TITLE: DCT,IDCT AND COLOR MODELS

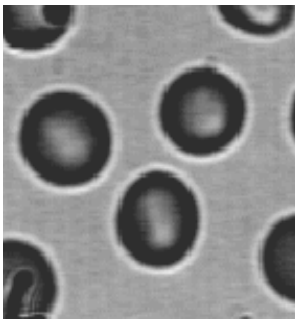
CODE:

```
clc;
clear all;
close all;
figure(1);

figure(1)
A=imread('E:\3227\a5\blood.bmp');
subplot(2,2,1);
imshow(A);
title('original image');
E=im2double(A);
%DCT
B=dct2(E);
subplot(2,2,2);
imshow(B);
title('DCT');
%IDCT
C=idct2(B);
subplot(2,2,3);
imshow(C);
title('IDCT');

%COLOUR MODELS
figure(2)
A=imread('E:\3227\a5\col.bmp');
subplot(3,3,1);
imshow(A);
title('original image');

B=rgb2hsv(A);
subplot(3,3,2);
imshow(B);
title('hsv');

H=B(:,:,1);
subplot(3,3,3);
imshow(H);
title('h');

S=B(:,:,2);
subplot(3,3,4);
imshow(H);
title('S')

V=B(:,:,3);
subplot(3,3,5);
imshow(V);
title('V')
```

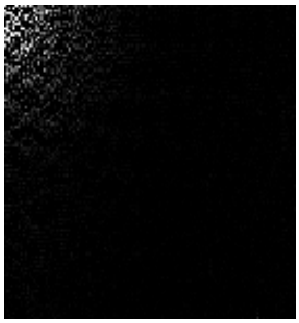
```
C=imcomplement(A);
subplot(3,3,6);
imshow(C);
title('COMPLEMENT(CMY)');

N=uint8(A);
subplot(3,3,7);
imshow(N);
title('YIQ');
```

OUTPUT:

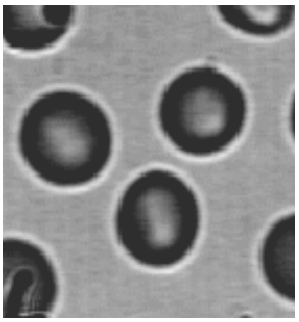
original image



DCT

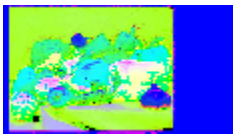


IDCT



original image

hsv



h

S

V

COMPLEMENT(CMY)

YIQ

APPLICATIONS:

1]RGB MODEL:

The main application of the RGB color model is to display digital images. It is used in cathode ray tubes, LCD displays, and LED display such as television, computer monitor or large screens.

2]CMY MODEL:

The CMY model is used for  printing devices and filters.

3]YIQ MODEL:

The YIQ colour space model is use in U.S. commercial colour television broadcasting (NTSC).