

Introduction to Traversal

29 June 2023 10:59

InOrder(root) visits nodes in the following order:

4, 10, 12, 15, 18, 22, 24, 25, 31, 35, 44, 50, 66, 70, 90

A Pre-order traversal visits nodes in the following order:

25, 15, 10, 4, 12, 22, 18, 24, 50, 35, 31, 44, 70, 66, 90

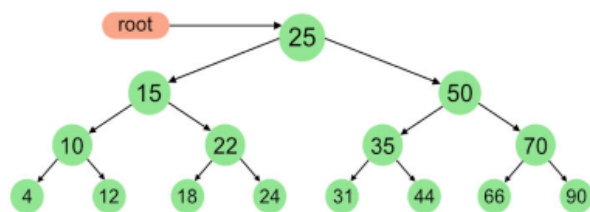
A Post-order traversal visits nodes in the following order:

4, 12, 10, 18, 24, 22, 15, 31, 44, 35, 66, 90, 70, 50, 25

In Order → Bottom up approach (Left, Node, Right)

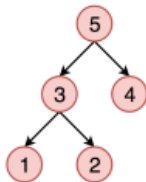
Pre Order → Top down approach

Post Order → Bottom up approach (Left, Right, Node)



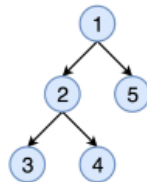
DFS
Postorder

Bottom -> Top
Left -> Right



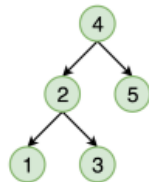
DFS
Preorder

Top -> Bottom
Left -> Right



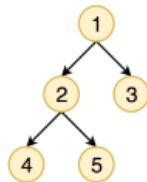
DFS
Inorder

Left -> Node -> Right



BFS

Left -> Right
Top -> Bottom



```
function traverse(node) {  
  if (node === null) {  
    return;  
  }  
  numbers.push(node.val);  
  // If above statement is line 1, then pre-order, if line 2, then in-order, if line 3  
  // then post-order traversal  
  node.left && traverse(node.left);  
  node.right && traverse(node.right);  
}
```