CSCI 162 Final Study Guide – Chapters 8 and 9.

This study guide is provided for your review. Please come prepared to the exam knowing the material and able to do the types of problems described in this guide.

1) Within chapters 8 and 9 in the book and the associated lecture notes you have been exposed to at least 20 new, different terms you must know the definitions of. These terms will not be listed for you. Study, read, review.

2) Be able to describe how recursion works, including the stopping (aka base) case code, the recursive code, and how the recursive call should be made in a way that moves the execution stack closer to the stopping case.

3) Be able to trace a recursive method, showing what values are placed on the execution stack versus what is printed out (or concatenated or returned), and what the ultimate return and/or output is from a recursive call.

4) Know the various terminology related to a Binary Tree, especially the different types of traversal (pre-order, post-order, in-order) and how to code and pseudocode them.

5) Be able to examine a supplied binary tree and be able to answer questions about it, including could it be a binary search tree, how many descendants or ancestors at a certain node, the tree depth, completeness and fullness, etc.

6) Be able to code a simple recursive method given its specification.

7) Be able to code a binary tree ADT method given its specification.