

### HW\_Count the Reversals 3

Given a string S consisting of only opening and closing curly brackets '{' and '}', find out the minimum number of reversals required to convert the string into a balanced expression. A reversal means changing '{' to '}' or vice-versa.

### Input Format

The First line will be contain String S

### Constraints

 $1 \leq |S| \leq 10^5$ 

### Output Format

returns the minimum number of reversals required to balance the bracket sequence. If balancing is not possible, return -1.

Sample Input 0

④ 2013年2月

valid, given

Language: Java 15

```

1 import java.io.*;
2 import java.util.*;
3
4 public class Solution {
5
6     public static void main(String[] args) {
7         Scanner sc = new Scanner(System.in);
8         String str = sc.nextLine();
9         if(str.length() % 2 != 0){
10             System.out.println(-1);
11             return;
12         }
13         Stack<Character> st = new Stack<>();
14
15         for(int i=0; i<str.length(); i++){
16             char ch = str.charAt(i);
17             if(ch == '{') st.push(ch);
18             else{
19                 if(!st.isEmpty() && st.peek()=='{' && ch=='}'){st.pop();}
20                 else st.push(ch);
21             }
22         }
23
24         int open = 0, close = 0;
25         while(!st.isEmpty()){
26             if(st.pop()=='{') open++;
27             else close++;
28         }
29
30         int ans = (int)(Math.ceil(open/2.0) + Math.ceil(close/2.0));
31         System.out.println(ans);
32     }
33 }

```

35

$$\} \{ \{ \} \} \{ \{ \{$$

$\frac{3}{2} \Rightarrow$  1 2  
~~1.5~~ 1.5  
 0 + Math.ceil(close(2.0));  
 S.F.

$Open = 3$        $Close = 1$   
 $\frac{2}{2} = 1$        $\frac{3}{2} = 0.5$   
 $\frac{1.5}{2} = 0.75$        $\frac{1}{2} = 0.5$   
 $\frac{1}{2} = 0.5$        $\frac{1}{2} = 0.5$

$\frac{24}{2} = 12$   
 $8 \div 2 = 4$

A handwritten diagram illustrating a sequence of 8 curly braces. The braces are arranged in two groups of four, with a circled arrow pointing from the second group to the first, indicating a transition or relationship between the two groups.

Close                      Open

3                      2 2 2

2 3                      2 3

                    3

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