

Problem 3076: Shortest Uncommon Substring in an Array

Problem Information

Difficulty: Medium

Acceptance Rate: 49.51%

Paid Only: No

Tags: Array, Hash Table, String, Trie

Problem Description

You are given an array `arr` of size `n` consisting of **non-empty** strings.

Find a string array `answer` of size `n` such that:

* `answer[i]` is the **shortest** substring of `arr[i]` that does **not** occur as a substring in any other string in `arr`. If multiple such substrings exist, `answer[i]` should be the lexicographically smallest. And if no such substring exists, `answer[i]` should be an empty string.

Return `the array answer`.

Example 1:

Input: `arr = ["cab", "ad", "bad", "c"]` **Output:** `["ab", "", "ba", ""]` **Explanation:** We have the following: - For the string "cab", the shortest substring that does not occur in any other string is either "ca" or "ab", we choose the lexicographically smaller substring, which is "ab". - For the string "ad", there is no substring that does not occur in any other string. - For the string "bad", the shortest substring that does not occur in any other string is "ba". - For the string "c", there is no substring that does not occur in any other string.

Example 2:

Input: `arr = ["abc", "bcd", "abcd"]` **Output:** `["", "", "abcd"]` **Explanation:** We have the following: - For the string "abc", there is no substring that does not occur in any other string. - For the string "bcd", there is no substring that does not occur in any other string. - For the

string "abcd", the shortest substring that does not occur in any other string is "abcd".

****Constraints:****

* `n == arr.length` * `2 <= n <= 100` * `1 <= arr[i].length <= 20` * `arr[i]` consists only of lowercase English letters.

Code Snippets

C++:

```
class Solution {
public:
    vector<string> shortestSubstrings(vector<string>& arr) {

    }
};
```

Java:

```
class Solution {
    public String[] shortestSubstrings(String[] arr) {

    }
}
```

Python3:

```
class Solution:
    def shortestSubstrings(self, arr: List[str]) -> List[str]:
```