

A. Finishing Tasks

Description

Lanran has n tasks to do, while the tasks are not independent. That means to do some task Lanran needs to finish other task first. Now given the dependency of the tasks, Lanran wants you to tell him one possible order to finish all these tasks. To make the output answer unique, the answer should have the **least lexicographical order** among all possible answers. If there is no possible answer, please output 'impossible' (without quotes).

Input format

The first line contains an integer $n, m (1 \leq n, m \leq 100\,000)$, indicates there are n jobs and m dependencies.

The next m lines contain i, j each line, indicates task i must be finished before task j .

Output format

Output n integers per line, indicating the answer.

Sample input

```
5 4
1 4
1 3
4 3
1 5
```

Sample output

```
1 2 4 3 5
```

Limitations & Hints

1 second for each test case. The memory limit is 256MB.

For 60% of the test cases, $n, m \leq 500$.

For 100% of the test cases, $n, m \leq 100\,000$.