Closing Comments

4-29-2002

Opening Discussion

❚ What did we do last class?

❚ Do you have any questions about the assignments. They are all due on Thursday so hopefully everyone is making good progress. Keep in mind that they are worth 50% of your grade so you probably can't pass without at least 3 done well or 4 done.

The Semester in a Nutshell

❚ This semester we have gone over many things that can be broken into three main categories.
  ❚ Algorithms
  ❚ Data Structures
  ❚ Programming Techniques
❚ Let's take a second to go over each of these.

Algorithms

- The main thrust of the class was learning how to use computers to solve problems, hopefully in a fairly efficient manner.
- Sorting and searching
- The role of recursion and how to use it.
- Patterns for building general algorithms: divide and conquer, dynamic programming, backtracking.

Data Structures

- We discussed many of these over the course of the semester: stacks, queues, lists, linked lists (static, dynamic, singly linked, doubly linked, circular), trees (binary, balanced, multi-way), heaps.
- We also looked at the order of using these various structures to tell us when they are good to use and when they aren't.

Programming Techniques

- This includes our discussions of using classes to get encapsulation and hiding the implementation behind a public interface.
- It also includes the use of inheritance and templates to produce polymorphism.
- Lastly, we talked about design patterns and how we can set up standard types of solutions to many common problems.

Course Objectives

- While all of that material is nice, it is only a part of my main objective for the class. What matters more in my mind is, did it make you think? Do you feel you understand how to use computers to solve problems now better than you did at the beginning of the semester? Are you more able to look at a problem and design an algorithmic solution before sitting down to code? Do you find that your brain uses these types of approaches to problems you are presented with outside of CS?

Final Review

- Do you have any questions now about the final?
- Do you want to schedule a review time closer to the final? Times on Friday might be ideal, but that can conflict with people's finals.

Minute Essay

- For today's minute essay we will do the course evaluations. Remember to be honest and complete. I do use the comments to adjust my teaching some in future semesters. Don't put your names on these though.