Problem I. MEXimum Spanning Tree

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	256 megabytes

Maximum spanning tree is a classical problem in computer science. One day, Grammy came out with a brand new variation of this problem. She wants to find a spanning tree of a weighted graph such that the MEX of the edge weights on the spanning tree is maximized.

The MEX(Minimum EXcluded natrual number) of a set is the minimum natrual number which does not appear in the set. For example, $\text{MEX}(\{0, 2, 4, 5, 7\}) = 1, \text{MEX}(\{0, 1, 2, 3, 6\}) = 4, \text{MEX}(\{3\}) = 0$.

Please help Grammy to solve this problem.

Input

The first line contains two integers n, m $(1 \le n \le 1\,000, 0 \le m \le 1\,000)$, denoting the number of vertices and the number of edges.

In each of the following m lines, there are three integers u_i, v_i, w_i $(1 \le u_i, v_i \le n, u_i \ne v_i, 0 \le w_i \le n)$, denoting that there is an edge from vertex u_i to vertex v_i with weight w_i.

It is guaranteed that the graph is connected.

Output

Output one integer, denoting the maximum MEX of the spanning tree.

Example

standard input	standard output

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