

Problem I. Edge Coloring

Input file: *standard input*
Output file: *standard output*
Time limit: 2.5 seconds
Memory limit: 256 mebibytes

You are given a simple connected undirected graph with N vertices and M edges. The i -th edge connects the vertices a_i and b_i .

Initially, the edges are not colored. Takahashikun wants to color the i -th edge with the color c_i .

He can color the edges in the following way:

- First he chooses a vertex, and he repeats zero or more steps.
- In each step, he chooses a vertex adjacent to the current vertex and moves to the chosen vertex along an edge. This edge is colored red or blue (the color is defined according to the rule below).
- In odd-indexed (1-based) steps he uses red. In even-indexed steps he uses blue.
- If he colors an already-colored edges, the color of the edge is updated to the new color.

Determine if he can color all edges with correct colors.

Input

Input Format:

N M
 a_1 b_1 c_1
 a_2 b_2 c_2
 \vdots
 a_M b_M c_M

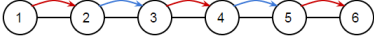
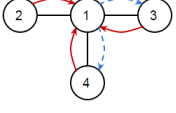
Constraints:

- $2 \leq N \leq 2000$
- $1 \leq M \leq 2000$
- $1 \leq a_i < b_i \leq N$
- The pairs (a_i, b_i) are pairwise distinct.
- c_i is either an 'r' (red) or a 'b' (blue).
- The graph is connected.

Output

Print "Yes", if Takahashikun can color all edges with correct colors or "No" otherwise.

Examples

standard input	standard output	Notes
6 5 1 2 r 2 3 b 3 4 r 4 5 b 5 6 r	Yes	 <p>Start from vertex 1.</p>
4 3 1 2 r 1 3 r 1 4 r	Yes	 <p>Start from vertex 2. Dashed lines represent overpainted colors.</p>
3 3 1 2 b 1 3 b 2 3 b	No	