

# Clique Challenge

Input file:            **standard input**  
Output file:         **standard output**  
Time limit:          1 second  
Memory limit:       512 megabytes

A clique of a graph  $G$  is a set  $X$  of vertices of  $G$  with the property that every pair of distinct vertices in  $X$  are adjacent in  $G$ . You are given an undirected graph  $G$  with  $n$  vertices and  $m$  edges, please find the number of distinct non-empty cliques of graph  $G$ .

## Input

The first line of the input contains two integers  $n$  and  $m$  ( $1 \leq n, m \leq 1000$ ), denoting the number of vertices and the number of edges.

Each of the following  $m$  lines contains two integers  $u_i$  and  $v_i$  ( $1 \leq u_i, v_i \leq n$ ,  $u_i \neq v_i$ ), describing an undirected edge between the  $u_i$ -th vertex and the  $v_i$ -th vertex.

It is guaranteed that there will be at most one edge between each pair of different vertices.

## Output

Print a single line containing an integer, denoting the number of cliques. Note that the answer may be extremely large, so please print it modulo  $(10^9 + 7)$  instead.

## Examples

| standard input           | standard output |
|--------------------------|-----------------|
| 3 2<br>1 2<br>2 3        | 5               |
| 3 3<br>1 2<br>1 3<br>2 3 | 7               |

## Note

In the first example, cliques are  $\{1\}$ ,  $\{2\}$ ,  $\{3\}$ ,  $\{1, 2\}$  and  $\{2, 3\}$ .

In the second example, cliques are  $\{1\}$ ,  $\{2\}$ ,  $\{3\}$ ,  $\{1, 2\}$ ,  $\{1, 3\}$ ,  $\{2, 3\}$  and  $\{1, 2, 3\}$ .