



# Image processing project Documentation

## Team members:

- 1- Hasnaa salah
- 2- Alaa shaher
- 3- Dina Muhammed

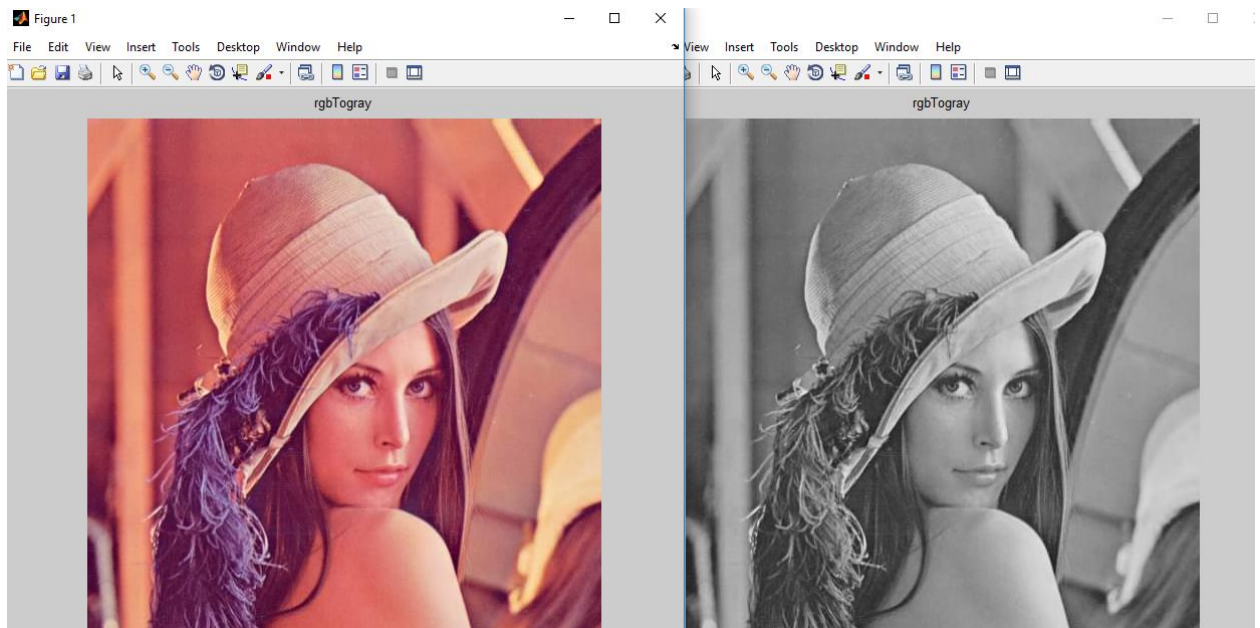
## Under the Supervision of:

Doc. Mazen Ahmed Selim

Eng. Doaa

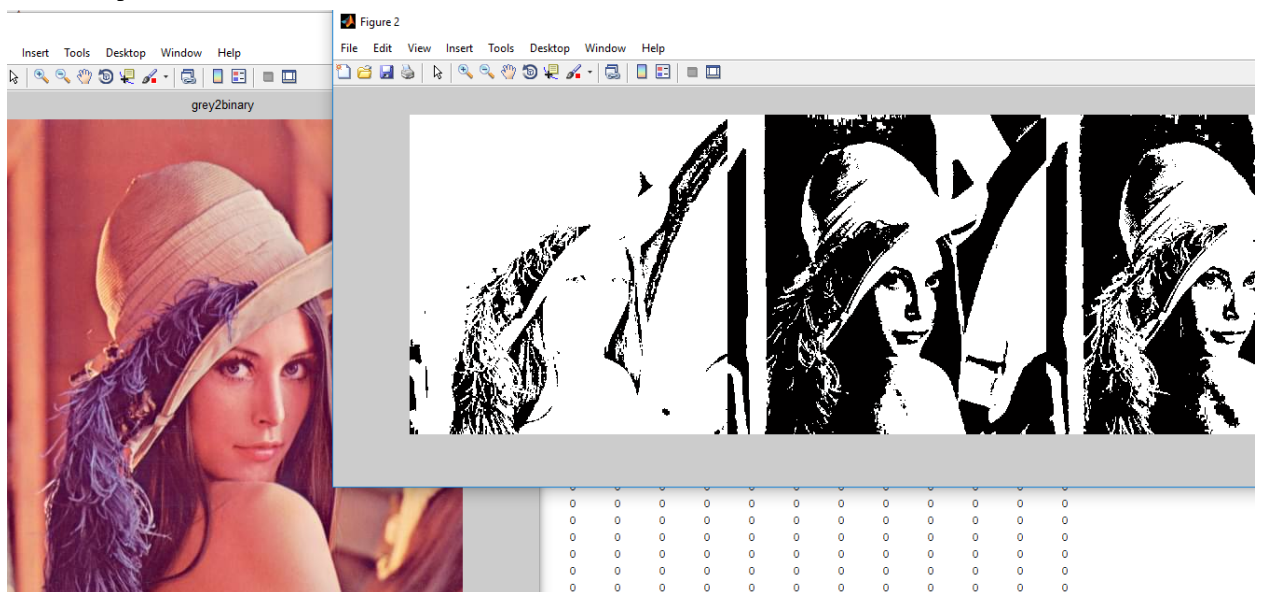
# 1-RGB2GRAY

Figure 1 shows the original image, Figure2 shows the Grey one



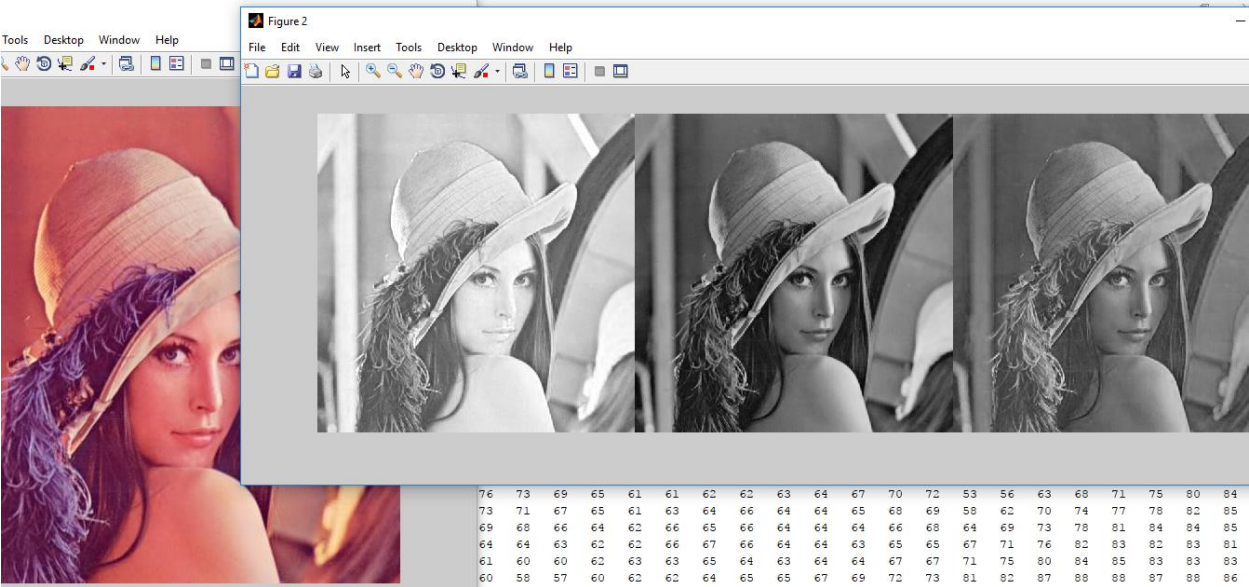
# 2-RGb2binary

Figure 1 shows the original image, Figure 2 shows the binary one



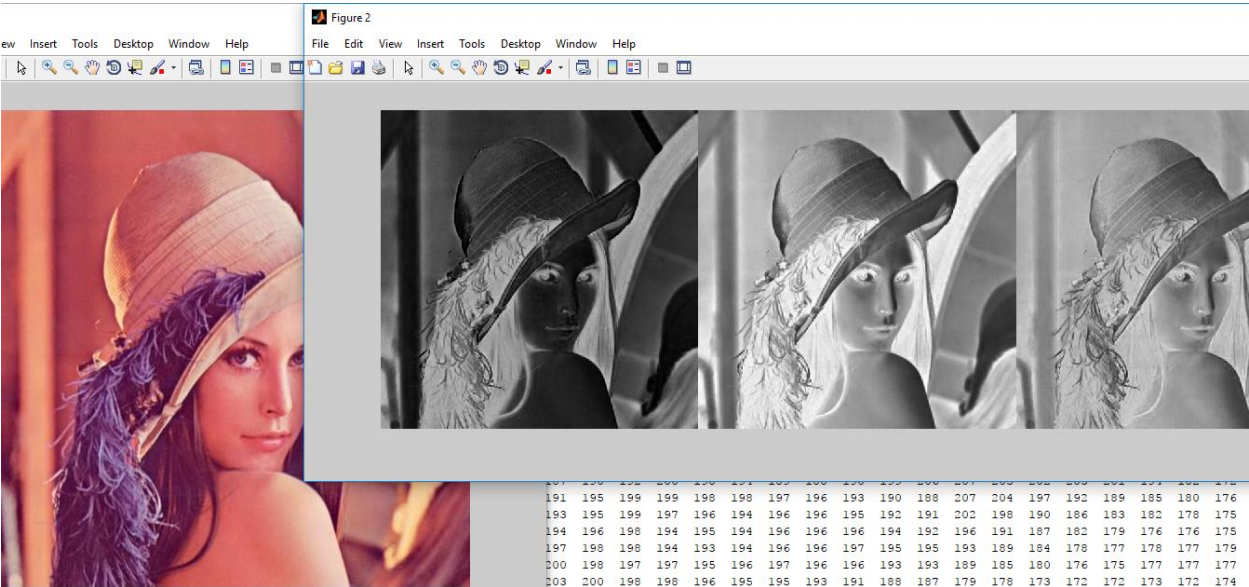
### 3-point processing Brightness

Figure 1 shows the original image, Figure 2 shows the Brightness one



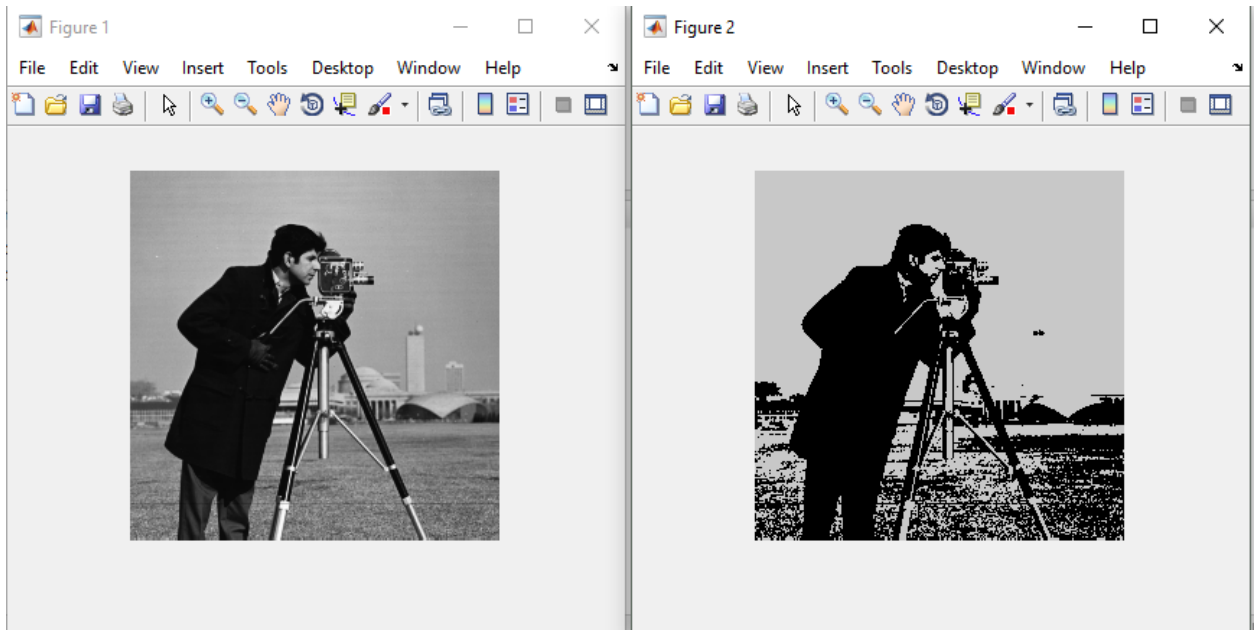
### 4-point processing negative

Figure 1 shows the original image, Figure 2 shows the negative one



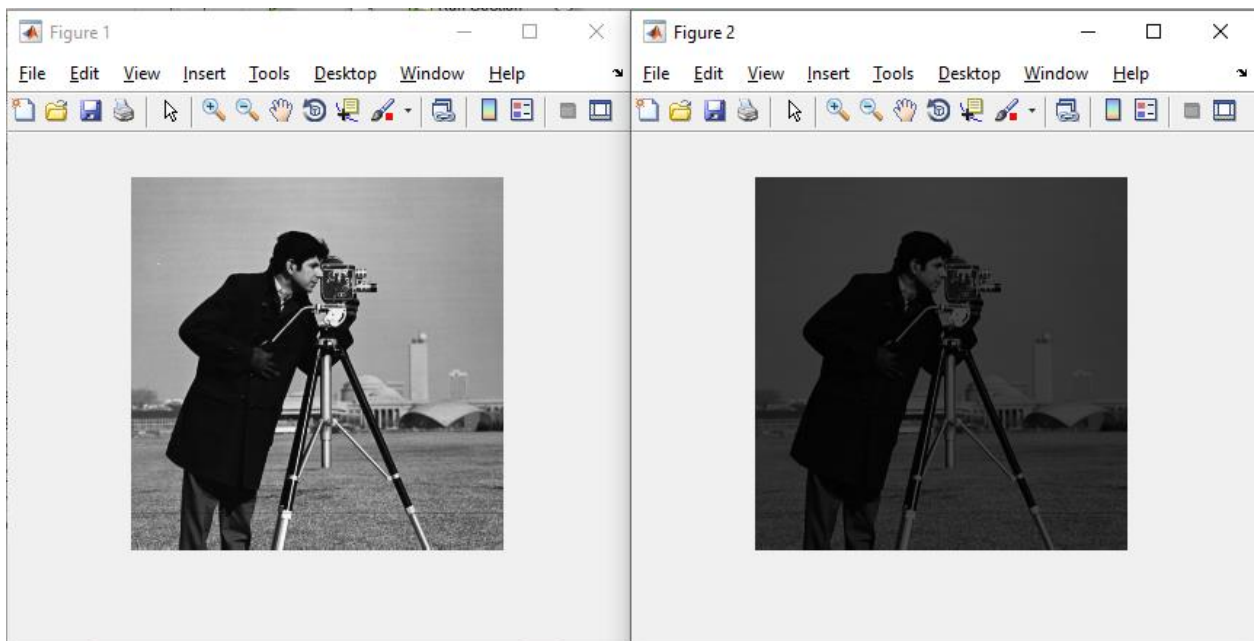
## 5-point processing contrast

Figure 1 shows the original image, Figure 2 shows contrast applying



## 6-point processing log-transformation

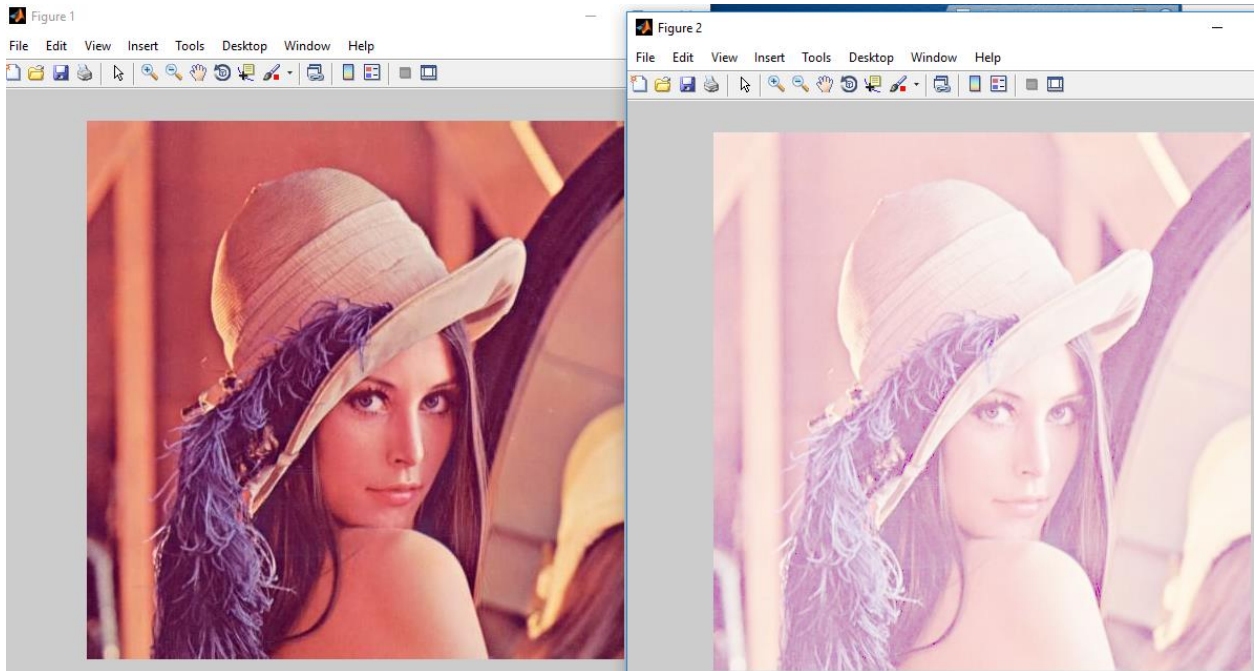
Figure 1 shows the original image, Figure 2 shows the applying of Log Transformation Function on this image ( $S=C*\text{LOG}(1+R)$ )





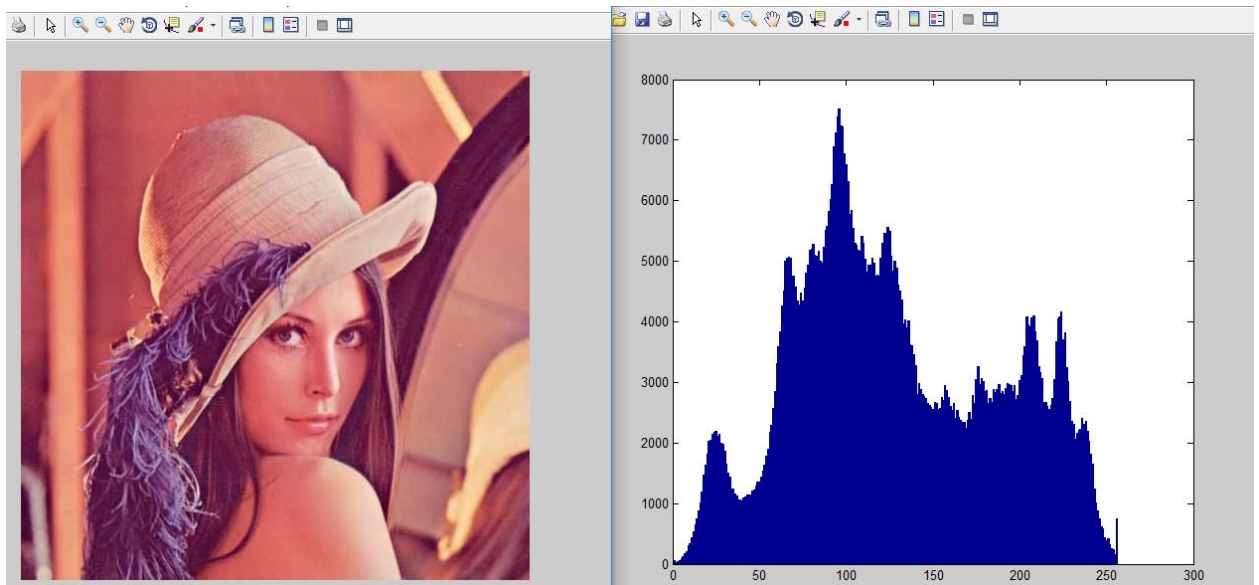
## 7-point processing gamma-correction

Figure 1 shows the original image, Figure 2 shows applying gamma correction Function on it



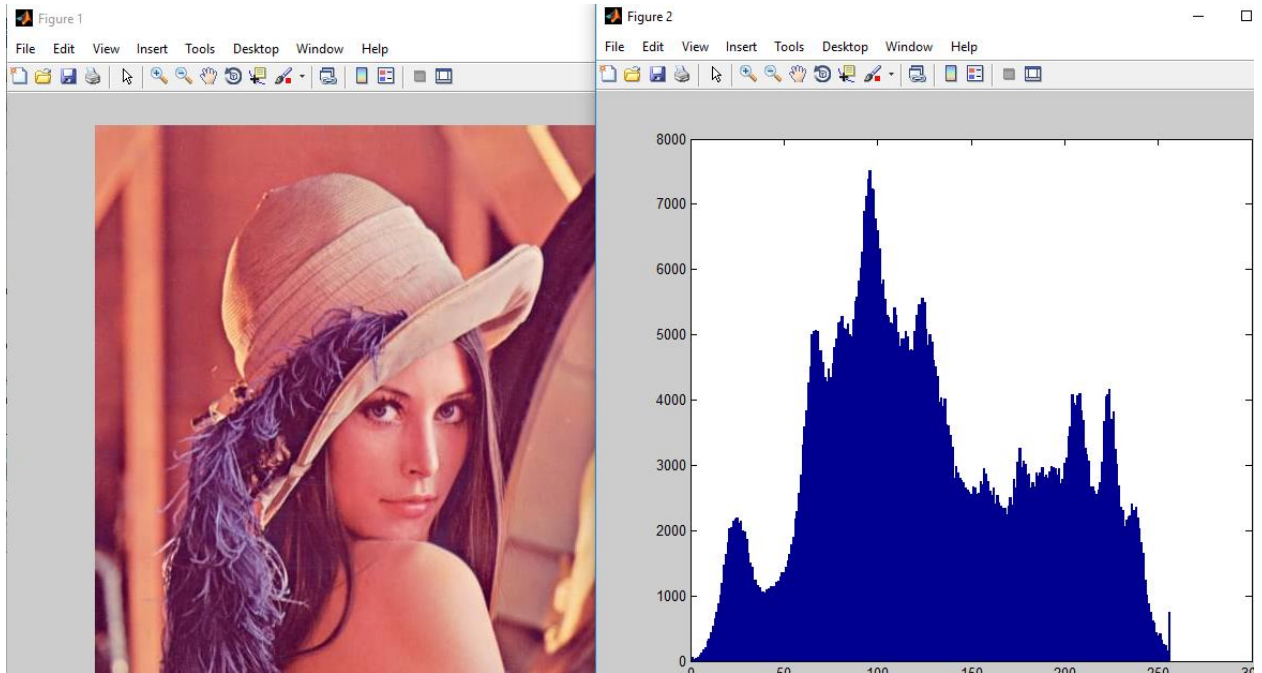
## 8-Histogram

Figure 1 shows the original image, Figure 2 shows its Histogram



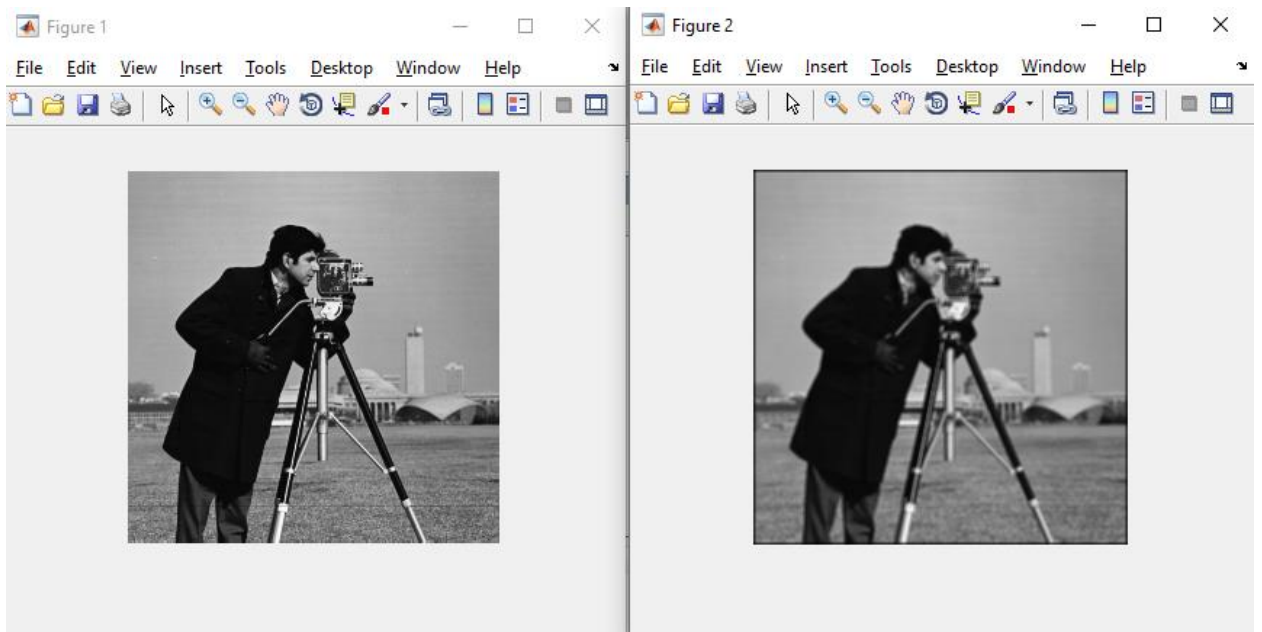
## 9- Histogram Equalization

Figure 1 shows the original image, Figure 2 shows its Histogram Equalization Function



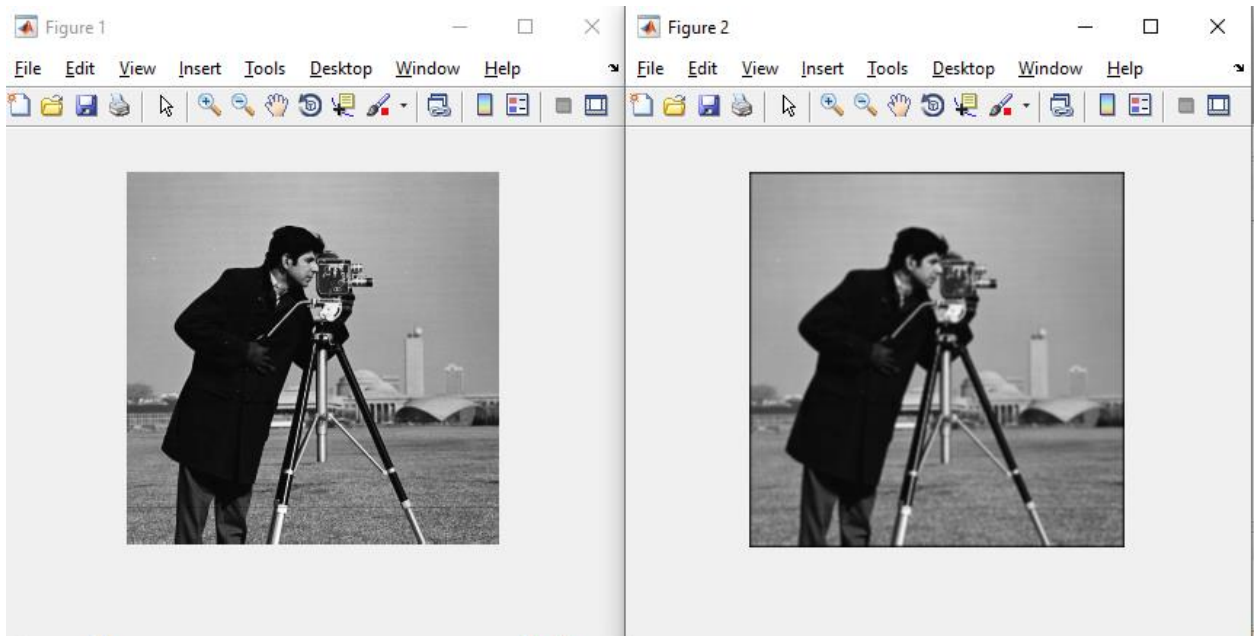
## 10-Mean Filter

Figure 1 shows the original image, Figure 2 shows Mean Filter



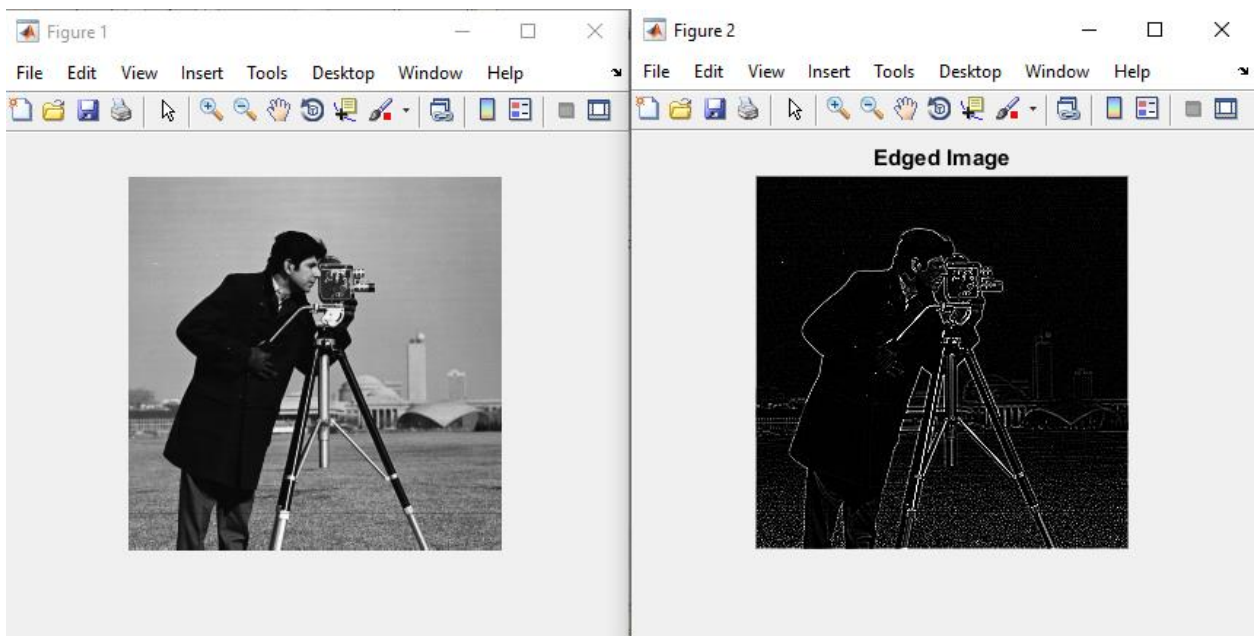
## 11-Weight Filter

Figure 1 shows the original image, Figure 2 shows applying the Weight Filter



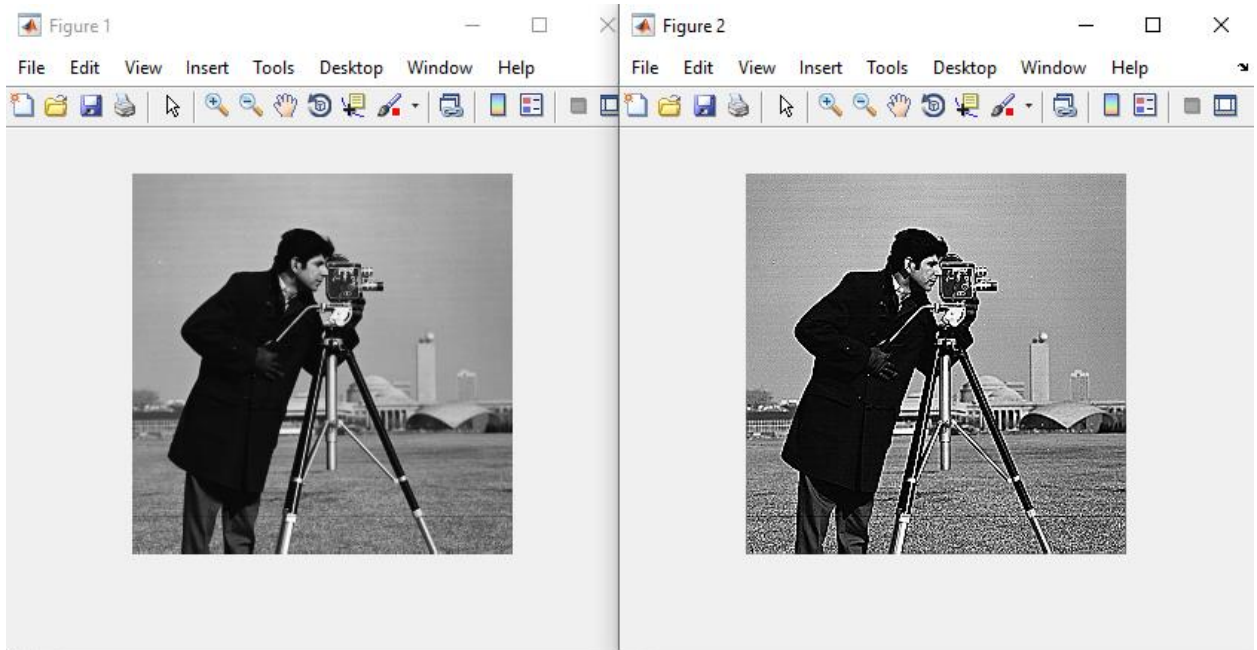
## 12- Edge Detection

Figure 1 shows the original image, Figure 2 shows Edge detection



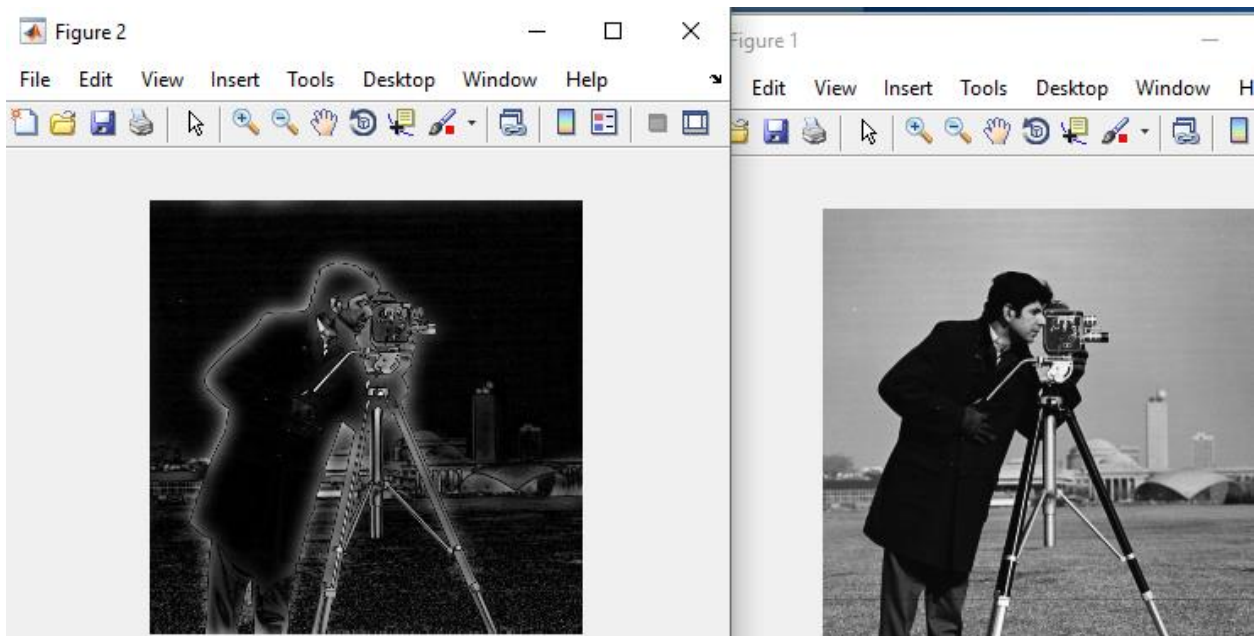
## 13- Sharpening Filters

Figure 1 shows the original image, Figure 2 shows applying the Sharpening Filter



## 14- Gaussian High pass Filter

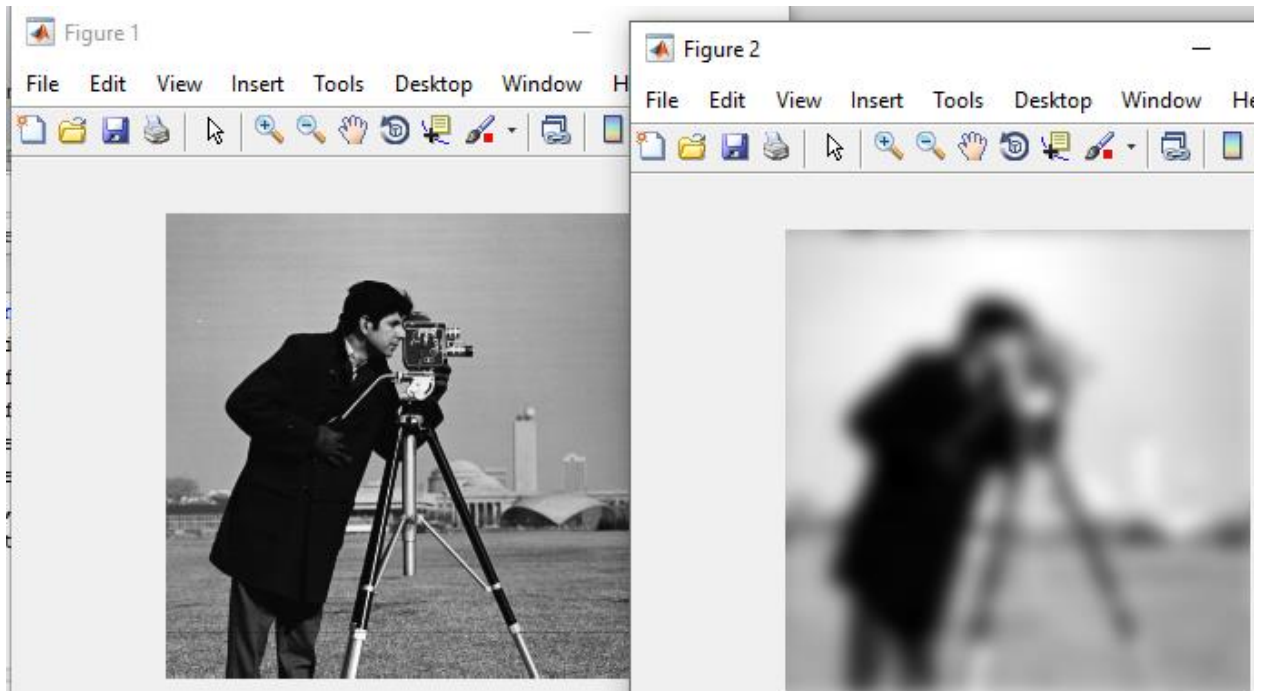
Figure 2 shows the original image, Figure 1 Shows Gaussian High





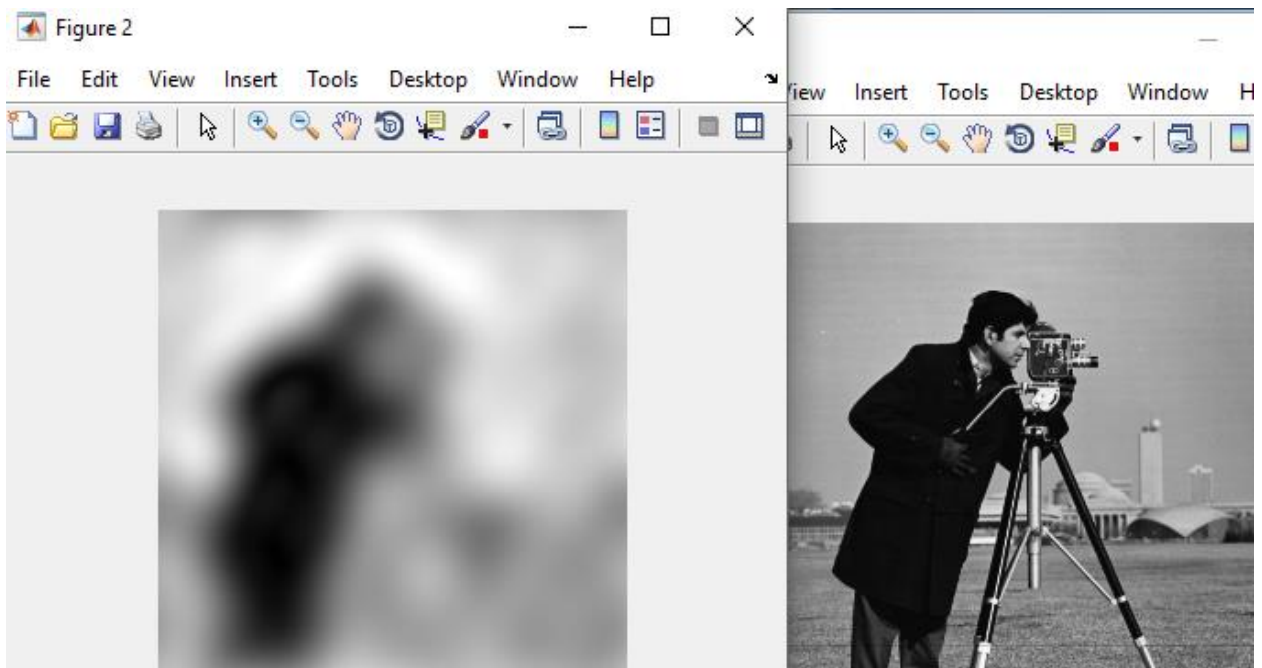
## 15- Gaussian Low pass Filter

Figure 1 shows the original image, Figure 2 Shows Gaussian Low



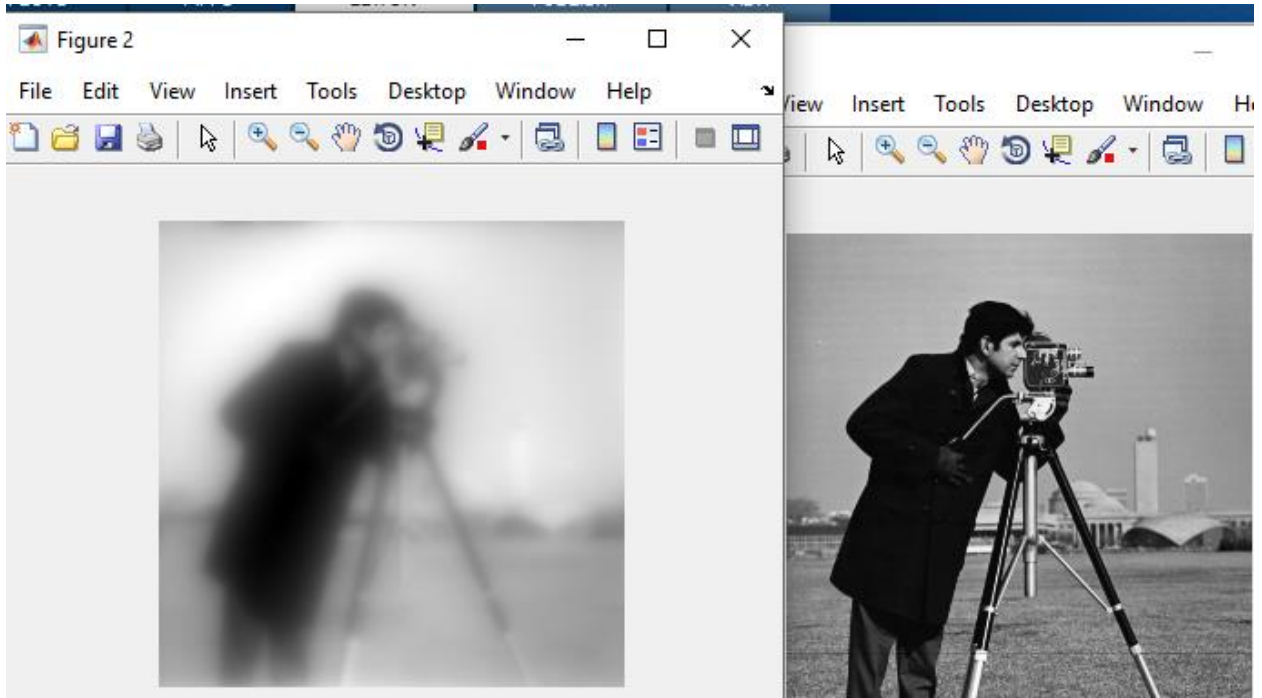
## 16- Ideal low pass Filter

Figure 2 shows the original image, Figure 1 Shows Ideal Low pass



## 17- Butterworth Low pass Filter

Figure 2 shows the original image, Figure 1 Shows Butterworth Low pass Filter



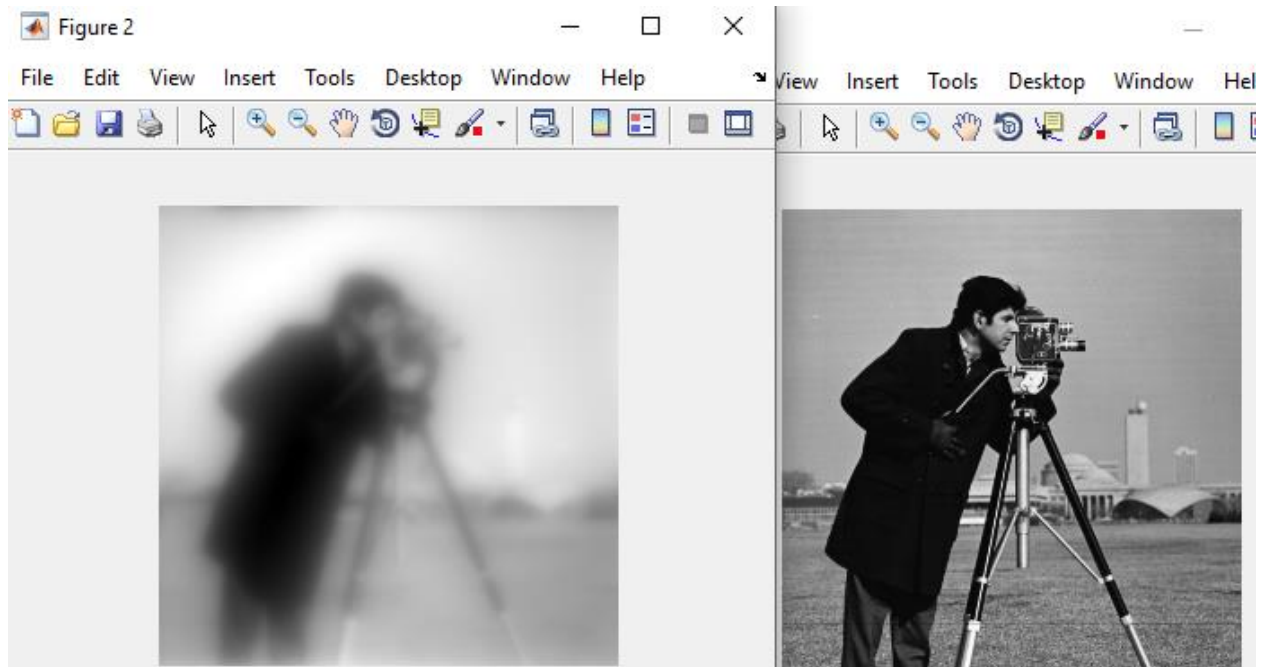
## 18- Ideal High pass filter

Figure 2 shows the original image, Figure 1 shows ideal High pass Filter



## 19- Butterworth High pass Filter

Figure 2 shows the original image, Figure 1 shows Butterworth High pass Filter



## 20- Salt and pepper noise

