AlgoExpert

Quad Layout

JavaScript

12px

Sublime

Monok

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Solution 1 Solution 2

```javascript
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// Average case: when the tree is balanced
// O(n) time | O(h) space - where n is the number of nodes in
// the Binary Tree and h is the height of the Binary Tree
function nodeDepths(root) {
  let sumOfDepths = 0;
  const stack = [{node: root, depth: 0}];
  while (stack.length > 0) {
    const {node, depth} = stack.pop();
    if (node === null) continue;
    sumOfDepths += depth;
    stack.push({node: node.left, depth: depth + 1});
    stack.push({node: node.right, depth: depth + 1});
  }
  return sumOfDepths;
}

// This is the class of the input binary tree.
class BinaryTree {
  constructor(value) {
    this.value = value;
    this.left = null;
    this.right = null;
  }
}

exports.nodeDepths = nodeDepths;

```