Image processing exercise 2

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Histogram for 8-bit image (test02_a.png)

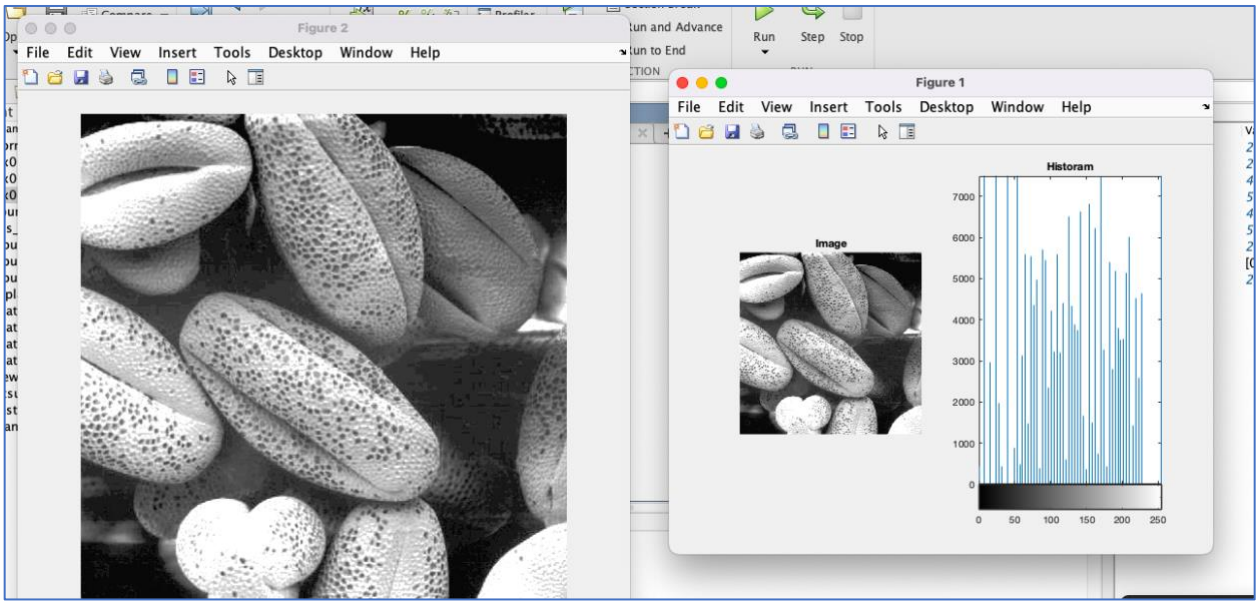
Code

Editor – /Users/wcwe/Documents/MATLAB/ex02_eq.m

correlation_filter.m | ex02_eq.m | ex02.m | fourbit_hist.m

```
% Tian Xiaoyang
% image values into histogram

img = imread('/Users/wcwe/Desktop/test02_b.jpg');

% IMAGE HISTORAM
%figure
subplot(1,2,1),imshow(img),title('Image');
subplot(1,2,2),imhist(img),title('Historam');

% HISTORAM EQUALIZATION
img_h_eq = histeq(img);
figure
imshow(img_h_eq);

%figure
subplot(1,2,1),imshow(img_h_eq),title('Image');
subplot(1,2,2),imhist(img_h_eq),title('Historam');
```

Result



8 bit image to 4 bit and histogram
Code

Editor – /Users/wcwe/Documents/MATLAB/ex02.m

correlation_filter.m | ex02_eq.m | ex02.m | fourbit_hist.m

```
% Tian Xiaoyang
% image histogram

img = imread('/Users/wcwe/Desktop/test02_a.png');
grayImg = rgb2gray(img);

% show histogram
figure;
imhist(grayImg);

```

Editor – /Users/wcwe/Documents/MATLAB/fourbit_hist.m

correlation_filter.m | ex02_eq.m | ex02.m | fourbit_hist.m

```
% Tian Xiaoyang
% image histogram
%  8 bit image to 4 bit


img = imread('/Users/wcwe/Desktop/test02_a.png');
grayImg = rgb2gray(img);

% 8 bit to 4 bit
Img4 = grayImg./ 16;
image(Img4);
colormap(gray(16));

% show histogram
figure;
imhist(Img4);
```

Result

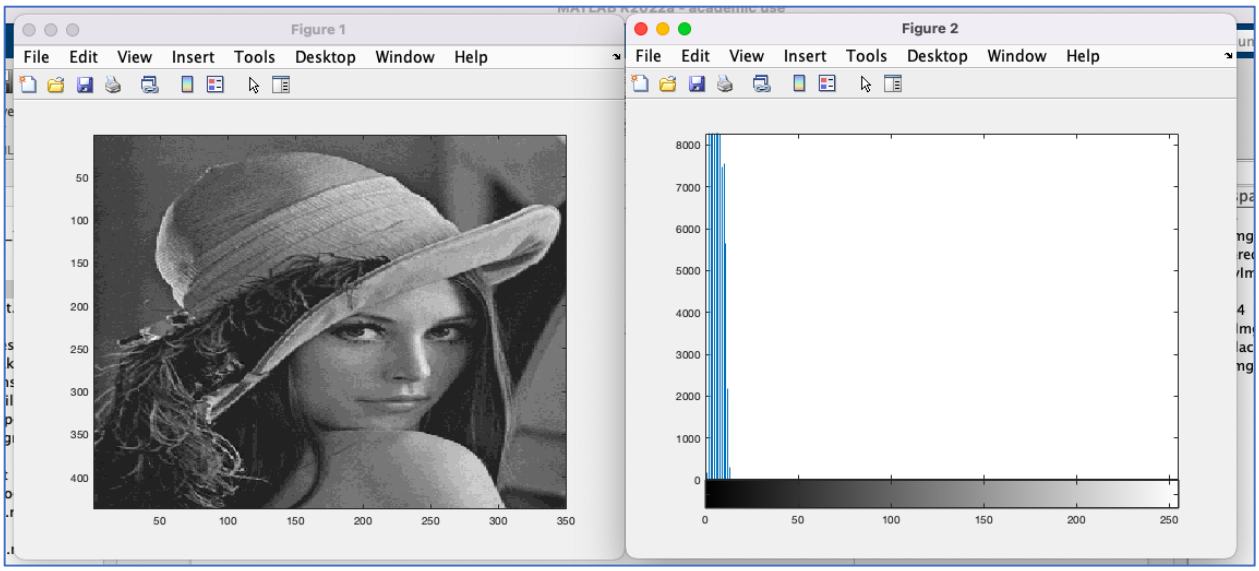


Figure 1
File Edit View Insert Tools Desktop Window Help
50
100
150
200
250
300
350
400
50 100 150 200 250 300 350
Figure 2
File Edit View Insert Tools Desktop Window Help
8000
7000
6000
5000
4000
3000
2000
1000
0
0 50 100 150 200 250