CSE 121 – Lesson 18

Miya Natsuhara

Autumn 2023
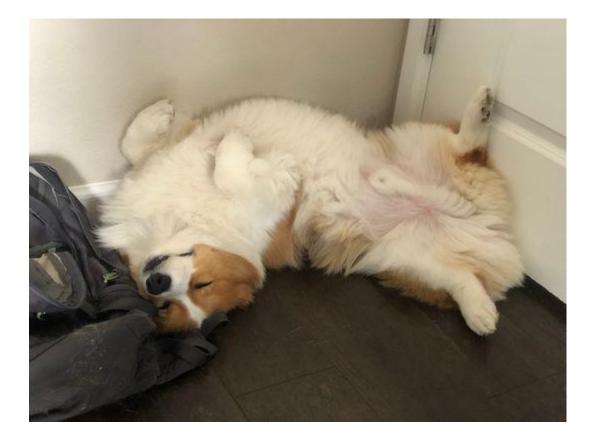
Music: 121 23au Lecture Tunes 🌧️

sli.do #cse121

TAs:	Trey	Christina	Sahej	Vinay	Kriti
	Sebastian	Colton	Anju	Maria	Minh
	Annie	Janvi	Jonus	Shreya	Vivian
	Jasmine	Arkita	Lydia	Andy	Nicole
	Christian	Vidhi	Luke	Nicolas	Simon
	Lucas	Ritesh	Andras	Shayna	Jessie
	Logan	Hibbah	Archit	Hannah	Lydia
	Jacob	Julia	Ayesha	Aishah	Yijia

Announcements, Reminders

- Resubmission Cycle 7 update: *all assignments eligible for resubmission*
  - Closes on Thursday, Dec 14

- Gumball (& friends) Visit on Monday, Dec 11 1:00pm-3:00pm around Drumheller Fountain & Rainier Vista

- TA-led Final Exam Review Session Tuesday, Dec 12 4:30pm-7:00pm in ARC147

- Final Exam: **Wednesday, Dec 13 12:30pm-2:20pm**
  - Seating charts have been posted!

- Bob Bandes TA Award Nominations Open!

- Course Evaluations open now, and close Sunday Dec 10 at 11:59pm
  - Currently at about 16% response rate!

You did it!!

Learning Objectives

or, "What will I learn in this class?"

- **Computational Thinking**

- **Code Comprehension**

- **Code Writing**

- **Communication**

- **Testing**

- **Debugging**

- **Ethics / Impact**

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(Optional) Using `String[] args`!

`String[] args` is just a parameter to our `main` method…but we never call `main`, so how do we pass anything to args?

When we run our program from the *terminal*, we can pass "command-line arguments" to the main method, and they become the contents of args

```
javac MyProgram.java
java MyProgram these 7 words will go in args
```

(Optional) Quines

A [quine](#) is a computer program which takes no input and produces a copy of its own source code as its only output.
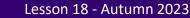
(Optional) Quines

A quine in Java!

You can understand all of the code constructs and syntax used here!

(Even if you would never have written code like this yourself)

```java
public class Quine {
  public static void main(String[] args){
    char q = 34;          // Quotation mark character
    String[] l = {        // Array of source code
    "public class Quine",
    "{",
    "  public static void main(String[] args)",
    "  {",
    "    char q = 34;         // Quotation mark character",
    "    String[] l = {       // Array of source code",
    "    ",
    "    };",
    "    for (int i = 0; i < 6; i++)          // Print opening code",
    "      System.out.println(l[i]);",
    "    for (int i = 0; i < l.length; i++)    // Print string array",
    "      System.out.println(l[6] + q + l[i] + q + ',');",
    "    for (int i = 7; i < l.length; i++)    // Print this code",
    "      System.out.println(l[i]);",
    "  }",
    "}",
    };
    for (int i = 0; i < 6; i++)          // Print opening code
      System.out.println(l[i]);
    for (int i = 0; i < l.length; i++)    // Print string array
      System.out.println(l[6] + q + l[i] + q + ',');
    for (int i = 7; i < l.length; i++)    // Print this code
      System.out.println(l[i]);
  }
}
```

Thank your TAs!

Thank you!

- This is still a very new course! We are always looking for feedback on how to improve the class for you and for future students! Thank you for your patience and understanding as we continue to improve these new assignments, resources, and examples.
    - We *really* value your feedback!
    - Let us know what is or isn't working for you!
    - Something that went well in another course? Tell us about it!

- ...Please fill out course evals by **Sunday Dec 10 at 11:59pm** to provide feedback about the course!

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* & *Identintify cheating in chess*
- *And so much more!*

Future Courses

or "What can I do next?"

Course	Overview
CSE 122	Introduction to Computer Programming II
CSE 123	Introduction to Computer Programming III

Majors

Course	Overview
CSE 311	Mathematical foundations
CSE 351	Low-level computer organization/abstraction 😉
CSE 331	Software design/implementation
CSE 341	Programming languages
CSE 340	Interaction programming

Non-majors

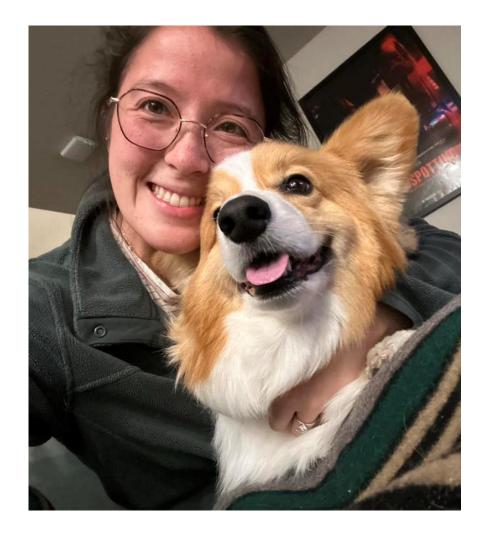| Course	Overview
CSE 154	Intro. to web programming (several languages)
CSE 163	Intermediate programming, data analysis (Python)
CSE 180	Introduction to data science (Python)
CSE 373	Data structures and algorithms (non-majors)
CSE 374	Low-level programming and tools (C/C++)
CSE 416	Intro. to Machine Learning

Other tech-related majors:

Informatics, ACMS, Electrical & Computer Engineering, …

See: https://www.cs.washington.edu/academics/ugrad/current-students and https://www.cs.washington.edu/academics/ugrad/nonmajor-options/nonmajor-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 or CSE 413)

Thank you!

Ask Me (Almost) Anything!