Lab 11

This lab is to be completed individually
This lab is for you to understand Tree structure.

What to do?

1. Create TreeNode class and use this class to build a binary search tree. You can see below example to build the tree.

2. Then find your binary search tree's maximum depth.
The maximum depth is the number of nodes along the longest path from the root node down to the farthest leaf node.
For example: Given a tree as below:

The maximum depth is 4.

3. Calculate size of the tree with recursive and iterative methods.

4. Print traversal of tree with preorder, postorder and inorder methods. Can you guess anything looking at inorder traversal.

InOrder(root) visits nodes in the following order:
4, 10, 12, 15, 18, 22, 24, 25, 31, 35, 44, 50, 66, 70, 90

A Pre-order traversal visits nodes in the following order:
25, 15, 10, 4, 12, 22, 18, 24, 50, 35, 31, 44, 70, 66, 90

A Post-order traversal visits nodes in the following order:
4, 12, 10, 18, 24, 22, 15, 31, 44, 35, 66, 90, 70, 50, 25