

# TOPOSORT - Topological Sorting

Sandro is a well organised person. Every day he makes a list of things which need to be done and enumerates them from 1 to n. However, some things need to be done before others. In this task you have to find out whether Sandro can solve all his duties and if so, print the correct order.

## Input

In the first line you are given an integer n and m ( $1 \leq n \leq 10000$ ,  $1 \leq m \leq 1000000$ ). On the next m lines there are two distinct integers x and y, ( $1 \leq x, y \leq 10000$ ) describing that job x needs to be done before job y.

## Output

Print "Sandro fails." if Sandro cannot complete all his duties on the list. If there is a solution print the correct ordering, the jobs to be done separated by a whitespace. If there are multiple solutions print the one, whose first number is smallest, if there are still multiple solutions, print the one whose second number is smallest, and so on.

## Example 1

```
Input:
8 9
1 4
1 2
4 2
4 3
3 2
5 2
3 5
8 2
8 6
Output:
1 4 3 5 7 8 2 6
```

## Example 2

```
Input:
2 2
1 2
2 1
Output:
Sandro fails.
```