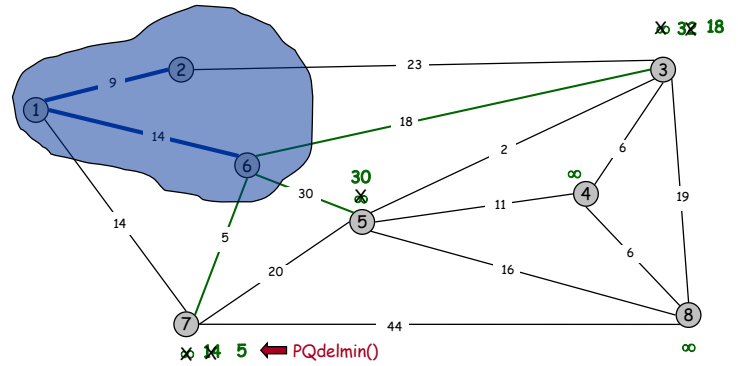


9

Prim's Minimum Spanning Tree Algorithm

$S = \{1, 2, 6\}$
 $PQ = (7, 3, 5, 4, 8)$

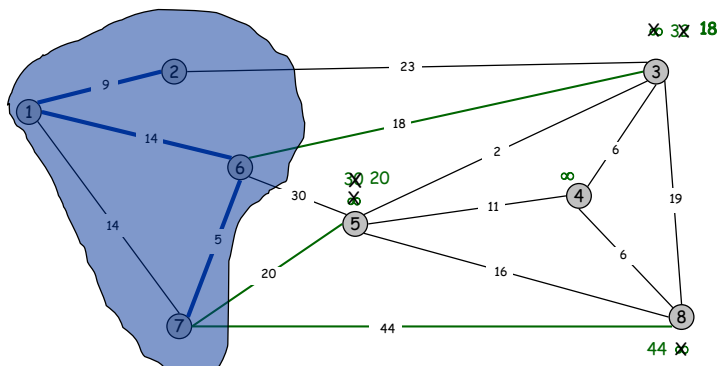
PQdelmin()



10

Prim's Minimum Spanning Tree Algorithm

$S = \{1, 2, 6, 7\}$
 $PQ = (3, 5, 8, 4)$

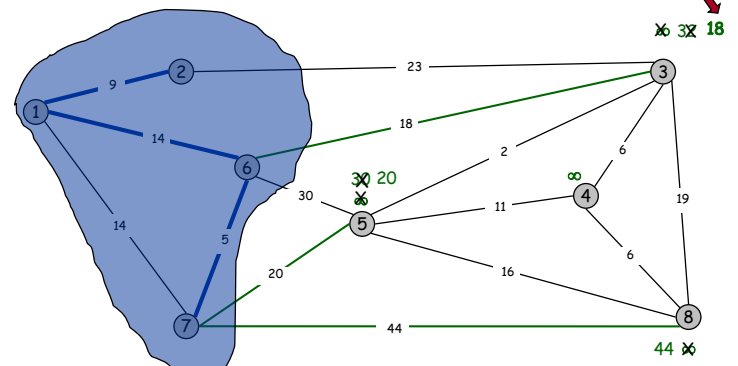


11

Prim's Minimum Spanning Tree Algorithm

$S = \{1, 2, 6, 7\}$
 $PQ = (3, 5, 8, 4)$

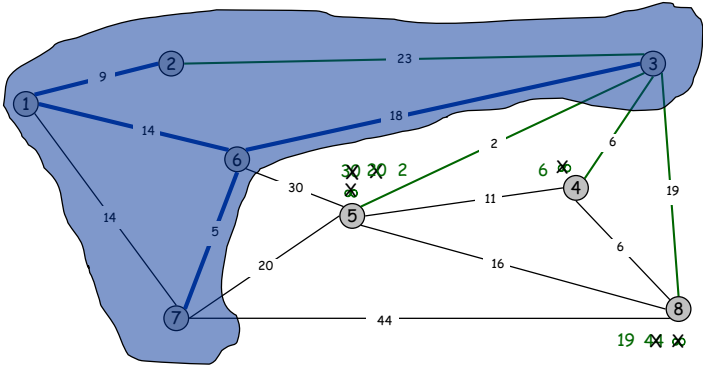
PQdelmin()



12

Prim's Minimum Spanning Tree Algorithm

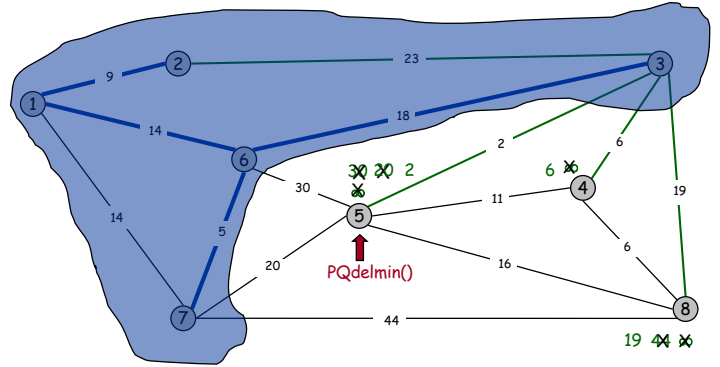
$S = \{1, 2, 6, 7, 3\}$
 $PQ = (5, 4, 8)$



13

Prim's Minimum Spanning Tree Algorithm

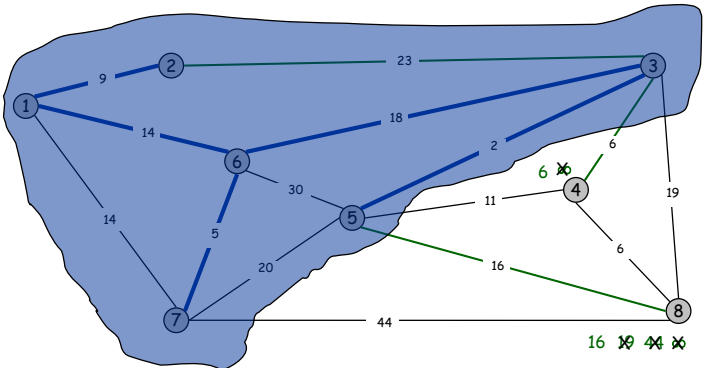
$S = \{1, 2, 6, 7, 3\}$
 $PQ = (5, 4, 8)$



14

Prim's Minimum Spanning Tree Algorithm

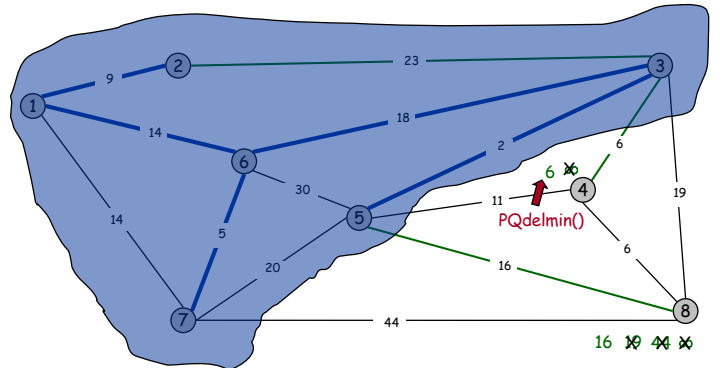
$S = \{1, 2, 6, 7, 3, 5\}$
 $PQ = (4, 8)$



15

Prim's Minimum Spanning Tree Algorithm

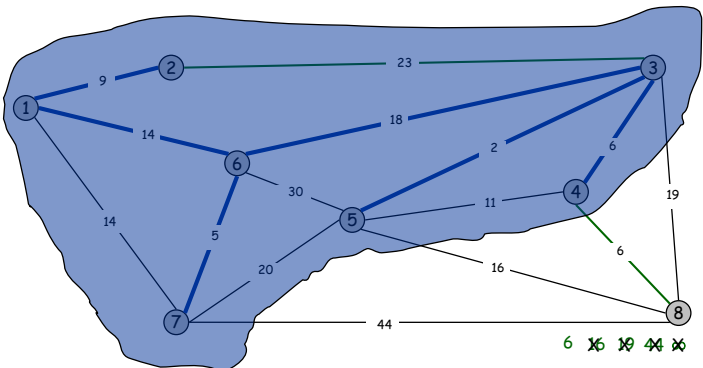
$S = \{1, 2, 6, 7, 3, 5\}$
 $PQ = (4, 8)$



16

Prim's Minimum Spanning Tree Algorithm

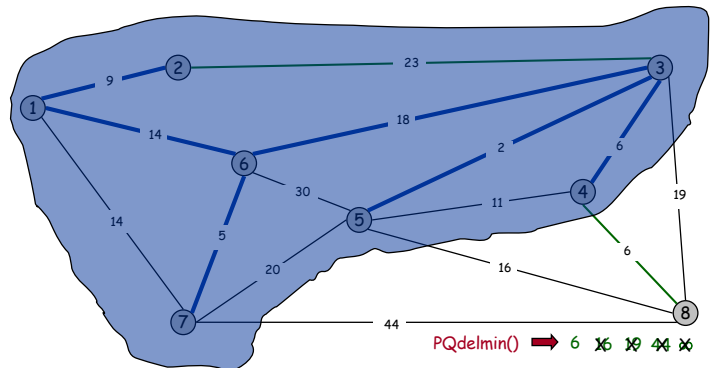
$S = \{1, 2, 6, 7, 3, 5, 4\}$
 $PQ = (8)$



17

Prim's Minimum Spanning Tree Algorithm

$S = \{1, 2, 6, 7, 3, 5, 4\}$
 $PQ = (8)$



18

Prim's Minimum Spanning Tree Algorithm

$S = \{1, 2, 6, 7, 3, 5, 4, 8\}$
 $PQ = ()$

