COSC 2P03

Assignment 2

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Sawyer Fenwick

6005011

To compare the AVL and BST I added 2 files, one for Strings and one for Integers each containing 1000 random elements. To find the time I got the current milliseconds before either inserting the file, traversing the tree, or finding the minimum and the time in milliseconds after doing each of those and finding the difference (I only timed the Breadth First Traversal for each tree). I found that on average the AVL tree is faster at traversing by 2-3 seconds, where as the BST is faster at inserting into the tree by 1-3 seconds. The trees both had a find minimum time of 0ms. I assume since the AVL tree is better balanced than a normal BST its faster to traverse since you don't have to go down so far, but the rotations slow the insert down. The find minimum both being 0 makes sense since for both cases its just traversing left as far as possible.

Operation	AVL	BST
Insert	12ms	11ms
Traverse	7ms	10ms
Minimum	0ms	0ms