

THE LAST SHOT

Tony Stark is on the mission to save the world from Loki's army so he spread N bombs in the enemy region. He spread the bombs in such a way that a bomb can be in range of another bomb i.e say bomb B_1 is in range of bomb B_2 , when bomb B_2 explodes it will trigger bomb B_1 and it also get explode but vice-versa might not be true because the bombs are of different of range. As he is running out of energy so he left with one shot To trigger the bomb .Now he ask Jarvis to find most appropriate bomb which he can trigger to make maximum impact.

Impact is basically number of bombs get explode.

Can you help Jarvis to do so?

Input

First line contains two integer N and M denoting number of bombs and number of relation between the bombs.

$$1 \leq n \leq 10000$$

$$1 \leq m \leq 10000$$

Next M lines contain two integer A and B denoting bomb B is in range of bomb A .

$$1 \leq A \leq N$$

$$1 \leq B \leq N$$

Output

A single line containing MAXIMUM IMPACT.

Example 1

Input:

4 3

1 2

2 4

1 3

Output:

4

Example 2

Input:

4 3

1 2

2 1

2 3

Output:

3