Prime Politics

There are n politicians numbered 1 to n in the TST party, these politicians are seated on seats connected by m bidirectional bridges. Two politicians are said to be adjacent if their seats connected by a bridge. All of these politicians love cash. Party Leader has an unlimited supply of two different types of currency cash and you have to give one type of currency to each politician. These politicians are really grumpy, if any politician finds another politician on adjacent seat with the same type of currrency, they leave the party and join the opposition party. It is guaranteed that there will be at least one path from one politician to another and there are no multiple bridges between the same politicians.

You have to distribute the cash in such a way that none of the politicians die. If it is possible to save all the politicians print "SAVED" else print "GONE".

Input Format

The first line consist of two integers n and m. The next m lines contain two integers a and b denoting a bridge between the politicians a and b.

Constraints

$2 \le n \le 10000$ $1 \le m \le min(nC2,100000)$

Output Format

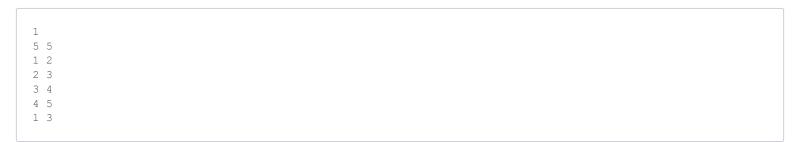Print "SAVED" if it's possible to save all the politicians are saved else print "GONE" in a new line.(without quotes)

Sample Input 0

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

Sample Output 0

```
SAVED
```

Sample Input 1

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

Sample Output 1

GONE