



# **Valid Parentheses with Multiple Types**

You are given a string s consisting of different types of parentheses: (), {}, and []. Your task is to determine whether the given string is valid.

A string is considered valid if:

- 1. Every opening bracket has a corresponding closing bracket of the same type.
- 2. The brackets are closed in the correct order. This means that a closing bracket must close the most recent unmatched opening bracket.

### Input:

A string s consisting of characters (, ), {, }, [, and ].

#### **Output:**

- Return true if the string is valid.
- Return false if the string is invalid.

## **Examples:**

• Example 1

Input: s = "()"
Output: true

Explanation: The string contains only one pair of valid parentheses.

#### **Constraints:**

- 0 ≤ s.length ≤ 10^4
- The string s contains only the characters ()[[{}].

#### **Test Cases:**

1. Input: s = "()"

Output: true

2. Input: s = "([)]"

Output: false

3. Input:  $s = "[\{()\}]"$ 

Output: true

4. Input: s = ""

Output: true





5. Input: s = "{[]"
Output: false

# **Edge Cases:**

- 1. Empty string: If the input string is empty, the output should be true since there are no parentheses to match.
- 2. Odd length string: If the string has an odd number of characters, it cannot be valid and should return false.
- 3. Unmatched closing brackets: If the string starts with a closing bracket, it is invalid.