```
im_rgb = imread("coloured.jpg");
im = rgb2gray(im_rgb);
imshow(im);
```

CONTRAST STRETCHING

```
% contrsat stretching using built in function

J = imadjust(im,stretchlim(im),[]);

figure;

imshow(J);
```

```
%contrast stretching using user defined functions

i = I(:,:,1);

rtemp = min(i);

rmin = min(rtemp);

rtemp = max(i);

rmax = max(rtemp);

m = 255/(rmax - rmin);

c = 255 - m*rmax;

i_new = m*i + c;

subplot(2,2,3),imshow(i),title("Original gray scale");

subplot(2,2,4),imshow(i_new),title("stretched gray scale");
```

POWER LAW TRANSFORMATION

```
[m,n] = size(im);

c = 5;

gamma = 0.5;

for i=1:m

   for j=1:n

       im(i, j) = c * double(im(i,j)) ^ gamma;

   end

end

imshow(im);
```

Image Resize using built in function and user defined functions:

```
% image resize using built in function
J = imresize(im, 0.5);
imshow(J);
```

Image resize using user defined function

% image resize using user defined function

[origImRows, origImColumns,~] = size(im);

newImage = zeros(origImRows/2, origImColumns/2,3);

```
newImRow = 1; newImColumn = 1;


for row = 1:2:origImRows
        for column = 1:2:origImColumns
        newImage(newImRow, newImColumn,:)=im(row, column,:);
        newImColumn = newImColumn+1;
        end
        newImRow = newImRow+1;
        newImColumn = 1;
end


figure; imshow(newImage/255);
```