Time limit: 1.00 s **Memory limit:** 512 MB

Consider a network consisting of n computers and m connections. Each connection specifies how fast a computer can send data to another computer.

Kotivalo wants to download some data from a server. What is the maximum speed he can do this, using the connections in the network?

Input

The first input line has two integers n and m: the number of computers and connections. The computers are numbered $1, 2, \ldots, n$. Computer 1 is the server and computer n is Kotivalo's computer.

After this, there are m lines describing the connections. Each line has three integers a, b and c: computer a can send data to computer b at speed c.

Output

Print one integer: the maximum speed Kotivalo can download data.

Constraints

- $1 \le n \le 500$
- $1 \le m \le 1000$
- $1 \le a, b \le n$
- $1 \le c \le 10^9$

Example

Input:
```
4 5
1 2 3
2 4 2
1 3 4
3 4 5
4 1 3
```

Output:
```
6
```