

NoOfSubstringContainsthreeChar.java

```

1  package SlidingWindow;
2
3  public class NoOfSubstringContainsthreeChar {
4      //Approch-1-BruteForce
5      public int numberOfSubstringsApproch1(String s) {
6          int l1 = -1;
7          int l2 = -1;
8          int l3 = -1;
9          int result = 0;
10         for (int i=0; i<s.length(); i++) {
11             if (s.charAt(i) == 'a')
12                 l1 = i;
13             else if (s.charAt(i) == 'b')
14                 l2 = i;
15             else
16                 l3 = i;
17             int minimum = Math.min(l1, Math.min(l2, l3));
18             result += minimum + 1;
19         }
20         return result;
21     }
22
23     //Approach-2-SlidingWindow
24     public static int numberOfSubstringsApproch2(String s) {
25         int [] count = new int[]{0, 0, 0};
26         int i = 0;
27         int result = 0;
28         for (int j=0; j<s.length(); j++) {
29             count[s.charAt(j) - 'a'] += 1;
30             while (count[0] > 0 && count[1] > 0 && count[2] > 0) {
31                 count[s.charAt(i++) - 'a'] -= 1;
32             }
33             result += i;
34         }
35         return result;
36     }
37 }

```

Mutations

```

10  1. negated conditional → KILLED
    2. changed conditional boundary → KILLED
11  1. negated conditional → KILLED
13  1. negated conditional → SURVIVED
18  1. Replaced integer addition with subtraction → KILLED
    2. Replaced integer addition with subtraction → KILLED
20  1. replaced int return with 0 for
    SlidingWindow/NoOfSubstringContainsthreeChar::numberOfSubstringsApproch1 → KILLED
28  1. negated conditional → KILLED
    2. changed conditional boundary → KILLED
29  1. Replaced integer addition with subtraction → KILLED
    2. Replaced integer subtraction with addition → KILLED
    1. changed conditional boundary → KILLED
    2. changed conditional boundary → KILLED
30  3. negated conditional → KILLED
    4. changed conditional boundary → KILLED
    5. negated conditional → KILLED
    6. negated conditional → KILLED
31  1. Changed increment from 1 to -1 → KILLED
    2. Replaced integer subtraction with addition → KILLED
    3. Replaced integer subtraction with addition → KILLED

```

| | |
|--------------------|--|
| 33 | 1. Replaced integer addition with subtraction → KILLED |
| 35 | 1. replaced int return with 0 for SlidingWindow/NoOfSubstringContainsThreeChar::numberOfSubstringsApproch2 → KILLED |

Active mutators

- CONDITIONALS_BOUNDARY
- EMPTY_RETURNS
- FALSE_RETURNS
- INCREMENTS
- INVERT_NEGS
- MATH
- NEGATE_CONDITIONALS
- NULL_RETURNS
- PRIMITIVE_RETURNS
- TRUE_RETURNS
- VOID_METHOD_CALLS

Tests examined

- SlidingWindow.NoOfSubstringContainsThreeCharTest.testApproach1(SlidingWindow.NoOfSubstringContainsThreeCharTest) (0 ms)
- SlidingWindow.NoOfSubstringContainsThreeCharTest.testApproach2(SlidingWindow.NoOfSubstringContainsThreeCharTest) (0 ms)

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