cb\_shaded=im2double(imread("checkerboard1024-shaded.tif"));

cb\_shaded=rescale(cb\_shaded,0,1);

imshow(cb\_shaded,[]);

7a. Use a Gaussian filter to blur this image. The result should be a consistent image that varies in instensity smoothly, with no evidence of the individual squares. Use the imgaussfilt function to perform the blurring operationa and experiment with the value of sigma until the result is a smooth image.

Use the imshow command, with the [] option, to display your result and save the result in a variable.

Add noise

Imgnoise =imnoise(cb\_shaded,"gaussian");

ImgnoiseSp =imnoise(cb\_shaded,"salt & pepper");

figure

subplot(3,1,1)

imshow(cb\_shaded)

subplot(3,1,2)

imshow(Imgnoise)

subplot(3,1,3)

imshow(ImgnoiseSp)

Add filter

cbblur=imgaussfilt(Imgnoise,5);

cbblurSp =medfilt2(ImgnoiseSp);

figure

subplot(3,1,1)

imshow(cb\_shaded)

subplot(3,1,2)

imshow(cbblur)

subplot(3,1,3)

imshow(cbblurSp)

7.b. Now divide the original image by the the result in 7a. Use the "elementwise" division, which in MATLAB is the ./ command

Outin=cb\_shaded ./ cbblur;

Outin1=cb\_shaded ./ cbblurSp;

figure

subplot(1,3,1)

imshow(cb\_shaded)

subplot(1,3,2)

imshow(Outin)

subplot(1,3,3)

imshow(Outin1)