**Module 5: Lab Activity – Iterative Programming**

Please see the “Module 5 example code” on d2l if you get stuck!

**Deliverables:**

* Python files containing solutions to the following problems

**Make Sure You:**

* Add header comments to the top of each of your files:

# Your name

# The date

# What the program does

* Test your programs to ensure they are free of any bugs

**Problem 1** – Write a program that uses a for loop to print “Hello world” 100 times.

**Problem 2** – Take the following list of numbers and use a for loop to print each number ***and*** its square to the screen:

num\_list = [12, 10, 32, 3, 66, 17, 42, 99, 20]

**Problem 3** - Write a program that uses a for loop and the turtle module to do the following:

* Ask the user for the length of a side, a fill color, and what shape they would like to draw (either a triangle or a square)
* Use a loop to draw the shape the user chose with their chosen side length and fill color
  + Each angle in a triangle is 60°, each angle in a square is 90°

**Problem 4** –  
Write a program that does the following:

* Print the numbers 1 through 50 to the screen
* For numbers evenly divisible by 3, print “Divisible by 3” instead of the number
* For numbers evenly divisible by 5, print “Divisible by 5” instead of the number
* For numbers evenly divisible by both 3 and 5, print “Divisible by both”

HINTS: The steps in your if/elif/else statement will be different from the order of the steps in this bulleted list. You will need the modulo (%) operator.

**Extra credit** – Write a program to draw some kind of picture. Be creative and experiment with the turtle methods provided in [Summary of Turtle Methods](https://runestone.academy/runestone/static/thinkcspy/PythonTurtle/SummaryofTurtleMethods.html#turtle-methods).