CSE 121 Lesson 1: Printing & Turtles

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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 for beginners! 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!
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!
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
 Turtle Time!

This Photo by Unknown Author is licensed under CC BY-SA
Turtles!

Turtle `donatello` = new Turtle();

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>forward(n)</code></td>
<td>Moves the turtle forward by <code>n</code> steps</td>
</tr>
<tr>
<td><code>backward(n)</code></td>
<td>Moves the turtle backward by <code>n</code> steps</td>
</tr>
<tr>
<td><code>right(d)</code></td>
<td>Turns the turtle right by <code>d</code> degrees</td>
</tr>
<tr>
<td><code>left(d)</code></td>
<td>Turns the turtle left by <code>d</code> degrees</td>
</tr>
<tr>
<td><code>speed(ms)</code></td>
<td>Sets the number of milliseconds it takes for the turtle to perform an action (e.g., if <code>ms</code> 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><code>up()</code></td>
<td>Picks up the turtle's pen so it doesn’t draw when it moves</td>
</tr>
<tr>
<td><code>down()</code></td>
<td>Puts the turtle's pen down so it draws when it moves</td>
</tr>
<tr>
<td><code>width(w)</code></td>
<td>Sets the width of the turtle's pen to <code>w</code> pixels wide</td>
</tr>
<tr>
<td><code>penColor(c)</code></td>
<td>Sets the color of the turtle's pen to <code>c</code></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);

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: not tested content. 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 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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