201 Final Exam Study Guide

Sign up for a time to take the final will be done Monday 4/19.

Like both midterms the final will be an oral exam but because it is cumulative the final exam, will not be focused on the last labs submitted.

Be sure to review the following topics when studying for the final exam. However know that while the following topics will be the focus of the exam the other algorithms and data structures we have studied in this class may also be referenced on the exam questions.

Linked Lists - Be able to describe how to Add, Remove, Search, and Access elements in a Lined List. You should also know the time complexities of performing all of these actions on a Linked List and be able to explain what the time complexity would be if the algorithms for performing these actions were changed slightly.

Trees - Be able to describe how to Add, Remove, Search, and Access elements in a Binary Search Tree and a Balanced Binary Search Tree. You should also know the time complexities of performing all of these actions on a BST and a BBST and be able to explain what the time complexity would be if the algorithms for performing these actions were changed slightly.

Sorts - Know the time complexities of performing Insertion, Selection, Bubble, Merge, and Quick sorts and be able to explain why each sort is the time complexity it is. Understand what the best and worst case input is for each sort and be able to explain what the time complexity would be if the algorithms for performing these sorts were changed slightly.

You should also know the basic mechanics of Insertion, Selection, Bubble, Merge, and Quick sort and be able to explain how elements are sorted using each of those sorts.

You are encouraged to look back at the videos and past assignments in the class while studying for the exam.

Good Luck!