



(/en/),
v1.1.0

CSD Testing System

(/en/)

Breadth-first search (BFS)

Cost: 6 | Solved: 119

Memory limit: 256 MBs

Time limit: 1 s

Input: input.txt

Output: output.txt

Task:

You are given an undirected graph.

Find the shortest path between two vertexes.

You must use breadth-first search (BFS) algorithm while completing this task.

Input:

The first line contains a natural n ($1 \leq n \leq 100$) – the quantity of the graph's vertexes.

The next n lines contain the adjacency matrix of the graph (0 means no edge, 1 means the edge exists).

The last line contains the indices of two vertexes – the initial and the final.

Output:

The first line should contain the length of the shortest possible path (the quantity of vertexes to go to).

The second line should contain the path itself.

If the path's length is 0, don't output the path itself, just the length. If the path doesn't exist, output -1.

Example:

Input	Output
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5	
0 1 0 0 1	
1 0 1 0 0	
0 1 0 0 0	3
0 0 0 0 0	3 2 1 5
1 0 0 0 0	
3 5	