

| Prompt | Scratchpad | Our Solution(s) | Video Explanation | Run Code |
|--------|------------|-----------------|-------------------|----------|
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| Solution 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Solution 2 | Solution 3 | Solution 4 |
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| <pre>1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved. 2 3 ▼ import java.util.*; 4 5 ▼ class Program { 6     // Average case: when the tree is balanced 7     // O(nlog(n)) time   O(h) space - where n is the number of nodes in 8     // the Binary Tree and h is the height of the Binary Tree 9 ▼ public static int allKindsOfNodeDepths(BinaryTree root) { 10     if (root == null) return 0; 11     return allKindsOfNodeDepths(root.left) + allKindsOfNodeDepths(root.right) + 12         nodeDepths(root, 0); 13 } 14 15 ▼ public static int nodeDepths(BinaryTree node, int depth) { 16     if (node == null) return 0; 17     return depth + nodeDepths(node.left, depth + 1) + nodeDepths(node.right, depth + 1); 18 } 19 20 ▼ static class BinaryTree { 21     int value; 22     BinaryTree left; 23     BinaryTree right; 24 25 ▼ public BinaryTree(int value) { 26     this.value = value; 27     left = null; 28     right = null; 29 } 30 } 31 } 32</pre> |            |            |            |

