Welcome!

Talk to your neighbors:
Introduce yourself to your neighbor!

What is your name? Major? Why are you taking this class?

Music: cse 122 su 23 tunes

Instructor: Melissa Lin
TAs:
- Poojitha Arangam
- Darel Gunawan
- Colton Harris
- Atharva Kashyap
- Eesha Kunisetty

Audrey Lin
Di Mao
Steven Nguyen
Ben Wang
Jaylyn Zhang

Questions during Class?
Raise hand or send here
sli.do  #cse122
Lecture Outline

• **Introductions**

• About this Course
  - Course Components & Tools
  - Policies
  - Making the Most of this Class

• Intro/Review Java
Course Staff

• Instructor: Melissa Lin

• Teaching Assistants:
  - Available in section, office hours, and discussion board
  - Invaluable source of information & help in this course

• We’re excited to get to know you!
  - Our goal is to help you succeed 😊
About me
Tas <3
Students

• 79 of you!

• Strength in numbers
  - If you’re confused about something, I guarantee someone else is too!
  - Students come from all different backgrounds & majors & interests in future career goals

• Focus on us trying to help you build community
  - Meet others in the class to form study groups or have people you can work with.
What is this Class?

CSE 121 – Computer Programming I
or Other Programming Experience

- Print statements
- Data types (int, String, boolean)
- Methods / Functions
  - Parameters
  - Returns
- Control structures
  - Loops
  - Conditionals
- File I/O
- Arrays
- Computational Thinking
  (language agnostic)

CSE 122 – Computer Programming II

- Decomposing large problems into smaller, manageable, subproblems
- Using data structures
  - List
  - Stacks / Queues
  - Sets
  - Maps
- Object Oriented Programming
  - Interfaces
Prerequisite Knowledge

• Students entering CSE 122 are coming from many of different backgrounds
  - UW: CSE 121 or other intro programming course
  - Community College: Intro Programming Course
  - High School Programming Course (e.g., UWHS, AP CS, IB CS, etc.)
  - Self-taught or other previous experience

• Importantly: CSE 122 is in Java, but we do not expect prior experience in Java! Do expect knowing the list of CSE 121 topics in some language.
  - Students who do not have experience in Java will be focusing on practicing the programming skills you know in a new language!
  - You will find the Java Tutorial and Programming Assignment 0 very helpful!

• If you want to know if this class is the right fit for you, take the Allen School Self-Placement Test
Why 122?

1. Build a strong foundation of data structures that will let you tackle the biggest problems in computing
Why 122?

2. Learn an important structural pattern for representing objects in code to make our code more reusable and maintainable and easier to understand.

• Java is designed around this idea of objects. We haven’t been leveraging that yet!

• Used in almost every real-world software project.
Poll: Why are you taking this class?

• Answer on sli.do #cse122 or using this QR code:
Lecture Outline

• Introductions

• About this Course
  - Course Components & Tools
  - Policies
  - Making the Most of this Class

• Intro/Review Java
Course Components

Meetings

**LECTURES** (x19)
- We’re here!
- Introduce concepts, practice ideas, discuss applications.
- Pre-class materials to prepare for class each day. Due **before** class.

**SECTIONS** (x18)
- Held in person
- More practice, reviews, applications
- TA advice, how to be an effective student
- Preparation for quizzes / exams

Assessments

**PROGRAMMING ASSIGNMENTS** (x4)
- Structured assignments
- Programming in Java
- Applying & implementing course concepts

**CREATIVE PROJECTS** (x4)
- More open-ended assignments
- Explore new ideas and applications

**QUIZZES** (x3)
- Take home, open-note, open-internet
- ~45 minutes

**EXAM** (x1)
- Culminating exam
- More details to come
Course Website

Contains most course info – check frequently!
- Announcements, Calendar, Lecture Slides, Office Hours schedule, Staff Bios, Important Links

**cs.uw.edu/122**

**Instructor**

Melissa Lin  
Email: mth2@uw.edu

Hi everyone, I’m Melissa!  
I’m currently a BS/MS computer science student in the Allen School. Previously, I was a TA for 4 quarters (3 quarters for 122, 1 quarter on some 300 level CSE courses). This will be my first time being the instructor for a course, so I’m super excited for this quarter!  
I’ve spent my whole life in the Seattle area, from Redmond where I was born and raised, to Seattle where I started at UW as a direct admit to the Allen School.  
After doing some computer science tutoring and realizing how much I enjoyed teaching, I became a teaching assistant here and have been doing it ever since. Outside of school and teaching, I enjoy crocheting, bouldering, watching TV shows, reading, going on walks, and exploring Seattle. My favorite weekend activity is going to a cafe to read or do work, so please let me know your favorite cafes so I can try them!  
Looking forward to a great quarter with y’all!

**Office Hours**

Wednesday and Friday 12:00 - 1:00pm  
CSE 206

**Teaching Assistants**

Get to know the staff
Other Course Tools

Ed
- Community & Information
  - Discussion Board
    (please ask & answer!; anonymous option)
  - Chat
  - Announcements
- Pre-Class Materials / Section Handouts
- Assignments
  - Online IDE
  - Submit assignments
  - View Feedback

My Digital Hand
- Queueing in office hours

IntelliJ
- Develop offline
- Visual debugger

Canvas
- Gradebook
- Lecture recordings

Sli.do
- In-class activities (ungraded)
- No account needed
Lecture Outline

• Introductions

• About this Course
  - Course Components & Tools
  - Policies
  - Making the Most of this Class

• Intro/Review Java
Resubmissions

Learning is a challenging process that takes time, it doesn’t always happen on your first try.

• Each week, one previous Programming Assignment or Creative Project can be resubmitted
  - Must be accompanied by a short write up explaining changes
  - Grade on resubmission completely replaces original grade.

See syllabus for more details
Collaboration

• These concepts are challenging: we strongly encourage discussion + collaboration!
  - Don’t attempt to gain credit for something you didn’t do
  - In general, share ideas and work together, but don’t copy work. Never show someone else your code or solution write up.
  - For any ungraded work (e.g., pre-class materials) there is no concern about academic misconduct! You should be collaborating on those without reservation.
  - On graded assignments you should still collaborate, but the code you write should be of your own creation.
    - Always cite the help you receive on graded work

• Withdrawal Policy

• Read full policy in Syllabus
Textbook

Pre-class Materials

• All required readings are available free on Ed!
• Should be finished before class (not graded)

Optional Textbook

• Building Java Programs by Reges and Stepp (5th Edition)
• Not required but does add another perspective. Will reference relevant chapters.
• Advice: only purchase if you learn best with a textbook, otherwise not recommended.
Lecture Outline

• Introductions

• About this Course
  - Course Components & Tools
  - Policies
  - Making the Most of this Class

• Intro/Review Java
How Learning Works

• Learning requires **active participation** in the process. It’s not as simple as sitting and listening to someone talk at you.
  - Requires **deliberate practice** in **learning by doing**
  - Benefits from **collaborative learning**

• Hybrid classroom model
  - Asks you to do some preparation before class in the form of readings and practice problems.
    - Should take ~30 minutes a day
  - Class will start with brief recap, then pick up where the reading and practice problems leave off.
  - Attendance isn’t graded, but showing up and trying is the first step in succeeding in the class!

• Pre-class materials are ungraded, but
  - It’s okay if you find them challenging! That means you are learning!
Metacognition

• **Metacognition**: asking questions about your solution process.

• Examples:
  - **While debugging**: explain to yourself why you’re making this change to your program.
  - **Before running your program**: make a prediction of what you expect to see.
  - **When coding**: be aware when you’re not making progress, so you can take a break or try a different strategy.
  - **When designing**:
    - Explain the tradeoffs with using a different data structure or algorithm.
    - Reflect on how you ruled out alternative ideas along the way to a solution.
  - **When studying**: what is the relationship of this topic to other ideas in the course?
  - **After coding**: reflect on the process – what were the challenges?
Getting Help

• Discussion Board
  - Feel free to make a public or private post on Ed
  - We encourage you to answer other peoples’ questions! A great way to learn

• Introductory Programming Lab (Office Hours)
  - TAs can help you face to face in office hours, and look at your code
  - You can go to the IPL with any course questions, not just assignments

• Section
  - Work through related problems, get to know your TA who is here to support you

• Your Peers
  - We encourage you to form study groups! Discord or Ed are great places to do that

• Email
  - We prefer that all content and logistic questions go on the Ed discussion board (even if you make them private).
  - For serious personal circumstances, you can email me directly. It never hurts to email me, but if it’s a common logistic question, I may politely ask you to post on the discussion board.
Help Us Improve!

• This is a very new course! We are always looking for feedback on how to improve the class for you and for future students! Thank you in advance for your patience and understanding as we develop everything. 😊
  - We really value your feedback!
  - Let us know what’s working and what isn’t working for you
  - Something that went well in another course? Tell us about it!

• Post on the discussion board (can be public/private).
  - Note: Anonymous here is anonymous to other students, not to the staff.

• Submit feedback via the Anonymous Feedback Tool (linked under “Course Tools” on the website)
The World Around CSE 122

• Our goal is to give you a great CSE 122 experience
  - But CSE 122 does not exist in a vacuum – there’s a lot going on in the world right now that can impact your education

• We’ve designed course policies for maximum flexibility
  - But we cannot cover every individual situation

• Please reach out if you need accommodations of any kind to deal with these unfamiliar situations
Lecture Outline

• Introductions

• About this Course
  - Course Components & Tools
  - Policies
  - Making the Most of this Class

• Intro/Review Java
Hello World

• Java Specifics
  - Every program needs a class
  - Runnable programs need a main method (*signature* must exactly match)
  - System.out.println to print
  - "Hello world" is a String

```java
public class HelloWorld {
    public static void main(String[] args) {
        System.out.println("Hello world");
    }
}
```

• Running on Ed
  - Run runs your program
  - Mark submits and runs autograder
    - Submit as many times as you like
    - “Shotgun submission” = Unhelpful habit
  - Solution shows solution (if applicable)
“Homework” for Next Time

• First assignment will be released Friday, but there are some things to do in the meantime.

• TODOs this week
  - Go meet your TA and classmates in Thursday’s quiz section
  - ⭐ Complete the pre-class material for Friday (see calendar)
  - Read over syllabus