Shayna Stewart

CS 241 TTH 10:00 – 11:50

Professor Diaz

Section 1. Project description

Create a binary tree that takes in numbers, then completes preorder, inorder, and postorder traversals. Display a menu that allows the user to insert data nodes without allowing duplicates, delete data nodes, traverse the tree, and find the successor or predecessor of a given node. Both the insert and delete methods must be implemented recursively.

Section 2. Project specification

The add and remove methods are both recursive rather than iterative. The tree may be traversed in inorder, postorder, and preorder order. The binary tree does not allow duplicates, not adding duplicates to the tree. The user menu displays when called, and when new nodes are added, the tree is displayed.

Section 3. Testing methodology

In order to test the project, I attempted to enter string, char, and double values, and allowed only integer values. I tested the traversals using multiple sets of data, including duplicates to test whether the program correctly dealt with them.

Section 4. Lessons learned

I was able to cement my understanding of recursive methods by implementing recursive add, remove, and traversal methods. I also furthered my understanding of different traversals of trees.