CSE 121 Lesson 1:
Printing and Turtles!

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Spring 2024

TAs: Andy  Anju  Archit  Arkita  Autumn  Christian
     Hannah H  Hannah S  Heather  Hibbah  Janvi  Jessie
     Jonus  Julia  Luke  Maria  Mia  Ritesh
     Shayna  Simon  Trey  Vidhi  Vivian  Gumball?

Today’s playlist:
CSE 121 lecture beats 24sp
Announcements, Reminders

• Check out website for links to all activities, materials
• Creative Project 0 will be out tonight, due Wed Apr 3
• New Ed materials: Sandbox & Glossary
• Matt’s office hours are out (incl. one today at 1:30)
• Fill out the introductory survey!
  • About 34% of the class has filled it out so far – ty <3
Aside: office hours as a resource!

The IPL (TA office hours) will open on Monday (Apr 1)

• one of the best parts of the course!!
• but: TAs are instructed to not just give you the answer!
  • why not? you wouldn’t be learning!
  • developing the skill of asking good questions!
  • e.g. “my code doesn’t work” versus “I tried X, expected Y, but got Z. Any thoughts on what to try next?”
• more about this on our website
Intro Survey – things we’re excited for!

“I am excited to learn more about how code can be used in real-world projects as well as develop my understanding of coding languages!”

“Learning something new that I have no experience or prior knowledge in, I might find out I love it and feel confident that that is what I want to study, and I might find it's not for me and that is also helpful in finding a major that fits me best”

“I am most excited about the creative projects.”

“JAVA!”
Reassuring worries from intro survey (1/3)

Most common: comments along the lines of...

• “I do not have any CS experience so i am nervous about my lack of experience being a disadvantage”
• “I haven’t learnt anything about coding yet”
• “Not knowing how to program”
• “coding, I have zero prior experience”

We’re all in the same boat here, and you’re in the right place! We expect zero prior knowledge.
Reassuring worries from intro survey (2/3)

Difficulty, workload, pace, & falling behind

• recognizing that programming can be difficult (if it was easy: why have a class?)
• as a result, have built many support systems (section, IPL, office hours, Ed, etc.)
• if you feel like you’re struggling: reach out early!
  • especially with pace of quarter system

Competitiveness & this class being a “weed-out” class

• explicitly not the goal of this class
• course designed against this (minimum grade guarantees, resubmissions, etc.)
Reassuring worries from intro survey (3/3)

Handwritten final
• we’ll have a whole week dedicated to this, with practice finals too!

Struggling with technology / not being a computer person / Ed is new
• this can be hard (and is important)! if you’re confused – please ask!
• along the way, we’ll teach some small skills (e.g. searching “smart”, shortcuts)

Not being a math or STEM “person”
• in my opinion, everybody can be a math or STEM person :)
• fun fact: some of our CSE professors were originally completely different majors!!
Finding groups?

A good chunk of people asked about finding study groups!

Some thoughts:

• as you’ll see today, we do lots of pair/group learning in class. Vibe well with someone? Ask them to study :)
• say hi to folks in section, office hours, and the IPL!
• stay tuned for more (!!)
... and some fun responses!

- “I think Atlanta Millionaires Club was better than Undressed at the Symphony tbh :]
- “I love Laufey and I can't wait to get to know you more in office hours! :)
- “The lecture beats are sick”
- “The country Cameroon is named for shrimp”
- “I'm very excited to learn and be part of this class!”
Escape Sequences

*escape sequence*: A special sequence of characters used to represent certain special characters in a string.

- \" to produce " in a String
- \ \ to produce \ in a String
- \n to produce a new line character (or line break) in a String
- And there are more!
Activities in Class

- **Goal**: To get you actively participating in your learning!

- May ask you to think and volunteer a suggestion

- May ask you poll in with a response (via slido)

- *Not graded* but strongly encouraged to maximize your learning and use of class time!

- Common Format: **Think, Pair, Share**
  - Question is posed
  - **Think** about the question on your own
  - **Pair** up with your neighbor and discuss the question
    - Focus on how you arrived at your answers, whether they’re the same or different!
  - **Share** what you discussed with the rest of the class!
Poll in with your answer!

How many lines of output would the following code produce?

```java
System.out.println("hello");
System.out.print("moi");
System.out.print("bonjour");
System.out.println("pryvit");
System.out.print("nihao");
System.out.println("hola");
```

a) 1  
b) 2  
c) 3  
d) 5  
e) 6
## Turtles!

Turtle `donatello` = new Turtle();

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>forward(n)</td>
<td>Moves the turtle forward by n steps</td>
</tr>
<tr>
<td>backward(n)</td>
<td>Moves the turtle backward by n steps</td>
</tr>
<tr>
<td>right(d)</td>
<td>Turns the turtle right by d degrees</td>
</tr>
<tr>
<td>left(d)</td>
<td>Turns the turtle left by d degrees</td>
</tr>
<tr>
<td>speed(ms)</td>
<td>Sets the number of milliseconds it takes for the turtle to perform an action (e.g., if ms is 1000, then it will take the turtle 1000 ms = 1 second to perform an action like moving forward or turning).</td>
</tr>
<tr>
<td>up()</td>
<td>Picks up the turtle's pen so it doesn't draw when it moves</td>
</tr>
<tr>
<td>down()</td>
<td>Puts the turtle's pen down so it draws when it moves</td>
</tr>
<tr>
<td>width(w)</td>
<td>Sets the width of the turtle's pen to w pixels wide</td>
</tr>
<tr>
<td>penColor(c)</td>
<td>Sets the color of the turtle's pen to c</td>
</tr>
</tbody>
</table>
Poll in with your answer!

Assuming we have created a Turtle named donatello, what do you think the following commands would end up drawing?

donatello.left(90);
donatello.forward(30);
donatello.right(135);
donatello.forward(40);
donatello.left(135);
donatello.forward(30);

ea) A circle
b) A triangle
c) The letter M
d) The letter N
e) A star
Food for Thought

A weekly section where I introduce open problems related to our lecture topic(s) of the week.

Goals:
1. give you “conversational familiarity” with CS terminology
2. see how CS interacts with other fields and people!
3. point you in the direction of more CSE (or adjacent) classes

Note: not tested content. Just food for thought :)

Lesson 1 - Spring 2024
Accessibility: can everyone use Turtle? (1/2)

Hint: have you heard of the term “alt text”? How is it relevant here?
Accessibility: can everyone use Turtle? (2/2)

Hint: have you heard of the term “alt text”? How is it relevant here?

Bigger picture question: how do blind (and non-sighted) people use computers?
Accessibility: what’s next? (1/3)

In your C0 reflection, you’ll experiment with one possible solution to this problem. But, it’s far from complete:

• there are many more types of access needs than what we’ve discussed today
• we don’t have enough CS knowledge to dive deep (yet!)

We’ll talk about accessibility again in the future – including in future lectures, assignments, & reflections!
Accessibility: what’s next? (2/3)

About 1 in 4 Americans (~40-60 million) have a disability (CDC, Census)

And much of modern life requires computers!

So, this is a problem that matters, whether or not you become a computer science major, write code for a living, etc.
Accessibility: what’s next? (3/3)

UW (and UW CSE) has some absolutely stellar folks who work on accessibility, and ways to get involved!

• Jen Mankoff’s [CSE 493E: Accessibility](#)
• the [Quorum](#) language
• UW [CREATE, AccessComputing, Disability Studies, ASL Minor](#)

Bottom line: Explore and be curious!
(and reach out if you want to learn more!)
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