CS 61b – Summer 2005
Homework #6 – Due Aug 1st at 11:00am

This homework can be done with your project partners from Project 3. You may, of course, ask your fellow classmates for help if you have trouble editing files, compiling programs, or using the submit program. Do not share code or specific parts of answers outside of your group. Please see the syllabus for guidelines on appropriate interaction with your fellow classmates.

When you are finished with the homework, you will submit it electronically. **Put answers to the following questions a file called writeup.txt. You may also hand in a paper copy if you would like**. Change to that directory, and then type "submit hw6"

This homework will teach you about Trees.

Part I (14 pts)

Given Figure 18.33, write the Pre-order, In-order, and Post-order traversal of nodes. (7 pts)

18.9 (7 pts)

Part 2 (14 pts)

Show the result of inserting (3,1,4,6,9,2,5,7) into an initially empty binary search tree. Now show that sequence added to an initially empty AVL tree. You can draw your trees using a computer program, or you can turn in paper copies of hand-drawn figures in class. (10 pts)

Write in your own words why it is that AVL trees guarantee O(log N) time to perform a find() operation. Discuss the aspects of insert() that make this possible. (4 pts)