Data Structures and Algorithms

Lab 09 – Binary Search Tree

Exercises/Tasks:

1. Write a program that implements all the required methods of a Binary Search Tree like insert, delete, search, and isEmpty, etc. Create the tree object and call the different methods to show the working in the main method.
2. Modify the previous task and add the traversal methods (preOrder, inOrder, and postOrder) as well. Then, call them as well in the main method to show the functionality.
3. You are given the root of a binary search tree (BST) and an integer **val**. Find the node in the BST where the node's value equals **val** and return the subtree rooted with that node. If such a node does not exist, return null.
4. Given two integer arrays preorder and inorder where preorder is the preorder traversal of a binary tree and inorder is the inorder traversal of the same tree, construct and return the binary tree.