**UNIVERSITY OF THE PUNJAB**

**GUJRANWALA CAMPUS**

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**Department of Information Technology**

**Computer Vision**

**Assignment**

* **Submitted by:**

Hammad Bin Tariq

* **Session:**

BSIT 7th semester

* **Roll no:**

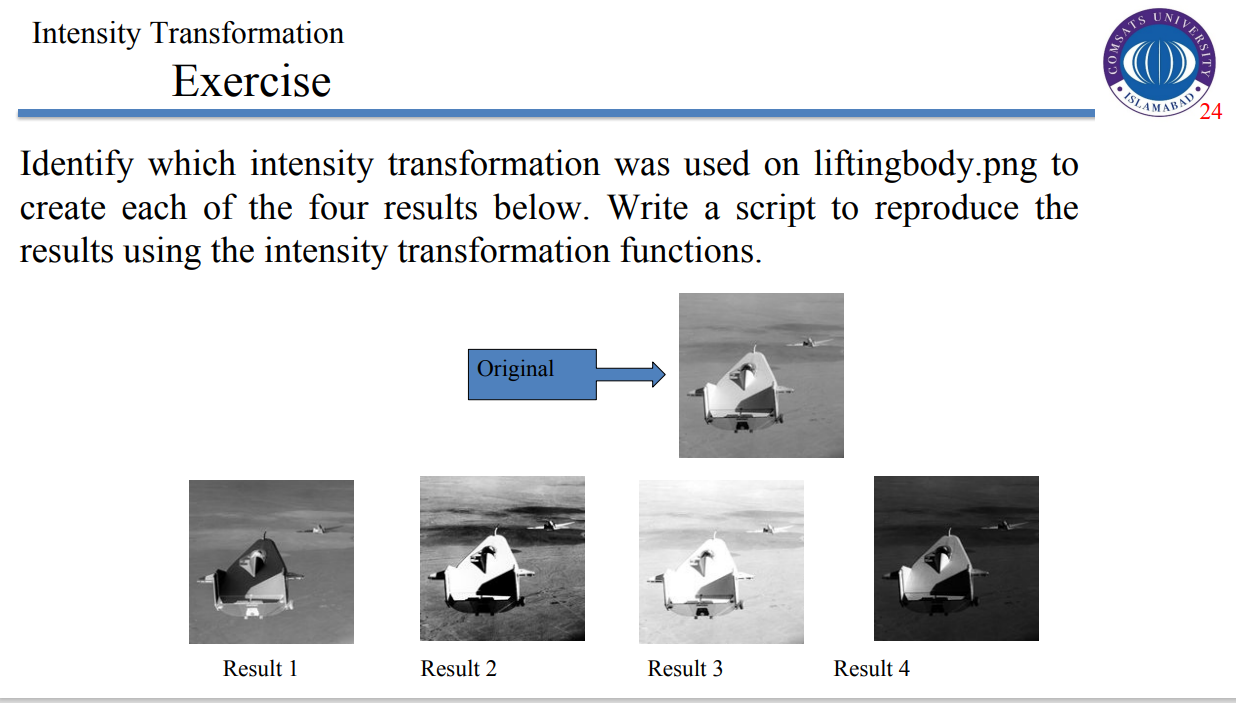
(BIT21203) Afternoon

* **Submitted to:**

Mam Fouqia Zafeer

**Topic:**

**Intensity Transformation (MATLAB Code)**



**MATLAB Code:**

% Read the original image

image = imread('liftingbody.png');

image = im2gray(image); % Convert to grayscale if needed

% 1. Image Negative

negative\_image = 255 - image;

% 2. Contrast Stretching

min\_intensity = double(min(image(:)));

max\_intensity = double(max(image(:)));

contrast\_stretched = uint8(255 \* (double(image) - min\_intensity) / (max\_intensity - min\_intensity));

% 3. Power Law (Gamma Correction)

gamma = 2.5; % Adjust gamma value as needed

power\_law\_image = uint8(255 \* ((double(image) / 255) .^ gamma));

% 4. Logarithmic Transformation

c = 255 / log(1 + double(max(image(:))));

log\_transformed = uint8(c \* log(1 + double(image)));

% Display Results

figure;

subplot(2, 3, 1);

imshow(image);

title('Original Image');

subplot(2, 3, 2);

imshow(negative\_image);

title('Image Negative');

subplot(2, 3, 3);

imshow(contrast\_stretched);

title('Contrast Stretching');

subplot(2, 3, 4);

imshow(power\_law\_image);

title('Gamma Correction');

subplot(2, 3, 5);

imshow(log\_transformed);

title('Log Transformation');

**Output:**

