COMP 480 – PROBLEM SOLVING WITH COMPUTING **WINTER 2010**

HOMEWORK #8 (10-2)[1] [27 PTS] **DUE:** TUE APR 6

PURPOSE:

To work more with loops in the context of image manipulations (and learn about pixel level operations and terminology). I hope you have fun playing with pixels and images.

Please be sure to consult the reference/"cheat sheet" to help you with the correct way to access/manipulate images at the pixel level.

TASKS:

Download the latest version of program `imageMaster.py` from the sample program directory and rename it to **`myImageMaster.py`**. Your task is to finish `myImageMaster.py`. Fortunately, most of the code is already written for you.

Required: After the image has been displayed, prompt the user if they want to save the modified image. If they answer 'y' or 'Y' save[2] the image with name '`myim.jpg`' (don't specify an additional path/directory, just use the shown string as the complete file name specification. This should place the output in the same directory where your program is located.)

Optional: Operation #5 (Reverse Diagonal). If implemented correctly some extra credit will be awarded.

Caveats:

- You may **not** modify or delete code. All you can do is add code to the existing program to make it fully functional. If this seems impossible (it shouldn't), contact me.
- You may **not** use PIL or other API functions to accomplish your tasks (other than for saving the image of course). You have to "roll your own". Let's say there's a PIL Image function that will color an image, you may not use it, you will only earn credit for your own original code.
- You must use nested for-loops to finish the image operations to get some practice with these type of loops.
- The image you open has to be in the same directory as your program, in other words, no path should be specified for the image so that it can be loaded locally.

Sample output for some of the operations are provided via this link:
http://cs.franklin.edu/~esmail/COMP_480/hw8pics.zip

[1] The number in () corresponds to the assignment number on the Franklin University web page and should be used when you submit your assignment via dropbox for proper credit.

2 http://www.pythonware.com/library/pil/handbook/image.htm

DELIVERABLES

A single compressed folder containing

- **`myImageMaster.py`**
- Your sample `.jpg` image used by you for testing. This does not have to be the "pie" image used in class, nor should it be square. However, please be sure your image is not unduly large.

As usual, your score will be based on functionality, documentation and style.