

Problem 1101: The Earliest Moment When Everyone Become Friends

Problem Information

Difficulty: Medium

Acceptance Rate: 65.75%

Paid Only: Yes

Tags: Array, Union Find, Sorting

Problem Description

There are n people in a social group labeled from 0 to $n - 1$. You are given an array `logs` where `logs[i] = [timestampi, xi, yi]` indicates that x_i and y_i will be friends at the time `timestampi`.

Friendship is **symmetric**. That means if a is friends with b , then b is friends with a . Also, person a is acquainted with a person b if a is friends with b , or a is a friend of someone acquainted with b .

Return `_` the earliest time for which every person became acquainted with every other person. If there is no such earliest time, return `-1`.

Example 1:

Input: `logs = [[20190101,0,1],[20190104,3,4],[20190107,2,3],[20190211,1,5],[20190224,2,4],[20190301,0,3],[20190312,1,2],[20190322,4,5]]`, `n = 6` **Output:** 20190301

Explanation: The first event occurs at timestamp = 20190101, and after 0 and 1 become friends, we have the following friendship groups [0,1], [2], [3], [4], [5]. The second event occurs at timestamp = 20190104, and after 3 and 4 become friends, we have the following friendship groups [0,1], [2], [3,4], [5]. The third event occurs at timestamp = 20190107, and after 2 and 3 become friends, we have the following friendship groups [0,1], [2,3,4], [5]. The fourth event occurs at timestamp = 20190211, and after 1 and 5 become friends, we have the following friendship groups [0,1,5], [2,3,4]. The fifth event occurs at timestamp = 20190224, and as 2 and 4 are already friends, nothing happens. The sixth event occurs at timestamp = 20190301, and after 0 and 3 become friends, we all become friends.

****Example 2:****

****Input:**** logs = [[0,2,0],[1,0,1],[3,0,3],[4,1,2],[7,3,1]], n = 4 ****Output:**** 3 ****Explanation:**** At timestamp = 3, all the persons (i.e., 0, 1, 2, and 3) become friends.

****Constraints:****

* `2 <= n <= 100` * `1 <= logs.length <= 104` * `logs[i].length == 3` * `0 <= timestampi <= 109`
* `0 <= xi, yi <= n - 1` * `xi != yi` * All the values `timestampi` are ****unique****. * All the pairs `(xi, yi)` occur at most one time in the input.

Code Snippets

C++:

```
class Solution {
public:
    int earliestAcq(vector<vector<int>>& logs, int n) {

    }
};
```

Java:

```
class Solution {
    public int earliestAcq(int[][] logs, int n) {

    }
}
```

Python3:

```
class Solution:
    def earliestAcq(self, logs: List[List[int]], n: int) -> int:
```