Tree

(For the below tasks, you may want to create a binary tree manually and use the same tree for all of these tasks. However, for task 6, you need two trees; hence, prepare another)

NB: All the methods(1-9) as well as the main method must be written in one class. DO NOT write a different class for each method.

Submit the single java file only DO NOT ZIP it.

1. **RECURSIVELY** calculate the height of a tree.

2. **RECURSIVELY** calculate the level of a Node in a tree.

3. Print elements of all the Nodes of a tree using **Pre-order Traversal**.

4. Print elements of all the Nodes of a tree using **In-order Traversal**.

5. Print elements of all the Nodes of a tree using **Post-order Traversal**.

6. Write a method which will evaluate whether two trees are **exactly same** or **not**.

7. Write a method which will return a **copy (new tree) of a given tree**.

8. Write a method that RECURSIVELY searches and finds an integer from a

given binary search tree (BST).

9. Write a method that RECURSIVELY prints all the elements of a binary

   search tree in a sorted order.