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$l$  = length of the inputted name

$n$  = number of nodes in tree

```
insert(string name, int ID) //  $O(l * \log n)$   
remove(int ID) //  $O(\log n)$   
search(int ID) //  $O(\log n)$   
search(string name) //  $O(l * \log n)$   
printInorder() //  $O(n)$   
printPreorder() //  $O(n)$   
printPostorder() //  $O(n)$   
printLevelCount() //  $O(n)$   
removeInorder(int n) //  $O(n)$  because it calls printInorder() internally
```

I learned a lot from this project, such as how to implement different types of rotations to balance the tree, how to draw and visualize the tree structure, and how to use github to keep track of my code changes across two computers. This was my first time coding on both my desktop PC and my laptop at the same time. If I had to start over, I would have started earlier because this project took a lot longer than I expected. Usually I'm done with coding projects a week or more before the due date, but because of the complexity of this project, and the demands of my other classes I didn't finish this one till the night before.