

Internet Tunneling

Description

Chih-chih and Ning-ning are two hackers living in the Catbug Kingdom. Being brilliant hackers, they keep hacking servers and their botnet keeps growing. However, as the number of computer grows, their own server becomes overwhelmed since there are too many tunnels to hold. As a result, they decide to reshape their botnet from a star to a tree.

After some investigation, they find M pairs of tunnels that can be built. Although it is easy to build a spanning tree among those tunnels, it is not that easy to assign work in a fair way. To be fair, Chih-chih and Ning-ning classify those tunnels into two categories: TN, tunnel that a normal hacker can build, and TB, tunnel that only brilliant hacker can build.

Now, Chih-chih and Ning-ning want to know whether there is a way to build a tree among those tunnels such that they build the same number of TB and almost the same number of TN. Almost the same means the difference should not exceed one. Unfortunately, Chih-chih and Ning-ning are not familiar with tree. So, they turn to you and promise not to hack NTUJ if you can help them.

Input

The first line contains an integer T , the number of test cases. The first line of each test case contains two integers N, M , the number of computers in botnet and the number of tunnel can be built. Each of the following M lines contains three integers A_i, B_i, C_i , indicating the two end-points and the type of the tunnel. 0 means a TN and 1 means a TB.

- $1 \leq T \leq 30$
- $1 \leq N \leq 100000$
- $N - 1 \leq M \leq 200000$
- $0 \leq A, B \leq N - 1, A \neq B$
- $0 \leq C \leq 1$
- There is at least one spanning tree.

Output

Output **Yes** if there is a way. Otherwise, output **No**.

Sample Input

```
3
3 3
0 1 1
1 2 1
2 0 1
5 5
0 1 0
1 2 1
2 3 0
3 4 1
4 0 1
6 6
0 1 0
1 2 0
2 0 0
0 3 1
1 4 1
2 5 1
```

Sample Output

```
Yes
Yes
No
```