

# Problem 678: Valid Parenthesis String

## Problem Information

**Difficulty:** Medium

**Acceptance Rate:** 39.55%

**Paid Only:** No

**Tags:** String, Dynamic Programming, Stack, Greedy

## Problem Description

Given a string `s` containing only three types of characters: `'(`, `)`` and `'\*``, return `true` \_if\_ `s` \_is\*\*valid\*\*\_.

The following rules define a \*\*valid\*\* string:

- \* Any left parenthesis `'(` must have a corresponding right parenthesis `)`.
- \* Any right parenthesis `)` must have a corresponding left parenthesis `(`.
- \* Left parenthesis `(` must go before the corresponding right parenthesis `)`.
- \* `'\*` could be treated as a single right parenthesis `)` or a single left parenthesis `(` or an empty string `""`.

**Example 1:**

**Input:** s = `()` **Output:** true

**Example 2:**

**Input:** s = `(\*)` **Output:** true

**Example 3:**

**Input:** s = `(\*))` **Output:** true

**Constraints:**

\* `1 <= s.length <= 100` \* `s[i]` is `'(`, `)`` or `'\*`.

## Code Snippets

### C++:

```
class Solution {  
public:  
    bool checkValidString(string s) {  
  
    }  
};
```

### Java:

```
class Solution {  
    public boolean checkValidString(String s) {  
  
    }  
}
```

### Python3:

```
class Solution:  
    def checkValidString(self, s: str) -> bool:
```