Introduction to Java Programming

Sheet # 25: Binary Search Trees

- **Textbook: Introduction to Java Programming and Data Structures, Comprehensive Version (12th Edition)**
- **This sheet covers chapter 25 "Binary Search Trees"**

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➢ Check Point Questions:

Review the questions at the following URL:
https://liveexample.pearsoncmg.com/checkpoint12/Chapter25.html

➢ Solve the following Programming Exercises from the textbook (pages 991-994)

25.1 25.3 25.5 25.9 25.10 25.12
25.14

➢ Mini Project: Binary Tree Traversal

Modify Listing 25.10, TreeControl.java, to add three new buttons *Show Inorder*, *Show Preorder*, and *Show Postorder* to display the result in a message dialog box, as shown in the following figure. You need also to modify BinaryTree.java to implement the inorder(), preorder(), and postorder() methods so that each of these methods returns a List of node elements in inorder, preorder, and postorder, as follows:

```
public java.util.List<E> inorderList();
public java.util.List<E> preorderList();
public java.util.List<E> postorderList();
```

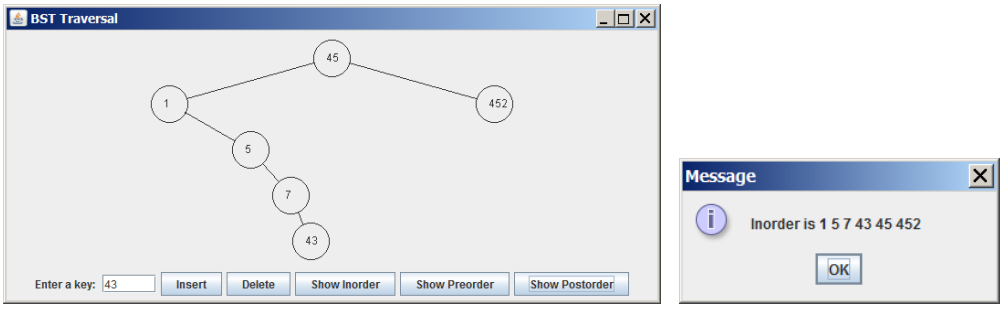

Figure
When you click the Show Inorder button in (a), the tree nodes are displayed in an inorder in a message dialog box in (b).

With our best wishes;