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CS 111: Foundations of Program Design

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Welcome!

About Me!

Academic Experience

- USF Alumni
  - BS CS
  - MAT
- CS Major, Psych Minor, joined Dual Degree Teaching Program
- TA for C and Systems, Tutor in the Tutoring Center
- Taught Mathematics at different Secondary Schools
- Helped various startups
- CoderSchool Management
- Solutions Architect at a current Startup

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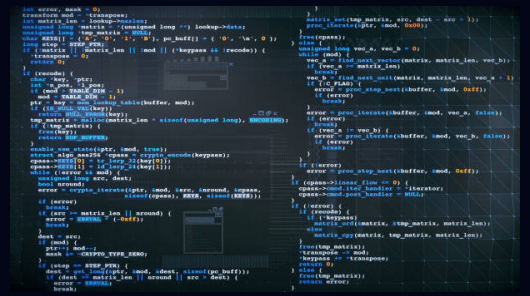
Tech Interests

- Web Development
- System Design
- DevOps
- Programming Languages
- CS for All
- Computer Science Education

Hobbies



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Your Turn!

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With a partner next to you, share about yourself!

- What's your name?
- Where are you from?
- What year are you in?
- What program are you in?
- What are you interested in? Doesn't have to be technical interests.

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Out of curiosity...

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How many of you are CS majors?

CS Minors?

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Math Majors?

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Data Science?

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UTEC/Teaching/UESJ?

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Engineering?

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Others?

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Freshmen?

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Sophomores?

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Juniors?

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Seniors?

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Alright that's enough.

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TA Introduction!

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Class Expectations

Attendance

Mandatory. Email me or message me on CampusWire (we will get into that more later) if you can't come to class.

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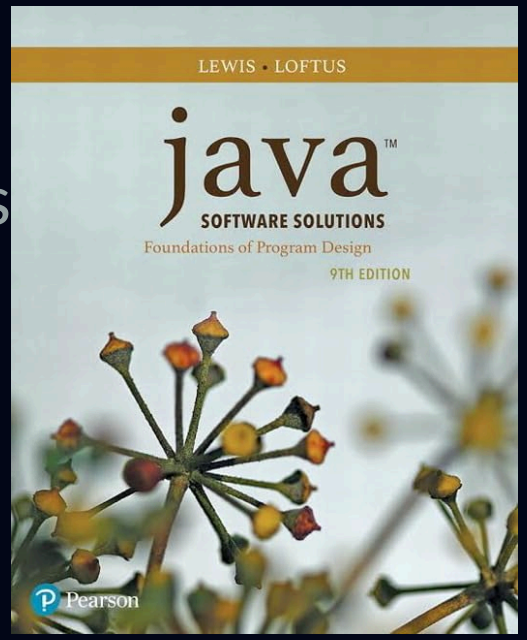
Textbook

- Java Software Solutions
- ISBN: 9780134543284
- Authors: John Lewis, William Loftus
- Publisher: Pearson
- Publication Date: 2017-02-17
- Recommended



Getting Help

- Myself
- TA
- Tutoring Center

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Code Review

If I question or doubt whether you wrote your own code, I'll ask you to come into my office hours and have you explain different parts of your code to me.

Additionally, the projects will have an Interactive Grading portion, where you will meet with one of us (TA or myself). We'll ask some questions about your project to ensure you understand your work.

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Late Policy/Resubmission Policy

- 5 Late Submissions throughout the semester
  - Canvas Module countdown
- Send me your reasoning for why it was late
- If you use the submission, up to 3 days late to still receive credit
- No resubmissions

Taking Notes/Tech Policy

- I will post the slides online after class.
- I may post the code written in class on Canvas, on CampusWire, or on GitHub (more on this later) depending on the context.
- I'm okay with you all using your computers and tablets, but please be productive in class and pay attention. I don't want to end up repeating myself every time in Office Hours because you were doing something else in class.

Office Hours

- MW 4:00-5:00 (After class)
- Room HR 415
- On Syllabus
- Also posted on CampusWire after today
- Please come into my Office Hours or the Office Hours of a TA to get help if you're unsure about anything!

TA Office Hours

Omyaasree

Tuesdays

6:30-8:30PM

HR 411/413 (CS Labs)

Rudraraj

Tuesdays, Thursdays

4-5:30PM

HR 411/413 (CS Labs)

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Syllabus Walkthrough

Course Objectives

- Students will learn basic principles of software design, development, and debugging. Students should leave the course able to develop quality software: well-structured, clearly written, and robust.
- Mastery of these subjects shall be demonstrated through the labs, projects, quizzes, in-class assignments, and exams.

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- Students will learn and be able to use the following computer science concepts:
  - Variable types and uses
  - Objects and references to objects
  - Command line, Keyboard, and File input/output
  - Conditional Statements
  - Loops
  - Mathematical Operations
  - Object Oriented Programming, including encapsulation and inheritance
  - Basic arrays
  - Basic collection data types

Class Structure

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Assignment Structure

- Weekly quizzes - short quizzes to check for understanding
  - Done in class (Mondays)
- In-class Programming - short programming assignments that can usually be completed in class. Can only be madeup if you weren't in class.
  - Due end of class
- Labs - medium sized assignments that take 3-5 days
  - Due by the end of the week, usually worked on in class on Wednesdays
- Projects - larger assignments that can take 7-10 days
  - Due two weeks after on Fridays
- Exams - a Midterm and Final Exam to demonstrate your understanding of the material through multiple choice, fill in the blanks, free response, and paper coded problems.

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Specification based Grading

The projects will have a specification regarding required features implemented for each grade point

For example, to get a C for the project, you **must** completely implement specific features. To get a B for the project, you **must** completely implement the features of a C and additional features to get a B.

We will see this more when we get to the first project.

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Labor Based Grading

We will use a Labor Based Grading

There is a supporting document in the "Policies" in the "Grading System" document. Please read it before next week to have a better understanding of what it is.

Labor Based Grading cont.

Short of it:

- Do X number of each assignment and you'll end up with a certain grade
- Do less work, you'll end up with a lower grade.
- Do more work, you'll end up with a better grade
- Labs, In Class, Quizzes, and Exams will be graded by Complete/Incomplete
- Projects will be graded with Specification Based Grading
- Engagement and Extra Credit are also Complete/Incomplete

Table

Final Grade	Final Exam	Midterm Exam	Final Project	Projects	Labs	In Class	Quizzes	Engagement	Extra Credit
A+	C	C	A	2 A, 1 A+	14	14	10	1	2
A	C	C	A	3 A	12	12	8	1	1
A-	C	C	A	2 A 1 B	10	10	7	1	1
B+	C	C	B	1 A 2 B	9	9	6	1	0
B	C	C	B	3 B	8	8	6	1	0
B-	C	C	B	2 B 1 C	6	6	6	1	0
C+	C	C	C	1 B 2 C	6	6	5	0	0
C	C	C	C	3 C	6	6	5	0	0
C-	IC	C	C	2 C 1 D	6	6	5	0	0
D+	IC	IC	D	1 C 2 D	5	5	4	0	0
D	IC	IC	D	3 D	4	4	4	0	0
D-	IC	IC	D	2 D 1 F/IC	3	3	3	0	0
F	IC	IC	F/IC	> 2 F/IC	< 2	< 2	< 2	0	0

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Projects

Quiz Study Helper

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CS Engagement

Go to a CS event and take a picture of yourself at the event.

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Important note about AI

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AI Use

- Don't use it
- We can tell
- You won't learn to code by relying on it.
- Not always accurate
  - Spend more time fixing it than writing it in some cases
- We may have exercises to showcase this throughout the semester
- Just don't use it.

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Plagiarism and Cheating

- Conversation around your code
- If suspicion remains after meeting, report may be sent to Academic Integrity Committee
- IC/F on submission
- Second time, IC/F on submission, report sent to Academic Integrity Committee
- Likely means CASA and Dean get involved
  - Not fun
  - Don't do it.

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Course Web Page

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Course Web Page

We will use a course web page for the assignments, but the submissions will happen on Canvas. Your grade will also be posted to Canvas.

https://cs111-fall-25.github.io

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Set some expectations

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What you'll do in this class

- Create small to medium sized programs to develop a deeper understanding of Java
- Learn the Foundations of the Java Programming Language
- Brainstorm and problem solve your way through various programs
- Practice what you've learned in various settings with different kinds of programs
- Present your code to others.
- Diagram your code and explain your thinking to others
- Develop a Quiz Study Program
- Become more comfortable with the Terminal to run programs

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What we won't do in this class

- Learn another programming language like C or Rust
- Create an AI
- Create a Mobile App
- Create a Game
- Create a new OS
- Develop the next big GPT equivalent
- Hack into your friends' social media accounts
- Fix your family's printer
- Get your friend's password

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Hopefully what you'll be able to do after this semester

- Code in Java
- Problem solve and develop a foundational understanding of debugging
- Have a stronger understanding of Programming as a whole
- Understand how to work through a problem and solve it

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Lastly, what you might be able to do after this semester

- Use tools to find bugs in your code
- Research on your own to expand your own understanding
- How to ask for help and find the resources you need

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See you on Monday for our setup!