ECE 5470 Digital Image Processing
Homework # 4
Due Date: February24, 2020 4:00 pm

1. Laplacian enhancement

    Write program to implement the Laplacian enhancement technique described in Lecture Note 4. Use the mask shown in Slide 4-63 (c and d). Download Fig4-1a.jpg and Fig4-2b.jpg; perform Laplacian enhancement technique on them. Compare the results.

    Your report should include your own MATLAB code, the original images, and the enhanced images.

2. Unsharpmasking and HighboostFiltering

    a. Write program to perform unsharpmasking and highboostFiltering .
    b. Download "Fig4-2.tif" to perform unsharpmasking and highboostFiltering.

    Your report should include your own MATLAB code, the original image, and the enhanced images. Use this information to explain what was enhanced as it was for a image.

3. Edge detection

    a. Fig 4-3 is an optical image of a contact lens. Apply Sobel operators for edge detection and threshold to represent the image in black and white image.

-1	-2	1-
0	0	0
1	2	1

-1	0	1
-2	0	2
-1	0	1

    Your report should include your own MATLAB code, the original image, and the enhanced images.