# D. Exciting II

**Time Limit: 1 second**

**Points: 100**

Dragomir is still a delivery driver, but he has moved to the country of Bivania. There are $n$ towns in Bivania, connected by $n - 1$ two-way roads. It is possible to travel from any town to any other by a sequence of roads.

Dragomir still gets notified of jobs through an app, which require him to travel from his current location, town $a$, to deliver an item from town $b$ to town $c$. Note that $a$, $b$ and $c$ are not necessarily distinct. Of course, there is only one shortest route from town $a$ to town $c$ via town $b$, which is picked for him by the app.

Dragomir finds a job *exciting* if he is guaranteed not to drive along the same road twice. Given *several* jobs, determine for each one whether Dragomir finds it exciting.

## Input

The first line of input consists of two space-separated integers $n$ and $t$, representing the number of towns and the number of jobs respectively.

Following this are $n - 1$ lines, the $i$th of which contains two space-separated integers $u_i$ and $v_i$, representing the towns connected by the $i$th road.

Following this are $t$ lines, the $j$th of which contains three space-separated integers $a_j$, $b_j$ and $c_j$, representing a job received in town $a_j$ which requires Dragomir to deliver an item from town $b_j$ to town $c_j$.

## Constraints

All input will satisfy the following constraints:

- $1 \leq n, t \leq 100,000$
- For all $1 \leq i \leq n - 1$:
  - $1 \leq u_i, v_i \leq n$
  - $u_i \neq v_i$
- For any two towns, it is possible to travel from one to another by a sequence of roads.
- For all $1 \leq j \leq t$:
  - $1 \leq a_j, b_j, c_j \leq n$

## Output

For each job, output a single line: `YES` if the job is exciting, and `NO` otherwise.

## Subtasks

**D1 (25 points)**: $t = 1$.

**D2 (75 points)**: no restrictions.

## Sample Input 1

```
5 1
1 2
1 3
3 4
3 5
2 1 5
```

## Sample Output 1

```
YES
```

## Sample Input 2

```
8 4
1 2
3 1
4 1
3 5
6 3
7 4
6 8
2 1 1
3 3 3
4 8 4
2 3 7
```

## Sample Output 2

```
YES
YES
NO
NO
```

## Explanations

In sample 1, Dragomir drives through towns $2 \to 1 \to 3 \to 5$ in that order.

In sample 2, Dragomir drives the following routes for each query:

1. $2 \to 1$

2. Dragomir stays at town 3.
3. $4 \rightarrow 1 \rightarrow 3 \rightarrow 6 \rightarrow 8 \rightarrow 6 \rightarrow 3 \rightarrow 1 \rightarrow 4$
4. $2 \rightarrow 1 \rightarrow 3 \rightarrow 1 \rightarrow 4 \rightarrow 7$