

LeetCode

Explore

Problems

Interview

Contest

Discuss

Store

LeetCode is hiring! Apply NOW.

Description

Solution

Discuss (752)

Submissions

1

Java

Autocomplete

i

{}

1

2

3

4

5

class Solution {

public int makeConnected(int n, int[][] connections) {

}

}

1919. Number of Operations to Make Network Connected

Medium

1893

29

Add to List

Share

There are n computers numbered from 0 to $n - 1$ connected by ethernet cables `connections` forming a network where `connections[i] = [ai, bi]` represents a connection between computers a_i and b_i . Any computer can reach any other computer directly or indirectly through the network.

You are given an initial computer network `connections`. You can extract certain cables between two directly connected computers, and place them between any pair of disconnected computers to make them directly connected.

Return the minimum number of times you need to do this in order to make all the computers connected. If it is not possible, return -1 .

Example 1:

Input: $n = 4$, `connections = [[0,1],[0,2],[1,2]]`
Output: 1
Explanation: Remove cable between computer 1 and 2 and place between computers 1 and 3.

Example 2:

Input: $n = 6$, `connections = [[0,1],[0,2],[0,3],[1,2],[1,3]]`
Output: 2

Example 3:

Input: $n = 6$, `connections = [[0,1],[0,2],[0,3],[1,2]]`
Output: -1
Explanation: There are not enough cables.

Constraints:

- $1 \leq n \leq 10^5$
- $1 \leq \text{connections.length} \leq \min(n * (n - 1) / 2, 10^5)$
- `connections[i].length == 2`
- $0 \leq a_i, b_i < n$
- $a_i \neq b_i$
- There are no repeated connections.
- No two computers are connected by more than one cable.

Accepted 68,165

Submissions 118,568

Seen this question in a real interview before?

Yes

No

Companies

i

Related Topics

Show Hint 1

Show Hint 2

Problems

Pick One

Prev

1319/2203

Next

Console

Contribute i

Run Code ^

Submit

https://leetcode.com/problems/number-of-operations-to-make-network-connected/

1/1