CSE 121 Lesson 1: Printing & Turtles

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Winter 2024

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sli.do #CSE121-1

Today's song: Turtles All the Way Down

Announcements, Reminders

- Check out [website](#) for links to all activities, materials
- Office hours have been posted (many!) – say hi!
- Creative Project 0 will be out tonight (~8pm)!
- The IPL will open on Monday (Jan 8)
- Fill out the introductory survey!
  - About 45% of the class has filled it out so far – ty <3

Reassuring some worries from intro survey

Pace, difficulty (esp at UW), & falling behind. [Most common]

we have a gentle ramp-up. Above all, we're on your side – please reach out for help!

Math

some CS is a lot of math, but not really in 121 – you make the computer do the math!

"I am terrified that everyone is secretly a coding wizard and I'm the only complete beginner."

this class is <u>for beginners!</u> And who knows, maybe you are a coding wizard...

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!

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And some fun responses…

"I will have so so so many questions"

"My dad is a computer programmer and he thought I should take at least one CSE course before I graduate, so this one is for you Pops!"

"None. Zero. Absolutely nothing. Computers are still magic and witchcraft in my world."

"Stream "Flyweight Love" by Vienna Teng"

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!

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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?

```
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

🐢 Turtle Time!

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🐢 Turtles!

`Turtle donatello = new Turtle();`

Method	Description
`forward(n)`	Moves the turtle forward by n steps
`backward(n)`	Moves the turtle backward by n steps
`right(d)`	Turns the turtle right by d degrees
`left(d)`	Turns the turtle left by d degrees
`speed(ms)`	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).
`up()`	Picks up the turtle's pen so it doesn't draw when it moves
`down()`	Puts the turtle's pen down so it draws when it moves
`width(w)`	Sets the width of the turtle's pen to w pixels wide
`penColor(c)`	Sets the color of the turtle's pen to c

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);
```

a) 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: <u>not tested content.</u> Just food for thought :)

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)

We're not close to done!

- 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)

But, we want you to think about accessibility as you learn more about computers, programming, and technology.

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

So, this is a problem that matters, regardless of 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 <u>absolutely stellar</u> folks who work on accessibility, and ways to get involved!

- Jen Mankoff's <u>CSE 493E: Accessibility</u>
- the <u>Quorum</u> language
- UW <u>CREATE</u>, <u>AccessComputing</u>, <u>Disability Studies</u>, <u>ASL Minor</u>

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

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