

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

→ 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

[graphs](#) [shortest paths](#) ***1900**

No tag edit access

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