Signals and Sytems
Sharif University of Technology

Introduction To Image Processing

Bluring and Debluring

1. open Cameraman.png using MATLAB

2. Blur the image by convolving it to matrix A (find it in the A.mat file)

3. Apply B kernel from B.mat file (convolve it!) to the blured image

4. describe what happened in the previous parts and what the second matrix did. (Justify your answer)

5. show element-wise absolute difference of the base image and the deblured image. (describe the result)

6. plot and compare histogram of base image, the blured image and the deblured image.

7. (BONUS) blur the image using this matrix, how can you deblur it?

$$\frac{1}{16} \begin{bmatrix} 1 & 4 & 6 & 4 & 1 \end{bmatrix}$$