

Colorful Cycles

Input file: *standard input*
Output file: *standard output*
Time limit: 8 seconds
Memory limit: 1024 mebibytes

You are given a connected graph G with n vertices and m bidirectional edges. The graph does not contain loops and multiple edges. Every edge has its own color: red, yellow, or blue. Is there a simple cycle in the graph containing edges of all three colors?

Input

The first line contains an integer t , the number of test cases ($1 \leq t \leq 10^6$). The descriptions of test cases follow.

The first line of each description contains two integers n and m : the number of vertices and edges in the graph ($1 \leq n, m \leq 10^6$). The i -th of the following m lines contains three integers x_i , y_i , and z_i : they mean that the i -th edge connects vertices x_i and y_i and has color z_i . The color numbers are: 1 for red, 2 for yellow and 3 for blue. It is guaranteed that the graph is connected and that it contains no loops and no multiple edges.

The total number of vertices in all test cases is no more than 10^6 , the total number of edges in all test cases is no more than 10^6 .

Output

Print a single line for each test cases. If there is a cycle containing edges of all three colors, print “Yes”. Otherwise, print “No”. Each letter can be uppercase or lowercase.

Example

<i>standard input</i>	<i>standard output</i>
2	Yes
3 3	No
1 2 3	
2 3 1	
1 3 2	
5 6	
1 2 1	
2 3 1	
1 3 2	
3 4 3	
3 5 3	
4 5 3	