110. Balanced Binary Tree

题目描述： **https://leetcode.com/problems/balanced-binary-tree/**

给定一棵二叉树，判断其是否是平衡二叉树。

解题思路：

循环递归左右子树判断是否为平衡。

代码：

```cpp
/**
 * 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 isBalanced(TreeNode* root) {
        int balanced = findLength(root);
        if(balanced < 0)
            return false;
        return true;
    }
    int findLength(TreeNode* root){
        if(root == NULL){
            return 0;
        }
        int leftLength = 0;
        int rightLength = 0;
        if(root->left != NULL){
            leftLength = findLength(root->left);
            if(leftLength < 0){
                return -1;}
            leftLength+=1;
        }
        if(root->right != NULL){
            rightLength = findLength(root->right);
            if(rightLength < 0){
                return -1;}
            rightLength+=1;
        }
        if(abs(leftLength-rightLength) > 1){
            return -1;}
        if(leftLength > rightLength)
            return leftLength;
        return rightLength;
    }
};
```