

Solution 1

Solution 2

1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 class Program {
4 class BinaryTreeNode {
5 var value: Int
6 var left: BinaryTreeNode?
7 var right: BinaryTreeNode?
8
9 init(value: Int) {
10 self.value = value
11 left = nil
12 right = nil
13 }
14 }
15
16 // O(n) time | O(n) space - where n is the number of nodes
17 // in the Binary Tree
18 func flattenBinaryTree(root: BinaryTreeNode) -> BinaryTreeNode {
19 var inOrderNodes = [BinaryTreeNode]()
20 getNodesInOrder(root: root, array: &inOrderNodes)
21 for i in 0 ..< inOrderNodes.count - 1 {
22 var leftNode = inOrderNodes[i]
23 var rightNode = inOrderNodes[i + 1]
24 leftNode.right = rightNode
25 rightNode.left = leftNode
26 }
27 return inOrderNodes[0]
28 }
29
30 func getNodesInOrder(root: BinaryTreeNode?, array: inout [BinaryTreeNode]) {
31 if let tree = root {
32 getNodesInOrder(root: tree.left, array: &array)
33 array.append(tree)
34 getNodesInOrder(root: tree.right, array: &array)
35 }
36 }
37 }
38

