



CODE FORCES
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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
```

Codeforces Alpha Round #20 (Codeforces format)

Finished

→ Practice?

Want to solve the contest problems after the official contest ends? Just register for practice and you will be able to submit solutions.

Register for 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

→ Problem tags



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

graphs

shortest paths

*2100

No tag edit access

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