

# DMOPC '17 Contest 2 P2 - Balance

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**Time limit:** 3.0s    **Memory limit:** 256M

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You were the Chosen One! You were supposed to destroy the Sith, not join them. You were supposed to bring balance to the Force, not leave it in darkness.

The Force, represented by the characters `(` and `)` is now unbalanced! The Force is *balanced* if it is one of the following:

- `( )`
- `AB`, where  $A$  and  $B$  are balanced
- `(A)`, where  $A$  is balanced

Kenobi can invert (i.e. turn a `(` character to `)`, or vice versa) **at most 1 character** in the Force. Given the sequence which represents the Force, print `YES` if Kenobi can balance it, and `NO` otherwise.

## Input Specification

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The input will contain a single string,  $S$ , the sequence which represents the Force.

## Output Specification

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`YES` if it can be balanced, and `NO` otherwise.

## Constraints

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For all subtasks:

$S$  will have an even number of characters.

### Subtask 1 [20%]

$$2 \leq |S| \leq 1\,000$$

### Subtask 2 [80%]

$$2 \leq |S| \leq 10^5$$

## Sample Input

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```
()()((())
```

# Sample Output

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YES