Problem 3258: Count Substrings That Satisfy K-Constraint I

Problem Information

Difficulty: Easy
Acceptance Rate: 78.53%
Paid Only: No
Tags: String, Sliding Window

Problem Description

You are given a **binary** string `s` and an integer `k`.

A **binary string** satisfies the **k-constraint** if **either** of the following conditions holds:

* The number of `0`'s in the string is at most `k`. * The number of `1`'s in the string is at most `k`.

Return an integer denoting the number of substrings of `s` that satisfy the **k-constraint**.

Example 1:

Input: s = "10101", k = 1

Output: 12

Explanation:

Every substring of `s` except the substrings `"1010"`, `"10101"`, and `"0101"` satisfies the k-constraint.

Example 2:

Input: s = "1010101", k = 2

Output: 25

Explanation:

Every substring of `s` except the substrings with a length greater than 5 satisfies the k-constraint.

Example 3:

Input: s = "11111", k = 1

Output: 15

Explanation:

All substrings of `s` satisfy the k-constraint.

Constraints:

* `1 <= s.length <= 50 ` * `1 <= k <= s.length` * `s[i]` is either `'0'` or `'1'`.

Code Snippets

C++:

```
class Solution {
public:
int countKConstraintSubstrings(string s, int k) {

}
};
```

Java:

```
class Solution {
public int countKConstraintSubstrings(String s, int k) {

}
}
```

Python3:

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