

You are given a string  $s$  that consists of English letters, punctuation marks, whitespace characters and brackets. It is guaranteed that the brackets in  $s$  form a **regular bracket sequence**.

Your task is to reverse the strings in each pair of matching parenthesis, starting from the innermost one.

### Example

For string " $s = a(bc)de$ " the output should be

`reverseParentheses(s) = "acbde"`.

### Input/Output

- **[time limit] 4000ms (py3)**
- **[input] string  $s$**

A string consisting of English letters, punctuation marks, whitespace characters and brackets. It is guaranteed that parenthesis form a *regular bracket sequence*.

*Constraints:*

$5 \leq x.length \leq 55$ .

- **[output] string**