% 1. Write a Matlab program to determine the frequency of a given pixel occurring in an image.

pixel = input('Enter the pixel value: ');

frequency = 0;

im = rgb2gray(imread('C:/Users/Admin/OneDrive/Desktop/Mountain.jpg'));

imshow(im);

[m,n] = size(im);

for i=1:m

for j=i:n

if(im(i,j)==pixel)

frequency = frequency + 1;

end

end

end

fprintf('Frequency = %d\n',frequency);

%2. Write a matlab program to calculate the global mean value in a two-dimensional matrix M \* N.

im = rgb2gray(imread('C:/Users/Admin/OneDrive/Desktop/Mountain.jpg'));

[m,n] = size(im);

sum=0;

SUM=double(sum);

for i=1:m

for j=1:n

SUM= SUM+double(im(i,j));

end

end

g\_mean=SUM/double(m\*n);

fprintf('Global Mean = %d\n',g\_mean);

%3. Write a matlab program to calculate the mean value of every row in a two-dimensional matrix M \* N.

im = rgb2gray(imread('C:/Users/Admin/OneDrive/Desktop/Mountain.jpg'));

[m,n] = size(im);

sum=0;

SUM=double(sum);

for i=1:m

for j=1:n

SUM= SUM+double(im(i,j));

end

rowmean = SUM/double(i\*n);

fprintf('Row %d Mean = %d\n',i,rowmean);

end

%4. Write a Matlab program to determine the frequency of each pixel occurring in a column of an image.

im = rgb2gray(imread('C:/Users/Admin/OneDrive/Desktop/Mountain.jpg'));

imshow(im);

[m,n] = size(im);

for pixel=0:255

frequency = 0;

for i=1:m

for j=i:n

if(im(i,j)==pixel)

frequency = frequency + 1;

end

end

end

fprintf('Frequency for pixel %d = %d\n',pixel,frequency);

end

%5. Write a Matlab program to find out the total number of pixels which has less than the given intensity.

intensity = input('Enter the pixel value: ');

frequency = 0;

im = rgb2gray(imread('C:/Users/Admin/OneDrive/Desktop/Mountain.jpg'));

[m,n] = size(im);

for i=1:m

for j=i:n

if(im(i,j) < intensity)

frequency = frequency + 1;

end

end

end

fprintf('\nFrequency = %d\n',frequency);