ELEN 640, COEN 340: Image Processing I
Fall 2020
Homework 2

Due Date/Time: Wed Oct 14, 2020. 7:00 PM Pacific

Notes:

1. Same comments apply to this homework that were enumerated in Homework 1.

Problems:

1. Use the image "coins.tif" for this exercise. Convert it to 8-bit grayscale image. Perform histogram equalization on this image and display the "before" and "after" images.
2. Use "coins.tif", "Apple.tif" and "Gearwheel.tif" for this exercise. Convert them to 8-bit grayscale image.
   a. Apply 3x3, 5x5 and 7x7 smoothing filters. Display "before" and "after" images.
   b. Apply gaussian noise to each pixel of these two images with std dev of 5, 10 and 25.
   c. Apply the 3x3, 5x5 and 7x7 smoothing filters. Display "before" and "after" images.
3. Use "coins.tif", "Apple.tif" and "Gearwheel.tif" for this exercise. Convert them to 8-bit grayscale image.
   a. Apply 3x3 sharpening filter. Display "before" and "after" images.
   b. Apply gaussian noise to each pixel of these two images with std dev of 5, 10 and 25.
   c. Apply 3x3 sharpening filter. Display "before" and "after" images.