

27638:求二叉树的高度和叶子数目

```
def cs27638(n):  
    def k(ni):  
        l = lst[ni][0]  
        if l > -1:  
            ans[l] = ans[ni] + 1  
            k(l)  
        r = lst[ni][1]  
        if r > -1:  
            ans[r] = ans[ni] + 1  
            k(r)  
    lst = []  
    ans = [0] * n  
    f = [False] * (n + 1)  
    for i in range(n):  
        ai = tuple(map(int, input().split()))  
        lst.append(ai)  
        f[ai[0]] = True  
        f[ai[1]] = True  
    k(f.index(False))  
    print(max(ans), lst.count((-1, -1)))
```

状态: **Accepted**

源代码

```
def cs27638(n):
    def k(ni):
        l = lst[ni][0]
        if l > -1:
            ans[l] = ans[ni] + 1
            k(l)
        r = lst[ni][1]
        if r > -1:
            ans[r] = ans[ni] + 1
            k(r)

    lst = []
    ans = [0] * n
    f = [False] * (n + 1)
    for i in range(n):
        ai = tuple(map(int, input().split()))
        lst.append(ai)
        f[ai[0]] = True
        f[ai[1]] = True
    k(f.index(False))
    print(max(ans), lst.count((-1, -1)))

cs27638(int(input()))
```

基本信息

#: 44298778
题目: 27638
提交人: 22n2200011358
内存: 3636kB
时间: 25ms
语言: Python3
提交时间: 2024-03-19 16:06:24

24729:括号嵌套树

```
def cs24729(s):
```

```
    lst = []
```

```
    ans1, ans2 = "", ""
```

```
    for i in s:
```

```
        if i in
```

```
        "QWERTYUIOPASDFGHJKLZXCVBNM":
```

```
            lst.append(i)
```

```
            ans1 += i
```

```
        elif i == ",":
```

```
            ans2 += lst.pop()
```

```
        elif i == "(":
```

```
            lst.append(i)
```

```
elif i == ")":
```

```
while lst[-1] != "(":
```

```
ans2 += lst.pop()
```

```
lst.pop()
```

```
print(ans1)
```

```
print(ans2)
```

#44299752提交状态

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状态: **Accepted**

源代码

```
def cs24729(s):
    lst = []
    ans1, ans2 = "", ""
    for i in s:
        if i in "QWERTYUIOPASDFGHJKLZXCVBNM":
            lst.append(i)
            ans1 += i
        elif i == ",":
            ans2 += lst.pop()
        elif i == "(":
            lst.append(i)
        elif i == ")":
            while lst[-1] != "(":
                ans2 += lst.pop()
            lst.pop()
    print(ans1)
    print(ans2)
```

```
cs24729("(" + input() + ")")
```

基本信息

#: 44299752
题目: 24729
提交人: 22n2200011358
内存: 3592kB
时间: 23ms
语言: Python3
提交时间: 2024-03-19 16:46:51

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02775:文件结构“图”

```
def cs02775():
```

```
    flag = False
```

```
    x = 1
```

```
    di = 0
```

```
    print('DATA SET ' + str(x) + ":")
```

```
    print('ROOT')
```

```
    x += 1
```

```
    lst = [[] for i in range(30)]
```

```
while True:
```

```
    s = input()
```

```
    if s == "#":
```

```
        exit()
```

```
    elif s == "*":
```

```
        lst[0].sort()
```

```
        for i in lst[0]:
```

```
            print(i)
```

```
        lst = [[] for i in range(30)]
```

```
        flag = True
```

```
        continue
```

```
    if flag:
```

```
        print()
```

```
        print('DATA SET ' + str(x) + ":")
```

```
        print('ROOT')
```

```
        x += 1
```

```
        flag = False
```

```
    if s[0] == "f":
```

```
        lst[di].append(s)
```

```
    elif s[0] == "d":
```

```
        di += 1
```

```
        print("|" * di + s)
```

```
elif s == "]:
```

```
    lst[di].sort()
```

```
    for i in lst[di]:
```

```
        print("|" + " " * di + i)
```

```
    lst[di] = []
```

```
    di -= 1
```

#44307025提交状态

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状态: Accepted

源代码

```
def cs02775():
    flag = False
    x = 1
    di = 0
    print('DATA SET ' + str(x) + ":")
    print('ROOT')
    x += 1
    lst = [[] for i in range(30)]
    while True:
        s = input()
        if s == "#":
            exit()
        elif s == "*":
            lst[0].sort()
            for i in lst[0]:
                print(i)
            lst = [[] for i in range(30)]
            flag = True
            continue
        if flag:
            print()
            print('DATA SET ' + str(x) + ":")
            print('ROOT')
            x += 1
            flag = False
        if s[0] == "f":
            lst[di].append(s)
        elif s[0] == "d":
            di += 1
            print("|" + " " * di + s)
        elif s == "]:
            lst[di].sort()
            for i in lst[di]:
                print("|" + " " * di + i)
            lst[di] = []
```

基本信息

#: 44307025

题目: 02775

提交人: 22n2200011358

内存: 3568kB

时间: 22ms

语言: Python3

提交时间: 2024-03-19 22:57:55

25140:根据后序表达式建立表达式树

```
def cs25140(n):
```

```
    for i in range(n):
```

```
        s = input()
```

```
        l = len(s)
```

```
        lst = [[-1, -1] for j in range(l)]
```

```
tmp, ans = [], ""
```

```
for j in range(l):
```

```
    if 65 <= ord(s[j]) <= 90:
```

```
        lst[j][1] = tmp.pop()
```

```
        lst[j][0] = tmp.pop()
```

```
        tmp.append(j)
```

```
    else:
```

```
        tmp.append(j)
```

```
    tem = [[tmp.pop()]]
```

```
def k(ni):
```

```
    tem.append([])
```

```
    for j in tem[ni]:
```

```
        if lst[j][0] > -1:
```

```
            tem[ni + 1].append(lst[j][0])
```

```
        if lst[j][1] > -1:
```

```
            tem[ni + 1].append(lst[j][1])
```

```
    if tem[ni + 1]:
```

```
        k(ni + 1)
```

```
k(0)
```

```
for j in range(len(tem)):
```

```
for k in tem[j]:
```

```
ans = s[k] + ans
```

```
print(ans)
```

#44309297提交状态

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状态: **Accepted**

源代码

```
def cs25140(n):
    for i in range(n):
        s = input()
        l = len(s)
        lst = [[-1, -1] for j in range(l)]
        tmp, ans = [], ""
        for j in range(l):
            if 65 <= ord(s[j]) <= 90:
                lst[j][1] = tmp.pop()
                lst[j][0] = tmp.pop()
                tmp.append(j)
            else:
                tmp.append(j)
        tem = [tmp.pop()]

    def k(ni):
        tem.append([])
        for j in tem[ni]:
            if lst[j][0] > -1:
                tem[ni + 1].append(lst[j][0])
            if lst[j][1] > -1:
                tem[ni + 1].append(lst[j][1])
        if tem[ni + 1]:
            k(ni + 1)

    k(0)
    for j in range(len(tem)):
        for k in tem[j]:
            ans = s[k] + ans
    print(ans)

cs25140(int(input()))
```

基本信息

#: 44309297
题目: 25140
提交人: 22n2200011358
内存: 3696kB
时间: 26ms
语言: Python3
提交时间: 2024-03-20 10:55:39

24750:根据二叉树中后序序列建树

```
def cs24750():
```

```
ans = ['']
```

```
def pre(m, p):
```

```
if len(m) >= 1:
```

```
a = m.split(p[-1])
```

```
ans[0] += p[-1]
```

```
for i in a:
```

```
pre(i, p[:len(i)])
```

```
p = p[len(i):]
```

```
pre(input(), input())
```

```
print(ans[0])
```

#44309758提交状态

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状态: Accepted

源代码

```
def cs24750():
    ans = []

    def pre(m, p):
        if len(m) >= 1:
            a = m.split(p[-1])
            ans[0] += p[-1]
            for i in a:
                pre(i, p[:len(i)])
            p = p[len(i):]

    pre(input(), input())
    print(ans[0])

cs24750()
```

基本信息

#: 44309758
题目: 24750
提交人: 22n2200011358
内存: 3592kB
时间: 21ms
语言: Python3
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22158:根据二叉树前中序序列建树

```
def cs22158():
```

```
    def post(p, m):
```

```
        if len(m) >= 1:
```

```
            a = m.split(p[0])
```

```
            a.reverse()
```

```
            ans[0] = p[0] + ans[0]
```

```
            for i in a:
```

```
                if i:
```

```
                    post(p[-len(i):], i)
```



```
p = p[::-len(i)]
```

```
while True:
```

```
try:
```

```
ans = [""]
```

```
post(input(), input())
```

```
print(ans[0])
```

```
except:
```

```
exit()
```

```
cs22158()
```

#44309887提交状态

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状态: **Accepted**

源代码

```
def cs22158():  
  
    def post(p, m):  
        if len(m) >= 1:  
            a = m.split(p[0])  
            a.reverse()  
            ans[0] = p[0] + ans[0]  
            for i in a:  
                if i:  
                    post(p[-len(i):], i)  
                    p = p[:-len(i)]  
  
    while True:  
        try:  
            ans = [""]  
            post(input(), input())  
            print(ans[0])  
  
        except:  
            exit()  
  
cs22158()
```

基本信息

#: 44309887
题目: 22158
提交人: 22n2200011358
内存: 3604kB
时间: 23ms
语言: Python3
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总结：树的问题我习惯于使用链表结构去存储，并以递归的方式处理数据，其优点是代码简

洁。建立完整的类的写法我还在跟着题解学习，其优点是思路清晰。这次出现的 BUG 都是循环里忘记初始化参量导致的，仍需注意。