Lab 3 Functions

13 February 2019

0.1 Lab 2 - Functions

Description and Summary: >A function in programming is a block of code that performs some task. Functions are a way to organize and simplify your program to allow for easy debugging and reading later on. For instance, print() is a built-in Python function that allows the programmer to easily print something to the screen without writing extra code. You may find it easier to think of functions like in math; for example, y = mx + b. The equation of a line is a function of x, where x and y are inputs and outputs, respectively. Programmers are encouraged to make their own functions on top of the built-in functions already provided by Python.

0.1.1 Note: Begin using Markdown to document your answers to the problems

0.1.2 Problem 1

1. Create a function named 'first_initial' which draws your first initial in a large print using the letter of your first initial to form the character. For example:

```
BBBBBB
B     B
B     B
BBBBBB
B     B
B     B
BBBBBB
```

2. Create a program to demonstrate your function
3. Write a second function named 'last_initial' which draws your last initial and create a program to display both of your initials

0.1.3 Problem 2

1. Using the functions created in problem 1, create a new function called initials, which prints both of your initials in the proper order, with the first initial on top, then create a program to displey both of your initials

0.1.4 Problem 3

3.1 Write a program which implements several functions:

- **print_cosine** - print the cosine of an angle, the angle measure is in radians and is passed in as a parameter
- **print_sine** - print the sine of an angle, the angle measure is in radians and is passed in as a parameter
- **print_sineSq** - print the square of the sign of an angle, the angle measure is in radians and is passed in as a parameter
- **print_tangent** - print the tangent of an angle, the angle measure is in radians and is passed in as a parameter
- **print_arctan** - print the arc tangent of an angle, the angle measure is in radians and is passed in as a parameter
- **print_degrees** - print the degrees of an angle, the angle measure is in radians and is passed in as a parameter

Import the appropriate module(s) to assist with this effort.
Test this program with **pi/3** for the angle measure.

3.2 Test this program with **pi/4**

0.1.5 Problem 4

Draw a stack diagram for problem 3. A table can be used for this purpose. Lookup how to Markdown a table here: https://sourceforge.net/p/jupiter/wiki/markdown_syntax/