



(/en/),
v1.1.0

CSD Testing System

(/en/),

Dijkstra's algorithm

Cost: 6 | Solved: 92

Memory limit: 256 MBs

Time limit: 1 s

Input: input.txt

Output: output.txt

Task:

You are given a directed weighted graph.

Find the shortest path from vertex s to vertex f , using Dijkstra's algorithm.

Input:

The first line contains three naturals n , s and f ($1 \leq n \leq 100$, $1 \leq s, f \leq n$), where n is the quantity of the graphs' vertexes, s is the initial vertex and f is the final.

The next n lines contain n numbers not greater than 100 (the adjacency matrix), where -1 means no edge, any non-negative integer – the existence of an edge with such weight.

Output:

The shortest path or -1 if it's impossible to reach the final vertex.

Example:

Input	Output

3 2 1 0 1 1 4 0 1 2 1 0	3
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