

(Adv.) Competitive Programming

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Problem: shoal (1 second timelimit)

Due to cleaning the facility management of the HPI pumped down most of the water of the Lake HPI. Only a few puddles and some small moats between the puddles are left.

And the fishes! They remained in the puddles (you can assume that each puddle contains at least one fish). To plan their strike back against the facility management, they try to meet at some of the puddles. But because of the reduced water it's not clear if there is any puddle that all fishes can reach through the moats.

Since you are a nature lover, you try to help them. Each puddle has an own ID. Given the list of moats check if all fishes can meet in some puddle.

Input The first line of the input contains the integers n ($n < 1000$) and m ($m < 40000$). n is the number of puddles, m the number of moats. Afterwards m lines follow. Each line contains two integers a and b ($a, b < n$). A pair of a and b represents a moat. A fish can swim through each moat in both directions.

Output Print 1 if there is any puddle where all fishes can meet and 0 otherwise.

Sample input

```
5 10
0 1
4 2
3 0
1 4
1 1
3 3
0 2
4 0
3 2
4 4
```

```
12 28
11 9
```

Sample output

```
1
```

```
0
```

0 1
1 5
5 4
1 2
4 3
10 11
0 0
7 7
8 10
7 6
5 5
7 11
7 10
9 8
3 3
4 0
3 2
8 7
0 2
5 0
10 6
8 11
6 11
1 4
6 9
1 3
9 10