# WATER SUPPLY

*Time limit:* 1s

*Memory limit:* 20MiB

All *N* household in Wonderland have accessed to fresh water. The fresh water supply system here has lots of underground pipeline connect directly between two households, forming a connected water pipe network. Which means there is always a line for water to flow (in both ways) from one household any others. For a small town like wonderland this system reduce the number of pipes that have to be installed and save cost.

However, an earthquake has ruptured many pipes and leave many households with no access to fresh water. A construction company was hired to fix the system, and after through surveying, the find out that **M** pipe was still intact but the network is not connected anymore. To maximize profit, the company want to seal off all ruptured pipe to prevent leak, then find a plan to install as few new pipes as possible. Your tasks are to find out the minimum number of new pipes that have to be installed. And while you are at it, please try to find out the number of ways to reconnect the whole network using this minimal number of new pipes, if there are too many ways, output the remainder after dividing that number by $10^9+7$.

## INPUT

The first line contains two integer N, M ($1 \le N, M \le 10^5$)

Each of the next M lines contains 2 integer *a*, *b* ($1 \le a, b \le N$) denotes that the pipe from household a to b is still intact.

## OUTPUT

Print the minimum number of new pipes required, and the number of ways to reconnect (by modulo of $10^9+7$), each number on a different separate line.

| SAMPLE INPUT | SAMPLE OUTPUT |
|---|---|
| 3 1 | 1 |
| 1 2 | 2 |