

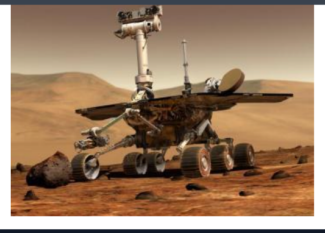
# MARS EXPLORATION

## HackerRank

Prepare > Algorithms > Strings > Mars Exploration

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Problem



Letters in some of the SOS messages are altered by cosmic radiation during transmission. Given the signal received by Earth as a string, *s*, determine how many letters of the SOS message have been changed by radiation.

**Example**

*s* = "SOSTOT"

The original message was SOS SOS. Two of the message's characters were changed in transit.

**Function Description**

Complete the marsExploration function in the editor below.

marsExploration has the following parameter(s):

- string *s*: the string as received on Earth

**Returns**

- int: the number of letters changed during transmission

Change Theme | Language: Java 7

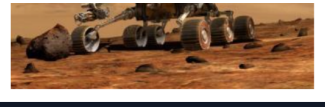
```
14  * The function is expected to return an INTEGER.
15  * The function accepts STRING s as parameter.
16  */
17
18  public static int marsExploration(String s) {
19      int counter_errors = 0;
20      for(int i = 0; i < s.length(); i++){
21          char indiv_string = s.charAt(i);           //SOS is three strings
22          if(i % 3 == 0 && indiv_string != 'S'){
23              counter_errors++;
24          }
25          else if(i % 3 == 1 && indiv_string != 'O'){
26              counter_errors++;
27          }
28          else if(i % 3 == 2 && indiv_string != 'S'){
29              counter_errors++;
30          }
31      }
32
33      return counter_errors;
34  }
```

Line: 37 Col: 1

Submissions

Leaderboard

Discussions



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**Input Format**

There is one line of input: a single string, *s*.

## Congratulations

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Test case 5

Test case 6

Test case 7

Test case 8

Test case 9

Test case 10

Test case 11

Compiler Message

Success

Input (stdin) [Download](#)

```
1  SOSSPSSQSSOR
```

Expected Output [Download](#)

```
1  3
```

Time and Space complexity:

Since it only uses one for loop that time complexity for this code is  $O(n)$ , since  $n$  is the length of the string and you are checking for "SOS", from an 'n' number of strings, hence the time being  $O(n)$ .

The space complexity is constant,  $O(1)$ , since is using a constant space to check for the accounted errors in a string, it is constantly checking for only SOS, regardless of the size of  $n$ .