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C. Dijkstra?

time limit per test: 1 second
 memory limit per test: 64 megabytes
 input: standard input
 output: standard output

You are given a weighted undirected graph. The vertices are enumerated from 1 to n . Your task is to find the shortest path between the vertex 1 and the vertex n .

Input

The first line contains two integers n and m ($2 \leq n \leq 10^5$, $0 \leq m \leq 10^5$), where n is the number of vertices and m is the number of edges. Following m lines contain one edge each in form a_i, b_i and w_i ($1 \leq a_i, b_i \leq n$, $1 \leq w_i \leq 10^6$), where a_i, b_i are edge endpoints and w_i is the length of the edge.

It is possible that the graph has loops and multiple edges between pair of vertices.

Output

Write the only integer -1 in case of no path. Write the shortest path in opposite case. If there are many solutions, print any of them.

Examples

input	Copy
5 6 1 2 2 2 5 5 2 3 4 1 4 1 4 3 3 3 5 1	
output	Copy
1 4 3 5	

input	Copy
5 6 1 2 2 2 5 5 2 3 4 1 4 1 4 3 3 3 5 1	
output	Copy
1 4 3 5	

Codeforces Alpha Round #20 (Codeforces format)

Finished

Practice



→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

[Start virtual contest](#)

→ Practice

You are registered for practice. You can solve problems unofficially. Results can be found in the contest status and in the bottom of standings.

→ Clone Contest to Mashup

You can clone this contest to a mashup.

[Clone Contest](#)

→ Submit?

 Language: GNU G++14 6.4.0 ▼

 Choose file: [Choose File](#) No file chosen

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't guarantee that the solution is absolutely correct and it will pass system tests.

[Submit](#)

→ Last submissions

Submission	Time	Verdict
77262690	Apr/19/2020 13:10	Accepted
77261195	Apr/19/2020 12:51	Memory limit exceeded on test 24
77260907	Apr/19/2020 12:47	Memory limit exceeded on test 24
77260790	Apr/19/2020 12:46	Wrong answer on test 4

[→ Problem tags](#)[graphs](#)[shortest paths](#)[*2100](#)

No tag edit access

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