

Problem 2781: Length of the Longest Valid Substring

Problem Information

Difficulty: Hard

Acceptance Rate: 38.07%

Paid Only: No

Tags: Array, Hash Table, String, Sliding Window

Problem Description

You are given a string `word` and an array of strings `forbidden`.

A string is called **valid** if none of its substrings are present in `forbidden`.

Return the length of the**longest valid substring** of the string `word`.

A **substring** is a contiguous sequence of characters in a string, possibly empty.

Example 1:

Input: word = "cbaaaabc", forbidden = ["aaa", "cb"] **Output:** 4 **Explanation:** There are 11 valid substrings in word: "c", "b", "a", "ba", "aa", "bc", "baa", "aab", "ab", "abc" and "aabc". The length of the longest valid substring is 4. It can be shown that all other substrings contain either "aaa" or "cb" as a substring.

Example 2:

Input: word = "leetcode", forbidden = ["de", "le", "e"] **Output:** 4 **Explanation:** There are 11 valid substrings in word: "l", "t", "c", "o", "d", "tc", "co", "od", "tco", "cod", and "tcod". The length of the longest valid substring is 4. It can be shown that all other substrings contain either "de", "le", or "e" as a substring.

Constraints:

`* `1 <= word.length <= 105` * `word` consists only of lowercase English letters. * `1 <= forbidden.length <= 105` * `1 <= forbidden[i].length <= 10` * `forbidden[i]` consists only of lowercase English letters.`

Code Snippets

C++:

```
class Solution {  
public:  
    int longestValidSubstring(string word, vector<string>& forbidden) {  
  
    }  
};
```

Java:

```
class Solution {  
public int longestValidSubstring(String word, List<String> forbidden) {  
  
}  
}
```

Python3:

```
class Solution:  
    def longestValidSubstring(self, word: str, forbidden: List[str]) -> int:
```