

#1299. Replace Elements with Greatest Element on Right Side

20. Valid Parentheses

Easy  15480  767  Add to List  Share

Given a string `s` containing just the characters `'('`, `')'`, `'{'`, `'}'`, `'['` and `']'`, determine if the input string is valid.

An input string is valid if:

1. Open brackets must be closed by the same type of brackets.
2. Open brackets must be closed in the correct order.
3. Every close bracket has a corresponding open bracket of the same type.

Example 1:

Input: `s = "()"`

Output: `true`

Example 2:

Input: `s = "()[]{}"`

Output: `true`

Example 3:

Input: `s = "()["`

Output: `false`

Code

```
1 class Solution:
2     def isValid(self, s: str) -> bool:
3         opened = []
4         for i in s:
5             if i == '(' or i == '{' or i == '[':
6                 opened.append(i)
7             elif len(opened) > 0:
8                 if i == ')':
9                     if opened[-1] != '(':
10                        return False
11                    opened.pop()
12                 elif i == '}':
13                     if opened[-1] != '{':
14                        return False
15                    opened.pop()
16                 elif i == ']':
17                     if opened[-1] != '[':
18                        return False
19                    opened.pop()
20             else:
21                 return False
22         if len(opened) == 0:
23             return True
24         else:
25             return False
```

The purpose of the code is to receive a String value which contains parentheses and determine whether the value follows correct grammar or not. The challenging part of the problem was that there are many conditions to consider because it includes three different types of parentheses “()”, “{}”, and “[]”.