LAB 4

Given a connected graph G = (V, E) with N vertices and non-negative weights. Using Dijkstra's algorithm, write a program to find a path from starting vertex s to vertex g of the graph.

**Input:**

- File name: “Dijkstra .inp”

- In this file, the first line contains three positive integers: n, s, g.

- The next n lines are the n-th order adjacency matrix.

**Output:**

- Print results to the console and file “Dijkstra .out ”.

- Print the result to the console in the following format: first vertex ->..-> last vertex: cost (path).

**For example:**

For example: The graph has 8 vertices, the starting vertex is 4, and the ending vertex is 8.

8 4 8

0 3 5 2 0 0 0 0

3 0 1 0 7 0 0 0

5 1 0 4 0 1 0 0

2 0 4 0 0 3 6 0

0 7 0 0 0 2 0 3

0 0 1 3 2 0 4 6

0 0 0 6 0 4 0 5

0 0 0 0 3 6 5 0

Output: print the result to the console and file “Dijkstra .out”.

For example: 4 – 8: 8 (4 → 6 → 5 → 8)

------ The end -----