

15-110 Recitation Week 1

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

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.

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.

PROGRAMMING BASICS

Answer the following questions:

1. What is the result of $4 ** 3$?
2. What is the result of "15" + 110?
 - a. 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 $(x = x+2)$?
 - a. 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?
$$pi * (5**2) = area$$
9. What is the difference between $==$ and $=$?
10. What are the operators that can be used to compare numbers?

Thonny

Installation instructions:

1. Download and install Thonny [here](#).
 - 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”