Problem 3598: Longest Common Prefix Between Adjacent Strings After Removals

Problem Information

Difficulty: Medium
Acceptance Rate: 32.05%
Paid Only: No
Tags: Array, String

Problem Description

You are given an array of strings `words`. For each index `i` in the range `[0, words.length - 1]`, perform the following steps:

* Remove the element at index `i` from the `words` array. * Compute the **length** of the **longest common prefix** among all **adjacent** pairs in the modified array.

Return an array `answer`, where `answer[i]` is the length of the longest common prefix between the adjacent pairs after removing the element at index `i`. If **no** adjacent pairs remain or if **none** share a common prefix, then `answer[i]` should be 0.

Example 1:

Input: words = ["jump","run","run","jump","run"]

Output: [3,0,0,3,3]

Explanation:

* Removing index 0: * `words` becomes `["run", "run", "jump", "run"]` * Longest adjacent pair is `["run", "run"]` having a common prefix `"run"` (length 3) * Removing index 1: * `words` becomes `["jump", "run", "jump", "run"]` * No adjacent pairs share a common prefix (length 0) * Removing index 2: * `words` becomes `["jump", "run", "jump", "run"]` * No adjacent pairs share a common prefix (length 0) * Removing index 3: * `words` becomes `["jump", "run", "run", "run"]` * Longest adjacent pair is `["run", "run"]` having a common prefix `"run"` (length 3) * Removing index 4: * words becomes `["jump", "run", "run", "jump"]` * Longest adjacent pair is

`["run", "run"]` having a common prefix `"run"` (length 3)

Example 2:

Input: words = ["dog","racer","car"]

Output: [0,0,0]

Explanation:

* Removing any index results in an answer of 0.

Constraints:

* `1 <= words.length <= 105` * `1 <= words[i].length <= 104` * `words[i]` consists of lowercase English letters. * The sum of `words[i].length` is smaller than or equal `105`.

Code Snippets

C++:

```
class Solution {
public:
vector<int> longestCommonPrefix(vector<string>& words) {

}
};
```

Java:

```
class Solution {
public int[] longestCommonPrefix(String[] words) {

}
}
```

Python3:

```
class Solution:
def longestCommonPrefix(self, words: List[str]) -> List[int]:
```