


 Description  Editorial  Solutions  Submissions

## 20. Valid Parentheses

Easy Topics Companies Hint

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

An input string is valid if:

- Open brackets must be closed by the same type of brackets.
- Open brackets must be closed in the correct order.
- 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`


**Constraints:**


- `1 <= s.length <= 104`
- `s` consists of parentheses only `'() [] {}'`.


</> Code


C Auto


```
1 char ch[100000];
2 int tp = -1;
3 void push(char c){
4     tp++;
5     ch[tp] = c;
6 }
7 char pop(){
8     char cc = ch[tp];
9     tp--;
10    return cc;
11 }
12 char top(){
13     if(tp != -1)
14         return ch[tp];
15     else return '\0';
16 }
17
18 bool isValid(char* s) {
19     tp = -1;
20     for (int i = 0; s[i] != '\0'; i++)
21     {
22         if (s[i] == '{' || s[i] == '[' || s[i] == '('){
23             push(s[i]);
24         }
25         else if (s[i] == '}' && top() == '{'
26                || s[i] == ']' && top() == '['
27                || s[i] == ')' && top() == '('){
28             pop();
29         }
30         else
31         {
32             return false;
33             return 0;
34         }
35     }
36     if (tp == -1) return true;
37     else return false;
38 }
```


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
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**Accepted** Runtime: 3 ms

• **Case 1** • Case 2 • Case 3

Input

```
s =  
"()"
```

Output

```
true
```

Expected

```
true
```

Accepted Runtime: 3 ms

- Case 1
- **Case 2**
- Case 3

Input

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

Output

```
true
```

Expected

```
true
```

**Accepted** Runtime: 3 ms

- Case 1
- Case 2
- **Case 3**

Input

```
s =  
"()"
```

Output

```
false
```

Expected

```
false
```