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 $(1 \le n, m \le 10^5)$ and q $(1 \le q \le 10^5)$ 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 $(1 \le v_i, w_i \le n)$ 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.

Input	Output
533	
1 2	
1 3	
4 5	
15	NO
2 3	YES
1 2	YES

Sample input/output

There are 5 places $\{1, 2, 3, 4, 5\}$ and 3 streets. The answer to the query 1 5 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.