

CS241

Data Structures and Algorithms

Introduction

What is this course about?

- Data Structures!
 - A particular method of **storing and organizing** data so it can be **accessed** and **modified quickly**.
- Algorithms!
 - A step by step procedure for accomplishing a task.

Goals

- To introduce the fundamental data structures and algorithms you will see throughout comp sci.
- To develop a level of understanding where you can:
 - implement them from scratch (though you will rarely need to)
 - use them in a program to solve some computational problem
 - be able to modify them to accomplish a related task
- To know how to pick the right data structure or algorithm for the problem.

Administrivia

- Textbook: no official printed textbook
 - I will post links to sections of online books and other resources.
- Communication:
 - Canvas will be the main source.
 - Also Slack. (Used for tutoring hours as well.)
- Programming:
 - In Java!
 - Highly encouraged to use IntelliJ IDEA (it's free).

Syllabus – Grading breakdown

- Programming projects 30%
- “Written” homework 20%
- Midterm 1 15%
 - Tuesday, March 9
- Midterm 2 15%
 - Thursday, April 8
- Comprehensive final exam 20%
 - Wednesday, May 5

Office Hours

- Scheduled hours will be announced soon.
- Office hours will be held over Zoom or Slack.
 - Send me an email or Slack message during office hours and we can chat over Slack or I'll open a Zoom call for us.
 - You can also message me in advance, and I can block off some time for us.
 - Sometimes things get busy when projects are due, so please be patient. I'll try to get to everyone, but last semester there were long delays sometimes.
- Also send me email or a Slack message for "unscheduled" office hours.
 - I can't promise I'll respond immediately, but I'll always get back to you within a day, and we can most likely schedule a time to meet.

Collaboration

Zoom Things

- Come to synchronous classes if possible.
 - Recordings available after class.
- Please turn on your cameras if you feel comfortable.
 - It helps us build a sense of community and your reactions do help me figure out how class is going.
- Please keep yourselves on mute unless talking.
- To ask a question:
 - Put it directly in the chat if it's short. (You can private-chat me as well if you want.)
 - If longer, use the "raise hand" feature --- I also tend to pause a lot to give you a chance to ask longer questions.
- To answer a question:
 - Take yourself off mute or put the answer in the chat.
- Be appropriate.

Introductions - You

- Name
- Year at Rhodes (first-year, sophomore, etc)
- Where you're from, or where you're zooming in from.
- Tell us about your pet(s),
 - or the pet you had growing up
 - or the pet you wish you had
 - or if you're not a pet person. 😊
 - bonus points if the pet gets on zoom with you. 😊

