Ordering Tasks

John has n tasks to do. Unfortunately, the tasks are not independent and the execution of one task is only possible if other tasks have already been executed.

Input Specifications:

First line contains two integers **N** and **M**, where **N** is the number of tasks (numbered from 1 to **N**) and **M** is the number of direct precedence relations between tasks. Each of the next **M** lines contains two integers **i** and **j**, representing the fact that task **i** must be executed before task **j**.

Output Specifications:

Print a single line with **N** space separated integers representing the tasks in the lexicographically smallest possible order of execution.

Constraints:

$1 \leq N \leq 10^5,\ 0 \leq M \leq 5 * 10^5$

$i,j\ \varepsilon\ [1,N]$

Example:

Sample Input

3 2

3 1

2 1

Sample Output

2 3 1

Explanation:

The two possible orderings of tasks are [3,2,1] and [2,3,1], where the latter one is the lexicographically smallest possible output.