

# Problem 2405: Optimal Partition of String

## Problem Information

**Difficulty:** Medium

**Acceptance Rate:** 78.33%

**Paid Only:** No

**Tags:** Hash Table, String, Greedy

## Problem Description

Given a string `s`, partition the string into one or more **substrings** such that the characters in each substring are **unique**. That is, no letter appears in a single substring more than **once**.

Return **the minimum** number of substrings in such a partition.

Note that each character should belong to exactly one substring in a partition.

**Example 1:**

**Input:** `s = "abacaba"` **Output:** 4 **Explanation:** Two possible partitions are ("a", "ba", "cab", "a") and ("ab", "a", "ca", "ba"). It can be shown that 4 is the minimum number of substrings needed.

**Example 2:**

**Input:** `s = "sssss"` **Output:** 6 **Explanation:** The only valid partition is ("s", "s", "s", "s", "s", "s").

**Constraints:**

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

## Code Snippets

**C++:**

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

**Java:**

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

**Python3:**

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