 Marwadi University	Marwadi University Faculty of Technology Department of Information and Communication Technology	
Sem : 5	Name : Pushti Depani	
Day : 27	Date : 13/11/2022	Enrollment No: 92000133018

CP Club 365Days Challenge

Date – 13/11/2022

Programming language – only C language

Problem Statement

Code must be in C language only

<https://www.hackerrank.com/challenges/mars-exploration/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();

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

int marsExploration(char* s) {
```

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```

int a;

// for(int i=0;i<s.size();i+=3)
for(int i=0;s[i]!='\0';i+=3) {
    if(s[i]!='S') {
        a++;
    }
    if(s[i+1]!='O') {
        a++;
    }
    if(s[i+2]!='S') {
        a++;
    }
}

return a;
}

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

    char* s = readline();

    int result = marsExploration(s);

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


    fclose(fptr);

    return 0;
}

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

    char* data = malloc(alloc_length);

```

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```

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';
    } else {

```

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```

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

return data;
}

```

Output (Screen Shot):

Test case 0

Test case 1

Test case 2

Test case 3

Test case 4

Test case 5

Test case 6

Compiler Message

Success

Input (stdin)

1 SOSSPSSQSSOR

Expected Output

1 3


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Download

Understanding about problem:

Here in this program there is a message like 'SOS' this type of message should be transferred. So in this it is said we have to take modulo 3 so after getting the length of the string we have to do modulo 3 and find the num of times 'SOS' is repeated. For ex. String passed is 'SOSSESSRS' over here length of string is 9 so there will be 3 'SOS' messages which will be sent. This we can say by doing the modulo i.e., $9/3=3$. So the output will be 3.

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.

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ALL THE BEST
Team CP Club