

# Homework Assignment 1

Introduction to Python Programming, Spring 2020

**Due Date: Thursday, March 5<sup>th</sup> by 6:00 PM**

## Instructions (please read carefully!)

- Please include your name on everything you turn in.
- Please attempt to answer every question.
- This assignment has two parts.
  - The first part consists of Questions 1 – 4 below. Please write or type your answers on a separate sheet of paper. Please hand in your answers in person at the start of class on Thursday, March 5<sup>th</sup>.
  - The second part is making a python program following the prompts below. Please email your answers to me ([pdalba@ucr.edu](mailto:pdalba@ucr.edu)) by the start of class on Thursday, March 5<sup>th</sup>.

## Part 1: Questions

1. Explain in a few sentences how a computer runs a Python program.
2. Define “IDE” and explain in a few sentences why an IDE is useful for writing Python code.
3. What is the difference between Python’s *int* data type and *float* data type?
4. In reference to a Python operator object, what is “polymorphism”? Provide one example of an operator that has this property.

## Part 2: Prompts for Python Program

1. Create a Python program named “Homework\_01\_YOURNAME.py” (where you write your name in place of “YOURNAME”).
2. Write your name at the top of the program in a comment (a line in a code that Python ignores).
3. Assign the following Python object types to variables: *int*, *float*, *string*, *list*, *dict*, *tuple*. Use *print* statements to display the value of each of these variables. The variables may be named however you like, and the objects themselves may have any values you like.
4. Using a *print* statement, demonstrate how to “concatenate” two strings.
5. Use a *print* statement to display the answer to the following calculation:  
“1 plus 8 times 4 squared divided by 2 minus 10 divided by 5 minus 2 squared minus 1 times 15”  
(Hint: the answer should be 44.0)
6. Copy the line of code written for the previous calculation onto two new lines. Use parentheses to change the order of operations in these calculations so that the answer becomes ...
  - a. 51.0
  - b. 1.0
7. Ensure that your Python program runs without producing any error codes.