Problem B: Traffic

Advanced Algorithms for Programming Contests

Restrictions

Time: 2 seconds
Memory: 512 MB

Problem description

Since your state government is currently planning to renovate a nearby segment of the highway running next to your town, you are worried about what might happen to said town if all the highway traffic was redirected through it. To be able to make a compelling argument to them that an extra detour road outside the town will be needed, you decided to determine how many cars can pass through the town's current road network each minute.

For that purpose, you already created a version of your town's road network where the junctions are numerated $1, ..., N$ and each of the streets is assigned an integer describing how many cars can drive into/out of it in one direction per minute. Of course you left out ring roads.

Since the streets have the same capacity in both directions anyway, you are only interested how many cars could enter/leave the town per minute in one of them.

Input

The input consists of

- one line containing N and M ($2 \leq N \leq 100$, $0 \leq M \leq \frac{N(N-1)}{2}$) – the numbers of junctions and streets, respectively

- M lines each containing integers a, b and c ($1 \leq a, b \leq N$, $1 \leq c \leq 10^9$) – the first two being the indices of the junctions the street connects and the third one being its capacity as defined above. Junctions 1 and N are the ones one starts/ends up in when entering/leaving the town.

Output

Output a single integer – the number of cars that can enter/leave the town per minute in one direction.

Sample input and output

Input	Output
5 7	6
1 2 2	
2 5 5	
1 3 6	
3 4 2	
4 5 1	
3 2 3	
2 4 1	