 Marwadi University	Marwadi University Faculty of Technology Department of Information and Communication Technology	
Sem : 5	Name : Pushti Depani	
Day : 30	Date : 16/11/2022	Enrollment No: 92000133018

CP Club 365Days Challenge

Date – 16/11/2022

Programming language – only C language

Problem Statement

Code must be in C language only

<https://www.hackerrank.com/challenges/alternating-characters/problem?isFullScreen=true>


Your Code:

```
#include <assert.h>
#include <ctype.h>
#include <limits.h>
#include <math.h>
#include <stdbool.h>
#include <stddef.h>
#include <stdint.h>
#include <stdio.h>
#include <stdlib.h>
#include <string.h>

char* readline();
char* ltrim(char*);
char* rtrim(char*);

int parse_int(char*);

/*
 * Complete the 'alternatingCharacters' function below.
 *
 * The function is expected to return an INTEGER.
 * The function accepts STRING s as parameter.
 */
```

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```
*/
```

```
int alternatingCharacters(char* s) {
    int a = 0;

    for (int i = 0; s[i]!='\0'; i++)
    {
        if (s[i - 1] == s[i])
        {
            a += 1;
        }
    }

    return a;
}

int main()
{
    FILE* fptr = fopen(getenv("OUTPUT_PATH"), "w");

    int q = parse_int(ltrim(rtrim(readline())));

    for (int q_itr = 0; q_itr < q; q_itr++) {
        char* s = readline();


        int result = alternatingCharacters(s);

        fprintf(fptr, "%d\n", result);
    }

    fclose(fptr);

    return 0;
}

char* readline() {
    size_t alloc_length = 1024;
    size_t data_length = 0;
```

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```

char* data = malloc(alloc_length);

while (true) {
    char* cursor = data + data_length;
    char* line = fgets(cursor, alloc_length - data_length, stdin);

    if (!line) {
        break;
    }

    data_length += strlen(cursor);

    if (data_length < alloc_length - 1 || data[data_length - 1] == '\n') {
        break;
    }

    alloc_length <= 1;

    data = realloc(data, alloc_length);

    if (!data) {
        data = '\0';

        break;
    }
}


if (data[data_length - 1] == '\n') {
    data[data_length - 1] = '\0';

    data = realloc(data, data_length);

    if (!data) {
        data = '\0';
    }
} else {
    data = realloc(data, data_length + 1);

    if (!data) {
        data = '\0';
    }
}

```

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```

        } else {
            data[data_length] = '\0';
        }
    }

    return data;
}

char* ltrim(char* str) {
    if (!str) {
        return '\0';
    }

    if (!*str) {
        return str;
    }

    while (*str != '\0' && isspace(*str)) {
        str++;
    }

    return str;
}

char* rtrim(char* str) {
    if (!str) {
        return '\0';
    }


    if (!*str) {
        return str;
    }

    char* end = str + strlen(str) - 1;

    while (end >= str && isspace(*end)) {
        end--;
    }

    *(end + 1) = '\0';

```

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```

    return str;
}

int parse_int(char* str) {
    char* endptr;
    int value = strtol(str, &endptr, 10);

    if (endptr == str || *endptr != '\0') {
        exit(EXIT_FAILURE);
    }

    return value;
}

```

Output (Screen Shot):

Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

Sample Test case 0

Sample Test case 1

Sample Test case 2

Input (stdin)


Download

1	5
2	AAAA
3	BBBBB
4	ABABABAB
5	BABABA
6	AAABBB

Your Output (stdout)

1	3
2	4
3	0
4	0

Understanding about problem:

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In this program we have to find that any of the characters should not be adjacent to each other and we have to count the number of repeated characters. So we have to find that if we have string 'aaab' then there are 2 'aa' which are same so the output will be 2.

Note: If you can't understand the problem, feel free to contact us and we'll help you. Please don't copy and paste from anywhere.

ALL THE BEST
Team CP Club