*Editor>>*

clc;

close all;

clear all;

im1=imread('livingroom.tif');

%Read the image

[r c]=size(im1); %Number of rows and columns

r\_mask=input('Enter the number of rows: ');

%Number of rows of masking matrix

c\_mask=input('Enter the number of columns: ');

%Number of columns of masking matrix

mask=input('Enter the masking matrix: '); %Masking matrix

r\_add=((r\_mask-1)/2); %Number of rows to be padded

c\_add=((c\_mask-1)/2); %Number of columns to be padded

padding=padarray(im1,[r\_add c\_add],0); %Zero Padding

pad\_d=double(padding); %Integer into Double Datatype

for i=(1+r\_add):(r+r\_add)

for j=(1+c\_add):(c+c\_add)

sub\_img=pad\_d(i-r\_add:i+r\_add,j-c\_add:j+c\_add);

con\_sum=sum(sum(mask .\* sub\_img)); %Convolution

result(i-r\_add,j-c\_add)=con\_sum; %New Filtered image

end

end

im1=double(im1); %Integer into Double datatype

sharpening= result+im1; %Sharpening of Image

im1=uint8(im1); %Double into Integer datatype

subplot(1,2,1);

imshow(im1); %Display the Original image

title('Original Image');

subplot(1,2,2);

imshow(result); %Display the Filtered image

title('Filtered Image');

figure;

subplot(1,2,1);

imshow(im1); %Display the Original image

title('Orginal Image');

sharp=uint8(sharpening); %Double into Integer datatype

subplot(1,2,2);

imshow(sharp); %Display the Sharpened image

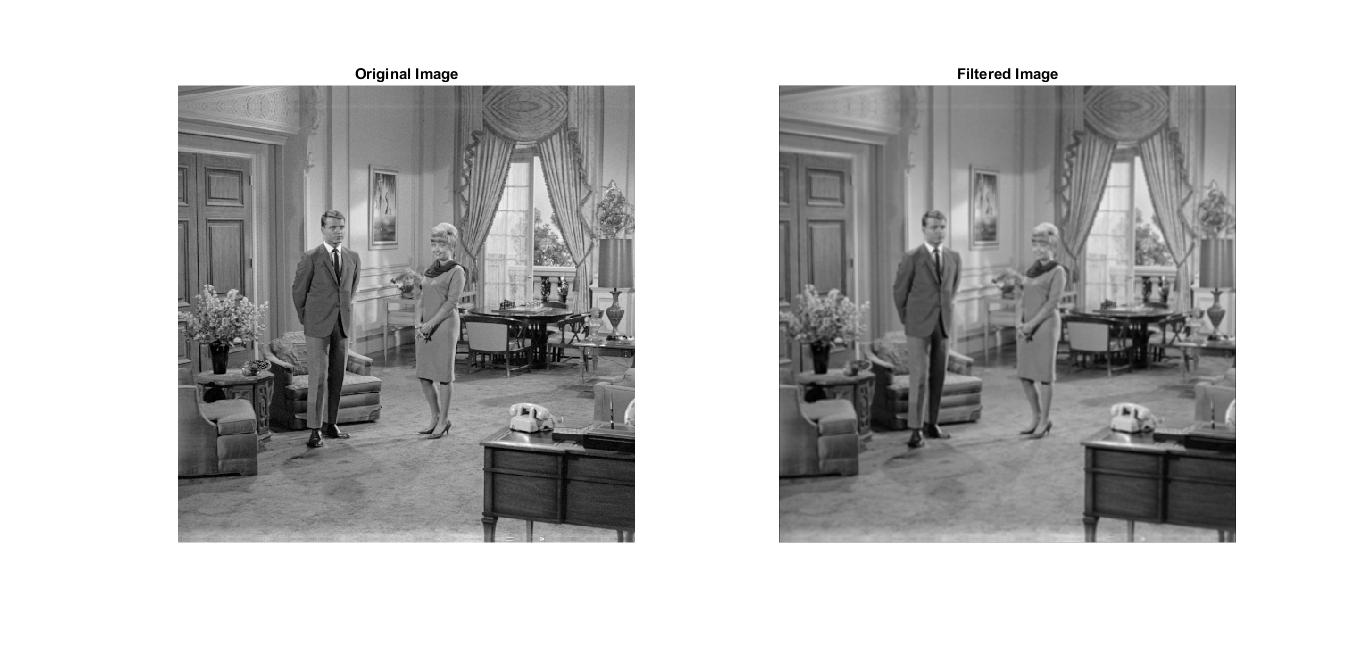
title('Sharpened Image');

*Command Window>>*

Enter the number of rows: 3

Enter the number of columns: 3

Enter the masking matrix: [ 1/9 1/9 1/9; 1/9 1/9 1/9; 1/9 1/9 1/9 ]





Enter the number of rows: 3

Enter the number of columns: 3

Enter the masking matrix: [ 1 1 1; 1 -8 1; 1 1 1 ]



