Lab Task 09

Create a simple menu-driven program that uses AVL tree, with the following menu options

1). Insert a value

2). Delete a value

3). Display tree (In order traversal)

4). Update a value

5). Search a value

6). Find max

7). Find min

As it is an AVL tree, after each insertion/ deletion let the user know if the tree becomes imbalance or not by printing a message. If so, display the current tree, balance it out (also print which rotation was performed), and print the updated tree.

Write a clean code by having separate methods for each operation like finding the height of a node, finding the balance factor, and for each kind of rotations.

Note: As AVL tree is a special kind of BST, so you can use the existing code you wrote last time for the BST where required.