

Welcome to CSE 142!

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Spring 2021

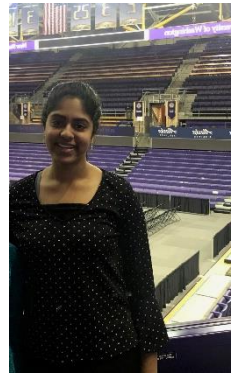
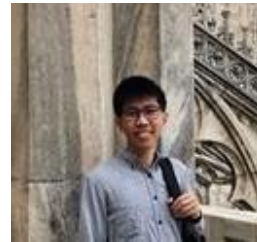
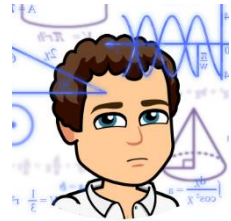
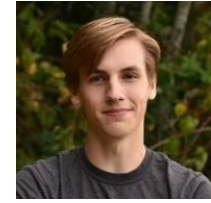
Please make sure your microphone is muted.

If you're willing, turn on your video so we can see you!

You Made It!



Thank your TAs!!



Learning Objectives

or “What ~~will~~ **did** I learn in this class?”

- **Functionality/Behavior:** Write functionally correct Java programs that meet a provided specification and/or solve a specified problem
- **Functional Decomposition:** Break down problems into subproblems that are modular and reusable, and define methods to represent those subproblems
- **Control Structures:** Select and apply control structures (e.g. methods, loops, conditionals) to manage the flow of control and information in programs
- **Data Abstraction:** Select and apply basic data abstractions (e.g. variables, parameters, arrays, classes) to manage and manipulate data in programs
- **Code Quality:** Define programs that are well-written, readable, maintainable, and conform to established standards

(Partial) Topic List

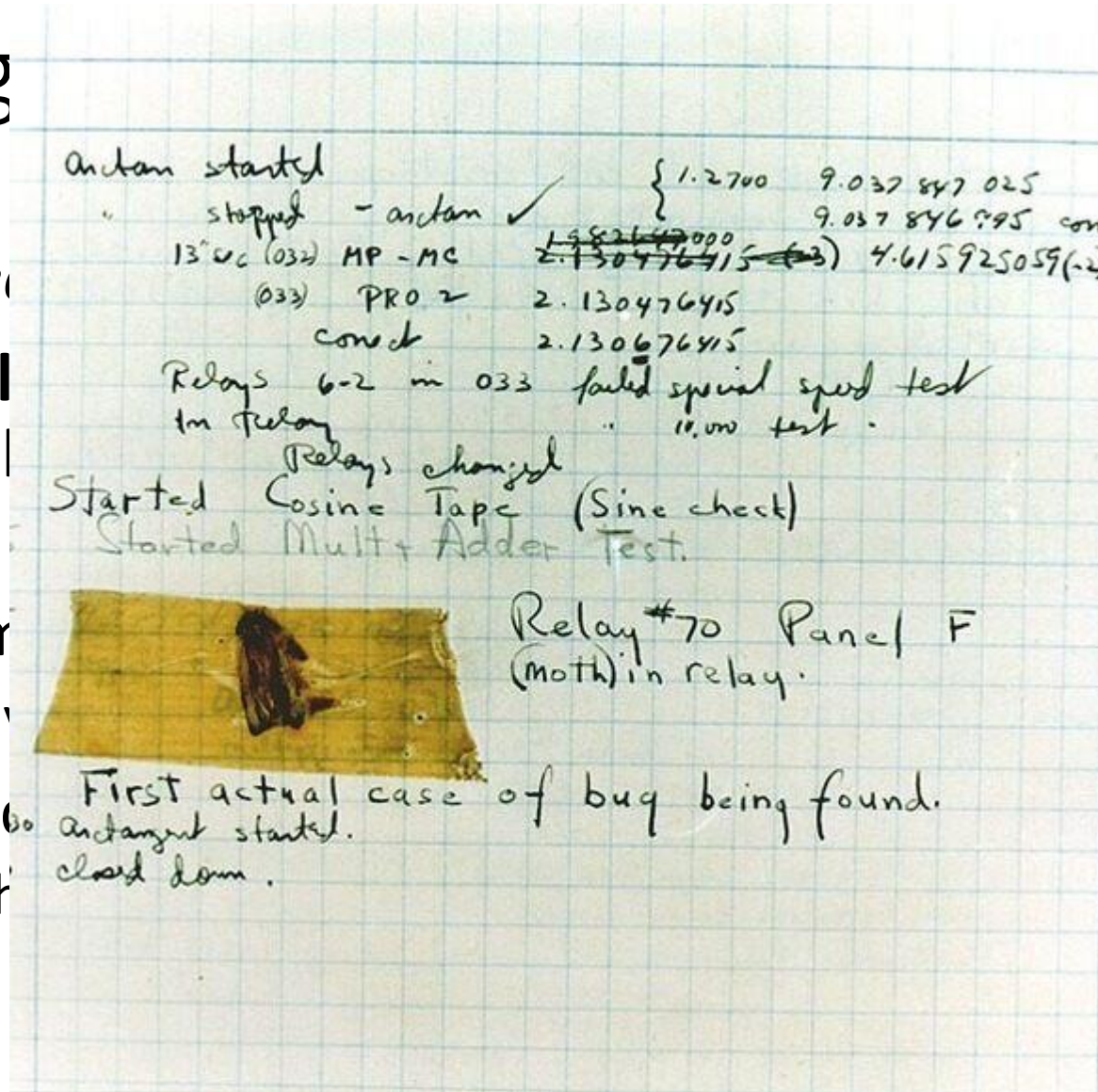
or another view on “What did I learn in this class?”

- Methods
- Parameters
- Return Values
- Variables
- Types
- Loops (for and while)
- Conditionals
- Console (User) I/O
- File I/O
- Arrays
- Classes
- Inheritance
- ArrayList

Underlying

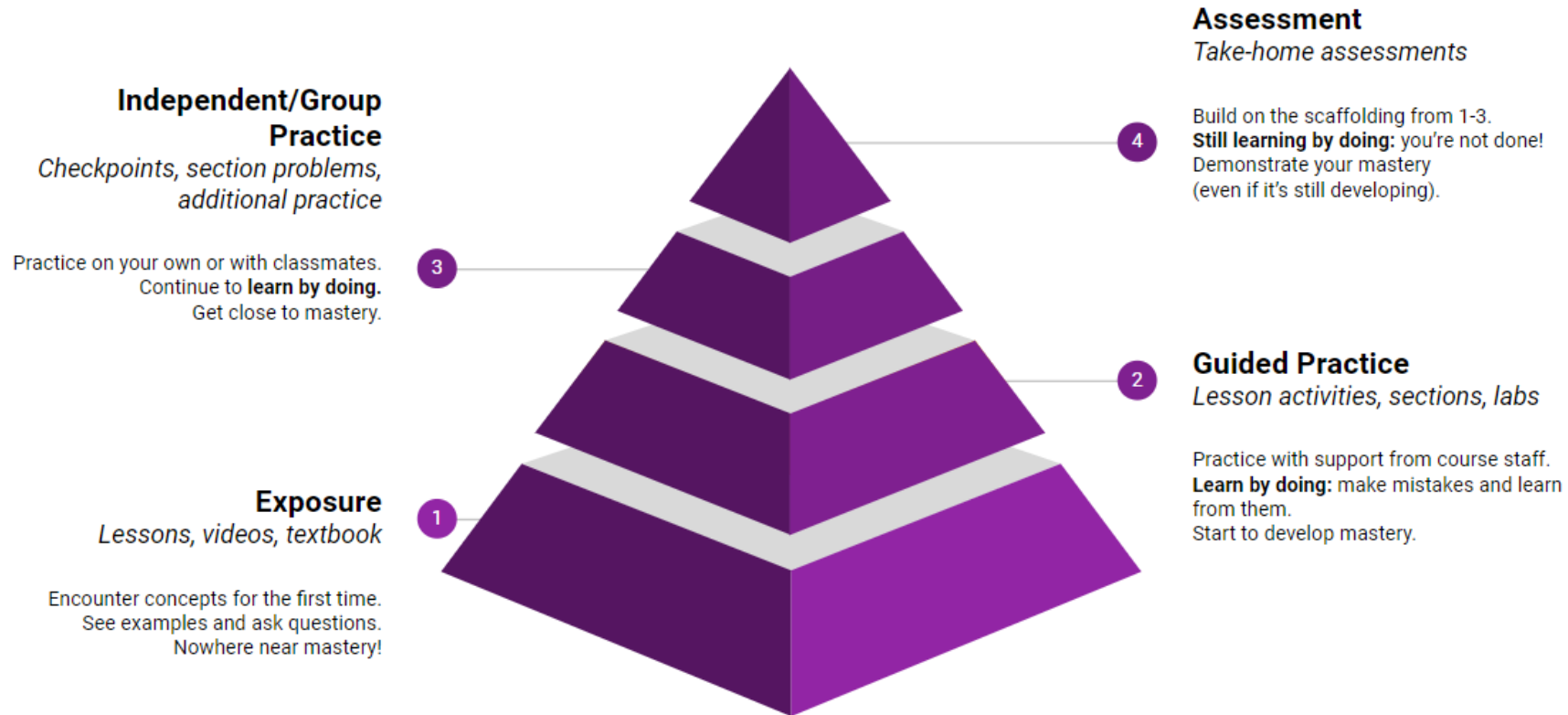
or "What did I learn

- **Computational** defined steps that
- "Thinking like a computer"
- **Testing:** determine if code works as intended
 - Requires really good test cases
- **Debugging:** find the bug
 - Often just as hard as writing the code



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Learning in CSE 142 (or anywhere)



Applications of CS

or “What can I do with what I learned?”

- Detect and prevent toxicity online
- Digitize basketball players
- Help DHH people identify sounds
- Figure out how to best distribute relief funds
- Recognize disinformation online
- Make movies
- Improve digital collaboration
- Fix Olympic badminton
- And so much more!

Future Courses

or “What can I do next?”

Course	Overview
CSE 143 * +	Intermediate programming with data structures (Java)
CSE 154 * +	Introduction to web programming (several languages)
CSE 160 +	Introduction to programming for data analysis (Python)
CSE 163 * +	Intermediate programming for data analysis (Python)
CSE 180	Introduction to data science (Python)

* Offered in Summer 2021

+ Offered in Autumn 2021

See also: <https://www.cs.washington.edu/academics/ugrad/nonmajor-options/intro-courses>

Frequently Asked Questions

- How can I get better at programming?
 - Practice!
- How can I learn to X?
 - Search online, read books, look at examples
- What should I work on next?
 - Anything you can think of! ([Here are some ideas](#))
 - Beware: it's hard to tell what's easy and what's hard.
- Should I learn another language? Which one?
 - That depends– what do you want to do?
- What's the best programming language?
 - 😞 (take CSE 341)

Thank you!!!

