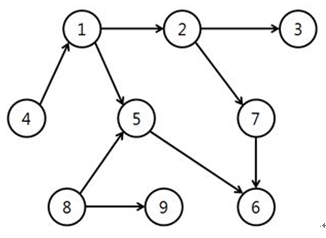
Thereare V tasks to do. Some task(s) can begin only after a particular task ends,which we will call precedence relation. A graph indicating precedence relationof tasks is given. In this graph, each task is denoted as vertex, and the precedencerelation as directed edge. Note there is no cycle with this graph (cycle refers to a path that starts from one vertex and returns to the same vertex). The graph below is one example of such graph

﻿

In this graph, task 1 can start after task 4 ends and task 6can when task 5 and task 7 end; there is no cycle with this graph.

Manager Kim is going to finish a set of tasks having precedencerelation by taking care of one task at a time. If he is going to do this withthe set of tasks illustrated above, the tasks can be handled with the followingorder.

8, 9, 4, 1, 5, 2, 3, 7, 6

And the order below is also possible.

4, 1, 2, 3, 8, 5, 7, 6, 9

But, the order below is not possible.

4, 1, 5, 2, 3, 7, 6, 8, 9

With this order, task 5 is handled earlier that task 8, but inthe precedence relation given in the graph above, task 5 can only begin whentask 8 ends so this order is not possible.

Given V tasks and their precedence relations, write a programthat finds the order by which one person can does one task at a time. Usuallythere are a number of possible orders so all you need to do is present just oneof them. Since a graph with a cycle is not given in input, you don’t need toconsider error-handling in such case. In the graph with no cycle, possibleorder(s) always exist.

[Constraints]

The total number of vertices, V, in the graph is 5≤V≤1000.

Time limit: 1 sec for 10 test cases combined

[Input]

10 test cases are given. Throughout 20 lines, one test case isgiven for every two lines. In the first line of each test case, the totalnumber of graph’s vertices, V, and the total number of edges, E, are given. Inthe next line, E edges are arranged; edges are denoted as comprising twovertices. For example, the edge connecting from vertex 5 to vertex 28 is denotedas “5 28”. The vertex numbers are integers from 1 to V and two neighboringnumbers in the input are separated by a blank space.

[Output]

Print answers for each of the 10 test cases line-by-linethroughout 10 lines. Start each line with ‘#x’, leave a blank space, and recordthe order of tasks. For the order of tasks, arrange V integers with a blankspace in-between.

[Input/output example]

Input

|  |
| --- |
| ﻿  9 9 ← Test case 1 starts  4 1 1 2 2 3 2 7 5 6 7 6 1 5 8 5 8 9  5 4 ← Test case 2 starts  1 2 2 3 4 1 1 5  ... |

Output(consisting of 10 lines in total)

|  |
| --- |
| #1 8 9 4 1 5 2 3 7 6  #2 4 1 2 3 5  **...** |

GondorFu: 拓扑排序经典应用，链表实现。