



(/en/),  
v1.1.0

CSD Testing System

(/en/)

# Floyd's algorithm

Cost: 6 | Solved: 86

**Memory limit:** 256 MBs

**Time limit:** 1 s

**Input:** input.txt

**Output:** output.txt

## Task:

You are given a directed weighted (each weight is non-negative) graph.

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

## Input:

The first line contains three naturals  $n$ ,  $s$  and  $f$  ( $1 \leq n \leq 50$ ,  $1 \leq s, f \leq n$ ), 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 1000000 (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
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3 1 2  0 -1 3  7 0 1  2 215 0	218
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