Assignment 14
(Full Score: 70 points)

(**Due in class on 4/22/Friday, at Moodle**)

Your name:	Score:

Binary Search Trees

Create a test routine for populating and displaying binary search trees.

Requirements:

1. Create a class that has the instance of the class *ArrayBinarySearchTree<Integer>* as its data field.
2. Populate this data field with at least 20 random integer values.
3. Using the iterators *iteratorPreOrder(),iteratorInOrder(),* and *iteratorPostOrder()* (inherited by the class *ArrayBinarySearchTree<Integer>* from its parent class *ArrayBinaryTree<Integer>*), iterate through your binary search tree displaying to the console output the results of the following three types of a Binary Tree traversals:
    a. Preorder traversal.
    b. Inorder traversal.
    c. Postorder traversal.
    d. Levelorder traversal
4. There are bugs in the class ArrayBinarySearchTree. Fix those bugs.—**One Challenging Bonus Point** will be given to the first 2 persons who have found and fixed the bugs **before 4/18/Monday—Midnight**.

Hints:

1. The class *ArrayBinarySearchTree<T>* is defined in the source file *chapter10\jss2\ArrayBinarySearchTree.java*.
2. The class *ArrayBinaryTree<T>* is defined in the source file *chapter10\jss2\ArrayBinaryTree.java*.
3. Use the addElement (T element) method to populate the instance of the class *ArrayBinarySearchTree<T>*.

Submissions:

- Create a folder (named like "**Assignment14_YourLastName**") for the project, and copy your source code, **javadoc** file(s), and **Lab Report** to this folder.
- Compress this **folder** including the **Repor**t and **javadoc file** into a single compressed ZIP file and submit it at Moodle by due time.
- (Your code must follow **Java Code/Javadoc Convention** (20% of the credits.))