IMAGE COMPLIMENT :-

```
x=imread('cameraman.tif');
y=imcomplement(x);
imshow(y)
```

LOG TRANSFORMATION :-

```
x=imread('cameraman.tif');
c=input('Enter the constant value, c = ');
[M,N]=size(x);
        for a = 1:M
            for b = 1:N
    m=double(x(a,b));
z(a,b)=c.*log10(1+m);
            end
        end
 imshow(z);
 title('log transformation')
```

POWER LAW TRANSFORMATION :-

```
x=imread('cameraman.tif');
c=input('Enter the constant value, c = ');
z=input('Enter the constant value, z = ');
[M,N]=size(x);
        for a = 1:M
            for b = 1:N

                y=c*(x.^z);
            end
        end
 imshow(y);
  title('power law')
```

HISTOGRAM OF AN IMAGE :-

```
a=imread(.....);
b=zeros(1,256);
[row,col]=size(a);
for x=1:1:row
      for y=1:1:col
        if a(x,y)<1
  continue;    else
   t=a(x,y);
                end
   b(t)=b(t)+1;    end
          end
subplot(1,2,1);
 imshow(unit8(a));
title('original Image');
subplot(1,2,2);
bar(b);
title(Histogram of Image');
```

HISTOGRAM EQUALIZATION –

```
GIm=imread('tire.tif');


numofpixels=size(GIm,1)*size(GIm,2);


figure,imshow(GIm);

title('Original Image');
```

```
 HIm=uint8(zeros(size(GIm,1),size(GIm,2)));

freq=zeros(256,1);
probf=zeros(256,1);
probc=zeros(256,1);
cum=zeros(256,1);
output=zeros(256,1);

%freq counts the occurrence of each pixel value.
%The probability of each occurrence is calculated by probf.
for i=1:size(GIm,1)

    for j=1:size(GIm,2)

        value=GIm(i,j);

        freq(value+1)=freq(value+1)+1;

        probf(value+1)=freq(value+1)/numofpixels;
    end
end

sum=0;

no_bins=255;

%The cumulative distribution probability is calculated.

for i=1:size(probf)

   sum=sum+freq(i);

   cum(i)=sum;

   probc(i)=cum(i)/numofpixels;

   output(i)=round(probc(i)*no_bins);
end
for i=1:size(GIm,1)

    for j=1:size(GIm,2)
           HIm(i,j)=output(GIm(i,j)+1);
    end
```

```
end

figure,imshow(HIm);

title('Histogram equalization');
```