Announcements

see Canvas announcement posted Monday, March 9th!

CS 10 Wrap-up: Overview

Look back at all you've accomplished!

- Our course consisted of 3 major components
  - Advanced Programming (image processing, networking)
  - Data Structures (modified a data structure to improve efficiency)
    - ADTs: Lists, Maps, Queues, Stacks, Graphs
    - DSs: Arrays, LLs (SLL, DLL, CLLS), Trees(BTs, GTs, BSTs), Hash Tables,…
  - Algorithms (data compression, large graph traversal)
  - + some advanced data structures/algorithms (2-3-4 Trees, Red-Black Trees, Skip Lists, Suffix Trees, Tries, Boyer-Moore, Edit Distance, A*, etc.)
- A new language: Java
- A new programming paradigm: Object oriented programming
- Good programming practices:
  - Abstraction — how to hide details
  - Modularity — how to decompose problems
  - Data Structures — how to efficiently organize data
  - Algorithms — procedures for solving problems

CS 10 Wrap-up: What Next?

What Next? — A Vague Checklist:

- Design Patterns — no need to reinvent the wheel (common solutions to common problems)
- Learn about software testing (catch bugs, break your code, etc.)
- Consider learning C (another *big* programming language)
- Learn about memory hierarchy, and really, how computers/operating systems work in general — this will make you a better programmer/debugger.
- Consider learning a *version control system* such as Git or SVN (collaboration!)
- Read books and *lots* of code by others (e.g., Github)!
- *Learn at least one language *really* well!
- Work on projects outside of class
- *Start applying to internships sooner rather than later…
  - Try now and get comfortable when the stakes aren't high — you'll feel more prepared and confident later when you are about to, say, graduate and want a full-time job :)
  - Stay "up" on algorithms & data structures — these are the most common interview questions!

see: https://www.google.com/about/careers/students/guide-to-technical-development.html

CS 10 Wrap-up: Facts

Facts:

- programming != computer science
- programming can be thought of like playing any sport or instrument in a sense — if you want to be good at it, you have to do it and practice it a lot!
  - The more you do it, the better you get…
- Above all else, moving forward, ***don't be afraid to try stuff***. Making mistakes and not getting it right the first time is part of the process! If you have an idea: try it! The worst that can happen is it doesn't work, but you will likely get a better idea of how to proceed once you've tried something and seen that it didn't work.

CS 10 Wrap-up

Wrap up: "The review game"

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That's All!

Thank You!