CL00: Welcome to

!

Today’s Goals

Introductions

What is the course about?

What are the instructional and workload expectations?

Logistics?

Homework

An introduction to computer systems + programs

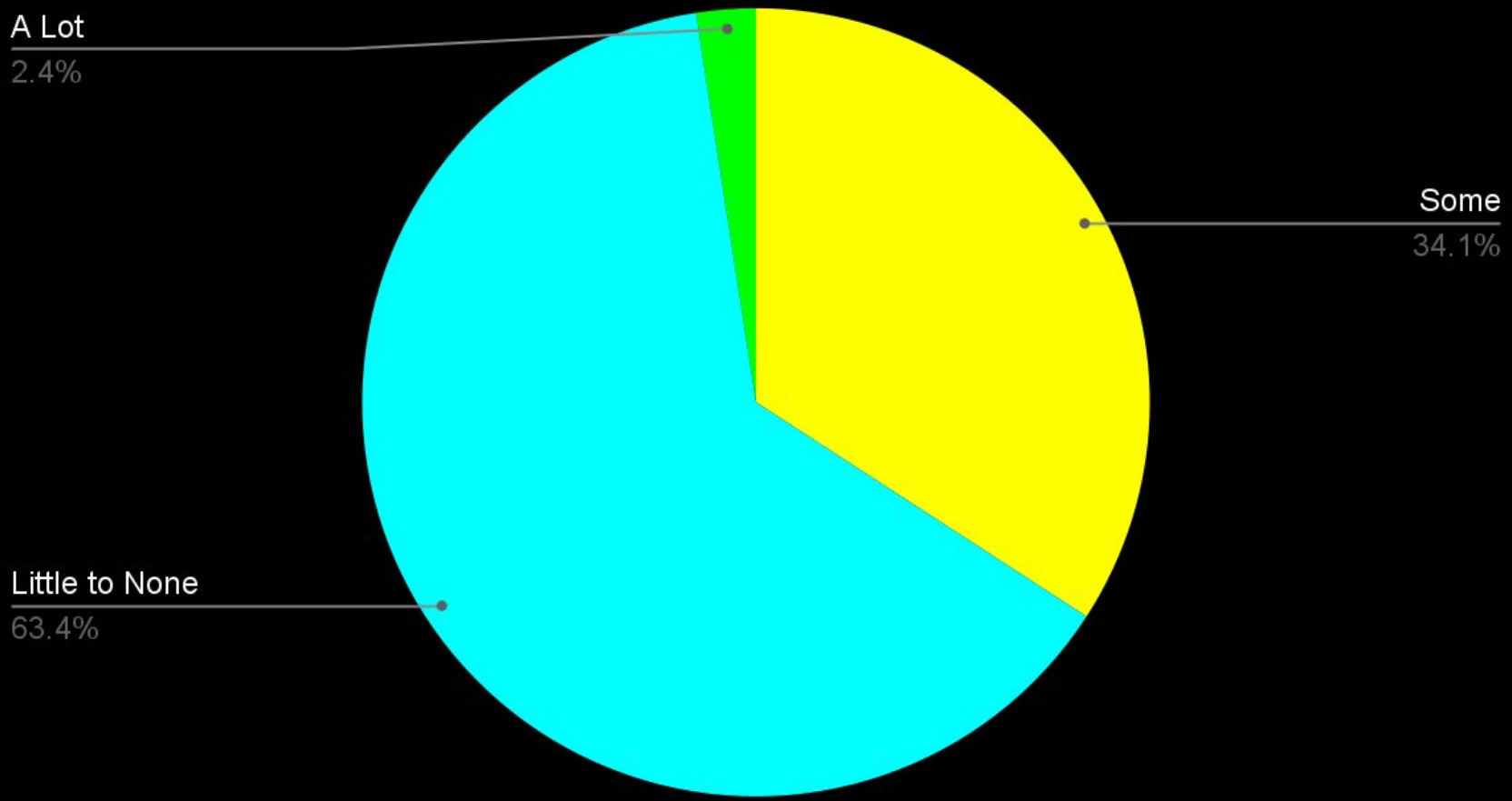
About me (Dr. Isabella (“Izzi”) Hinks)

- Originally from Apex, NC
- Did my undergrad at UNC!
- PhD @ NC State University
- COMP110 student → UTA → work, grad school… → **Professor**

The Real MVPs: Your UTA Team!

- This course would be **impossible** for all of us, if not for them
- THE absolute best UTA team at Carolina. You will 💙 them
- This team can do it all: they'll help teach you concepts you're struggling with, guide review sessions, create study guides, build exercises, and more
- In-person and virtual office hours will be available to you most days of the week!

TA’s coding experience before taking COMP110



Who else is in **COMP110** with you?

- Be prepared to stand/raise your hand if I call out an affinity group you belong to
- After peers stand, we'll *clap to celebrate their presence in the course*!

Who is a **freshman/sophomore**?

Who else is in **COMP110** with you?

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Who is a **junior/senior+**?

Who else is in **COMP110** with you?

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Who is **not an undergraduate student**?

Who else is in **COMP110** with you?

- Be prepared to stand/raise your hand if I call out an affinity group you belong to
- After peers stand, we'll *clap to celebrate their presence in the course*!

Who is coming into this course with ***no*** *programming experience*?

Who else is in **COMP110** with you?

- Be prepared to stand/raise your hand if I call out an affinity group you belong to
- After peers stand, we'll *clap to celebrate their presence in the course*!

Who is coming into this course with ***a little*** *programming experience*?

Who else is in **COMP110** with you?

- Be prepared to stand/raise your hand if I call out an affinity group you belong to
- After peers stand, we'll *clap to celebrate their presence in the course*!

Who is coming into this course with ***a lot*** *of programming experience*?

Who else is in **COMP110** with you?

- Be prepared to stand/raise your hand if I call out an affinity group you belong to
- After peers stand, we'll *clap to celebrate their presence in the course*!

Who **is *not*** planning to major in computer science?

Who else is in **COMP110** with you?

- Be prepared to stand/raise your hand if I call out an affinity group you belong to
- After peers stand, we'll *clap to celebrate their presence in the course*!

Who ***is*** planning to major in computer science?

Who else is in **COMP110** with you?

- Be prepared to stand/raise your hand if I call out an affinity group you belong to
- After peers stand, we'll *clap to celebrate their presence in the course*!

You are a **capable and diverse group**!

Zero Programming Experience Expected

- This course assumes *no* prior programming experience
  - (But some experience is OK!)

- COMP110 is a ***rigorous*** introduction to programming (especially over the summer!)
  - 7.5 hours of lecture/lessons
  - and ~15 hours of practice/coursework per week

Course Objectives

- You will learn the **fundamentals of programming**
  - Using common tools and techniques used by software engineers
  - Universal concepts that **apply to nearly all programming languages**
  - You will leave knowing what it feels like to be a programmer
- You will gain practice with **computational thinking**
  - **Thinking algorithmically** while breaking down problems step-by-step
  - Thinking at varying levels of **abstraction** by describing problems & solutions abstractly and precisely

Course Website: Your one-stop shop for course content

https://comp110-25ss1.github.io/

(Syllabus and course agenda on there!)

Grading Breakdown

- 50% - Preparation, Practice, Participation
  - 35% - (EX) Programming Exercises
  - 4% - (RD) 2x Reading Responses
  - 4% - (LS) Async Lesson Responses on Gradescope (Graded for Correctness)
  - 4% - (CQ) In-class Challenge Questions (Graded for Correctness)
  - 3% - (CL) In-class Participation (Graded for Completion)
- 50% - Mastery
  - 40% - 5x Quizzes
  - 10% - Final Exam

Quizzes

Quizzes are ***in person***, with *pencil and paper*, during your section's lecture time. You are only permitted to be absent for *one quiz*.

NO MAKEUPS unless you have a university-approved excuse!

All dates are on the course website!
For full policies, see syllabus.

CQs, Exercises, + Autograding

- Come to class for CQs, and start exercises EARLY!
- You can re-submit to the autograder without penalty before the due date
- If you do not get full credit, stop and think about what might be causing a test to fail. Try again!
- Be careful to avoid a frustrating loop of "tweak one small thing, resubmit, tweak one small thing, resubmit, ..."
    1. The autograder gives you feedback – see if you can reproduce the error!
    2. If you find yourself stuck in this loop, stop by office hours in person or virtually

Use of AI

- AI tools like ChatGPT can be very useful in programming, but it takes a trained eye to use them properly!
- In this class, *you are training your eyes* to learn the fundamentals, so using AI will only hinder your understanding and won't strengthen you as a programmer!
- Considered a violation of the honor code, unless we ask you to use it in some way.

Programming is a Practiced Skill

- Like playing an instrument, painting, writing cursive letters, dancing, singing, sports, wood working, quilting, and so on.... **Time spent *individually practicing* is the key to success.**
- This is *very different* from courses that are knowledge-based!
- The team and I want you to succeed in learning how to program, so we structure everything we do toward helping you practice individually.
- *Know what every line of your code is doing!*

Computer Scientists are Toolsmiths

“The *programmer*, like the poet,
works only slightly removed from
pure thought-stuff.

(S)he builds castles in the air, from air,
creating **by exertion of the imagination.**

Few media of creation are
so flexible
so **easy to polish** and **rework**
so **readily capable** [..]”

- **Fred Brooks**

How do *you* believe programming will be valuable toward achieving *your* personal goals?

Why are you in this course?

Think for a minute, introduce yourself to your neighbor(s) and discuss, then we'll share.

Homework - by tonight!

- Ready Syllabus and Support on Course Page
- *Complete Lesson 00 (LS00) on Gradescope*
- Update your computer's operating system
  - Instructions are posted under the Resources section
- Install required software
- Set up your course workspace
- *Complete Lesson 01 (LS01) on Gradescope*

- Start your first Exercise (EX00): Hello World!
  - Due Friday at 11:59pm

(In-Person) Open House Today

- 1:30–3pm today
- Sitterson Hall (SN) - Go downstairs to SN008
- Get help installing course software!
- Introduce yourself and meet me!

Please complete this WhenIsGood with the times you'd like us to offer Office Hours each week.

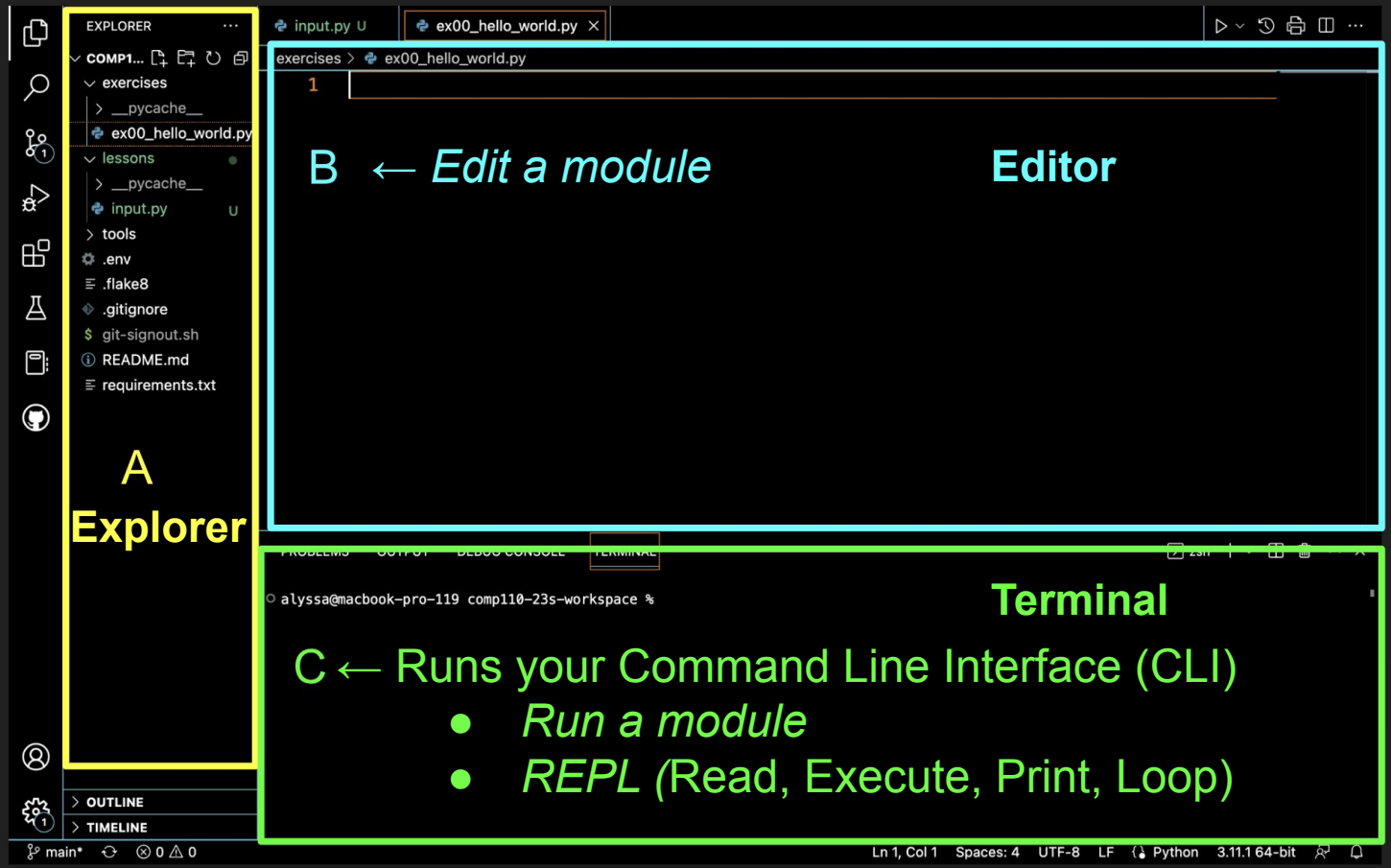
We'll do our best to schedule Office Hours when students have the greatest shared availability.

Feedback + Help

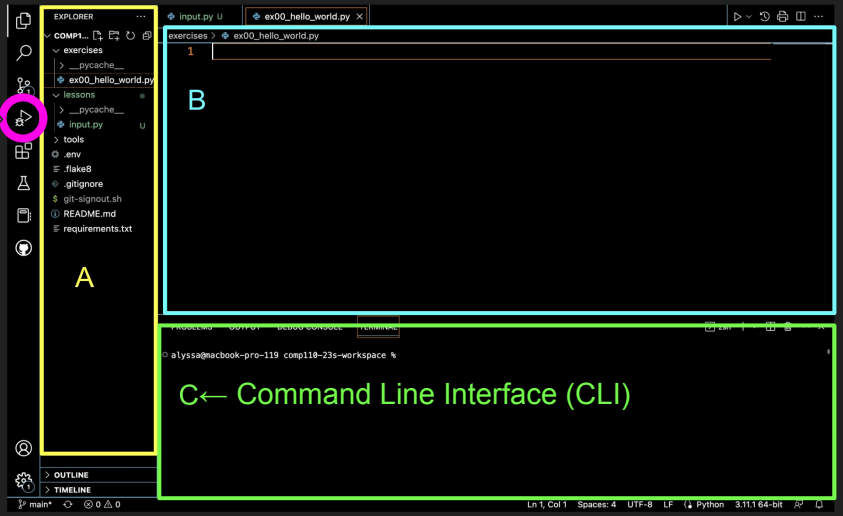
Feedback is *always* welcome!

- From “your mic is too quiet” to suggestions on how to improve the course
- Feedback form here – feel free to submit feedback any time!

An introduction to Visual Studio (VS) Code

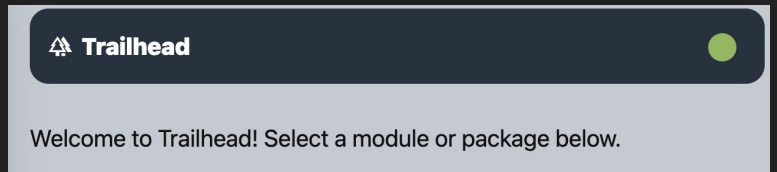


Ways to run code



Use Trailhead:

- Launch with the debug button
- “Starting Trailhead server at http://localhost:1110”



Interactive (like a conversation with your computer):

REPL: Read Execute Print Loop

- To initialize the REPL in your terminal, type:
  - `python`
- `>>>` means you’re in the REPL
- To exit the REPL, type:
  - `exit()`

To run a module (execute a python (.py) file) from your terminal, type:

- `python -m my_file_name`

Looking forward to a great summer session!

Questions?