

# Beautiful Toys

## Lab Exam 1 - Replay

Computer Programming

Date: 3 October, 2019

Problem Code: **BTB [5 Marks]**

**Problem Statement:** *This is continuation of the question B2P1A.*

The beauty index is defined as the minimal length of continuous segment of P having exactly N occurrences of C. Along with beauty index, find the number of sub-arrays which form to the beauty index.

### Input

The beauty index is defined as the minimal length of continuous segment of P having exactly N occurrences of C. Here, along with beauty index, you also have to find the number of sub-arrays which form to the beauty index.

**Note:** To get input of above format, don't use `scanf("%s%c%d",str1, &c, &n);` This will not properly input n. Use `scanf("%s%s%d",str1, str2, &n);` and then use `c = str2[0];` to get proper input.

### Output

For each test case, output two space separated integers, the minimal length beautiful segment and the beauty index of P

### Constraints

*Same as question B2P1A.*

### Sample Test Case

Input	Output
5	2 1
AAa A 2	1 3
bbb b 1	3 1
LoL L 2	3 5
XyXyXyyyyXyXyXyX X 2	2 1
XyXyXyyyyXyXyXyXX X 2	

### Explanation

For the first case, there are two consecutive segment denoted by indices [0,1] and [0,2], of which [0,1] is minimal.

For the second case, there are 3 consecutive segment denoted by indices [0,0], [1,1], [2,2] have exactly 1 occurrence of b.

For the third case, there is only 1 consecutive segment denoted by indices [0,2] which has exactly 2 occurrence of L.

For the fourth case, there are 5 consecutive segment denoted by indices [0,2], [2,4], [9,11], [11,13] and [13,15] which have exactly 2 occurrence of X. There are many more for e.g. [2,5] but it is not minimal.

For the fifth case, there is only 1 consecutive segment denoted by indices [15,16] which have exactly 2 occurrence of X. There are 5 consecutive segment which have exactly 3 occurrence of X, but they are not minimal.