Problem: LOVE

Time Limit: 1.0 seconds

Memory Limit: 64 MB

Problem Description Jacob has been watching too much Korean drama recently, and has gotten so into them that he has created a problem about it. In Jacob's imaginary universe, there are N people. Each pair of persons either love or hate one another, there is no neutral state.

A love triangle is defined as three persons a, b and c such that a loves c, b loves c and a hates b. A hate clique is defined as three persons such that all of them hate one another.

Jacob has already M relationships in mind, which means he has already fixed the relationships between some pairs of persons (i.e. decided if they love or hate each other). He wants to know in how many ways can you fill up the remaining relationships such that there exists no love triangles or hate cliques in his imaginary utopian Korean drama universe.

Input Format The first line of input will contain two integers, N and M. The next M lines of input will contain three integers each, with the first two integers describing the persons involved in the relationship and the third integer being either 1 or 0, indicating a love or hate relationship respectively.

Output Format The output should contain exactly one line with one integer, the total number of ways Jacob can fill in the rest of the relationships, modulo $10^9 + 7$.

Limits These are the bounds on the input.

Subtask	Score	Additional Bounds
1	30	$1 \leq N \leq 3,000$, $0 \leq M \leq 3,000$
2	34	$1 \leq N \leq 1,000,000$, $M = 0$
3	36	$1 \leq N \leq 1,000,000$, $0 \leq M \leq 1,000,000$

Sample Input

```
4 4
0 1 1
1 2 1
2 3 0
```

```
3 0 0
```

Sample Output

```
1
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