

Description

Solution

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Submissions

22. Generate Parentheses

Medium

5302

272

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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:

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

Accepted 558,538

Submissions 896,318

Seen this question in a real interview before?

Yes

No

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```
1 class Solution {
2     public List<String> generateParenthesis(int n) {
3         List<String> res = new ArrayList<>();
4         backtrack(n, n, "", res);
5         return res;
6     }
7     // This is deapth first search
8     private void backtrack(int left, int right, String s,
9                             List<String> res) {
10         if (left > right)
11             return;
12         if (left == 0 && right == 0) {
13             res.add(s);
14             return;
15         }
16         // "left" or "right" means how many left or right parentheses
17         // could be used here
18         if (left > 0)
19             backtrack(left - 1, right, s + "(", res);
20         if (right > 0)
21             backtrack(left, right - 1, s + ")", res);
22     }
23 }
```

Testcase

Run Code Result

Debugger

Accepted

Runtime: 0 ms

Your input

3

Output

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

Diff

Expected

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