

**Objectives:** You will gain experience:

- implementing AVL tree operations

Download the following file to your desktop: <http://www.cs.uni.edu/~fienup/cs052s10/labs/lab10.zip>

Extract this file to the Desktop by right-clicking on lab10.zip icon and selecting Extract All.

**Part A:** The lab10.zip file you downloaded and extracted contains a IntAVLTree folder with a Visual Studio C++ project file: IntAVLTree.sln inside. Double-click on it to open this project in Visual Studio. This project contains the IntAVLTree class that does the majority of the work for the insert method. Using Tuesday's (Lecture 19) handout, complete the rotateLeft and insert methods.

The main.cpp file contains an interactive test driver to test your new functions.

**After you have implemented and tested your functions, raise your hand and demonstrate your program.**

**EXTRA CREDIT:** Uncomment the code at the bottom of main.cpp to complete the tables below. If you completed the BST from lab 9, compare the performance.

	Time to fill BST in random order	Initial BST Height	Time to fill AVL in random order	Initial AVL Height
1,000,000 Elements				

**After you have completed the above tables, raise your hand and explain your results.**