

# 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:
```