Week: 01 Date: 08/31/2023

| 15-110 Recitation Week 1 |
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# **Reminders**

* Check1 due at Noon Wednesday 09/06!
* Post recitation feedback form: <https://forms.gle/MsTcE2TCpwYBvx7U7>

# **Overview**

* TA + student introductions, Course Logistics
* Algorithms
* Programming Basics
* Working with Thonny

**TA + Student Introduction**

Let us know your name, pronouns, major + year, and something fun you did over the break!

| Problems |
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# **ABSTRACTION**

First, write an algorithm at a **low** level of abstraction that instructs a person on how to wash their hands. Assume the person you are instructing has almost no prior knowledge.

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Second, write an algorithm at a **high** level of abstraction that does the same. This time you can assume the person you're instructing has a little more prior knowledge- what soap is, what a sink is.

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# **PROGRAMMING BASICS**

**Answer the following questions:**

1. What is the result of 4 \*\* 3?
2. What is the result of “15” + 110?
   1. How do we solve this error?
3. What is the result of 10 == "10"?
4. What is the result of 8 / 2 + 4.0?
5. What is the result of 34 > 34?
6. What is the correct way to output “Hello World” from the editor?
7. Given (x = 1), what will be the value of x after we run (x = x+2)?
   1. Using x, what line of code initializes a variable y that is equal to 5x?
8. What are the errors in the following line of code?

pi \* (5\*\*2) = area

1. What is the difference between == and =?
2. What are the operators that can be used to compare numbers?

# **Thonny**

Installation instructions:

1. Download and install Thonny [here](https://thonny.org/).
   * If you are on a Mac, you may need to verify that Thonny is a safe application in your settings.
   * Go to System Preferences > Security & Privacy.
   * There should be a notification about Thonny being blocked. Click 'Open Anyway' to verify Thonny.
2. Launch Thonny.
3. For a simple Python3 test, type this line of code in the shell/interpreter (with ">>>"):  
   **print(5/3)**then press Enter. You should not get 1 (which you would get if you are using Python2) but instead should get 1.666666667.

Now download the starter file from the website. Open the file in Thonny (Open -> select file) and then click the green play button to run the file (also found in Run -> Run current script). If you see the message “Welcome to your 15-110 Recitation!” pop up in the interpreter, this means you’ve successfully ran your first python program in 15-110!

As a second exercise, change the print statement so that it says “Welcome to your **first** 15-110 Recitation” (add the word first). Re-run the program to assure that this works!

Additionally, change the print statement so that it welcomes the person next to you, for example “Welcome to your first 15-110 Recitation, Sean”