**Code a**

clc;

close all;

clear 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

subplot(2,2,1);

imshow(a);

title('Original Image');

subplot(2,2,2);

imshow(uint8(e));

title('Low pass with 3x3 mask(all 1s)');

subplot(2,2,3);

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

subplot(2,2,4);

imshow(uint8(h));

title('Low pass with 5x5 mask (all 1s)');