

22. Generate Parentheses

Medium 16.9K 674

Companies

Given n pairs of parentheses, write a function to generate all combinations of well-formed parentheses.

Example 1:

Input: $n = 3$
Output: ["((()))", "(()())", "(())()", "()(())", "()()()"]

Example 2:

Input: $n = 1$

Testcase Result

Accepted Runtime: 1 ms

• Case 1 • Case 2

Input

 $n =$
3

Output

["((()))", "(()())", "(())()", "()(())", "()()()"]

Expected

["((()))", "(()())", "(())()", "()(())", "()()()"]

Console



Run

Submit

```
1 class Solution {
2     public List<String> generateParenthesis(int n) {
3         List<String> list = new ArrayList<String>();
4         generateOneByOne("", list, n, n);
5         return list;
6     }
7     public void generateOneByOne(String sublist, List<String> list, int left, int right){
8         if(left>right){
9             return;
10        }
11        if(left>0){
12            generateOneByOne(sublist+"(", list, left-1, right);
13        }
14        if(right>0){
15            generateOneByOne(sublist+")", list, left, right-1);
16        }
17        if(left==0 && right==0){
18            list.add(sublist);
19            return;
20        }
21    }
22 }
```

Activate Windows
Go to Settings to activate Windows.

Description Discussion (32) Solutions (6.5K) Submissions

Accepted

Next question

• 23. Merge k Sorted Lists

More challenges

• 17. Letter Combinations of a Phone Number

• 20. Valid Parentheses

• 2116. Check if a Parentheses String Can Be Valid

All statuses

All languages

Accepted

in a minute

Java

Compile Error

3 minutes ago

Java

Console



Run

Submit

Close

ReddGhost_33
Feb 13, 2023 14:43

Details

+ Solution

Java

Runtime 1 ms

Beats 92.56%

Memory 42.2 MB

Beats 83.43%

Click the distribution chart to view more details

Notes

Write your notes here

Related Tags

Select tags

0/5

```
class Solution {  
    public List<String> generateParenthesis(int n) {  
        List<String> list = new ArrayList<String>();  
        generateOneByOne("", list, n, n);  
        return list;  
    }  
    public void generateOneByOne(String sublist, List<String> list, int left, int right){  
        if(left>right){  
            return;  
        }  
        if(left>0){  
            generateOneByOne(sublist+"(", list, left-1, right);  
        }  
        if(right>0){  
            generateOneByOne(sublist+")", list, left, right-1);  
        }  
        if(left==0 && right==0){  
            list.add(sublist);  
            return;  
        }  
    }  
}
```

Activate Windows
Go to Settings to activate Windows.