Ip4:

clc;

clear all;

close all;

a=imread('pout.tif');

figure()

subplot(2,2,1)

imshow(a)

title('original image');

subplot(2,2,2)

imhist(a)

title('histogram of original image')

b=histeq(a);

subplot(2,2,3)

imshow(b)

title('equalized image')

subplot(2,2,4)

imhist(b)

title('histogram of equalized image')

IP5:

%LOW PASS

clc;

clear all;

close all;

a=imread('cameraman.tif');

w1=ones(3)/9;

w2=[1 2 1;2 12 2;1 2 1]/24;

[m n]=size(a);

e=zeros(m, n);

l=zeros(m, n);

for i=2:m-1

for j=2:n-1

e(i,j)=sum(sum(w1.\*double(a(i-1:i+1,j-1:j+1))));

l(i,j)=sum(sum(w2.\*double(a(i-1:i+1,j-1:j+1))));

end

end

figure,imshow(a);

title('original image');

figure,imshow(uint8(e));

title('low pass with 3x3 mask (all is)');

figure,imshow(uint8(l));

title('Low pass with weighted 3x3 mask');

w3=ones(5)/25;

h=zeros(m,n);

for i=3:m-2

for j=3:n-2

h(i,j)=sum(sum(w3.\*double(a(i-2:i+2,j-2:j+2))));

end

end

figure,imshow(uint8(h));

title('low pass with 5x5 mask(all is)');

Ip5-2:

%high pass

clc;

clear all;

close all;

a=imread('cameraman.tif');

w1=[-1 -1 -1;-1 8 -1;-1 -1 -1]/9;

w2=[0 -1 0;-1 4 -1;0 -1 0];

[m n]=size(a);

e=zeros(m,n);

l=zeros(m,n);

for i=2:m-1

for j=2:n-1

e(i,j)=sum(sum(w1.\*double(a(i-1:i+1,j-1:j+1))));

l(i,j)=sum(sum(w2.\*double(a(i-1:i+1,j-1:j+1))));

end

end

figure,imshow(a);

title('original image');

figure,imshow(uint8(e));

title('high pass filter with laplacian mask');

figure,imshow(uint8(l));

title('high pas');

IP6:

clc;

clear all;

close all;

a=rgb2gray(imread('C:\Users|SAMANT|Desktop|lena.jpg'));

d=a;

figure()

imshow(a)

title('original image')

[m,n]=size(a)

%with function

a=imnoise(a,'salt and pepper',0.2);

figure()

imshow(a)

title('image corrupted by salt and pepper noise random')

for i=2:m-1

for j=2:n-1

b=a(i-1:i+1,j-1:j+1);

c=cat(2,b(1,1:3,b(2,1:3));

c=cat(2,c,b(3,1:3));

g=median(c);

a(i,j)=g;

end

end

figure()