**Discrete Cosine Transform**

clc

clear all

close all

a=imread('cameraman.tif');

c=zeros(256,256);

y=[2 5 10 15 25 50 100]

mse=zeros(1,7)

for k=1:1:7

for i=1:8:256

for j=1:8:256

a1=a(i:i+7,j:j+7)

b=dct2(a1)

thr=max(max(abs(b)))/y(1,k)

for i1=1:8

for j1=1:8

if b(i1,j1)<thr

b(i1,j1)=0;

end

end

end

bo=idct2(b);

c(i:i+7,j:j+7)=bo;

end

end

figure(k);

imshow(uint8(c));

label('thr factor=',k);

e=zeros(256,256);

sum=0;

for i=1:256

for j=1:256

e(i,j)=(a(i,j)-c(i,j));

sum = sum + e(i,j)\*e(i,j);

end

end

sum

mse(1,k)=(sum/(256\*256));

end

figure(9)

plot(y,mse)

xlabel('thr factor')

ylabel('mse')