CIS 122 Fall 2015 Project 2
Due Monday, October 12, 11:59 PM

Briefly

Submit four Python 3 programs
Your programs are worth a total of 25 points
Test your programs -- did they work right? -- before uploading to Canvas.

Project2-names.py 5 points:

Ask for a first name, use the input( ) function to accept the name, then print **Hello** a space and the name.

Example
Type your name please Pat
The program then prints
Hello Pat

Project2-triangles.py 10 points

Use turtle graphics
Define your functions before using (calling) them

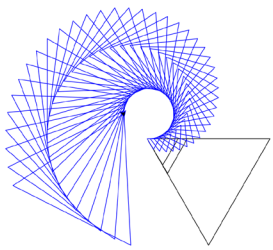
a) 5 points
Define a function **draw_triangle(size)**
When called, it draws a triangle, each side **size** long.

Call the function at least 3 times, each time using a different length **such as** this

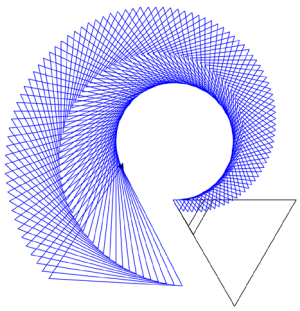
```
length = 50
draw_triangle(length)
length = 65
draw_triangle(length)
big = 200
draw_triangle(big)
```

b) 5 points
Draw a spiral made of at least 40 triangles
Hint: a **for** loop can work here
Start small, draw a triangle of a given length
Turn a small amount (such as 7 degrees)
Increase the length a small amount (such as 5 units)

Example output for 40 triangles



Smaller turn (2), a smaller move (3), more triangles:



Bonus 1 point
Add a "docstring" to your function.
help(draw_triangle) will show something like this

```
>>> help(draw_triangle)
Help on function draw_triangle in module __main__:

draw_triangle(size)
    Given size, draws a triangle
    with each side of length size
    return None

>>>
```

Project2-temperatures.py 5 points

Define 2 functions **celsius_to_fahr(c)** and **fahr_to_celsius(f)**

celsius_to_fahr(c) is given a temperature in degrees Celsius and returns a the temperature as degrees Fahrenheit.

fahr_to_celsius(f) is given a temperature in degrees Fahrenheit and returns a the temperature as degrees Celsius.

Here are some temperatures you can use to test your program

Celsius	**Fahrenheit**
0 Celsius	32 Fahrenheit
100 Celsius	212 Fahrenheit
20 Celsius	68 Fahrenheit

Bonus 1 point
Accept a temperature using an input function and a float function to convert the input string to a floating point (decimal) number.

Bonus 2 points

Play around with your functions to find what temperature is the same number in both Celsius and Fahrenheit.

Project2-distance.py 5 points

Define 2 functions **km_to_miles(km)** and **miles_to_km(mi)**
Here are some test values; use them to call your functions; print the results.

KM	Miles
1.609	1.00
8.00	4.98
10.0	6.2