Homework – Lesson –10 (Binary Search Trees)

You have Complete the problem 1and submit in Sakai.

1. Implement the following methods in the demo code folder `MyBST`.java

    a. `private void preOrder(BinaryNode t){}`
    b. `private void postOrder(BinaryNode t){}`
    c. `public boolean contains(Integer key){}`
    d. `public BinaryNode getRoot(){}`
    e. `public int leafNodes(){} -` invoke from the client side, inside this method invoke `leafNodes(root)`
    f. `private int leafNodes(BinaryNode t){}`
    g. `public int size(){}`
    h. `public boolean isEmpty(){} // check the tree is empty or not`

Note : Pass the root node for the parameter BinaryNode t

// No need to Submit Q.No 2 & 3 in Sakai. Just for your practice.

2. Practice manually the following. No need to Submit on Sakai.
    a. Construct Binary Search Tree with the initial set of values.
    b. Insert some nodes in your tree.
    c. Delete some nodes from the tree
    d. Perform in-order, pre-order, post-order traversal

3. Need to practice the following predefined classes and its methods for the wrapper type as well as for user defined type such as Employee, Sales etc. For your own class type need to implement Comparable/Comparator.
    a. TreeSet
    b. TreeMap