CS 45, Lecture 1
Introduction

Spring 2023

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Why CS45?

Honestly moral of the story is never look at GitHub rip

I'm dying with lab 4

Haha if you still have any interest in debugging 😂

Hey CS question - do you know how to use Docker?

So my program is hanging, any thoughts on how I should start debugging?

First I have to figure out how to use GitHub though 🤮

do i have to like compile/make or anything

i accidentally locked my whole group out of our VM that we're using for research last week b/c i somehow changed the permissions of our entire root directory

i know it's a cryptography thing but idk about what it means in this class

What is this class?

We created this course to help you learn how to use programming tools more effectively and to introduce you to important technology concepts that are often overlooked in traditional CS classes.

The class started at MIT with a course called “The Missing Semester of Your CS Education”. CS45 is an expanded version of the MIT course.

Who are we?

All three of us are current students who have been at Stanford for quite a while now (5 years and counting!)

We are all passionate about teaching and have each CAed multiple different CS classes at Stanford.

Who are we?

Akshay (akshay01@stanford.edu)

- He/him
- PhD student (Computer Systems)
- UG: CS Graphics
- Research: Mitchell, Winstein, Engler, Achour
- Hobbies: photography, piano, learning languages

Who are we?

Ayelet (adrazen@stanford.edu)

- She/her
- MSCS student (Computer and Network Security)
- UG: Political Science
- Worked at Google (Cloud Security) this past summer and will return in the fall
- Hobbies: surfing, painting, yoga, boxing, podcasts, crossword puzzles

Who are we?

Jonathan (jdkula@stanford.edu)

- He/him or they/them
- MSCS student (Human-Computer Interaction)
- UG: CS Systems Major + Education Minor
- Interned at Rockset (full stack development) last two summers and will return for full time next fall.
- Hobbies: drawing, reading, D&D, video games

What do we expect you to know?

The goal of this class is to teach the basics of using software tools and understanding software concepts. We don't expect you to be a coding expert or know anything about any of the tools we are covering, but we do expect some basic knowledge in computer science:

- Have taken CS106A (or equivalent)
- Are interested in learning about software and coding

Course Overview

This course will meet on Mondays and Wednesdays from 4:30 to 5:50 PM, in-person at 300-300.

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The course will build upon topics covered earlier in the course. For instance, Lecture 9 (Version Control) will expect that you are broadly familiar with what was covered in Lecture 2 (The Shell and Shell Tools).

Administrivia

Course website: https://cs45.stanford.edu

All pertinent information is on the course website.

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Attendance: Attendance is not required but is highly encouraged. We will try to record lectures, but cannot guarantee it. Slides and notes will always be posted.

Administrivia

Assignments and Projects: There are 8 weekly assignments in the course and a final project.

The weekly assignments are brief exercises to help you apply what you have learned in the course that week. We expect each assignment to take around 1-2 hours each week.

We expect the final project to take around 3-4 hours to complete.

Assignments will typically go out on Wednesdays and be due on Wednesdays.

Administrivia

Grading: the course is graded on a S/NC basis for 2 units. We expect everyone to earn a satisfactory grade.

Your grade will be based on your assignment scores, completion of weekly surveys, and your final project score. You get an S if you earn 25 points in the class:

- Each weekly assignment 1 thru 8 is worth 3 points
  - Assignment 0 is worth 1 point
- Each weekly survey is worth 0.5 points
- The final project is worth 5 points

Administrivia

Office Hours: Each of us will host 2 hours of office hours per week. Some office hours will be online. Times will be posted on the course website.

We will also be available on Ed to answer any questions.

Late Policy: Each student has 3 late days. If you run into any issues or need any other extensions, let us know.

Topics

We have a bunch of topics in mind, but we're open to suggestions!

Currently planned:

- UNIX, the shell, and command line tools
- Computer Security
- Computer Networking
- Setting up a project (build tools, debugging, etc.)
  - Version Control (git)
  - Deployment (CI, CD, docker)