

이진 트리가 높이 균형인지 판단하라.

Input: root = [3,9,20,null,null,15,7]

Output: true

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

1.dfs

class Solution:

result = True

def isBalanced(self, root: TreeNode) -> bool:

def dfs(node, depth):

if node == None:

return depth - 1

left = dfs(node.left, depth + 1)

right = dfs(node.right, depth + 1)

if abs(left - right) > 1:

self.result = False

return max(left, right)

dfs(root, 1)

return self.result

class Solution:

def isBalanced(self, root: TreeNode) -> bool:

def check(root):

if not root:

return 0

left = check(root.left)

right = check(root.right)

if left == -1 or right == -1 or abs(left - right) > 1:

return -1

return max(left, right) + 1

return check(root) != -1