Component Count

Time limit: 1 sec

Given a simple graph with **v** nodes and **e** edges. Determine the number of connected component in the graph. The connected component is a set of nodes that there exists a path connecting any pair of its member.

Each node in the graph is numbered 1 to **v**.

Input

- The first line of input contains two integer v and **e** where 1 ≤ v ≤ 10,000 and 1 ≤ e ≤ 10,000.
- The next e lines describe the edges, one edge per line.
  - Each line contains two integer a and b indicating that there is an undirected edge connecting node a and b where 1 ≤ a, b ≤ e

Output

There must be exactly **1** line that contains the number of connected component in the graph.

Suggestion

- For 20% of the test data, each component has either 1 or 2 nodes
- For 50% of the test data, the number of nodes does not exceed 10.

Example

Input	Output
4 3 1 2 2 3 3 1	2
5 0	5
5 1 1 2	4
5 2 1 2 4 5	3
10 7 1 2 2 3 3 4 1 3 2 4 5 6 6 7	5