Capital City

Urbanization is a long process. In the view of historians, the reason that a place develops into the capital city of a country is determined by revolution. In the view of economists, it is determined by the natural resource and prosperity of the city. However, in the view of mathematicians, the capital city should be the city that is close to all other cities, which brings convenience to transportation.

Given the distance of some cities, the mathematician wants to know which city should be the capital city, i.e. the total distance to all other cities is the smallest.

Input

Input contains multiple test cases and is terminated by end of file.

The first line of each test case contains two integers: $\mathbf{n}$ (the number of cities, $2 \leq \mathbf{n} \leq 100$) and $\mathbf{m}$ (the number of roads connecting these cities, $1 \leq \mathbf{m} \leq 10000$). The cities are labeled with $\mathbf{1, 2 \ldots, n}$. In the following $\mathbf{m}$ lines, each line containing three integers $\mathbf{u,v,w}$ $\mathbf{(1 \leq u \leq n,\ 1 \leq v \leq n,\ 1 \leq w \leq 1000000)}$, which means there is a road of length $\mathbf{w}$ connecting the city $\mathbf{u}$ and city $\mathbf{v}$. It guarantees that there is at least one path connecting any two cities.

Output

For each test case, print the label of the capital city in separate line. If two or more cities are eligible for capital city, print the one with the smallest label.

Sample Input

2 1

1 2 3

4 4

1 2 3

2 3 4

3 4 5

1 4 6

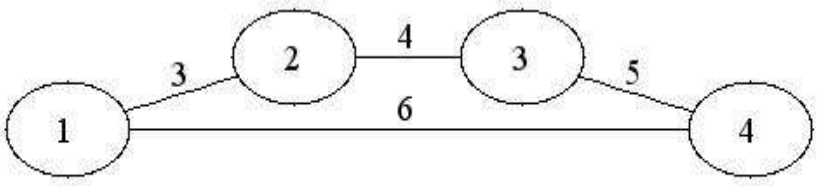
Sample Output

1

1

Hints

In the second example,



for city 1, L1 = 3 + 6 + (3+4).

for city 2, L2 = 3 + 4 + (4+5).

for city 3, L3 = 4 + 5 + (3+4).

for city 4, L4 = 5 + 6 + (4+5).

L4 > L1 = L2 = L3, City 1 2 3 are eligible for capital city, then print 1