100. Same Tree

100 Same Tree

- **Depth-first Search** + tree

Description

Given two binary trees, 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.

1. Thought line

2. Depth-first Search + tree

```
/**
 * Definition for a binary tree node.
 * struct TreeNode {
 *     int val;
 *     TreeNode *left;
 *     TreeNode *right;
 *     TreeNode(int x) : val(x), left(NULL), right(NULL) {}
 * };
 */
class Solution {
public:
    bool isSameTree(TreeNode* p, TreeNode* q) {
        if (p == nullptr && q == nullptr)
            return true;
        if (p != nullptr && q != nullptr)
            return (p->val == q->val) && isSameTree(p->left, q->left) && isSameTree(p->right, q->right);
        return false;
    }
};
```