Problem 2416: Sum of Prefix Scores of Strings

Problem Information

Difficulty: Hard
Acceptance Rate: 60.78%
Paid Only: No
Tags: Array, String, Trie, Counting

Problem Description

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

We define the **score** of a string `term` as the **number** of strings `words[i]` such that `term` is a **prefix** of `words[i]`.

* For example, if `words = ["a", "ab", "abc", "cab"]`, then the score of `"ab"` is `2`, since `"ab"` is a prefix of both `"ab"` and `"abc"`.

Return _an array_`answer` _of size_`n` _where_`answer[i]`_is the**sum** of scores of every **non-empty** prefix of _`words[i]`.

Note that a string is considered as a prefix of itself.

Example 1:

Input: words = ["abc","ab","bc","b"] **Output:** [5,4,3,2] **Explanation:** The answer for each string is the following: - "abc" has 3 prefixes: "a", "ab", and "abc". - There are 2 strings with the prefix "a", 2 strings with the prefix "ab", and 1 string with the prefix "abc". The total is answer[0] = 2 + 2 + 1 = 5. - "ab" has 2 prefixes: "a" and "ab". - There are 2 strings with the prefix "a", and 2 strings with the prefix "ab". The total is answer[1] = 2 + 2 = 4. - "bc" has 2 prefixes: "b" and "bc". - There are 2 strings with the prefix "b", and 1 string with the prefix "bc". The total is answer[2] = 2 + 1 = 3. - "b" has 1 prefix: "b". - There are 2 strings with the prefix "b". The total is answer[3] = 2.

Example 2:

Input: words = ["abcd"] **Output:** [4] **Explanation:** "abcd" has 4 prefixes: "a", "ab", "abc", and "abcd". Each prefix has a score of one, so the total is answer[0] = 1 + 1 + 1 + 1 = 4.

Constraints:

* `1 <= words.length <= 1000` * `1 <= words[i].length <= 1000` * `words[i]` consists of lowercase English letters.

Code Snippets

C++:

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

}
};
```

Java:

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

}
}
```

Python3:

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