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1 class BinarySearchTreeNodeAct {
2     int data;
3     BinarySearchTreeNodeAct left;
4     BinarySearchTreeNodeAct right;
5
6     BinarySearchTreeNodeAct(int data) {
7         this.data = data;
8         this.left = null;
9         this.right = null;
10    } }
11
12 class BinaryTreeAct {
13     BinarySearchTreeNodeAct root;
14
15     void insert(int data) {
16         root = insertRec(root, data);
17     }
18
19     private BinarySearchTreeNodeAct insertRec(BinarySearchTreeNodeAct node, int data) {
20         if (node == null) {
21             return new BinarySearchTreeNodeAct(data);
22         }
23         if (data < node.data) {
24             node.left = insertRec(node.left, data);
25         } else if (data > node.data) {
26             node.right = insertRec(node.right, data);
27         }
28         return node;
29     } }
30
31 public class BinarySearchTreeAct {
32     public static void main(String[] args) {
33         BinaryTreeAct tree = new BinaryTreeAct();
34         BinaryTreeAct tree2 = new BinaryTreeAct();
35
36         // Inserting - Tree #1
37         tree.insert(5); tree.insert(2); tree.insert(10); tree.insert(7);
38         tree.insert(15); tree.insert(6); tree.insert(8); tree.insert(12);
39         tree.insert(20); tree.insert(30);
40
41         // Inserting - Tree #2
42         tree2.insert(8); tree2.insert(3); tree2.insert(10); tree2.insert(1);
43         tree2.insert(6); tree2.insert(14); tree2.insert(4); tree2.insert(7);
44         tree2.insert(13);
45
46         // Printing
47         System.out.println("First Tree");
48         System.out.println("Root: " + tree.root.data);
49         System.out.println("2nd Level Root - Left: " + tree.root.left.data);
50         System.out.println("2nd Level Root - Right: " + tree.root.right.data);
51         System.out.println("3rd Level Root - Right - Left: " + tree.root.right.left.data);
52         System.out.println("3rd Level Root - Right - Right: " + tree.root.right.right.data);
53         System.out.println("4th Level Root - Right - Left - Left: " + tree.root.right.left.left.data);
54         System.out.println("4th Level Root - Right - Left - Right: " + tree.root.right.left.right.data);
55         System.out.println("4th Level Root - Right - Right - Left: " + tree.root.right.right.left.data);
56         System.out.println("4th Level Root - Right - Right - Right: " + tree.root.right.right.right.data);
57         System.out.println("5th Level Root - Right - Right - Right - Right: " + tree.root.right.right.right.right.data + "\n");
58
59         System.out.println("\nSecond Tree");
60         System.out.println("Root: " + tree2.root.data);
61         System.out.println("2nd Level Root - Left: " + tree2.root.left.data);
62         System.out.println("2nd Level Root - Right: " + tree2.root.right.data);
63         System.out.println("3rd Level Root - Left - Left: " + tree2.root.left.left.data);
64         System.out.println("3rd Level Root - Left - Right: " + tree2.root.left.right.data);
65         System.out.println("3rd Level Root - Right - Right: " + tree2.root.right.right.data);
66         System.out.println("4th Level Root - Left - Right - Left: " + tree2.root.left.right.left.data);
67         System.out.println("4th Level Root - Left - Right - Right: " + tree2.root.left.right.right.data);
68         System.out.println("4th Level Root - Right - Right - Left: " + tree2.root.right.right.left.data);
69     } }

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PS C:\Users\UST1611\Documents\Choa 2ITB - ICS2605> & 'C:\Program Fi  
rage\25845096636081f232c555392168bfe5\redhat.java\jdt_ws\Choa 2ITB -
```

First Tree

Root: 5

2nd Level Root - Left: 2

2nd Level Root - Right: 10

3rd Level Root - Right - Left: 7

3rd Level Root - Right - Right: 15

4th Level Root - Right - Left - Left: 6

4th Level Root - Right - Left - Right: 8

4th Level Root - Right - Right - Left: 12

4th Level Root - Right - Right - Right: 20

5th Level Root - Right - Right - Right - Right: 30

Second Tree

Root: 8

2nd Level Root - Left: 3

2nd Level Root - Right: 10

3rd Level Root - Left - Left: 1

3rd Level Root - Left - Right: 6

3rd Level Root - Right - Right: 14

4th Level Root - Left - Right - Left: 4

4th Level Root - Left - Right - Right: 7

4th Level Root - Right - Right - Left: 13

```
PS C:\Users\UST1611\Documents\Choa 2ITB - ICS2605>
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