→ Submit?

Language: GNU G++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

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 Copy

```
4 4
union 1 2
union 1 3
get 1 4
get 2 3
```

output Copy

```
NO
YES
```