

Counting<>

RunSubmit

880

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2083. Substrings That Begin and End With the Same LetterPremium

MediumTopicsHint

You are given a **0-indexed** string `s` consisting of only lowercase English letters. Return the *number of substrings* in `s` that begin and end with the **same** character.

A **substring** is a contiguous non-empty sequence of characters within a string.

Example 1:

Input: `s = "abcba"`

Output: `7`

Explanation:

The substrings of length 1 that start and end with the same letter are: "a", "b", "c", "b", and "a".

The substring of length 3 that starts and ends with the same letter is: "bcb".

The substring of length 5 that starts and ends with the same letter is: "abcba".

Example 2:

Input: `s = "abacad"`

Output: `9`

Explanation:

The substrings of length 1 that start and end with the same letter are: "a", "b", "a", "c", "a", and "d".

The substrings of length 3 that start and end with the same letter are: "aba" and "aca".

The substring of length 5 that starts and ends with the same letter is: "abaca".

Example 3:

Input: `s = "a"`

Output: `1`

Explanation:

The substring of length 1 that starts and ends with the same letter is: "a".

Constraints:

- `1 <= s.length <= 105`
- `s` consists only of lowercase English letters.

</> Code

Python3Auto

```
1 class Solution:
2     def numberOfSubstrings(self, s: str) -> int:
3
4         ans = 0
5         counts = defaultdict(int)
6         for r in range(len(s)):
7             counts[s[r]] += 1
8             ans += counts[s[r]]
9         return ans
10
```

Ln 10, Col 9

TestcaseTest Result

AcceptedRuntime: 38 ms

Case 1Case 2Case 3

Input

s = "abcba"

Output

Seen this question in a real interview before? 1/5

YesNo

Accepted 6.4KSubmissions 9.3KAcceptance Rate 68.5%

Topics

Hash TableMathStringCountingPrefix Sum

Hint 1

In the string "abacad", the letter "a" appears 3 times. How many substrings begin with the first "a" and end with any "a"?

Hint 2

There are 3 substrings ("a", "aba", and "abaca"). How many substrings begin with the second "a" and end with any "a"? How about the third?

Hint 3

2 substrings begin with the second "a" ("a", and "aca") and 1 substring begins with the third "a" ("a").

Hint 4

Hint 5

Similar Questions

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