Description | Hints | Submissions | Discussions | Notes

Difficulty	Time Limit	Memory	Score
[illegible]	1 sec	256000KB	100

80/80 XP | 30/30

Description

Among the sequences P that are permutations of $(1, 2, \ldots, N)$ and satisfy the condition below, find the lexicographically smallest sequence.

- For each $i = 1, \ldots, M$, A_i appears earlier than B_i in P.

If there is no such P, print -1.

Input Format

Input is given from Standard Input in the following format:

N M
A_1 B_1
:
:
A_M B_M

Output Format

Print the answer.

Constraints

$2 \leq N \leq 2 \times 10^5$
$1 \leq M \leq 2 \times 10^5$
1$$\leq A_i, B_i \leq$$N
$A_i \neq B_i$
All values in input are integers.

Sample Input 1

Copy

```
4 3
```

C++14 | 00:00:00 | 12 px

```
10      priority_queue<int>pq;
11      for(int i=1;i<=n;i++){
12          if(indeg[i]==0){
13              pq.push(-i);
14          }
15      }
16      while(!pq.empty()){
17          int v=-pq.top();
18          pq.pop();
19          ans.push_back(v);
20          for(auto i:g[v]){
21              indeg[i]--;
22              if(indeg[i]==0){
23                  pq.push(-i);
24              }
25          }
26      }
27  }
28  int main(){
29      ios_base::sync_with_stdio(0);
30      cin.tie(0);
31      cout.tie(0);
32      cin>>n>>m;
33      g.resize(n+1);
34      indeg.resize(n+1);
35      for(int i=1;i<=m;i++){
36          int a,b;
```

Sample Tests | Manual Tests

Test Case 1 | Test Case 2

ACCEPTED

Console | Run on Sample