AlgoExpert Quad Layout C# 12px Sublime Monokai 00:00:00

Prompt Scratchpad Our Solution(s) Video Explanation Run Code

```
1 // Copyright @ 2020 AlgoExpert, LLC. All rights reserved.
2
3 using System;
```

Solution 1

47 } 48

```
5 public class Program {
     // O(n) time | O(1) space
      public static void IterativeInOrderTraversal(BinaryTree tree, Action<BinaryTree> callback) {
        BinaryTree previousNode = null;
        BinaryTree currentNode = tree;
        while (currentNode != null) {
10
11
          BinaryTree nextNode;
12
          if (previousNode == null || previousNode == currentNode.parent) {
13
           if (currentNode.left != null) {
              nextNode = currentNode.left;
14
15
            } else {
              callback(currentNode);
16
17
              nextNode = currentNode.right !=
18
                null ? currentNode.right : currentNode.parent;
19
20
          } else if (previousNode == currentNode.left) {
21
22
           callback(currentNode);
            nextNode = currentNode.right !=
23
              null ? currentNode.right : currentNode.parent;
24
          } else {
25
            nextNode = currentNode.parent;
26
27
          previousNode = currentNode;
28
          currentNode = nextNode;
30
31
32
      public class BinaryTree {
33
        public int value;
        public BinaryTree left;
34
35
36
        public BinaryTree right;
        public BinaryTree parent;
37
38
        public BinaryTree(int value) {
         this.value = value;
39
40
41
42
        public BinaryTree(int value, BinaryTree parent) {
          this.value = value;
44
          this.parent = parent;
45
```