There are n variables and m requirements. Requirements are represented as $(x \leq y)$, meaning that the x^{th} variable must be less than or equal to the y^{th} variable.

Your task is to assign non-negative numbers smaller than 10 to each variable and then calculate the number of different assignments satisfying all requirements. Two assignments are different if and only if at least one variable is assigned to a different number in both assignments. Print your answer modulo $10^3 + 7$.

Input Format

The first line contains 2 space-separated integers, n and m, respectively. Each of the m subsequent lines contains 2 space-seperated integers describing the respective x and y values for an $(x \leq y)$ requirement.

Constraints

- $0 < n < 14$
- $0 < m < 200$
- $0 \leq x, y < n$

Output Format

Print your answer modulo $10^3 + 7$.

Sample Input 0

```
6 7
1 3
0 1
2 4
0 4
2 5
3 4
0 2
```

Sample Output 0

```
1000
```

Explanation 0

There are 6 variables and 7 requirements.

Let the variables be in the array $a[6]$.

Requirements are -
$a[1] <= a[3], a[0] <= a[1], a[2] <= a[4], a[0] <= a[4], a[2] <= a[5], a[3] <= a[4], a[0] <= a[2]$

One of the assignments is - $\{1, 2, 3, 4, 5, 6\}$

Similarly there are 25168 assignments possible.

Result = $25168 \bmod 1007 = 1000$.