K-Connected Graph

Time Limit 1 sec/Memory Limit 256 MB

Given a connected, undirected simple graph G.

Please output the maximum k, such that G is k-connected.

Input Format

- The first line contains 2 integers n and m, which mean the number of vertices and the number of edges.
- The next m lines all contain 2 integers, u_i and v_i, which imply that there is an edge connection between vertex u_i and vertex v_i.

Output format

- The single line contains number k.
- (We will ensure that $k \geq 2$)

Constraints

- $4 \leq n \leq 80$
- $n-1 \leq m \leq \frac{n(n-1)}{2}$
- $1 \leq u_i, v_i \leq n$

sample input #1	sample output #1
4 4 1 2 2 3 3 4 4 1	2

sample input #2	sample output #2
4 6 1 2 1 3 1 4 2 3 2 4 3 4	3