**SKELETAL NOTES** (follow this template to take notes as you are working through the lab):**:**

**Learning Objectives**

What are the main learning objectives for this lab?

**Packages:**

What packages are used in this lab?

**Functions**

List all the **Python functions** learned today and their syntax:

* Turtle functions   
  (don’t forget to write the different options for color() using name, decimal, percentage and hex)
* Pyplot functions
* Syntax for accessing parts of an image data stored as numpy array

**Unix**

List all the **bash commands** learned today and their syntax:

**FOCUS QUESTIONS** (Make sure you can answer these questions when you are done with the lab):

* What are the different ways you can specify the color of a turtle?
* The Decimal number system uses digits 0-9. What are the digits for the Hexadecimal number system?
* What is the largest 3-digit Decimal number?
* What is the largest 3-digit Hexadecimal number?
* What is the lowest 3-digit Decimal number?
* What is the lowest 3-digit Hexadecimal number?
* What is the largest 1-digit Hexadecimal number? What number is that in Decimal?
* What is the largest 2-digit Hexadecimal number? What number is that in Decimal?
* How does a 6-digit Hexadecimal number encode RGB colors?
* When we store image data in a numpy array we have a 3-dimensional array (the grid with 3 sheets). In img[r,c,ch] what do r, c and ch stand for?
* When we read in image data, it is stored in memory as a numpy array and will be wiped out when the program terminates execution. After you modify the image, what can you do to save it to a file?
* In the image program, what line is responsible for input and what lines are responsible for output?