Louisiana State University
Department of Electrical and Computer Engineering
EE 4780 – Introduction to Computer Vision
Spring 2006

Problem Set 1

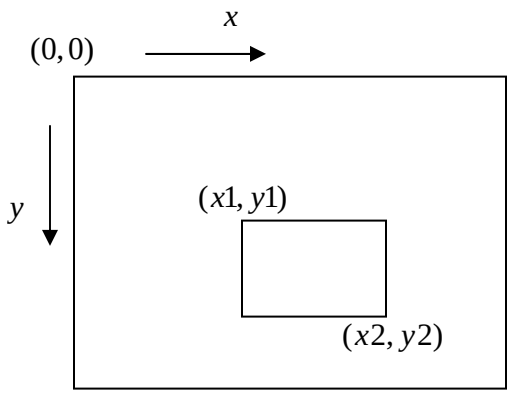
Assigned: January 30, 2006
Due: February 8, 2006
What to Return: Create a folder and name it as your last name. Put the functions in the folder and email it to course TA, Hong Zhao (hzhao2@lsu.edu), by due date midnight.

Problem: (100 points)
Write a MATLAB function that applies histogram equalization on a specific region of an image. Name the function as my_hist_eq.

The header is as follows:

```
function [ Region ] = my_hist_eq( x1,y1, x2,y2, img )

% This function takes a region of an image, applies histogram equalization to it, and return it.
% (x1,y1) is the top-left-corner coordinate of the region.
% (x2,y2) is the bottom-right-corner coordinate of the region.
% img is the input image.
%
% Region is the histogram equalized region.
%
% Note that the function should work with both gray-scale and color images. In case of color
images, you may have artificial looking images after histogram equalization. You may get (up to
10) bonus points for “good” approaches for color images. The TA will evaluate your algorithm for
different images.
```



Bonus: (20 points) Modify your function such that: when it is run, it displays the image and lets the user to click on the image to select the region. Name your function as given:

```
function [ Region ] = my_hist_eq2( img )
```