

Balancing Parentheses ⚠️

🕒 Recommended Time: 13 mins 🏆 Points: 50 📝 15 test cases (5 samples)

Skills: Problem Solving (Basic) ⓘ

Coding 📁

EASY

Implementation

Algorithms

Interviewer Guidelines

Strings

CPCE Questions

Given a string that consists of left and right parentheses, '(' and ')', balance the parentheses by inserting parentheses as necessary. Determine the minimum number of characters that must be inserted.

Example

`s = '(()))'`

Insert 1 left parenthesis at the left end of the string to get '((()))'. The string is balanced after 1 insertion.

`s = '))((('`

Insert 2 left parentheses at the start and 2 right parentheses at the end of the string to get '(()())()' after 4 insertions.

Constraints

- $1 \leq \text{length of } s \leq 10^5$

► Input Format For Custom Testing

▼ Sample Case 0

Sample Input

STDIN	Function
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<code>(()))</code>	<code>→ s = '(()))'</code>