

```
void dijkstra (int [][] adj, int startIndex)
{
```

```
    int nvertices = adj[0].length;
```

```
    int [ ] shortestDistance = new int [nvertices]
```

```
    for (int vertex = 0; vertex < nvertices; vertex++)
```

```
    {
        shortestDist [vertex] = max
```

```
        added [vertexIndex] = false;
```

```
    }
```

```
    shortestDistance [startVertex] = 0
```

```
    for (int i = 1 to nvertices)
```

```
    { nearestVertex = -1
```

```
    int shortestDistance = max
```

```
    for (int u = 0; u < nvertices; u++) { if (shortestDistance[u] < shortestDistance[nearestVertex])
```

```
    { nearestVertex = u;
```

```
    shortestDistance [nearestVertex] = shortestDistance [vertexIndex] + adj[vertexIndex][nearestVertex];
```

```
    }
```

added [nearest vertex] = true;

}

void printSol ( )

{ int nverts = distanc.length;

cout << "Vertex | Distance | Path ";

for ( int i = 0 ; i < nverts ; i++ )

{ if ( i != startVertex )

cout << " \n" << startVertex + " -> "

cout << (distance [Vertex Index] + " ( + ) " );

print path (vertex, parents);

}

}