Basic Image Manipulation
Computational Photography: Project 1

1 -   Objective

This first project is designed to get you used to using the Processing language and basic image manipulation.

2 -   Deadline

It should be submitted on T-Square by 11:55PM on Monday.

3 -   Process

3.1   Download the base source

Download and unzip the folder with the base code for this project.

3.2   Project description

This project has two parts: write a Processing program, and including an image with this program that you took yourself. The program will manipulate your image (more on this below), and the photo will be on a particular theme. You will turn in both the program and the image.

Everyone will include a different image that they shot as part of this assignment. Place this photo in your "data" directory, and make sure that it is this photo that is used when you run your program. The theme of this photo is "Not Like Home". Your photograph should be of something that you have found in Barcelona that is different than what you would find back in Atlanta. Your picture can be anything that matches this theme -- it might be an object, a collection of objects, a style of clothing, an action or an event.

I am hoping that we will have a great deal of variety in the various photos that you all take. Try not to tell others in the class what you are selecting for this assignment. If you do learn what someone else is doing, please select a different theme for your photo.

Once you have your photo, you will write a program to perform basic image manipulation, and you will turn in this program. This is to familiarize yourself with using processing to interact with photos. You will perform the operations below programmatically using Processing. The current source code will load a default image from the data folder and display it on the screen. You will then write functions within the given framework to automatically load your own image and:

1. convert your image to grayscale (as discussed in class).
2. flip your image horizontally over the vertical center line (ie. mirror your photo).
   Example:
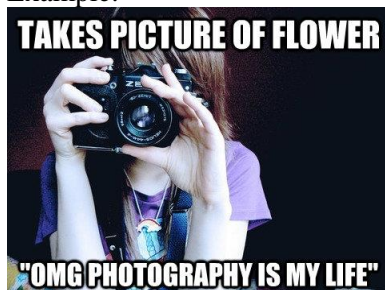
3.3 Source code

You should modify the source code as explained above and comment your code (include your name in the header). The source code is written in Processing. Visit "Processing.org/reference/" for more information on built in functions and structure. Please not that **you are not allowed to use built in processing functions** to accomplish the tasks listed in the project description. We want you to access and directly manipulate the pixels in question to perform each task. When in doubt, ask.

3.4 Submission

Your picture should be located in the data folder where the default photo currently resides. In order to run the source code, it must be in a folder named after the main file. When submitting any assignment, leave code in this folder, compress it and submit via T-square.