



CSCI 2270

Data Structures & Algorithms

Gabe Johnson

Lecture 1

Jan 14, 2013

Introductions, Administtrivia, and *Why Am I Here?*

Lecture Goals

1. Introductions
2. Collab., Design, Learning, Coding
3. Syllabus Stuff, Schedule
4. Existential Stuff
5. Recitations for this week

Upcoming Homework Assignment

HW # **Due: Friday, Jan 25**

Linked Lists

Implement a Linked List data structure including common operations.

Details to follow.

(I will remind you of upcoming HW assignments or tests at the beginning of each lecture.)

Team CSCI 2270

Instructor: Dr. Gabe Johnson

TAs:

Yogesh Virkar, Xin Pan, Shang Ma

LAs: TBD

Office Hours: TBD

Course Goals

Learn *Data Structures*: fundamental ways of organizing information

Learn *Algorithms*: fundamental techniques to operate on that information

DS&A are fundamental. I use this word three times on this slide, *because I mean it*. **Master this stuff. Everything else depends on it.**

Spring 2013 - CSCI 2270

	Sa	Su	Mo	Tu	We	Th	Fr	
Jan	12	13	14	15	16	17	18	
	19	20	21	22	23	24	25	hw 1
Feb	26	27	28	29	30	31	1	hw 2
	2	3	4	5	6	7	8	hw 3
	9	10	11	12	13	14	15	test 1
	16	17	18	19	20	21	22	hw 4
Mar	23	24	25	26	27	28	1	hw 5
	2	3	4	5	6	7	8	hw 6
	9	10	11	12	13	14	15	hw 7
	16	17	18	19	20	21	22	test 2
	23	24	25	26	27	28	29	
Apr	30	31	1	2	3	4	5	hw 8
	6	7	8	9	10	11	12	hw 9
	13	14	15	16	17	18	19	hw 10
	20	21	22	23	24	25	26	hw 11
May	27	28	29	30	1	2	3	
	4	5	6	7	8	9	10	test 3

Monday, January 14, 13

Something interesting happens on every single Friday, except this Friday, the one before spring break, and the last day of class. There will be a final, but I don't know when or where. I will announce that when I know.

Collaboration

Do! *Strongly Encouraged!*

Work with your friends, family, and bitter enemies!

Document all Internet help and student collaboration.

*caveat: **type everything** yourself.
this is important. especially at this
early phase of your software life.*

Design

This is as much about *design* as it is about typing C or Python or Java or whatever.

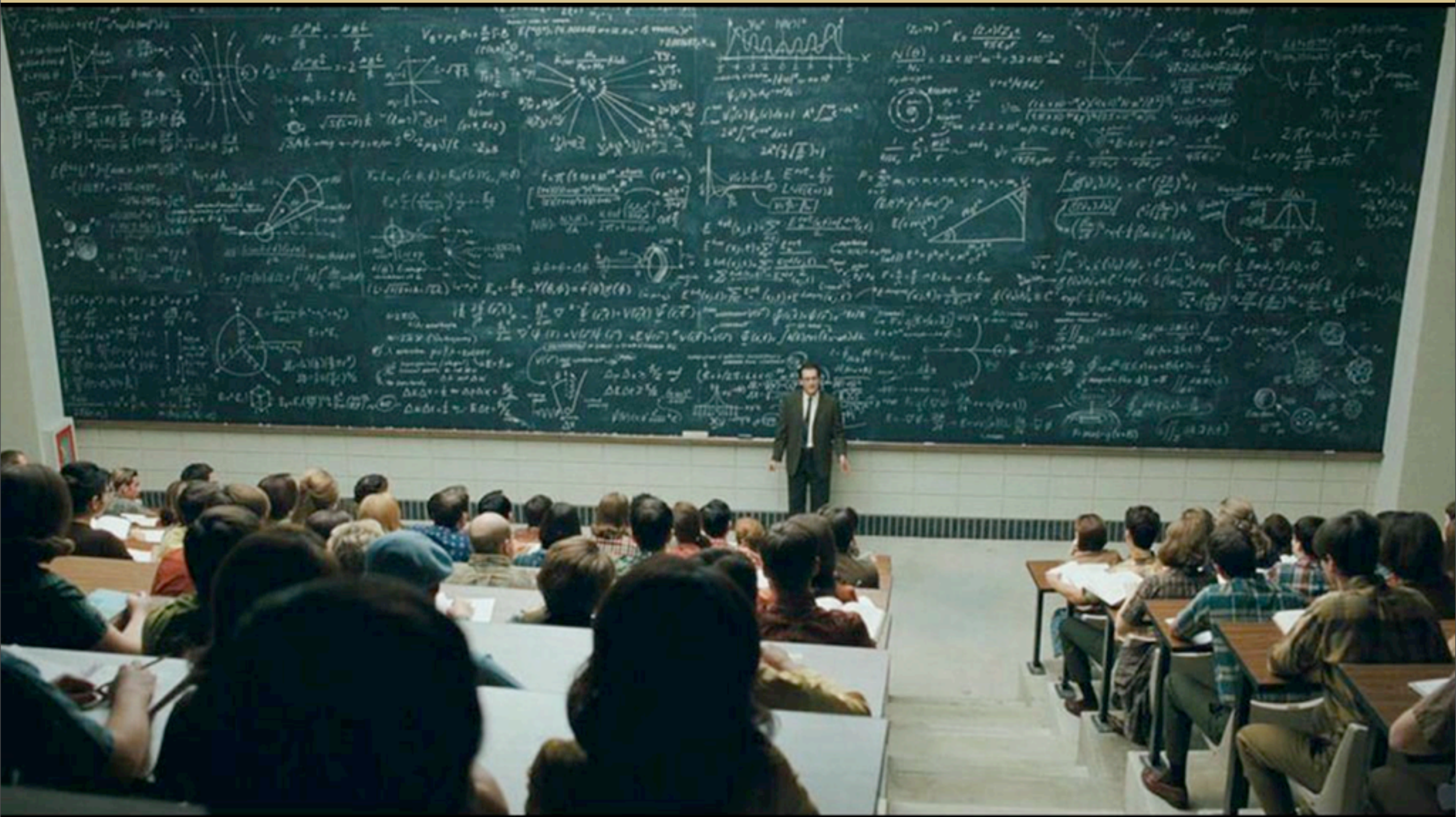
Design is as much about *understanding and framing* problems as it is *solving* problems.

Learning

The software world moves fast. *You have to be able to learn new concepts quickly.*

This is not an after-school special.
Characterize what you don't know, and
once you've figured it out, characterize the
strategy that worked. Remember and use!

Coding



Hello World

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Coding

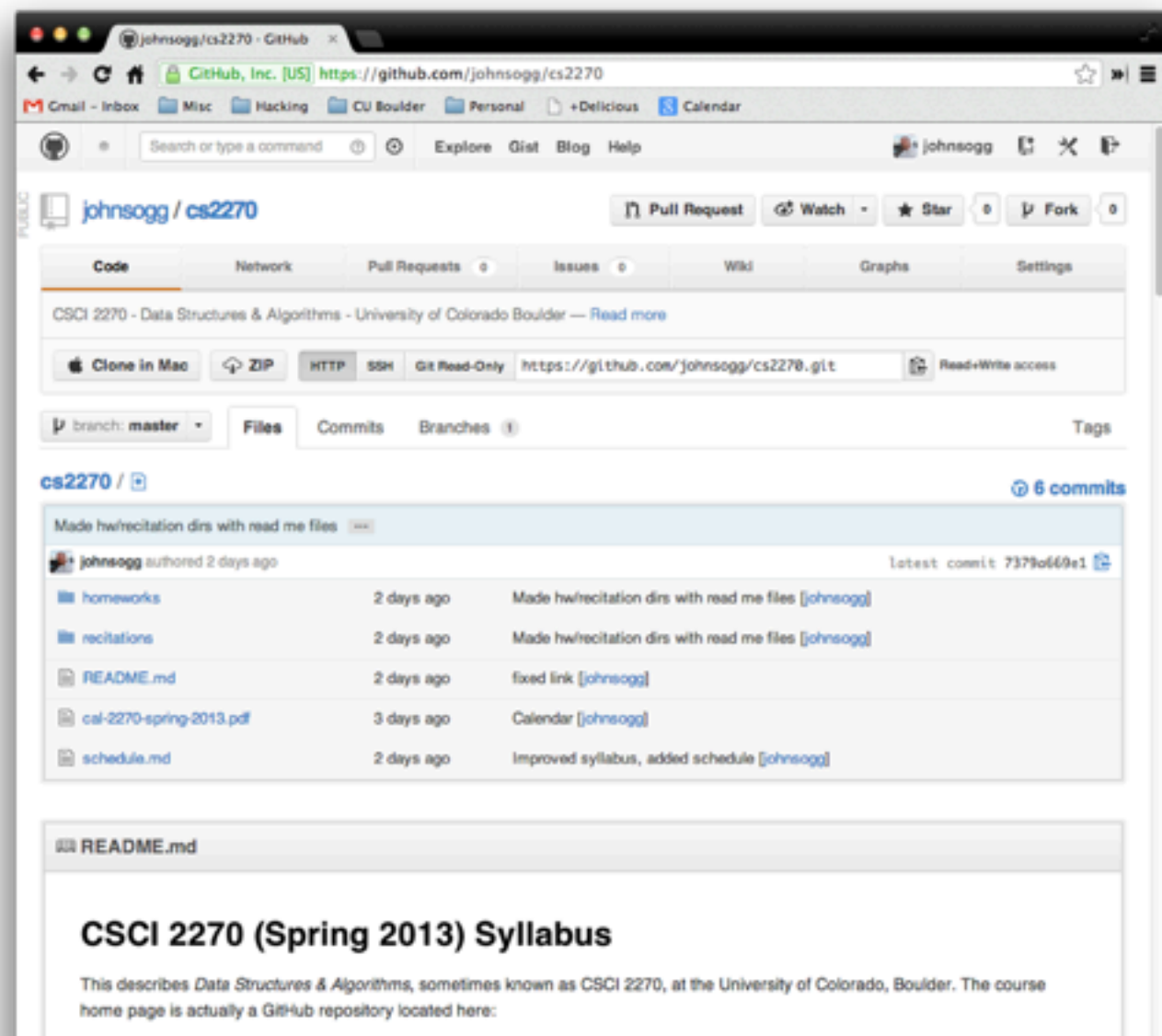
Writing code can be frustrating.
I assure you it is awesome.
Hang in there, and you will win.

**Leave machismo behind. Do not wield
your skills as a weapon.**

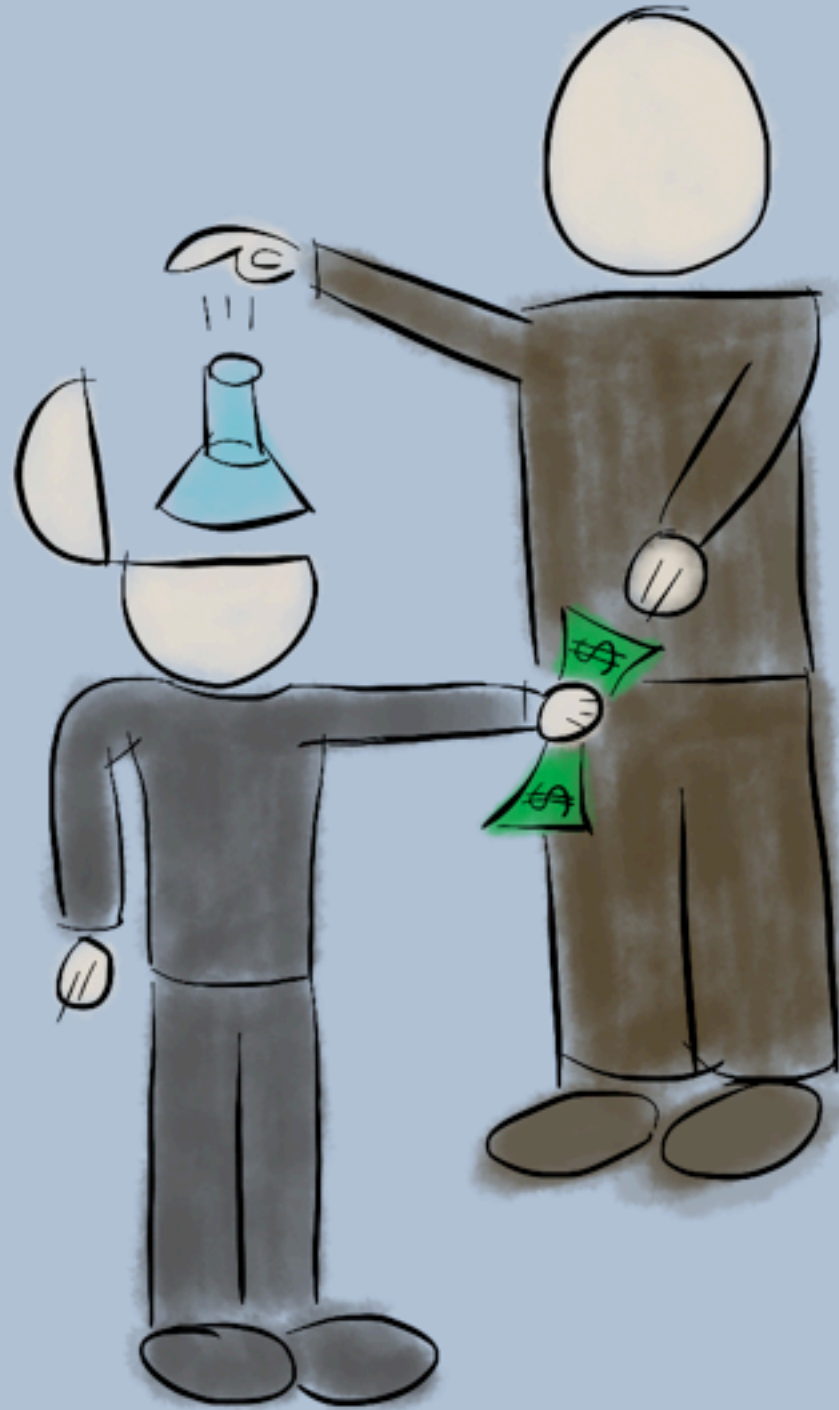
Syllabus Stuff

Course “Home Page” is really a Git repository.

github.com/johnsogg/cs2270



Lots more information is contained in the syllabus, including details about how assignments are graded, general recitation info, and email addresses. We will change the syllabus in ways that help you (we won't make things harder). Lecture notes and slides are in their own directory, as are homework assignments.



A COMMON MISCONCEPTION ABOUT COLLEGE

Monday, January 14, 13

You have to work hard. Somewhere along the line many people come to believe that if they are paying for something, it should be easy. Would you pay a personal trainer to make you look like an action hero and expect to not exert yourself?

Recitation

In general, recitations are an opportunity to get extended help from the TA, LAs, or fellow students. Attendance is *optional*, but if you never go to recitation, don't expect us to give you personal attention via email all the time.

This week: use recitation to familiarize yourself with the computing environment, including:

- * The lab computers.
- * The gigantic virtual machine. See recitation notes on GitHub.