Lesson Five

Math 6080 (for the Masters Teaching Program), Summer 2020

Part 1. Files. Python files are in the following format:

filename.py

When you want to run your Python file, you enter:

python filename.py

For example, my file for finding the gcd is GCD.py, located in a folder named Python on my Desktop, and I use python3, so I actually enter:

python3 Desktop/Python/GCD.py

Part 2. Input. If your code is meant to be read (e.g. by your amazed mother) then it is most likely going to include an opportunity for user input. Input is accepted via:

input()

but you need to specify the data type of the input. Thus:

int(input())

expects an integer,

float(input())

expects a real number (with a decimal point),

bool(input())

expects a Boolean, and

str(input())

expects a string (Python provides the quotation marks).

The empty parentheses following "input" are meant to be filled with a message to the user (enclosed in quotation marks). For example:

x = int(input('Enter your favorite integer: '))

prompts the user to type in her favorite integer and, as a bonus, Python assigns it to the variable x.

Exercise. Create a program run from a file that:

(a) Prompts the user for two non-zero integers, assigns them to n and m

(b) Computes the gcd of n and m, and

(c) Prints the message:

The gcd of (first entered number) and (second entered number) is (gcd)

Part 3. Any time Python sees the symbol #, it ignores whatever is to the right. This is a very important tool for **commenting** on your code. Thus:

$x = x + 2$ # increasing the value of x by 2

would be a comment (but not a particularly useful one).