Cool Kids

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1 Problem Statement

At the cool kids club, there are $n(1 \leq n \leq 10^5)$ kids. Because they are all cool kids, many of them are friends each other, but are only one way. There are a total of $m(1 \leq m \leq 10^5)$ friendships. A friendship is when one kid considers another kid a friend, but the other kid doesn't necessarily have to consider the first kid a friend. A friend group is a group of kids that share friends or are mutual friends with every other kid in the group.

Justin is the newest addition to the cool kids club but doesn't have any friends yet. However, he wants to become very popular by befriending at least 1 person in each friend group such that he has mutual friends with everybody in the cool kids club. Help Justin find the total number of friend groups he must join. It is guaranteed that everybody either has a friend or is a friend to someone else.

2 IO

2.1 Input Format

The first line of input contains n and m. The next m lines contain 2 numbers, A and $B(1 \leq A, B \leq n)$. A considers B a friend, but B doesn't consider A a friend.

2.2 Output Format

Print the total number of friend groups that Justin must join.

3 Sample

3.1 Input

9 11
1 3
3 2

2 1
4 2
4 6
6 5
5 4
7 5
7 9
9 8
8 7

3.2 Output

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