

110. Balanced Binary Tree

Given a binary tree, determine if it is height-balanced.

For this problem, a height-balanced binary tree is defined as:

a binary tree in which the left and right subtrees of every node differ in height by no more than 1.

```
class ResultType {
    public boolean isBalanced;
    public int maxDepth;

    public ResultType(boolean isBalanced, int maxDepth) {
        this.isBalanced = isBalanced;
        this.maxDepth = maxDepth;
    }
}

class Solution {

    public boolean isBalanced(TreeNode root) {
        return helper(root).isBalanced;
    }

    private ResultType helper(TreeNode root) {
        if (root == null)
            return new ResultType(true, 0);

        ResultType left = helper(root.left);
        ResultType right = helper(root.right);

        if (!left.isBalanced || !right.isBalanced)
            return new ResultType(false, -1);

        if (Math.abs(left.maxDepth - right.maxDepth) > 1)
            return new ResultType(false, -1);

        int depth = Math.max(left.maxDepth, right.maxDepth) + 1;
        return new ResultType(true, depth);
    }
}
```

