Program No.: 01

1)Image Negative

```
close all;
clear all;
clc
r=imread('cat2.jpeg');
imshow(r);
for i=1:size(r,1)
    for j=1:size(r,2)
        s(i,j)=255-r(i,j);
    end
end
subplot(2,1,1);imshow(r);title('Original');
subplot(2,1,2);imshow(s);title('After Negative Transformation');
```

2) Log Transformation

```
r=imread('cat2.jpeg');
ad=im2double(r);
s=ad;
[r,c]=size(ad);
factor=1.5;
for i=1:r
       for j=1:c
           s(i,j)=factor*log(1+ad(i,j));

       end
end
subplot(2,1,1);imshow(ad);title('Original');
subplot(2,1,2);imshow(s);title('After Log Transformation for factor=1');
```

3) Power Law Transformation

```
close all;
clear all;
clc
r=imread('cat2.jpeg');
ad=im2double(r);
s=ad;
[r,c]=size(ad);
factor=1;
for i=1:r
       for j=1:c
       s(i,j)=factor*ad(i,j) ^2;
       end
end

subplot(2,2,1);imshow(ad);title('Original');
subplot(2,2,4);imshow(s);title('After Power law Transformation for factor=1');
```

4) Contrast Stretching

```
close all;
clear all;
```

```
clc
i=imread('cat2.jpeg');
imshow(i);
j=imadjust(i,[0.3,0.7],[]);
subplot(2,1,1);imshow(i);title('Original');
subplot(2,1,2);imshow(j);title('After Contrast stretching with L-int=0.3 & H-
int=0.9');
```

5) Gray level Slicing

```
close all;
clear all;
clc
p=imread('cat2.jpeg');
   z=p;
   [m,n]=size(p);
  for i=1:m
      for j=1:n
          if((z(i,j))>120)&&(z(i,j)<150)
              z(i,j)=255;
          else
              z(i,j)=p(i,j); %condition for grey level slicing with background
          end
      end
  end

 subplot(2,1,1);imshow(p);title('Original');
subplot(2,1,2);imshow(z);title('After Gray Level slicing');
```