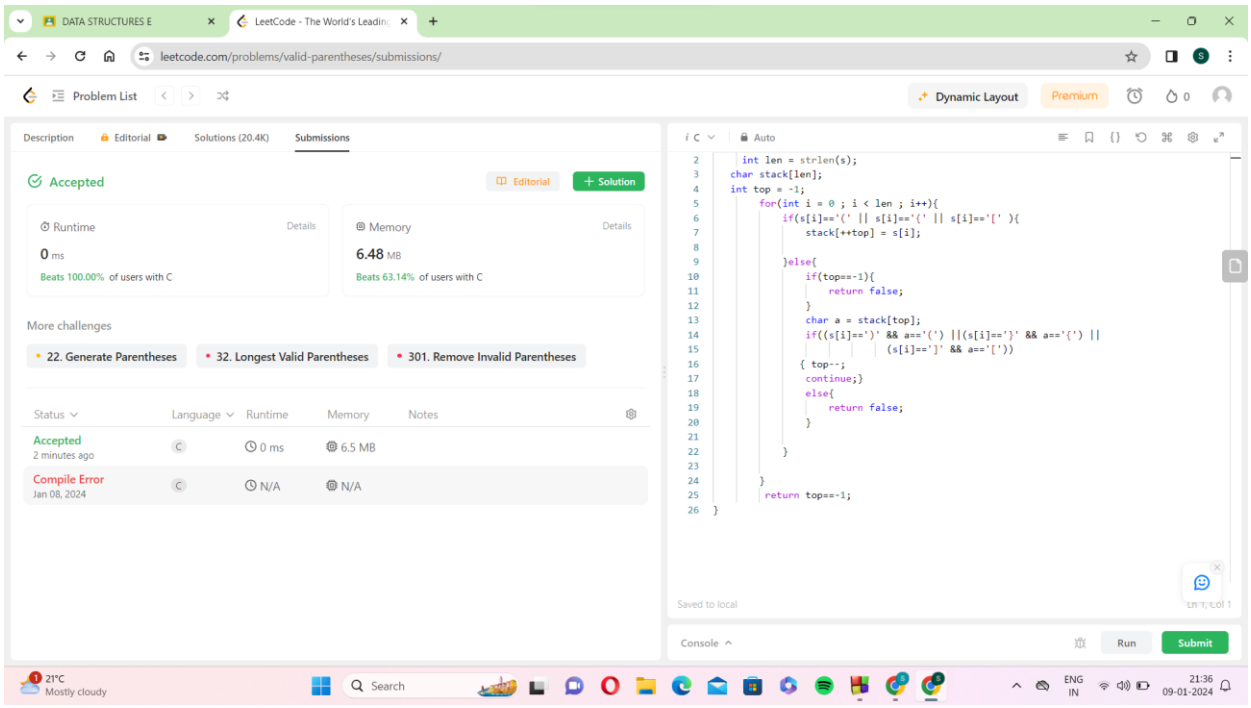
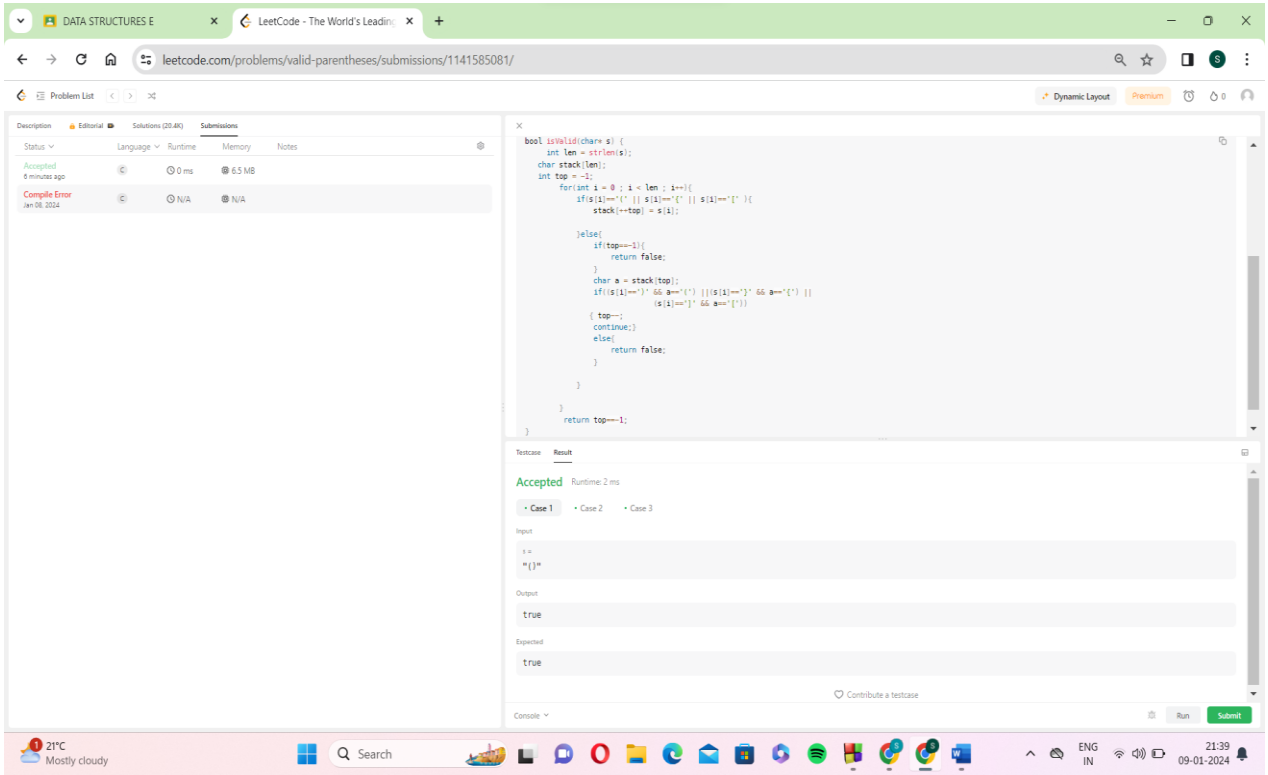
Lab-4

```
bool isValid(char* s) {
    int len = strlen(s);
    std::vector<char> stack;
    for (int i = 0; i < len; i++) {
        if (s[i] == '(' || s[i] == '{' || s[i] == '[') {
            stack.push_back(s[i]);
        } else {
            if (stack.empty()) {
                return false;
            }
            char a = stack.back();
            stack.pop_back();
            if ((s[i] == ')' && a == '(') || (s[i] == '}' && a == '{') || (s[i] == ']' && a == '[')) {
                continue;
            } else {
                return false;
            }
        }
    }
    return stack.empty();
}

int main() {
    char input[] = "{[()]}";
    if (isValid(input)) {
        std::cout << "The string is valid." << std::endl;
    } else {
        std::cout << "The string is not valid." << std::endl;
    }
```

```
    return 0;
}
```


DATA STRUCTURES E
LeetCode - The World's Leadin
leetcode.com/problems/valid-parentheses/submissions/
Problem List
Dynamic Layout
Premium
Description
Editorial
Solutions (20.4K)
Submissions
Accepted
Editorial
Solution
Runtime
Details
0 ms
Beats 100.00% of users with C
Memory
Details
6.48 MB
Beats 63.14% of users with C
More challenges
22. Generate Parentheses
32. Longest Valid Parentheses
301. Remove Invalid Parentheses
Status
Language
Runtime
Memory
Notes
Accepted
2 minutes ago
0 ms
6.5 MB
Compile Error
Jan 08, 2024
N/A
N/A
Auto
int len = strlen(s);
char stack[len];
int top = -1;
for(int i = 0 ; i < len ; i++){
if(s[i]=='(' || s[i]=='{' || s[i]=='['){
stack[++top] = s[i];
}else{
if(top==-1){
return false;
}
char a = stack[top];
if((s[i]==')' && a=='(') ||(s[i]=='}' && a=='{') ||
(s[i]==']' && a=='['))
{ top--;
continue;}
else{
return false;
}
}
}
return top==-1;
}
Saved to local
Ln 1, Col 1
Console
Run
Submit
21°C
Mostly cloudy
Search
ENG
IN
21:36
09-01-2024


DATA STRUCTURES E
LeetCode - The World's Leadin
leetcode.com/problems/valid-parentheses/submissions/1141585081/
Problem List
Dynamic Layout
Premium
Description
Editorial
Solutions (20.4K)
Submissions
Status
Language
Runtime
Memory
Notes
Accepted
6 minutes ago
0 ms
6.5 MB
Compile Error
Jan 08, 2024
N/A
N/A
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]=='['){
stack[++top] = s[i];
}else{
if(top==-1){
return false;
}
char a = stack[top];
if((s[i]==')' && a=='(') ||(s[i]=='}' && a=='{') ||
(s[i]==']' && a=='['))
{ top--;
continue;}
else{
return false;
}
}
}
return top==-1;
}
Testcase
Result
Accepted
Runtime: 2 ms
Case 1
Case 2
Case 3
Input
s =
"()"
Output
true
Expected
true
Contribute a testcase
Console
Run
Submit
21°C
Mostly cloudy
Search
ENG
IN
21:39
09-01-2024