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## A. Disjoint Sets Union

time limit per test: 1 second 
memory limit per test: 256 megabytes

Implement disjont sets union data structure. You have to perform queries of two types:

- union u v unite two sets that contain u and v, respectively;
- get u v check that two elements u and v belong to the same set.

## Input

The first line of the input contains two integers n and m ( $1 \le n, m \le 10^5$ ) — the number of elements and the number of queries. Next m lines contain queries, one per line. For a query union the line looks like union u v ( $1 \le u, v \le n$ ). For a query get the line looks like get u v ( $1 \le u, v \le n$ ).

## **Output**

Output the result of each query get one per line in the respected order: "YES", if the elements belong to the same set, and "NO", otherwise.

## Example

input	Сору
4 4	
union 1 2	
union 1 3	
get 1 4	
get 1 4 get 2 3	
output	Сору
NO	
YES	

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