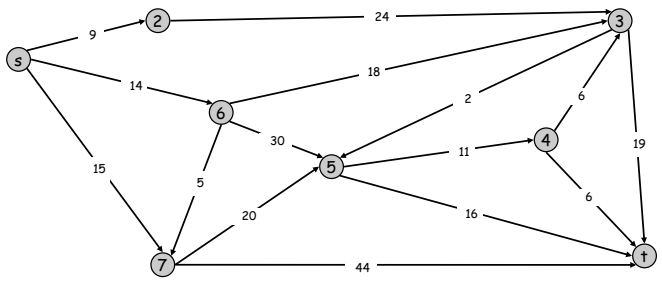
Dijkstra's Shortest Path Algorithm

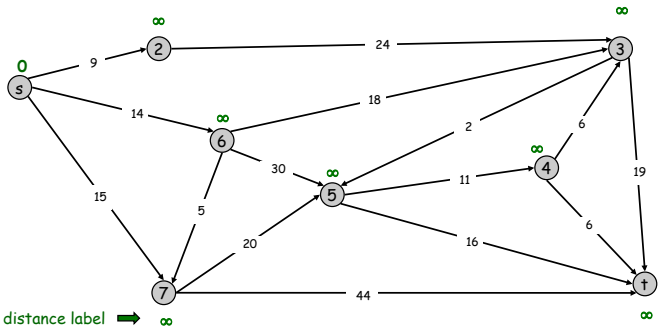
Find shortest path from s to t.



1

Dijkstra's Shortest Path Algorithm

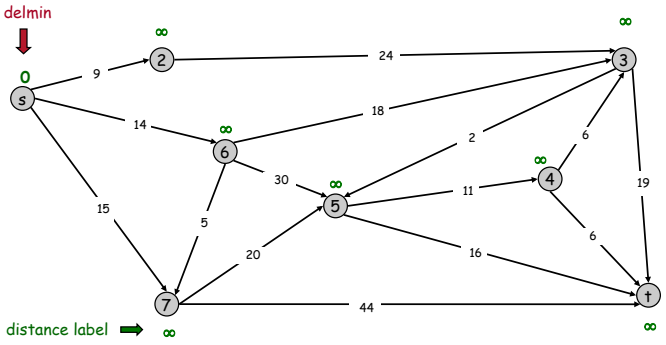
S = { }
PQ = { s, 2, 3, 4, 5, 6, 7, t }



2

Dijkstra's Shortest Path Algorithm

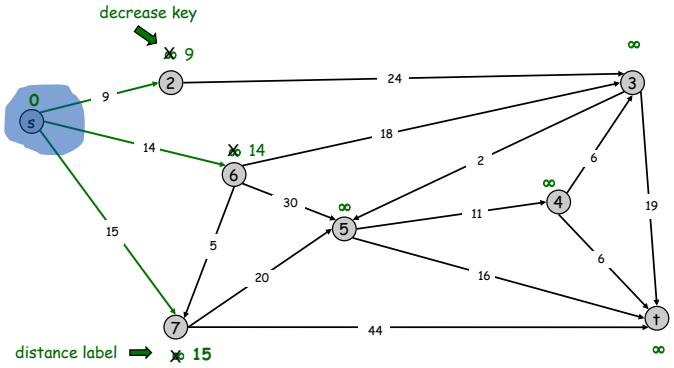
S = { }
PQ = { s, 2, 3, 4, 5, 6, 7, t }



3

Dijkstra's Shortest Path Algorithm

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



4

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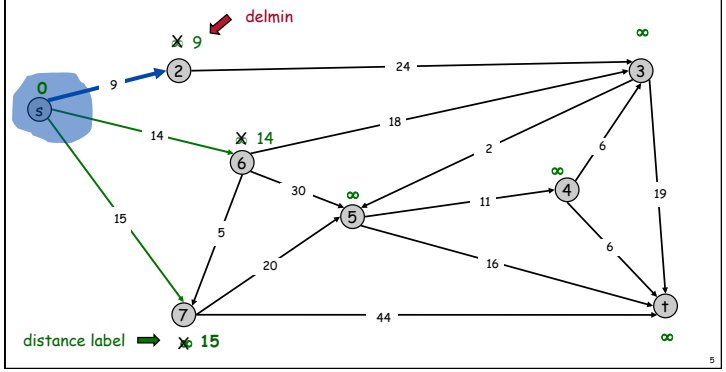
Dijkstra's Shortest Path Algorithm

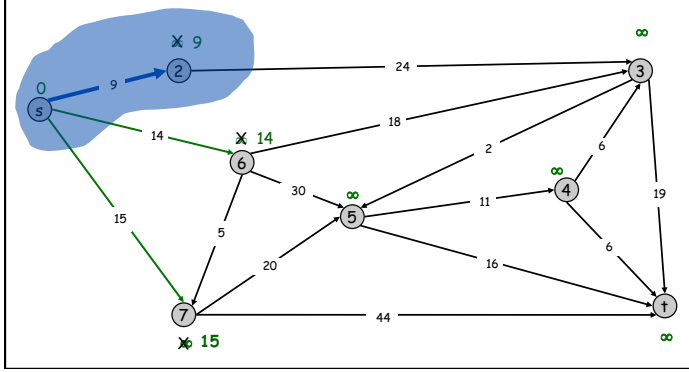
S = { s }
PQ = { 2, 3, 4, 5, 6, 7, t }



5

Dijkstra's Shortest Path Algorithm

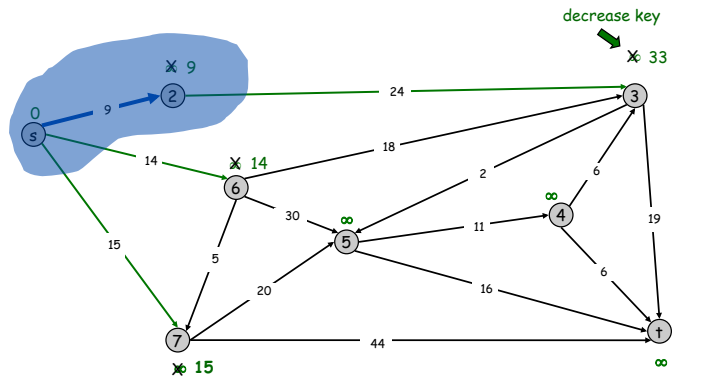
S = { s, 2 }
PQ = { 3, 4, 5, 6, 7, t }



6

Dijkstra's Shortest Path Algorithm

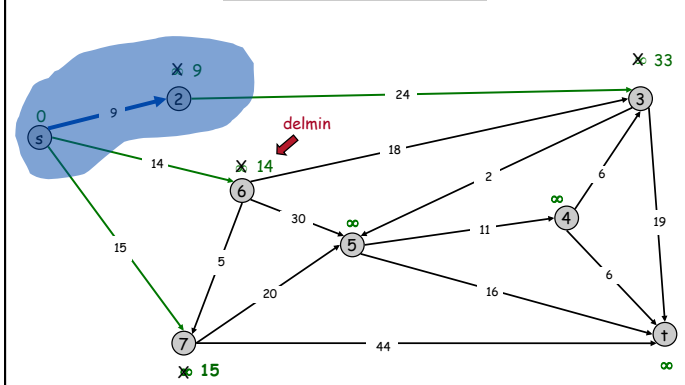
S = { s, 2 }
PQ = { 3, 4, 5, 6, 7, t }



7

Dijkstra's Shortest Path Algorithm

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



8

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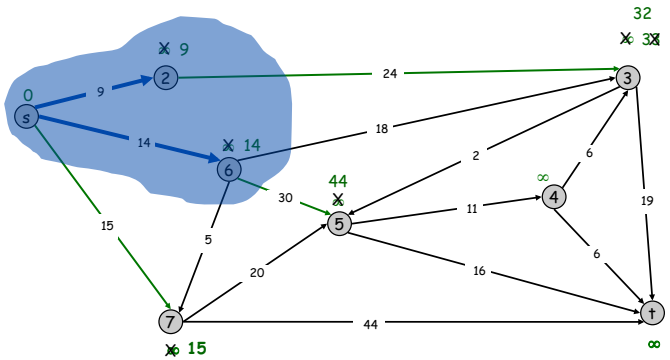
Dijkstra's Shortest Path Algorithm

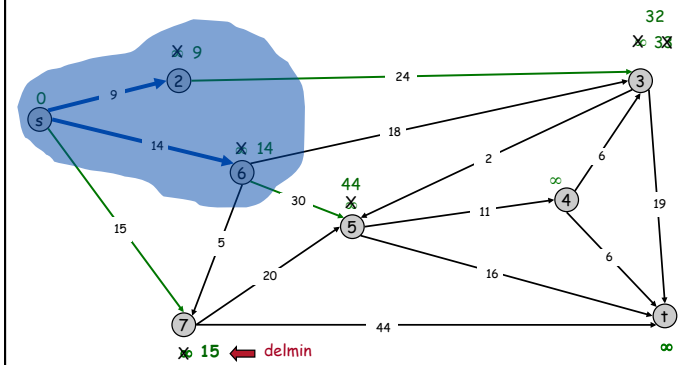
S = { s, 2, 6 }
PQ = { 3, 4, 5, 7, t }



9

Dijkstra's Shortest Path Algorithm

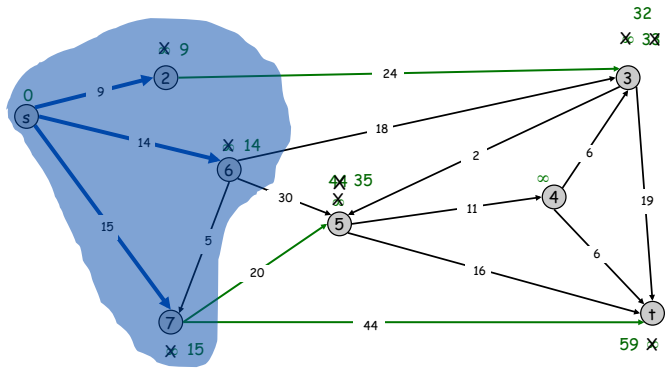
S = { s, 2, 6 }
PQ = { 3, 4, 5, 7, t }



10

Dijkstra's Shortest Path Algorithm

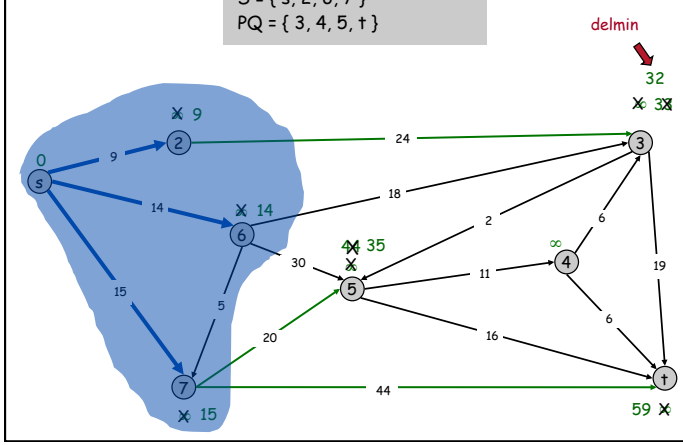
S = { s, 2, 6, 7 }
PQ = { 3, 4, 5, t }



11

Dijkstra's Shortest Path Algorithm

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



12

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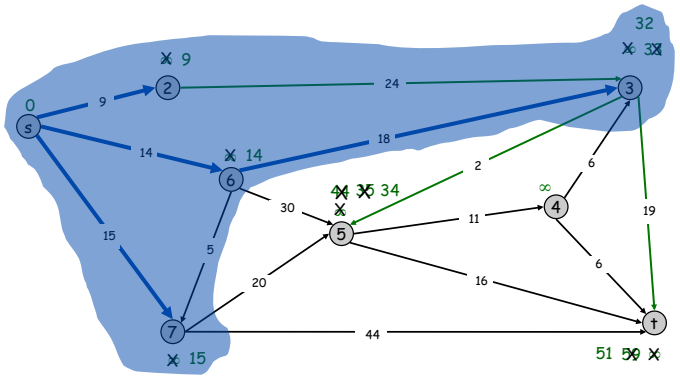
Dijkstra's Shortest Path Algorithm

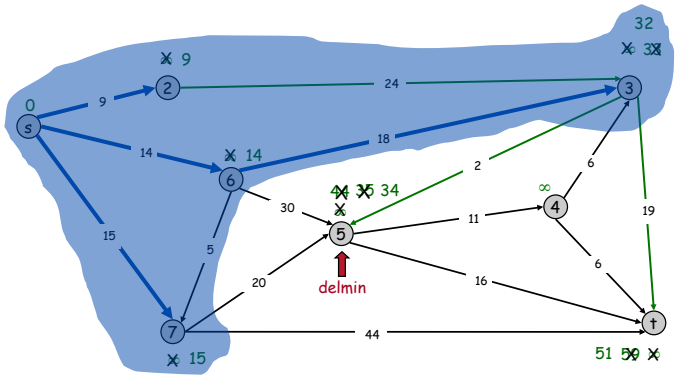
S = { s, 2, 3, 6, 7 }
PQ = { 4, 5, t }



13

Dijkstra's Shortest Path Algorithm

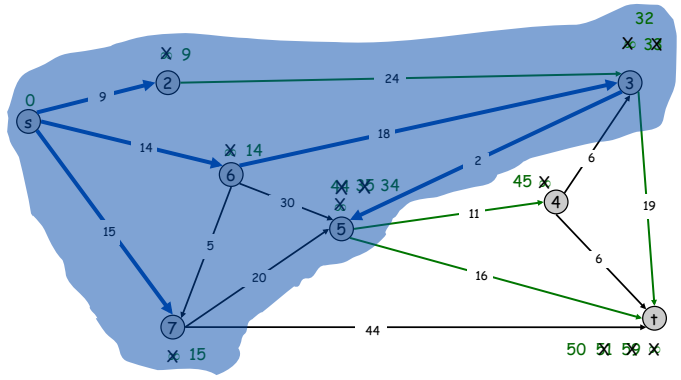
S = { s, 2, 3, 6, 7 }
PQ = { 4, 5, t }



14

Dijkstra's Shortest Path Algorithm

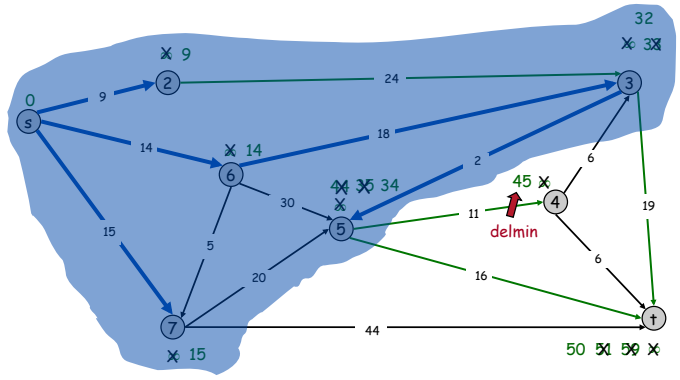
S = { s, 2, 3, 5, 6, 7 }
PQ = { 4, t }



15

Dijkstra's Shortest Path Algorithm

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



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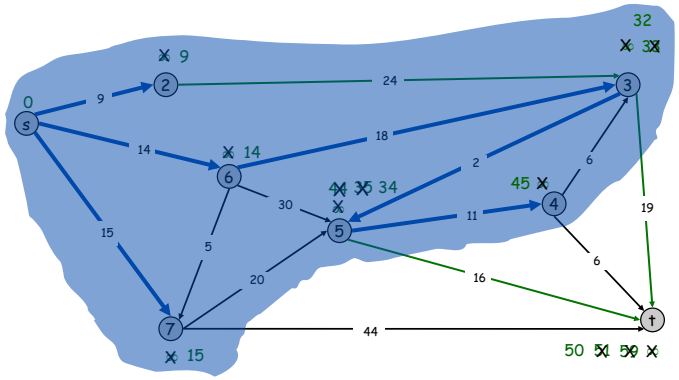
Dijkstra's Shortest Path Algorithm

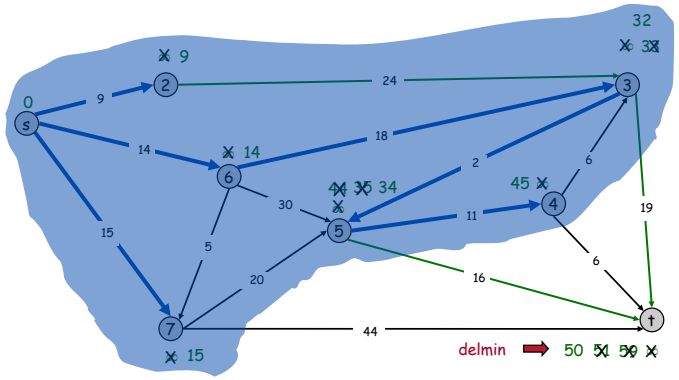
S = { s, 2, 3, 4, 5, 6, 7 }
PQ = { t }



17

Dijkstra's Shortest Path Algorithm

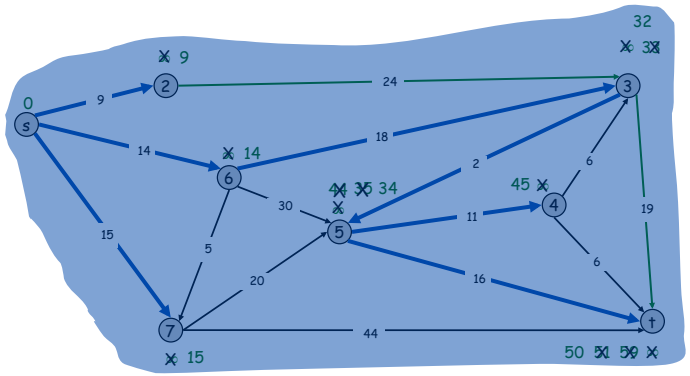
S = { s, 2, 3, 4, 5, 6, 7 }
PQ = { t }



18

Dijkstra's Shortest Path Algorithm

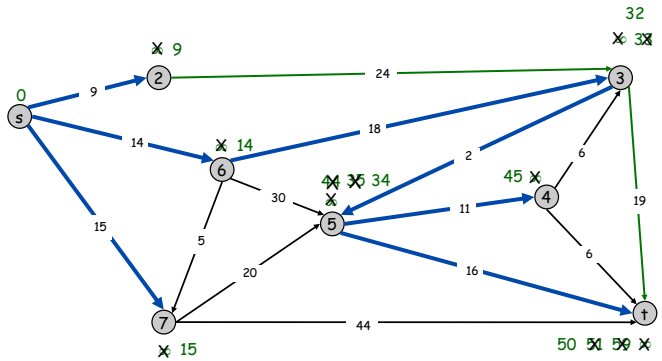
S = { s, 2, 3, 4, 5, 6, 7, t }
PQ = { }



19

Dijkstra's Shortest Path Algorithm

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



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