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696. Count Binary Substrings

Easy   👍 3938   👎 858   ♡ Add to List   ⎙ Share

Given a binary string `s`, return the number of non-empty substrings that have the same number of `0`'s and `1`'s, and all the `0`'s and all the `1`'s in these substrings are grouped consecutively.

Substrings that occur multiple times are counted the number of times they occur.

Example 1:

```
Input: s = "00110011"
Output: 6
Explanation: There are 6
substrings that have equal number
of consecutive 1's and 0's:
"0011", "01", "1100", "10",
"0011", and "01".
Notice that some of these
substrings repeat and are counted
the number of times they occur.
Also, "00110011" is not a valid
substring because all the 0's (and
1's) are not grouped together.
```

Example 2:

```
Input: s = "10101"
Output: 4
Explanation: There are 4
substrings: "10", "01", "10", "01"
that have equal number of
consecutive 1's and 0's.
```

Constraints:

- $1 <= s.length <= 10^5$
- `s[i]` is either `'0'` or `'1'`.

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```python
class Solution:
    def countBinarySubstrings(self, s: str) -> int:
        counter = 0
        i = 0
        j = 0

        while i < len(s):
            while j < len(s) and s[i] == s[j]:
                j += 1
            k = j
            while k < len(s) and s[j] == s[k]:
                k += 1

            counter += min(j - i, k -j)
            i = j

        return counter
```

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