clc

clear all;

close all;

im0=imread(uigetfile('\*.bmp;\*.jpg;\*.png;\*.gif;\*.jpeg','ENTER THE COVER(COLOUR) IMAGE'));

im1=imread(uigetfile('\*.bmp;\*.jpg;\*.png;\*.gif;\*.jpeg','ENTER THE Encrypted(COLOUR) IMAGE'));

img=im0;

img1=im1;

J = entropy(im1);

red = img(:,:,1); % Red channel

green = img(:,:,2); % Green channel

blue = img(:,:,3); % Blue channel

red1 = img1(:,:,1); % Red channel

green1 = img1(:,:,2); % Green channel

blue1 = img1(:,:,3); % Blue channel

R = corr2(red,red1);

R1= corr2(red,blue1);

R2= corr2(red,green1);

g= corr2(green,red1);

g1= corr2(green,green1);

g2= corr2(green,blue1);

b = corr2(blue,red1);

b1= corr2(blue,green1);

b2= corr2(blue,blue1);

%...................... mean square error

cover=im0;

stego=im1;

redc=cover(:,:,1);

reds=stego(:,:,1);

greenc=cover(:,:,2);

greens=stego(:,:,2);

bluec=cover(:,:,3);

blues=stego(:,:,3);

figure(3),subplot(3,2,1),imhist(redc);

title('Red Channel');

figure(3),subplot(3,2,2),imhist(reds);

title('Encrypted Red Channel');

figure(3),subplot(3,2,3),imhist(greenc);

title('Green Channel');

figure(3),subplot(3,2,4),imhist(greens);

title('Encrypted Green channel ');

figure(3),subplot(3,2,5),imhist(bluec);

title('Blue channel');

figure(3),subplot(3,2,6),imhist(blues);

title('Encrypted blue channel');

im0=double(im0);

im1=double(im1);

[m n]=size(im1);

mse=sum(sum((im1-im0).^2))./(m.\*n);

psnr=10\*log10(65025/mse);

%...................... dispaly all compute value

disp('MSE');

disp(mse);

disp('PSNR');

disp(psnr);

disp('Correlations');

disp('RR');

disp(R);

disp('RG');

disp(R1);

disp('RB');

disp(R2);

disp('GR');

disp(g);

disp('GG');

disp(g1);

disp('GG');

disp(g2);

disp('BR');

disp(b);

disp('BG');

disp(b1);

disp('BB');

disp(b2);

disp ('Entropy');

disp (J);

%END................