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Assignment 5
Section 1002

An AVL tree is a binary search tree with a big difference of having to be balanced. The tree can have nodes that can have two children each. We use a balance factor to indicate if the tree needs to be rebalanced by seeing if sub tree's heights are off by more than 1 or -1. Right/Left rotates are performed to keep the tree balanced.

An advantage of an AVL tree over a BST is that an AVL tree is going to be balanced at all times while a BST can get out of control really quick at higher number of nodes. A disadvantage of AVL tree is the longer process of keeping it balanced.

AVL TREE BIG O

Average Case
- Access - theta(log(n))
- Search - theta(log(n))
- Insertion - theta(log(n))
- Deletion - theta(log(n))

Worst Case
- Access - O(log(n))
- Search - O(log(n))
- Insertion - O(log(n))
- Deletion -O(log(n))