## Balanced Parentheses

You will be given a sequence consisting of parentheses. Your job is to determine whether the expression is **balanced**. A sequence of parentheses is balanced if every **opening** **parenthesis** has a corresponding **closing** **parenthesis** that occurs **after** the former. There will be **no** **interval symbols** **between** the parentheses. You will be given **three** types of parentheses: (, {, and [.

**{[()]} - Parentheses are balanced.**

**(){}[] - Parentheses are balanced.**

**{[(])} - Parentheses are NOT balanced.**

### Input

* On a **single line** you will receive a **sequence of parentheses**.

### Output

* For each test case, print on a new line "**YES**" if the parentheses are balanced.

Otherwise, print "**NO**". Do not print the quotes.

### Constraints

* **1 ≤ lens ≤ 1000**, where lens is the length of the sequence.
* Each character of the sequence **will be one of** {, }, (, ), [, ].

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| {[()]} | YES |
| {[(])} | NO |
| {{[[(())]]}} | YES |