

Duplicate subtree in Binary Tree

Given a binary tree, find out whether it contains a duplicate sub-tree of size two or more, or not.

Input :

```
1
/\
2 3
/\
4 5 2
/\
4 5
```

Output : 1

Explanation :

```
2
/\
4 5
```

is the duplicate sub-tree.

Example 2 :

Input :

```
1
/\
2 3
```

Output: 0

Explanation: There is no duplicate sub-tree in the given binary tree.

```
def dupSub(self, root):
    # code here
    res = {}
    self.helper(root, res)
    for ele in res.keys():
        if res[ele]>1:
            return 1
    return 0

def helper(self, root, res):
```

```
if root is None:
    return "#"
if root.left is root.right:
    return ""
lt = self.helper(root.left, res)
rt = self.helper(root.right, res)
temp = str(root.data)+lt+rt
if temp in res:
    res[temp] = res[temp]+1
else:
    res[temp] = 1
return temp
```