

# Subtree of Another Tree

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/**
 * Definition for a binary tree node.
 * struct TreeNode {
 *     int val;
 *     TreeNode *left;
 *     TreeNode *right;
 *     TreeNode() : val(0), left(nullptr), right(nullptr) {}
 *     TreeNode(int x) : val(x), left(nullptr), right(nullptr) {}
 *     TreeNode(int x, TreeNode *left, TreeNode *right) : val(x),
left(left), right(right) {}
 * };
 */
class Solution {
public:
    bool isSubtree(TreeNode* root, TreeNode* subRoot, int check = 0) {

        if (root == nullptr && subRoot == nullptr) return true;
        if (root == nullptr || subRoot == nullptr) return false;

        if (root->right == nullptr && root->left == nullptr){
            if (subRoot->right == nullptr && subRoot->left == nullptr){
                printf("reached\n");
                return root->val == subRoot->val;
            }
        }

        bool awn = false;
        bool awn1 = false;
        bool awn2 = false;
        bool awn3 = false;

        if (root->val == subRoot->val){
            awn = isSubtree(root->left, subRoot->left, 1);
            awn1 = isSubtree(root->right, subRoot->right, 1);
```

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    }

    if (!awn && check == 0) awn2 = isSubtree(root->left, subRoot);
    if (!awn1 && check == 0) awn3 = isSubtree(root->right, subRoot);

    return (awn && awn1) || (awn2 || awn3);

}

};
```