Dijsktra's Algorithm

1. Create two sets of nodes, the first is the set of visited nodes and it will start empty, and the second is the set of unvisited nodes which will initially contain all the nodes.

2. Assign a distance to each node, for now the distance to the start node is 0 and every other node is infinite.

3. Select the node from the unvisited set with the lowest distance to be the current node.

4. For each edge that travels from the current node to an unvisited node, calculate the distance of travelling from the current node to the new node via this edge. If this new distance is less than the current distance to the new node, then replace the distance to the new node.

5. Once all the edges leaving the current node to unvisited nodes have been considered, remove the current node from the unvisited set and add it to the visited set.

6. Repeat steps 3 to 5 until all nodes have been visited. Once this is done you can re-trace the path either by inspection or by recording the previous node alongside the distance to each node.