

Problem 2734: Lexicographically Smallest String After Substring Operation

Problem Information

Difficulty: **Medium**

Acceptance Rate: 33.91%

Paid Only: No

Tags: String, Greedy

Problem Description

Given a string `s` consisting of lowercase English letters. Perform the following operation:

* Select any non-empty substring then replace every letter of the substring with the preceding letter of the English alphabet. For example, 'b' is converted to 'a', and 'a' is converted to 'z'.

Return the **lexicographically smallest** string **after performing the operation**.

Example 1:

Input: `s = "cbabc"`

Output: `"baabc"`

Explanation:

Perform the operation on the substring starting at index 0, and ending at index 1 inclusive.

Example 2:

Input: `s = "aa"`

Output: `"az"`

Explanation:

Perform the operation on the last letter.

****Example 3:****

****Input:**** s = "acbbc"

****Output:**** "abaab"

****Explanation:****

Perform the operation on the substring starting at index 1, and ending at index 4 inclusive.

****Example 4:****

****Input:**** s = "leetcode"

****Output:**** "kddsbncd"

****Explanation:****

Perform the operation on the entire string.

****Constraints:****

$1 \leq s.length \leq 3 \times 10^5$ * `s` consists of lowercase English letters

Code Snippets

C++:

```
class Solution {
public:
    string smallestString(string s) {

    }
};
```

Java:

```
class Solution {  
    public String smallestString(String s) {  
  
    }  
}
```

Python3:

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