

# Assignment #8: 树为主  
Updated 1704 GMT+8 Apr 8, 2025  
2025 spring, Compiled by 李振硕、信息管理系

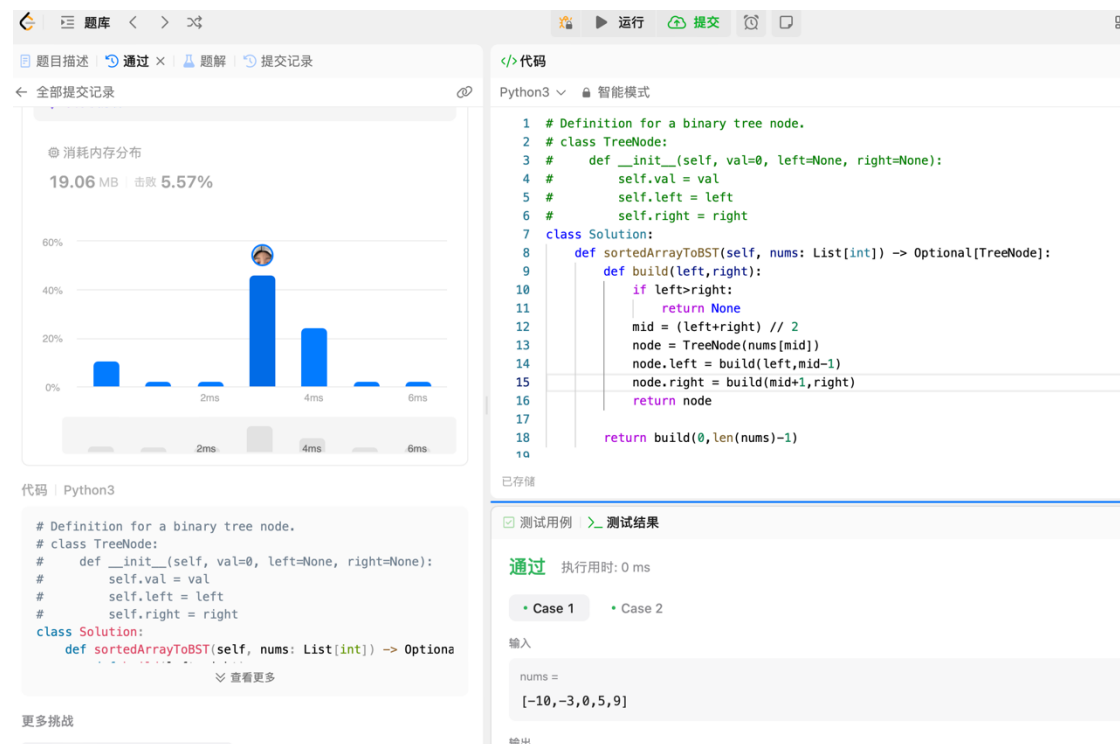
## ## 1. 题目

### LC108.将有序数组转换为二叉树

dfs, <https://leetcode.cn/problems/convert-sorted-array-to-binary-search-tree/>

思路:

代码:



### M27928:遍历树

adjacency list, dfs,

<http://cs101.openjudge.cn/practice/27928/>

思路:

代码:

```
```python
```
```

代码运行截图 <mark>（至少包含有"Accepted"）</mark>

### LC129.求根节点到叶节点数字之和

dfs, <https://leetcode.cn/problems/sum-root-to-leaf-numbers/>

思路:

代码:

全部提交记录

通过 108 / 108 个通过的测试用例

LEE 李振强 提交于 2025.04.10 22:01

官方题解 写题解

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执行用时分布

0 ms 击败 100.00%

复杂度分析

消耗内存分布

17.42 MB 击败 79.96%

100% 50% 0% 1ms 2ms 3ms 4ms

代码 Python3

代码

Python3 智能模式

```
5 # self.left = left
6 # self.right = right
7 class Solution:
8     def sumNumbers(self, root: Optional[TreeNode]) -> int:
9         def dfs(node, current_sum):
10             if not node:
11                 return 0
12             current_sum = current_sum * 10 + node.val
13             if not node.left and not node.right:
14                 return current_sum
15             return dfs(node.left, current_sum) + dfs(node.right, current_sum)
16
17         return dfs(root, 0)
18
19
```

已存储 行 16,

测试用例 测试结果

通过 执行用时: 0 ms

Case 1 Case 2

输入

root = [1,2,3]

输出

25

预期结果

### M22158:根据二叉树前中序序列建树  
tree, <http://cs101.openjudge.cn/practice/22158/>  
思路:  
代码:

#48910414提交状态

查看 提交 统计 提

状态: Accepted

源代码

```
def build_postorder(preorder, inorder):
    if not preorder:
        return ""
    root = preorder[0]
    root_index = inorder.index(root)

    # 分出左右子树
    left_in = inorder[:root_index]
    right_in = inorder[root_index + 1:]

    left_pre = preorder[1:1 + len(left_in)]
    right_pre = preorder[1 + len(left_in):]

    # 递归重建并拼接后序
    left_post = build_postorder(left_pre, left_in)
    right_post = build_postorder(right_pre, right_in)

    return left_post + right_post + root

# 多组输入处理
try:
    while True:
        pre = input().strip()
        ino = input().strip()
        print(build_postorder(pre, ino))
except EOFError:
    pass
```

基本信息

#: 48910414

题目: 22158

提交人: 24n2300093007

内存: 3532kB

时间: 21ms

语言: Python3

提交时间: 2025-04-14 19:05:19

### M24729:括号嵌套树

dfs, stack, <http://cs101.openjudge.cn/practice/24729/>

思路:

代码:

#48910707提交状态

[查看](#) [提交](#) [统计](#) [提问](#)

状态: **Accepted**

源代码

```
class Node:
    def __init__(self, val):
        self.val = val
        self.children = []

def parse_tree(s):
    stack = []
    i = 0
    root = None

    while i < len(s):
        if s[i].isalpha():
            node = Node(s[i])
            if stack:
                stack[-1].children.append(node)
            else:
                root = node
            stack.append(node)
            i += 1
        elif s[i] == '(':
            i += 1
        elif s[i] == ',':
            stack.pop()
            i += 1
        elif s[i] == ')':
            stack.pop()
            i += 1
        else:
            i += 1 # ignore unexpected

    return root

def preorder(node, res):
    if not node:
        return
    res.append(node.val)
    for child in node.children:
        preorder(child, res)

def postorder(node, res):
    if not node:
        return
    for child in node.children:
        postorder(child, res)
    res.append(node.val)

s = input().strip()
root = parse_tree(s)

pre_res = []
post_res = []
preorder(root, pre_res)
postorder(root, post_res)

print(' '.join(pre_res))
print(' '.join(post_res))
```

基本信息

#: 48910707

题目: 24729

提交人: 24n2300093007

内存: 3624kB

时间: 22ms

语言: Python3

提交时 2025-04-14 19:38:09

间:

### LC3510.移除最小数对使数组有序 II  
doubly-linked list + heap,  
<https://leetcode.cn/problems/minimum-pair-removal-to-sort-array-ii/>

思路:

代码:

## ## 2. 学习总结和收获

这次作业我觉得非常难，会做的只有一道题，需要复习 tree 结构。遍历树和移除最小数对使数组有序 II 这两道题看了答案但是还没明白。。想复习完 tree 结构再补