Ordering Tasks

Time Limit = 1s, Memory Limit = 32768KB

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

There are multiple test cases. The first line contains an integer T, indicating the number of test cases. Each test case begins with a line containing two integers, 1 <= n <= 100000 and 1 <= m <= 100000. n is the number of tasks (numbered from 1 to n) and m is the number of direct precedence relations between tasks. After this, there will be m lines with two integers i and j, representing the fact that task i must be executed before task j. It is guaranteed that no task needs to be executed before itself either directly or indirectly.

Output

For each test case, print a line with n integers representing the tasks in a possible order of execution. To separate them, print exactly one space after each integer. If there are multiple solutions, output the smallest one by lexical order.

Sample Input

```
1
5 5
3 4
4 1
3 2
2 4
5 3
```

Sample Output

```
5 3 2 4 1
```