

## JAWABAN NO 1

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### Jawaban UAS No 1

#### Binary search tree

```
public class BinarySearchTree {
    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 BinarySearchTree() {
        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) {
    // Basecase : 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 > new data)
    {
        // If current root data is greater 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 right sub-tree
        root.right = insert (root.right, new data);
    }
    return root;
}

// Traversal
public void pre order () {
    preorder (root);
}

public void pre order (Node root) {
    if (root == Null) {
        return;
    }
    System.out.print (root.data + " ");
    preorder (root.left);
    preorder (root.right);
}

```