

# MINIMUM ADD TO MAKE PARENTHESES VALID

★ In this problem, we are given a parentheses string that may or may not be valid, and our job is to figure out how many parentheses do we add to make it valid.

We take 2 counters, one which will track open Brackets and one which will track additional requirements. Each time we see an open Bracket its counter is added to and each time we see a closed bracket, we subtract one from open brackets. But if there are none, we add one to our requirements counter.

C++ :

```
int minAddParenthesesValid(string s) {  
    int openBrackets = 0;  
    int minReq = 0;  
    int N = s.length();  
    for (int i = 0; i < N; i++) {  
        char c = s[i];  
        if (c == '(') {  
            openBrackets += 1;  
        } else {  
            if (openBrackets == 0) {  
                minReq += 1;  
            }  
        }  
    }  
}
```

```
    } else {  
        openBrackets -= 1;  
    }  
}  
minReq += openBrackets;  
return minReq;
```