

## Problem H. This is not an Abnormal Team!

Input file:            standard input  
Output file:           standard output  
Time limit:            5 seconds  
Memory limit:         1024 megabytes

*Hope for normalcy,  
all gains to be had,  
And a bright future,  
no longer sad.*

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(Not Little Cyan Fish)

There are  $n_1$  boys and  $n_2$  girls in the XCPC Training team, and  $m$  pairs of boys and girls are in relationships. One person may be in a relationship with multiple partners. However, there will not be any relationships between people of the same gender.

Little Cyan Fish is the coach of the XCPC Training team, and he wants to divide them into several XCPC teams. Each team can have no more than 3 members. To make the teams not being *abnormal*, if there is more than one member in a team, at least one member must be in a relationship with all other team members.

However, participating in XCPC alone is not as enjoyable, so Little Cyan Fish aims to minimize the number of single-person teams. Additionally, when one person is in a relationship with the other two teammates, the team can become unstable. Therefore, Little Cyan Fish also wants to minimize the number of three-person teams after minimizing the number of single-person teams.

The Little Cyan Fish is very anxious to find a way to divide the teams. To make everything back to normal, you need to help him to complete the dividing team task so that his teams can fight for the champion. XCPC is his favorite business, please help him!

### Input

The first line of the input contains three integers  $n_1, n_2, m$  ( $1 \leq n_1, n_2 \leq 10^5, 1 \leq m \leq 2 \times 10^5$ ), representing the number of boys, the number of girls, and the number of relationships.

The  $i$ -th of the next  $m$  lines contains two integers  $u_i, v_i$  ( $1 \leq u_i \leq n_1, 1 \leq v_i \leq n_2$ ), representing a relationship between the  $u_i$ -th boy and the  $v_i$ -th girl.

It is guaranteed that all  $(u_i, v_i)$  are pairwise distinct.

### Output

Output a single line contains two integers, indicating the number of teams with 1 member and the number of teams with 3 members.

## Example

standard input	standard output
5 6 10	1 2
1 1	
2 1	
2 2	
3 2	
4 2	
4 3	
5 3	
5 4	
5 5	
5 6	

## Note

