

Solution 1Solution 2

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2

3import java.util.\*;

4

5class Program {

6// O(n) time | O(n) space - where n is the number of nodes in the Binary Tree

7public static BinaryTreeNode flattenBinaryTree(BinaryTreeNode root) {

8List<BinaryTreeNode> inOrderNodes = getNodesInOrder(root, new ArrayList<BinaryTreeNode>());

9for (int i = 0; i < inOrderNodes.size() - 1; i++) {

10BinaryTreeNode leftNode = inOrderNodes.get(i);

11BinaryTreeNode rightNode = inOrderNodes.get(i + 1);

12leftNode.right = rightNode;

13rightNode.left = leftNode;

14}

15return inOrderNodes.get(0);

16}

17

18public static List<BinaryTreeNode> getNodesInOrder(BinaryTreeNode tree, List<BinaryTreeNode> array) {

19if (tree != null) {

20getNodesInOrder(tree.left, array);

21array.add(tree);

22getNodesInOrder(tree.right, array);

23}

24return array;

25}

26

27static class BinaryTreeNode {

28int value;

29BinaryTreeNode left = null;

30BinaryTreeNode right = null;

31

32public BinaryTreeNode(int value) {

33this.value = value;

34}

35}

36}

37

