

Problem Statement

The road network of Byteland can be described as a graph with N nodes, describing the cities, and M edges, describing the roads. Historically, all the roads are toll roads, so each road has positive integer cost associated with it. Moreover, all the roads are **bidirectional** and you can reach any city from any other city of Byteland by roads.

Historically, there are two capital cities in Byteland - ByteCity and St. Byteburg. They are described as the nodes with the numbers 1 and N respectively.

Now it's time for a road reform in Byteland. The treasury has enough funds for building **exactly one bidirectional road** with an arbitrary positive integer cost between any pair of different cities. In order for the reform to be efficient, there is a requirement that the shortest distance between ByteCity and St. Byteburg should **decrease**.

Please count the number of ways the road reform can be performed, i.e. find the number of ways to build a road with a positive integer cost between an unordered pair of different cities so that the distance between the cities 1 and N decrease.

Input Format

The first line contains two space-separated integers, N and M , denoting the number of cities and the number of roads respectively.

Each of the following M lines contain three integers, X , Y , and Z , that describe a road connecting the cities with the numbers X and Y and has the cost Z .

There can be multiple roads connecting the same pair of cities. You can also build a road that connects some pair of cities that are already directly connected with a road.

Constraints

$$2 \leq N \leq 10^5$$

$$(N - 1) \leq M \leq 25 \times 10^4$$

$$1 \leq X, Y \leq N$$

$$1 \leq Z \leq 10^4$$

It is possible to reach any city from any other city using the given road network.

Output Format

Output the number of ways to perform the road reform on a single line.

Sample Input

```
3 3
1 3 4
1 2 1
2 3 2
```

Sample Output

```
3
```

Explanation

The shortest distance between the cities 1 and 3 equals to 3. Here's the list of roads that can be added so that the shortest distance decreases.

- A road between the cities 1 and 3 with a cost 1.
- A road between the cities 1 and 3 with a cost 2.
- A road between the cities 2 and 3 with a cost 1.