Binary Trees: -

Tree with degree two is called a **Binary Tree.**

Class Representation of a tree: -

```
public class BTNode {
     int data;
     BTNode[] children = new BTNode[degree];
}
```

For a BinaryTree, the degree is 2, so, it can be represented as below: -

```
public class BTNode {
     int data;
     BTNode[] children = new BTNode[2];
}
```

BinaryTree can be represented as below to understand easier: -

```
public class BTNode{
     int data;
     Node left;
     Node right;
}
```

```
public class PreOrder {
     public static void preOrder(Node root) {
          // Base condition
          if (root == null) {
               return;
          }
          System.out.print(root.data + " ");
          preOrder(root.left);
          preOrder(root.right);
     }
}
```

```java
public class InOrder {
    public static void inOrder(Node root) {
        // Base condition
        if (root == null) {
            return;
        }
        inOrder(root.left);
        System.out.print(root.data + " ");
        inOrder(root.right);
    }
}


public class PostOrder {
    public static void postOrder(Node root) {
        // Base condition
        if (root == null) {
            return;
        }
        postOrder(root.left);
        postOrder(root.right);
        System.out.print(root.data + " ");
    }
}


public class HeightBTree {
    static int height(Node root) {
        // Base Condition
        if (root == null) {
            return -1;
        }

        int leftHeight = height(root.left);
        int rightHeight = height(root.right);
        if (leftHeight > rightHeight) {
            return leftHeight + 1;
        } else {
            return rightHeight + 1;
        }
    }
}
```