A Perfect Pair



Problem Statement

You are given an undirected graph with n nodes (numbered from $1 \dots n$) and m edges (without any parallel edges or self loops). A pair of vertices u,v in the graph are said to be **perfect** if there exists at least two different paths connecting vertex u and vertex v which do not contain any other vertex in common except u and v.

For Example:

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Path 1: u,a_i,a_{i+1},a_{i+2},a_{i+3}\ldots v
Path 2: u,b_j,b_{j+1},b_{j+2},b_{j+3}\ldots v
a_i\neq b_j \forall i,j
```

Now, given q queries of the type u, v, tell whether vertex u and vertex v form a perfect pair according to the above definition.

Input Format

The first line contains three space separated integers n, m, q.

The next m lines contain two space separated integers u,v denoting that there exist an undirected edge in the graph between vertex u and vertex v.

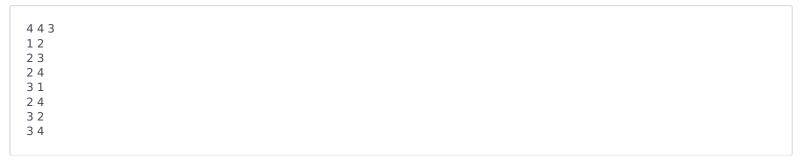
The next q lines describe the queries. Each line contains two space separated integers u, v.

$$egin{aligned} 1 & \leq n \leq 10^5 \ 1 & \leq m \leq min(rac{n*(n-1)}{2}, 2*10^5) \ 1 & \leq q \leq 10^5 \end{aligned}$$

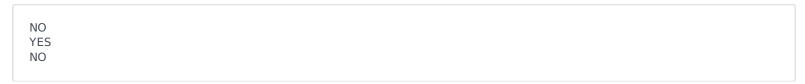
Output Format

For each query, if the given pair of vertices satisfies the condition of a perfect pair, print **YES**; otherwise, print **NO**.

Sample Input



Sample Output



Explanation

• 2 4 : Only a single path 2-->4 exists between the given vertices. Hence, they do not form a perfect pair.

- ullet 3 2 : Two different paths are 3-->2 and 3-->1-->2 . Hence, they form a perfect pair.
- **3 4**: Whatever path we might follow, we always need to cross the edge 2-->4. Hence, they do not form a perfect pair