

Question 3

You are given an undirected graph that has n vertices and m edges. You are also given q queries, each of them contains two vertices a and b . You should check if there is a path between a and b .

Input

The first line contains 3 integers n, m, q ($0 < n, m \leq 10^5$).

Each of the next m lines contains two integers u, v representing an edge connecting vertex u and vertex v ($0 \leq u, v < n$).

Each of the next q lines contains two integers a and b , representing a query ($0 \leq a, b < n$).

Output

For each query, print "YES" if there is a path between two vertices, otherwise print "NO". The output is case-sensitive.

Sample

<https://drive.google.com/file/d/1Lu4JPqxvw8etw0d6OWHzeAVsqY0TJyAn/view?usp=sharing>

Input	Output
5 4 3	YES
0 1	YES
1 2	NO
2 3	
0 3	
1 3	
1 0	
0 4	