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tanggal kas 10 - 1

Binary Search Tree

```
Public Class Binary Search tree {
```

```
    Public class Node {
```

```
        // instance variable of node class
```

```
        Public int data;
```

```
        Public Node left;
```

```
        Public Node right;
```

```
        // constructor
```

```
        Public Node (int data) {
```

```
            this.data = data;
```

```
            this.left = null;
```

```
            this.right = null;
```

```
        }
```

```
    }
```

```
    // instance variable
```

```
    Public Node root;
```

```
    // constructor for initialise the root null by default
```

```
    Public Binary Search tree () {
```

```
        this.root = null;
```

```
    }
```

```
    // insert method to insert the new data
```

```
    Public Node (int item) {
```

```
        key = item;
```

```
        left = right = null;
```

```
    }
```

public Node Search (Node root, int key) {

// Base case; root is null or not

if (root == null) {

// insert the new data, if root is null.

root = new Node (newData);

// return the current root to his sub tree

return root;

}

// Here checking for root data is greater or equal
to new data or not else if (root.data >= newData)

{

// if current root data is ^{greater} ~~less~~ than the new data
then now process the right sub-tree root.right =
insert (root.right, new data);

} else {

// if current root data is less than the new data
then now process the left sub-tree
root.left = insert (root.left, new data);

}

return root;

}

// Traversal

public void preOrder () {

preOrder (root);

}

public void preOrder (Node root) {

if (root == null) {

return;

}

System.out.print (root.data + " ");

preOrder (root.left);

preOrder (root.right);