

```

function dijkstrasAlgorithm (start, edges) {
  const vertices = edges.length

  const minDistances = []
  for (let edge in edges) {
    minDistances.push(Infinity)
  }

  minDistances[start] = 0

  const visited = new Set()

  while (visited.size !== vertices) {
    const [currMinDistance, vertex] = findVertexWithMinDistance(minDistances, visited)

    if (currMinDistance == Infinity) break

    visited.add(vertex)

    for (const edge of edges[vertex]) {
      const [destination, distanceToDestination] = edge

      if (visited.has(destination)) continue

      const newPath = currMinDistance + distanceToDestination

      const currPath = minDistances[destination]

      if (newPath < currPath) minDistances[destination] = newPath
    }
  }

  return minDistances.map((k) => k === Infinity ? -1 : k )
}

function findVertexWithMinDistance (distances, visited) {
  let minDistance = Infinity
  let vertex = -1

  for (let [currVertex, currMinDistance] of distances.entries()) {
    if (visited.has(currVertex)) continue

    if (currMinDistance < minDistance) {
      minDistance = currMinDistance
      vertex = currVertex
    }
  }

  return [minDistance, vertex]
}

```

```
console.log(dijkstrasAlgorithm(0, [
  [
    [1, 7]
  ],
  [
    [2, 6],
    [3, 20],
    [4, 3]
  ],
  [
    [3, 14]
  ],
  [
    [4, 2]
  ],
  [],
  []
]))
```