

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".

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]:
```