100. Same Tree

⏱ Created	@November 26, 2022 11:13 AM
⦿ Difficulty	Easy
≡ LC Url	https://leetcode.com/problems/same-tree/
⦿ Importance	
≔ Tag	DFS NEET Tree
≡ Video	

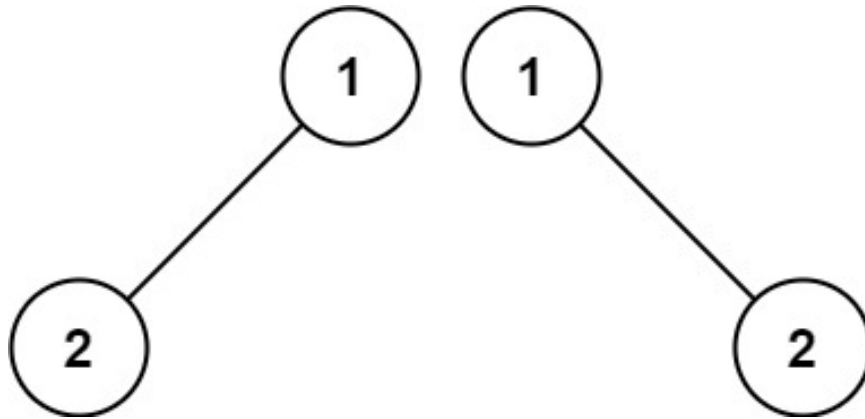Given the roots of two binary trees `p` and `q`, write a function to check if they are the same or not.

Two binary trees are considered the same if they are structurally identical, and the nodes have the same value.
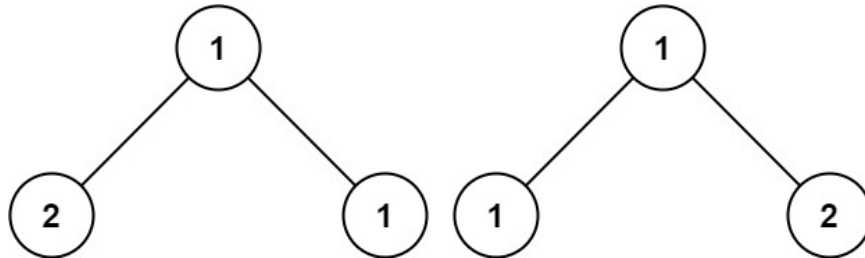
Example 1:
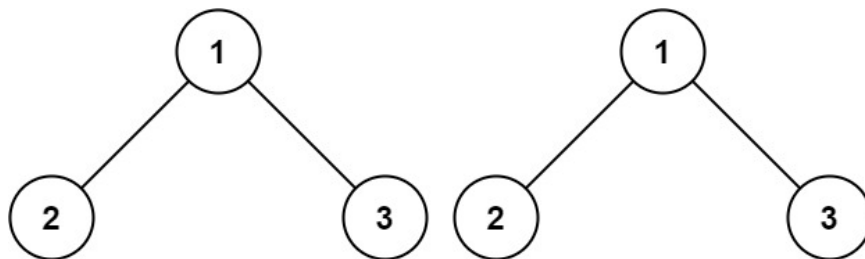

```
Input: p = [1,2,3], q = [1,2,3]
Output: true
```

Example 2:

```
Input: p = [1,2], q = [1,null,2]
Output: false
```

Example 3:


```
Input: p = [1,2,1], q = [1,1,2]
Output: false
```

Constraints:

- The number of nodes in both trees is in the range `[0, 100]`.

- `10 4  <= Node.val <= 10 4`

Solution

```
# Definition for a binary tree node.
# class TreeNode:
#     def __init__(self, val=0, left=None, right=None):
#         self.val = val
```

```
#        self.left = left
#        self.right = right
class Solution:
    def isSameTree(self, p: Optional[TreeNode], q: Optional[TreeNode]) -> bool:
        if not p and not q:
            return True
        if not p or not q:
            return False
        if p.val != q.val:
            return False
        return self.isSameTree(p.left, q.left) and self.isSameTree(p.right, q.right)
```

写的非常好：写树算法的套路框架 - 相同的树 - 力扣（LeetCode）