

ALOVEG - Hackerearth

Sunday, February 23, 2020 10:44 AM

Note: This problem is exactly same as ***Number of R's - Hackerearth***

Gurpreet loves his crush A(secret) very much. Recently he forgot her birthday that made "A" very upset.

Gurpreet tried lot to make her happy and asked her to forgive him once. Finally "A" changed her mood and gave Gurpreet a task to prove his love.

The task is :

Given a string str consisting of characters 'A' and 'G' only. Now "A" asks the maximum number of A's in the given string. But there's a twist you have to choose a substring of range [l,r].

where $1 \leq l \leq r \leq \text{length}(\text{str})$.

And flip all the characters in choosen range [l,r]. If character is 'A' then change it to 'G' and if it is 'G' then change it to 'A'.

As Gurpreet loves "A" very much so he does not want to make her upset again. Help him with maximum A's.

NOTE:It is necessary for Gurpreet to choose a segment.

input :

first line is T (Number of Test Cases)

Next T lines contain a String.

output :

print T lines with maximum number of A's.

CONSTRAINTS:

$1 \leq T \leq 10$

$1 \leq \text{length}(\text{str}) \leq 10^5$

SAMPLE INPUT

```
3
AGGAG
AGGA
AAGAA
```

SAMPLE OUTPUT

```
4
4
5
```

Explanation

for test case 1 optimal substring is from [2,3] and string will become AAAAG and so the number of A's in it is 4.

similarly for test case 2 optimal substring is from [2,3] and string will become AAAA .

And for test case 3 optimal substring is from [3,3] and string will become AAAAA.

The Code:

```
#include <stdio.h>

int main(){
    int caseCount, seqLength, iter, max, addedACount, gCount;
    scanf("%d", &caseCount);
    char* sequence = (char*)calloc(1000000, sizeof(char));

    while(caseCount > 0){
        scanf("%s", sequence);
        seqLength = strlen(sequence);

        iter = gCount = addedACount = max = 0;
        while(iter < seqLength){
            if(sequence[iter] == 'A') {
                addedACount--;
                gCount++;
            } else {
                addedACount++;
            }

            if(addedACount > 0 && addedACount > max){
                max = addedACount;
            } else if(addedACount <= 0) {
                addedACount = 0;
            }
            iter++;
        }
        caseCount--;
        max = max == 0 ? -1 : max;
        printf("%d\n", (max + gCount));
    }
}
```

The stats:

Score
30.0

Time (sec)

1.06011

Memory (KiB)

64

Language

C