Simulation and Modelling Lab

Final Test

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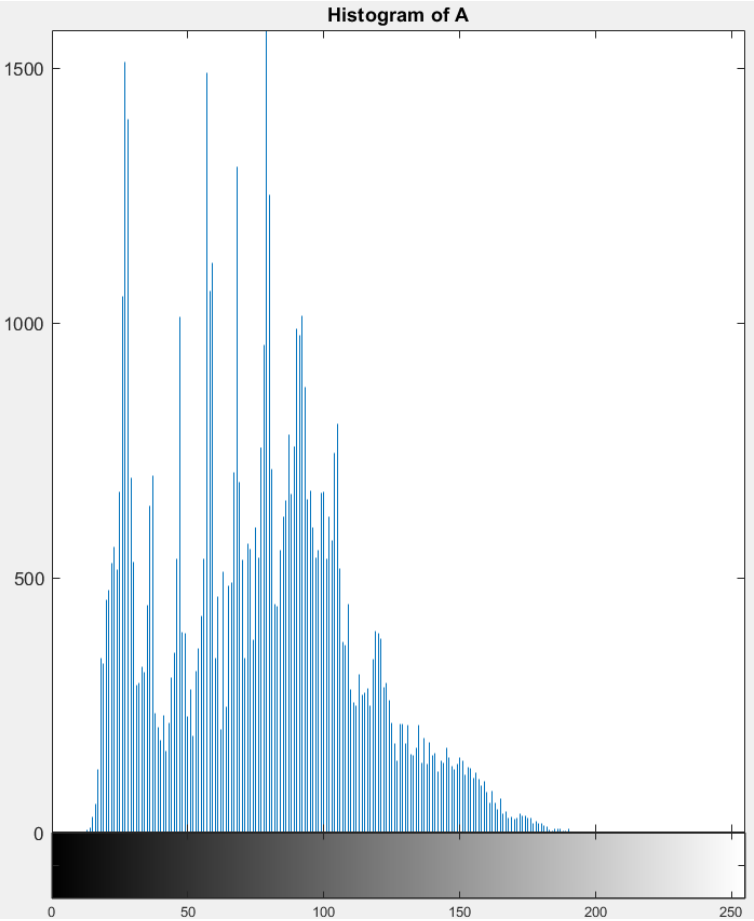
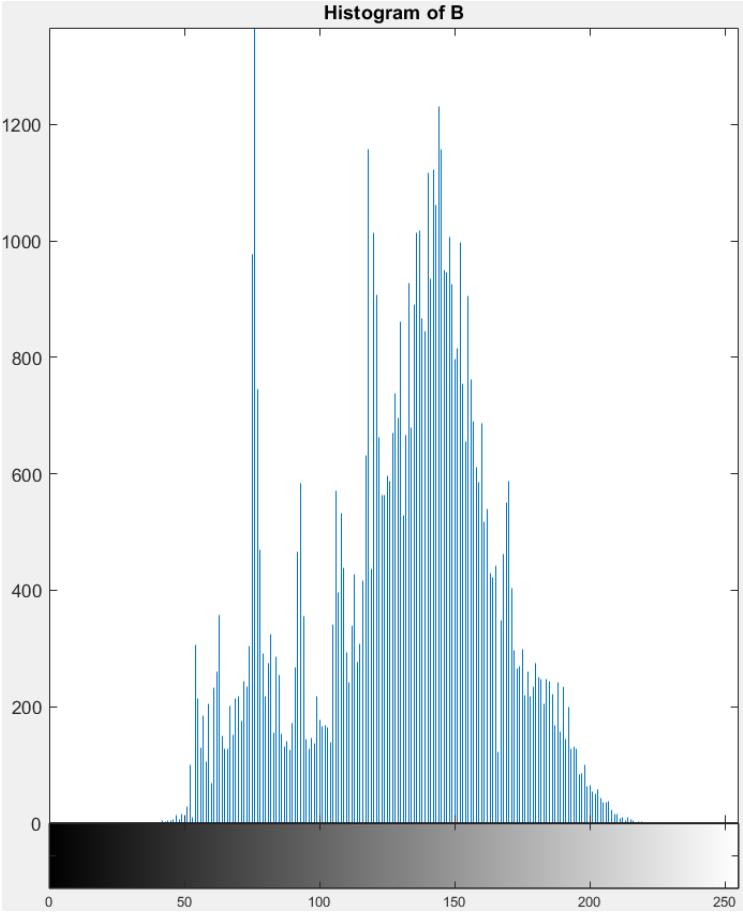
Q1.

Command Window

```
>> Hist()
Size of A:
   256   256     3

Size of B:
   256   256     3

Mean value of pixels in A:
   76.7444

Median value of pixels in A:
   78

Mode value of pixels in A:
   79

Mean value of pixels in B:
  130.4741

Median value of pixels in B:
   136

Mode value of pixels in B:
   76

fx >>
```

Q2.

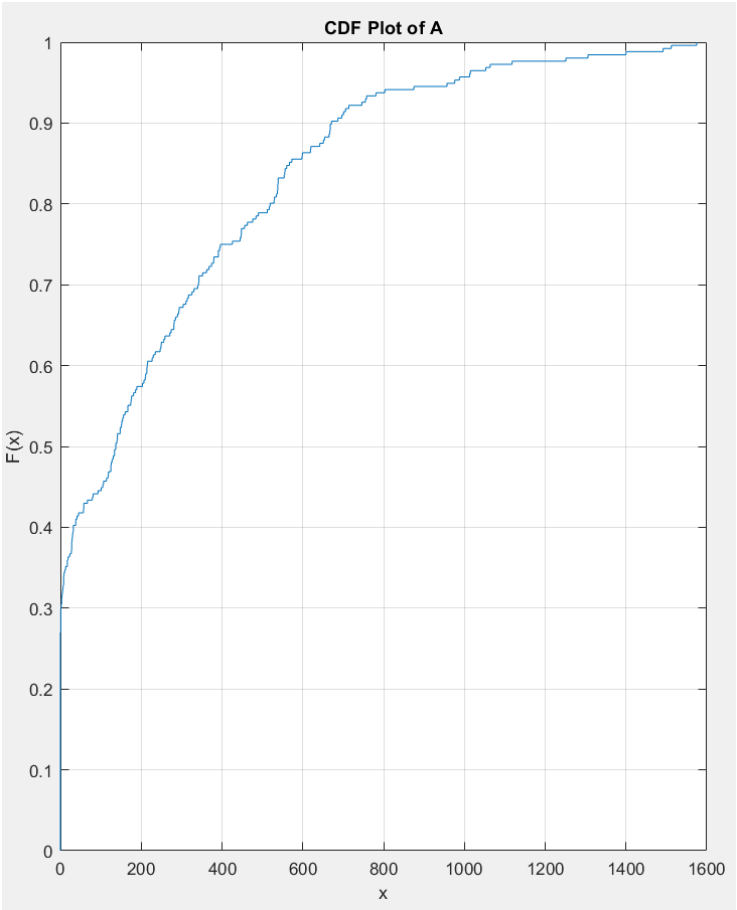

Histogram of A
1500
1000
500
0
0
50
100
150
200
250

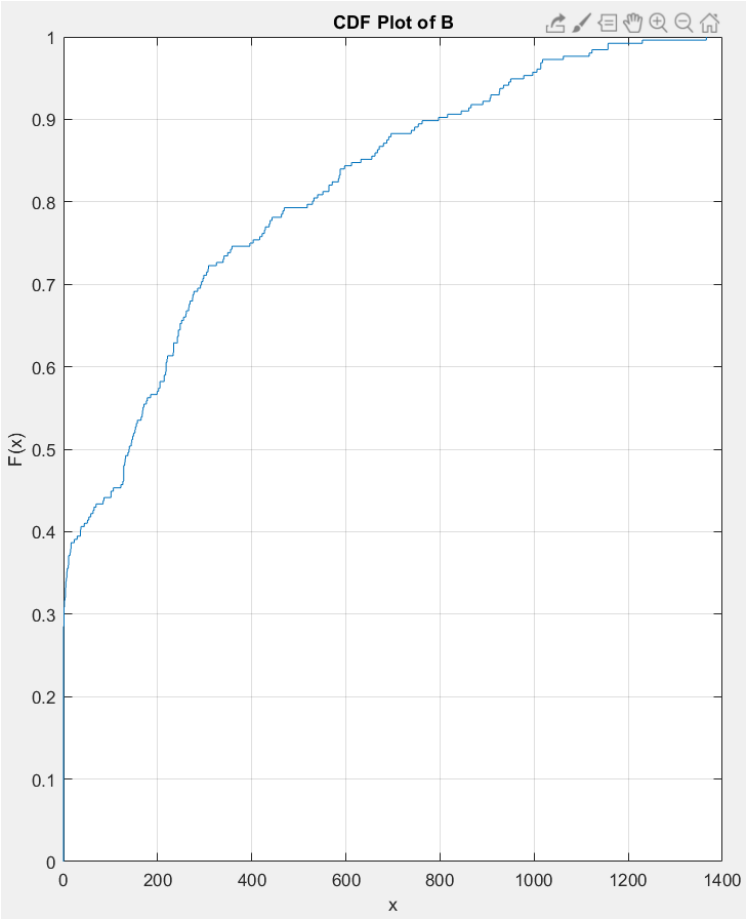

Histogram of B
1200
1000
800
600
400
200
0
0
50
100
150
200
250

Q3.

```
Command Window
>> Hist()
Size of A:
   256   256     3

Size of B:
   256   256     3

Mean value of pixels in A:
   76.7444

Median value of pixels in A:
   78

Mode value of pixels in A:
   79

Mean value of pixels in B:
  130.4741

Median value of pixels in B:
   136

Mode value of pixels in B:
   76

fx >>
```

Q4.





Q5. From the histograms, we can see that it is shifted to the left(lower values mean darker pixels) in case of picture A. This means that in A the blacks are darker, and the overall image is darker than B. We also see that several lower value pixels have higher frequencies(the spikes in the histogram) in case of A.

This is further verified when we find the mean and median values of the 2 images, and in both cases, the values are lower(darker) for A.

Code screenshot

C:\Users\ASUS\Desktop\Matlab Assignment\Final Test\Hist.m

EDITOR PUBLISH VIEW

```
function [] = Hist()
%SIMULAB FINAL TEST
%Anurup De 510818020
%

A=imread('A.tif');
B=imread('B.tif');
disp("Size of A:");
disp(size(A));
disp("Size of B:");
disp(size(B));

A1=A(:,:,1);
B1=B(:,:,1);

figure;
subplot(121),imhist(A1),title('Histogram of A');
subplot(122),imhist(B1),title('Histogram of B');

disp("Mean value of pixels in A:")
disp(mean(A1(:)));
disp("Median value of pixels in A:")
disp(median(A1(:)));
disp("Mode value of pixels in A:")
disp(mode(A1(:)));
disp("Mean value of pixels in B:")
disp(mean(B1(:)));
disp("Median value of pixels in B:")
disp(median(B1(:)));
disp("Mode value of pixels in B:")
disp(mode(B1(:)));

figure;
subplot(121),cdfplot(imhist(A1)),title('CDF Plot of A');
subplot(122),cdfplot(imhist(B1)),title('CDF Plot of B');

end
```