**University of the Punjab**

**Gujranwala Campus**

**Department of Information Technology**



**Assignment: Computer Vision**

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**Submitted to:**

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% Read the input image from file

I = imread('sun.jpg');

% Display the original input image

figure('Name', 'Original Image'); % Create a new figure window

imshow(I); % Show the image

title('Original Image'); % Set title for the figure

% Analyze the histogram of the image

figure('Name', 'Histogram'); % Create a new figure window for histogram

imhist(I); % Display the histogram of the image

title('Image Histogram'); % Set title for the histogram plot

% Compute the optimal threshold level using Otsu's method

level = graythresh(I);

% Convert the grayscale image to a binary image using the threshold

BW = im2bw(I, level);

% Display the binary (black and white) image after thresholding

figure('Name', 'Output Image'); % Create a new figure window for output image

imshow(BW); % Show the thresholded binary image

title('Output Image'); % Set title for the output image

**RESULT:**





