Discrete Fourier Transform (DFT)

Matlab Code:

clc

clear all

close all

a=imread('coins.png');

b=fft2(a);

[m,n]=size(a);

for i=1:m

for j=1:n

c(i,j)=a(i,j)\*(-1)^(i+j);

end

end

d=20\*log(1+abs(fft2(c)));

e=ifft2(b);

subplot(2,2,1);

imshow(a)

title(‘Original Image’)

subplot(2,2,3);

imshow(uint8(d))

title(‘Spectrum with Dynamic Range Compression’)

subplot(2,2,2);

imshow(b)

title(‘Dft of original Image’)

subplot(2,2,4);

imshow(uint8(e)))

title(‘Inverse DFT’)