1021. Remove Outermost Parentheses

Solved ●

Easy Topics Companies Hint

A valid parentheses string is either empty `""`, `"(" + A + ")"`, or `A + B`, where `A` and `B` are valid parentheses strings, and `+` represents string concatenation.

- For example, `""`, `"()"`, `"(())()"`, and `"(()(()))"` are all valid parentheses strings.

A valid parentheses string `s` is primitive if it is nonempty, and there does not exist a way to split it into `s = A + B`, with `A` and `B` nonempty valid parentheses strings.

Given a valid parentheses string `s`, consider its primitive decomposition: `s = P_1 + P_2 + ... + P_k`, where `P_i` are primitive valid parentheses strings.

Return `s` *after removing the outermost parentheses of every primitive string in the primitive decomposition of* `s`.

Example 1:

```
Input: s = "(()())(())"
Output: "()()()"
Explanation:
The input string is "(()())(())", with primitive decomposition "(()())" + "(())".
After removing outer parentheses of each part, this is "()()" + "()" = "()()()".
```

Example 2:

```
Input: s = "(()())(())(()(()))"
Output: "()()()()(())"
Explanation:
The input string is "(()())(())(()(()))", with primitive decomposition "(()())" + "(())" + "(()(()))".
After removing outer parentheses of each part, this is "()()" + "()" + "()(())" = "()()()()(())".
```

Example 3:

```
Input: s = "()()"
Output: ""
Explanation:
The input string is "()()", with primitive decomposition "()" + "()".
After removing outer parentheses of each part, this is "" + "" = "".
```

Constraints:

- `1 <= s.length <= 10^5`
- `s[i]` is either `'('` or `')'`.
- `s` is a valid parentheses string.

Seen this question in a real interview before? 1/4

Yes No

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Hint 1

Discussion (37)