Building Routing Tables
Dijkstra’s Shortest Path Algorithm
Dijkstra’s Shortest Path Algorithm

In the following let Distance(X) be the best estimate of the distance to X, let weight(A, B) be the weight on the edge from A to B and let Previous(Y) be the node immediately before Y on the path whose distance is the best estimate of the distance to Y.

Set Distance(A) to 0
For all other nodes, X, set Distance(X) to infinity
repeat until the distance to all nodes is known
  choose a node, Z, marked unknown such that
  Distance(Z) is less than Distance(Y) for any Y marked unknown
  mark Z as known
  for each node, W, adjacent to Z
    if Distance(Z) + weight(Z, W) < Distance(W) then
      set Distance(W) to Distance(Z) + weight(Z, W)
      set Previous(W) to Z