

22. Generate Parentheses

Description

Hints

Submissions

Discuss

Solution

Pick One

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

For example, given $n = 3$, a solution set is:

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

```
public class L22 {

    public List<String> generateParenthesis(int n) {

        List<String> list = new ArrayList<String>();
        String res = "";

        if(n <= 0)
            return list;

        return list;

    }
    //left表示<的个数，right表示>的个数
    public void dfs(List<String> list, String res, int left, int right) {
        if(left > right) { //这是为了防止出现)(的情况
            return ;
        }
        if(left == 0 && right == 0) {
            list.add(res);
            return ;
        }
        //如果left大于0，表示还可以有<出现，加一个，right大于0表示还可以有>出现
        if(left > 0) {
            dfs(list, res + "(", left - 1, right);
        }
        if(right > 0) {
            dfs(list, res + ")", left, right - 1);
        }
    }
}
```