note @184 134 views

PA4 - 4002 Discussion Thread

The minimum sequence

Description

Link is in a maze which can be represented as a connected graph with n nodes and m bidirectional edges.

Initially he is at the node 1 and records 1 on his "Sheikah Slate" (you can regard it as a notebook). He can travel from one node to another through the edges. Whenever he visits a node that has not been recorded, he will record it. After he visits all nodes at least once, he stops his travel, and a permutation of nodes $a_1, a_2, ..., a_n$ is recorded.

We define sequence $a_1, a_2, ..., a_n$ is smaller than another sequence $b_1, b_2, ..., b_n$ if and only if there exist integer $i \in [1, n]$ that $a_i < b_i$ while all the elements in two sequences with indices $< i$ are equal to each other.

We want you to find a minimum sequence of nodes.

Input

The 1st line: 2 positive integers n and m, denoting the number of nodes and edges, respectively.

The following m lines: the bidirectional edges in the graph. The ith line contains 2 integers u_i and v_i ($1 \leq u_i, v_i \leq n$) representing the nodes the ith edge connects.

The graph can have multiple edges connecting the same two nodes and self-loops. It is guaranteed that the graph is connected.

50% cases, $n \leq 50$.

100% cases, $n \leq 500$.

$m < n^2$

Output

A line containing the minimum sequence of nodes $a_1, a_2, ..., a_n$

programming

Updated 21 days ago by Yining She (余以宁)

followup discussions *for lingering questions and comments*

◉ Resolved ○ Unresolved

龚 可 22 days ago
How big can m be?

helpful! | 1

Yining She (余以宁) 21 days ago m<n^2

good comment | 0

◉ Resolved ○ Unresolved

王鹏程 21 days ago
At some position during recording, visit in the order of 10 8 9 is smaller than 8 9 10, the number formed former is 1089 < the number formed latter is 8910.

So I guess the problem statement has something wrong?

helpful! | 1

Yining She (余以宁) 21 days ago You are right. We will fix it pretty soon.

good comment | 0

Yining She (余以宁) 21 days ago Updated.

good comment | 0

◉ Resolved ○ Unresolved

刘雨乐 15 days ago
what does ground level mean?

helpful! | 0

刘雨乐 15 days ago Please ignore this post.

helpful! | 0