```matlab
%Written by Shiv Kumar Gurjar(BT23ECE084)
%Image read and show
%red,gray,green,black-white image show
clc;
clear all;
close all;

% Read the original RGB image
I = imread('GaneshJi_image.JPEG');

% Display original image
figure;
imshow(I);
title('Original RGB Image');

% Convert RGB image to Grayscale
Ig = rgb2gray(I);

% Display grayscale image
figure;
imshow(Ig);
title('Grayscale Image');

% Extract Red channel (keep red, remove green & blue)
Ired = I;
Ired(:,:,2) = 0;    % Remove green channel
Ired(:,:,3) = 0;    % Remove blue channel

% Display red channel image
figure;
imshow(Ired);
title('Red Channel Image');

% Extract Green channel (keep green, remove red & blue)
Ib = I;
Ib(:,:,1) = 0;      % Remove red channel
Ib(:,:,3) = 0;      % Remove blue channel

% Display green channel image
figure;
imshow(Ib);
title('Green Channel Image');

% Convert grayscale image to binary using threshold
BW = Ig > 100;

% Display binary image
figure;
imshow(BW);
title('Binary Image (Threshold = 100)');

% Apply histogram equalization to enhance contrast
Ieq = histeq(Ig);

% Display histogram equalized image
figure;
```

```
imshow(Ieq);
title('Histogram Equalized Image');
```

Original RGB Image



Grayscale Image

**Red Channel Image**



**Green Channel Image**

## Binary Image (Threshold = 100)



## Histogram Equalized Image