Problem W. Matching Brackets

Time limit 1000 ms

Mem limit 524288 kB

You will be given a sequence of opening and closing brackets of different types (`(` , `)` , `[` , `]` , `{` , and `}`). You will have to determine if the sequence is a valid one.

A sequence of brackets is considered valid if every opened bracket of a type has a closing bracket of an equivalent type appearing after it. And, there are no unpaired brackets in the sequence.

Input

The input will contain a string of opening and closing brackets. The string will be no longer than 25 characters.

Output

Print `Yes` if the input string contains a valid sequence of parentheses. Otherwise, print `No`.

Samples

Input	Output
`[[(){]}]`	No

Input	Output
`(([]{}[{}]){})[]`	Yes