

Our Solution(s)

Run Code

Your Solutions

Run Code

Solution 1

```
1 // Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 import java.util.function.Function;
4
5 class Program {
6     // O(n) time | O(1) space
7     public static void iterativeInOrderTraversal(
8         BinaryTreeNode tree, Function<BinaryTreeNode, Void> callback) {
9         BinaryTreeNode previousNode = null;
10        BinaryTreeNode currentNode = tree;
11        while (currentNode != null) {
12            BinaryTreeNode nextNode;
13            if (previousNode == null || previousNode == currentNode.parent) {
14                if (currentNode.left != null) {
15                    nextNode = currentNode.left;
16                } else {
17                    callback.apply(currentNode);
18                    nextNode = currentNode.right != null ? currentNode.right : c
19                }
20            } else if (previousNode == currentNode.left) {
21                callback.apply(currentNode);
22                nextNode = currentNode.right != null ? currentNode.right : cur
23            } else {
24                nextNode = currentNode.parent;
25            }
26            previousNode = currentNode;
27            currentNode = nextNode;
28        }
29    }
30
31    static class BinaryTreeNode {
32        public int value;
33        public BinaryTreeNode left;
```

Solution 1 Solution 2 Solution 3

```
1 import java.util.function.Function;
2
3 class Program {
4     public static void iterativeInOrderTraversal(
5         BinaryTreeNode tree, Function<BinaryTreeNode, Void> callback) {
6         // Write your code here.
7     }
8
9     static class BinaryTreeNode {
10        public int value;
11        public BinaryTreeNode left;
12        public BinaryTreeNode right;
13        public BinaryTreeNode parent;
14
15        public BinaryTreeNode(int value) {
16            this.value = value;
17        }
18
19        public BinaryTreeNode(int value, BinaryTreeNode parent) {
20            this.value = value;
21            this.parent = parent;
22        }
23    }
24 }
25
```

Our Tests

Custom Output

Submit Code

```
1 import java.util.function.Function;
2
3 class Program {
4     public static void iterativeInOrderTraversal(
5         BinaryTreeNode tree, Function<BinaryTreeNode, Void> callback) {
6         // Write your code here.
7     }
8
9     static class BinaryTreeNode {
10        public int value;
11        public BinaryTreeNode left;
```

```
1 import java.util.function.Function;
2
3 class Program {
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5         BinaryTreeNode tree, Function<BinaryTreeNode, Void> callback) {
6         // Write your code here.
7     }
8
9     static class BinaryTreeNode {
10        public int value;
11        public BinaryTreeNode left;
```

Run or submit code when you're ready.