

## 22. Generate Parentheses

QuestionEditorial Solution

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- Total Accepted: **95460**
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- Difficulty: **Medium**

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:

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

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```
// zzw  
// C++  
class Solution {  
public:  
    void search(int left,int right,string path,vector<string> &v)  
    {  
        if(left==0 && right==0)  
        {  
            v.push_back(path);  
        }  
        if(left>0)  
        {  
            search(left-1,right,path+"(",v);  
        }  
        if(right>left)
```

```
        {
            search(left,right-1,path+"\"",v);
        }
    }
vector<string> generateParenthesis(int n) {
    vector<string> res;
    search(n,n,"",res);
    return res;
}
};
```