

1257. Smallest Common Region

Medium👍 259🗨 26❤️ Add to List🔗 Share

You are given some lists of `regions` where the first region of each list includes all other regions in that list.

Naturally, if a region `x` contains another region `y` then `x` is bigger than `y`. Also, by definition, a region `x` contains itself.

Given two regions: `region1` and `region2`, return *the smallest region that contains both of them*.

If you are given regions `r1`, `r2`, and `r3` such that `r1` includes `r3`, it is guaranteed there is no `r2` such that `r2` includes `r3`.

It is guaranteed the smallest region exists.

Example 1:

Input:
regions = [{"Earth","North America","South America"}, {"North America","United States","Canada"}, {"United States","New York","Boston"}, {"Canada","Ontario","Quebec"}, {"South America","Brazil"}],
region1 = "Quebec",
region2 = "New York"
Output: "North America"

Example 2:

Input: regions = [{"Earth", "North America", "South America"}, {"North America", "United States", "Canada"}, {"United States", "New York", "Boston"}, {"Canada", "Ontario", "Quebec"}, {"South America", "Brazil"}], region1 = "Canada", region2 = "South America"
Output: "Earth"

Constraints:

- 2 <= regions.length <= 10⁴
- 2 <= regions[i].length <= 20
- 1 <= regions[i][j].length, region1.length, region2.length <= 20
- region1 != region2
- regions[i][j], region1, and region2 consist of English letters.

Accepted 11,301Submissions 18,218

Seen this question in a real interview before?

Yes

No

Companies👤 1

0 ~ 6 months6 months ~ 1 year1 year ~ 2 years

Airbnb3

Related Topics

ArrayHash TableStringTreeDepth-First SearchBreadth-First Search

Similar Questions

Lowest Common Ancestor of a Binary Search Tree	Easy
Lowest Common Ancestor of a Binary Tree	Medium

Hide Hint 1
Try to model the problem as a graph problem.

Hide Hint 2
The given graph is a tree.

Hide Hint 3
The problem is reduced to finding the lowest common ancestor of two nodes in a tree.

```
1class Solution {
2    public String findSmallestRegion(List<List<String>> regions, String region1, String region2) {
3
4    }
5}
```