Expt No.:6 Phase Interchange Date 23/08/13

clc;

close all;

clear aLL;

a1=imread('img1.jpg');

a=rgb2gray(a1);

b1=imread('img2.jpg');

b=rgb2gray(b1);

b=imresize(b,[120 120]);

## Fourier Transform of 2 images

ffta=fft2(double(a));

fftb=fft2(double(b));

## Magnitude & phase comp

mag\_a=abs(ffta);

ph\_a=angle(ffta);

mag\_b=abs(fftb);

ph\_b=angle(fftb);

## newfft by interchanging phase

newffta = mag\_a.\*(exp(i\*ph\_b));

newfftb = mag\_b.\*(exp(i\*ph\_a));

## Reconstruct image using ift

rec\_a=ifft2(newffta);

rec\_b=ifft2(newfftb);

## Display Image

figure;

subplot(2,2,1);imshow(a);

title('image a');

subplot(2,2,2);imshow(b);

title('image b');

subplot(2,2,3);imshow(uint8(rec\_a));

title('image a after phase interchange');

subplot(2,2,4);imshow(uint8(rec\_b));

title('image b after phase interchange');

