

<https://course.acciojob.com/idle?question=21523eb1-d0bd-4c4f-ab7f-8bf49b848691>

● EASY

● Max Score: 30 Points

●

Minimum Parentheses!

Given a string s of parentheses '(' or ')'.

The task is to find the minimum number of parentheses '(' or ')' (at any positions) we must add to make the resulting parentheses string valid.

A string is valid if:

Open brackets must be closed by the corresponding closing bracket.

Open brackets must be closed in the correct order.

Input Format

The first line given is a string s .

Output Format

Print a single integer denoting the minimum number of parentheses '(' or ')' (at any positions) we must add in A to make the resulting parentheses string valid.

Example 1

Input

`()`

Output

1

Example 2

Input

(((

Output

3

Constraints

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

$s[i] = '('$ or $s[i] = ')'$

Topic Tags

- **Strings**

My code

// in java

```
import java.util.*;  
import java.lang.*;  
import java.io.*;
```

```
public class Main  
{
```

```
    public static void main (String[] args) throws java.lang.Exception  
    {
```

```
        //your code here
```

```
Scanner s=new Scanner(System.in);
String str=s.next();
Stack <Character> stk=new Stack<>();
for(int i=0;i<str.length();i++)
{
    char ch=str.charAt(i);
    if(ch=='(')
    {
        stk.push('(');

    }
    if(ch==')')
    {
        if(stk.empty()) { stk.push(''); }
        else if(stk.peek()==' ' ) stk.push('');
        else stk.pop();
    }

}

System.out.print(stk.size());
}
}
```