LAB 3 - Leetcode

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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.

```c
#include<string.h>
bool isValid(char* s) {
int len = strlen(s);
char stack[len];
int top = -1;
for(int i = 0; i < len; i++) {
if(s[i] == '(' || s[i] == '{' || s[i] == '[') {
top++;
stack[top] = s[i];
} else {
if (top == -1) {
return false;
}
if((s[i] == ')' && stack[top] == '(') || (s[i] == '}' && stack[top] == '{') ||
(s[i] == ']' && stack[top] == '[')) {
top--;
} else {
return false;
}
}
}
return top == -1;
}
```

Output:

Accepted   Runtime: 0 ms

• Case 1   • Case 2   • Case 3   • Case 4

Input

s =
"()"

Output

true

Expected

true

Accepted   Runtime: 0 ms

• Case 1   • Case 2   • Case 3   • Case 4

Input

s =
"()[]{}"

Output

true

Expected

true

Accepted   Runtime: 0 ms

• Case 1   • Case 2   • Case 3   • Case 4

Input

s =
"(]"

Output

false

Expected

false

Accepted Runtime: 0 ms

• Case 1   • Case 2   • Case 3   • **Case 4**

Input

s =
"([])"

Output

true

Expected

true