



All Competitions > Week of Code 33 > Pattern Count

Pattern Count



by sarfraz1234

Problem

Submissions

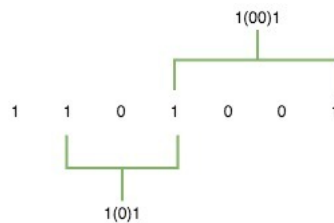
Leaderboard

Discussions

Your submission will run against only preliminary test cases. Full test cases will run at the end of the day.

A string s contains many patterns of the form $1(0+)$ where $(0+)$ represents any non-empty consecutive sequence of 0's. The patterns are allowed to overlap.

For example, consider string "**1101001**", we can see there are two consecutive sequences "**1(0)1**" and "**1(00)1**" which are of the form $1(0+)$.



You have to answer q queries, each containing a string s . For each query, find and print the total number of patterns of the form $1(0+)$ that occur in s .

Input Format

The first line contains a single integer q , denoting the number of queries. After that, q lines follow. The i^{th} of them represents the i^{th} test case and contains a string s for this test case.

Constraints

- $1 \leq q \leq 20$
- $1 \leq |s| \leq 2000$
- s contains only digits and lowercase English letters

Output Format

Output exactly q lines, one for each testcase.

Sample Input 0

```
3
100001abc101
1001ab010abc01001
1001010001
```

Sample Output 0

```
2
2
3
```

Explanation 0

- In the first case, $s = "100001abc101"$ we have $s[0 \dots 5]$ as "**100001**" and $s[9 \dots 11]$ as "**101**". Hence, we print **2** as the answer.

- In the second case, $s = \text{"1001ab010abc01001"}$ we have $s[0 \dots 3]$ as "1001" and $s[13 \dots 16]$ as "1001" . Hence, we print **2** as the answer.
- In the third case, $s = \text{"1001010001"}$ we have $s[0 \dots 3]$ as "1001" , $s[3 \dots 5]$ as "101" and $s[5 \dots 9]$ as "10001" . Hence, we print **3** as the answer.

[f](#) [t](#) [in](#)

Contest ends in 5 days

Submissions: 5899

Max Score: 20

Difficulty: Easy

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C#



```
1 using System;
2 using System.Collections.Generic;
3 using System.IO;
4 using System.Linq;
5 class Solution {
6
7     static int patternCount(string s){
8         // Complete this function
9
10        int cont = 0;
11        bool hayuno = false;
12        bool hayceroenmedio = false;
13        for (int i = 0; i < s.Length; i++)
14        {
15            if (!hayuno)
16            {
17                if (s[i] == '1')
18                {
19                    hayuno = true;
20                }
21            }
22            else if (hayuno)
23            {
24                if (s[i] == '0')
25                {
26                    hayceroenmedio = true;
27                }
28                else if (s[i] != '0' && s[i] != '1')
29                {
30                    hayuno = false;
31                    hayceroenmedio = false;
32                }
33                else if (s[i] == '1')
34                {
35                    if (hayceroenmedio)
36                    {
37                        cont++;
38                    }
39                    hayceroenmedio = false;
40                }
41            }
42            if (hayuno && hayceroenmedio)
43            {
44                if (s[i] == '1')
45                {
46                    cont++;
47                }
48            }
49        }
50
51        return cont;
52    }
53
54    static void Main(String[] args) {
55        int q = Convert.ToInt32(Console.ReadLine());
56        for(int a0 = 0; a0 < q; a0++){
```

```
57         string s = Console.ReadLine();
58         int result = patternCount(s);
59         Console.WriteLine(result);
60     }
61 }
62 }
63 }
```

Line: 51 Col: 25

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