

Outline for October 1, 2020

Reading: §1

Assignments: Homework 1, due October 15, 2020

1. About the class
 - (a) Instructor
 - (b) Class web site, handouts
 - (c) Zoom meetings, attendance
 - (d) Canvas, backup web site, and submitting homework
 - (e) Homework, grading, and extra credit
2. Python
 - (a) What is Python?
 - (b) Why Python for this class?
3. Programming environments
 - (a) Python, files and shells
 - i. Python: programming *language* that you use to tell the computer what to do
 - ii. Shell: what you can type Python statements directly into, to see what they do
 - iii. IDLE: the program that *interprets* Python statements (executes the Python program)
 - iv. File: type Python statements into this, and then have IDLE execute those statements by running the program in the file
 - (b) More powerful IDEs: PyCharm, Eclipse
 - (c) Notebooks: Jupyter
4. First program: hello, world [*helloworld.py*]
 - (a) Explain printing
 - (b) Demonstrate program in IDLE
5. How to write a program; example is making change [*change-write.py*]
 - (a) Goal and general algorithm idea
 - (b) Representing data and basic program structure
 - (c) Translating this into a programming-like language
 - (d) Translating that into Python
 - (e) Defensive programming and debugging