

## 11838 Come and Go

In a certain city there are  $N$  intersections connected by one-way and two-way streets. It is a modern city, and several of the streets have tunnels or overpasses. Evidently it must be possible to travel between any two intersections. More precisely given two intersections  $V$  and  $W$  it must be possible to travel from  $V$  to  $W$  and from  $W$  to  $V$ .

Your task is to write a program that reads a description of the city street system and determines whether the requirement of connectedness is satisfied or not.

### Input

The input contains several test cases. The first line of a test case contains two integers  $N$  and  $M$ , separated by a space, indicating the number of intersections ( $2 \leq N \leq 2000$ ) and number of streets ( $2 \leq M \leq N(N-1)/2$ ). The next  $M$  lines describe the city street system, with each line describing one street. A street description consists of three integers  $V$ ,  $W$  and  $P$ , separated by a blank space, where  $V$  and  $W$  are distinct identifiers for intersections ( $1 \leq V, W \leq N, V \neq W$ ) and  $P$  can be 1 or 2; if  $P = 1$  the street is one-way, and traffic goes from  $V$  to  $W$ ; if  $P = 2$  then the street is two-way and links  $V$  and  $W$ . A pair of intersections is connected by at most one street.

The last test case is followed by a line that contains only two zero numbers separated by a blank space.

### Output

For each test case your program should print a single line containing an integer  $G$ , where  $G$  is equal to one if the condition of connectedness is satisfied, and  $G$  is zero otherwise.

### Sample Input

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

### Sample Output

```
1
1
```

0  
0