

# Problem 1358: Number of Substrings Containing All Three Characters

## Problem Information

**Difficulty:** Medium

**Acceptance Rate:** 73.36%

**Paid Only:** No

**Tags:** Hash Table, String, Sliding Window

## Problem Description

Given a string `s` consisting only of characters \_a\_ , \_b\_ and \_c\_.

Return the number of substrings containing **at least** one occurrence of all these characters \_a\_ , \_b\_ and \_c\_.

**Example 1:**

**Input:** s = "abcabc" **Output:** 10 **Explanation:** The substrings containing at least one occurrence of the characters \_a\_ , \_b\_ and \_c are "\_abc\_" , "\_abca\_" , "\_abcab\_" , "\_abcabc" , "\_bca" , "\_bcab" , "\_bcabc" , "\_cab" , "\_cabc" and "\_abc" **(again)** .

**Example 2:**

**Input:** s = "aaacb" **Output:** 3 **Explanation:** The substrings containing at least one occurrence of the characters \_a\_ , \_b\_ and \_c are "\_aaacb" , "\_aacb" and "\_acb".

**Example 3:**

**Input:** s = "abc" **Output:** 1

**Constraints:**

\* `3 <= s.length <= 5 x 10^4` \* `s` only consists of \_a\_ , \_b\_ or \_c\_ characters.

## Code Snippets

### C++:

```
class Solution {  
public:  
    int numberOfSubstrings(string s) {  
  
    }  
};
```

### Java:

```
class Solution {  
    public int numberOfSubstrings(String s) {  
  
    }  
}
```

### Python3:

```
class Solution:  
    def numberOfSubstrings(self, s: str) -> int:
```