Problem K. Kaleidoscopic Route

Time limit: 2 seconds
Memory limit: 512 megabytes

There are n cities in Kaleidostan connected with m bidirectional roads. The cities are numbered from 1 to n. Each road has an integer called *colorfulness*.

Keanu wants to travel from city 1 to city n. He wants to take the *shortest* route — that is, the route with the smallest number of roads. Among all the shortest routes, he wants to take the *kaleidoscopic* one — that is, the route with the largest possible difference between the maximum and the minimum colorfulnesses of its roads. Help Keanu find such a route.

Input

The first line contains two integers n and m — the number of cities and the number of roads ($2 \le n \le 10^5$; $1 \le m \le 2 \cdot 10^5$).

The i-th of the following m lines contains three integers v_i, u_i, and c_i — the indices of the cities connected by the i-th road, and the colorfulness of the i-th road ($1 \le v_i, u_i \le n$; $v_i \ne u_i$; $0 \le c_i \le 10^9$).

Each pair of cities is connected by at most one road. It is guaranteed that you can travel from any city to any other city using the roads.

Output

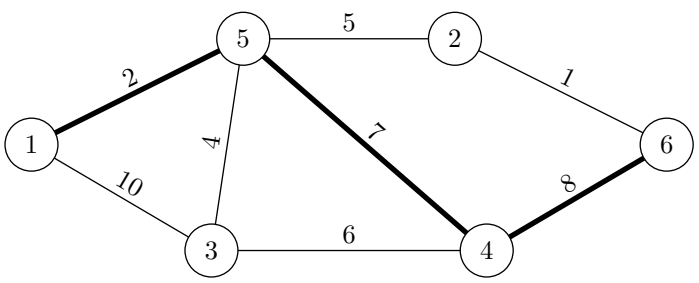
In the first line, print a single integer k — the number of roads in the required route.

In the second line, print $k + 1$ integers $c_0, c_1, \ldots, c_k$ — the sequence of cities on the route ($1 \le c_i \le n$; $c_0 = 1$; $c_k = n$).

Example

standard input	standard output
6 8 1 5 2 5 2 5 3 5 4 1 3 10 3 4 6 4 5 7 4 6 8 2 6 1	3 1 5 4 6

Note



In the example test, the required route consists of 3 roads, and the difference between the maximum and the minimum colorfulnesses of its roads is $8 - 2 = 6$.