

## Maximum Tolerance Class

You are given a directed graph  $G = (V, E)$  on the set of vertices  $V = \{0, \dots, n-1\}$ . Let  $v_1, v_2 \in V$ . We say that  $v_1 \sim v_2$  if there exists a path from  $v_1$  to  $v_2$  or a path from  $v_2$  to  $v_1$ .

$\sim$  is a *tolerance relation* as it is *reflexive* and *symmetric*. A *tolerance class* is an inclusionwise maximal set  $W \subseteq V$  such that for all  $w_1, w_2 \in W$  it is true that  $w_1 \sim w_2$ .

Compute the maximal cardinality of a tolerance class.

**Input:** The first line contains the number of vertices  $n$  and the number of edges  $m$ . The following  $m$  lines describe the edges. You can assume that  $n \leq 50000$ .

**Output:** Output the maximal cardinality of a tolerance class.

**Sample Input:**

```
5 5
0 1
1 2
2 3
3 1
4 3
```

**Sample Output:**

```
4
```