## Reachable Places

Timelimit: 2 sec

## Problem description

The freshman week is about to reach its end and although the freshmen have seen much of Aachen already, they are super excited to be in this wonderful and new environment. Therefore, they want to visit many places within Aachen before the lectures start. As the freshmen are very climate friendly, they only want to get to places by public transport. You are a freshman tutor and your students want to know whether they can get from one place to another with the public transportation system. You know all of the available direct connections. Help your students find out wether they can reach a spot from another one by riding only busses. We assume that each bus line can be taken in both directions.

## Input

The input consists of:

- one line with three integers $n, m\left(1 \leq n, m \leq 10^{5}\right)$ and $q\left(1 \leq q \leq 10^{5}\right)$ that describe the number of bus stops in Aachen, the number of bus lines in Aachen and the number of queries that you have to answer.
- $m$ lines follow, each containing two integers $v_{i}, w_{i}$, indicating a direct connection between $v_{i}$ and $w_{i}$.
- $q$ lines follow, each containing two integers $v_{i}, w_{i}\left(1 \leq v_{i}, w_{i} \leq n\right)$ asking whether it is possible to reach $w_{i}$ from $v_{i}$.


## Output

Output $q$ lines to the $q$ queries. Print YES in line $i$ in case query $i$ can be fulfilled, otherwise print NO .

## Sample input/output

|  |  | Input |  |
| :--- | :--- | :--- | :--- |
| 5 | 3 | 3 | Output |
| 1 | 2 |  |  |
| 1 | 3 |  |  |
| 4 | 5 | NO |  |
| 1 | 5 | YES |  |
| 2 | 3 | YES |  |
| 1 | 2 |  |  |

There are 5 places $\{1,2,3,4,5\}$ and 3 streets. The answer to the query 15 is NO because you cannot reach 5 from 1, but the second answer is YES because you can go from 2 to 1 and then from 1 to 3 .

