



Credit Hours System



Cairo University

Faculty of Engineering

Medical Image Processing & Computer Vision

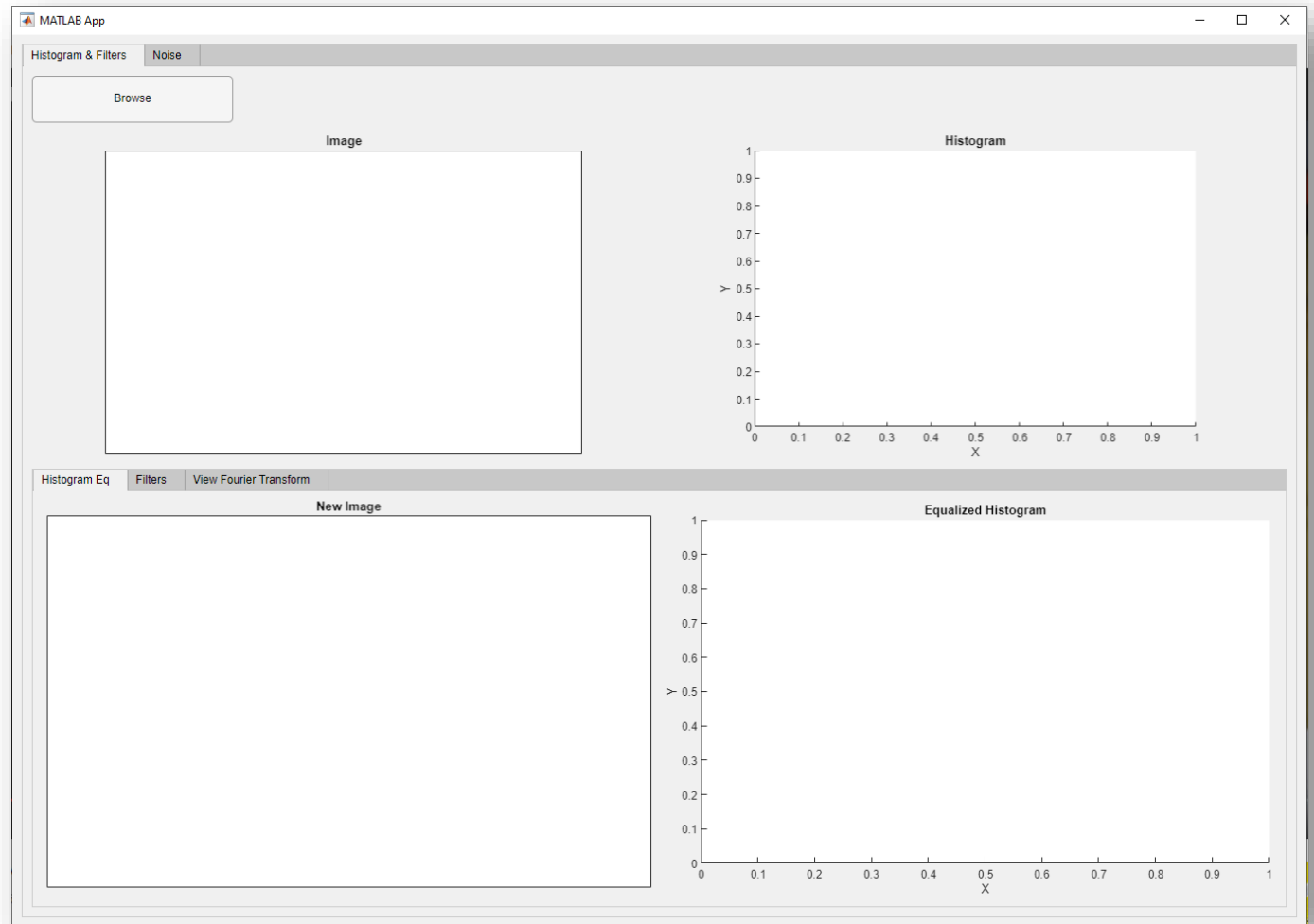
Final Project Report

Name: Hisham Khaled Ahmed Algendy

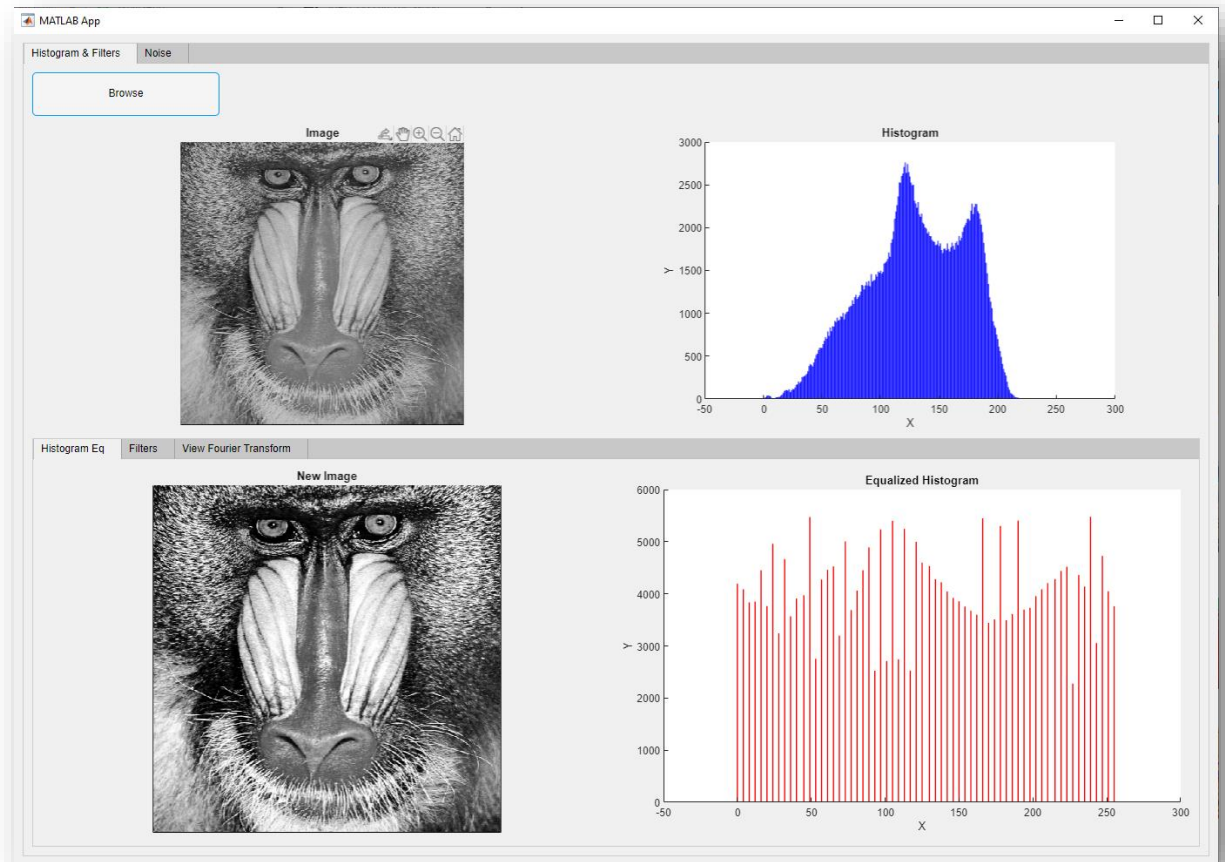
ID: 1170479

The GUI is designed with 2 main tabs.

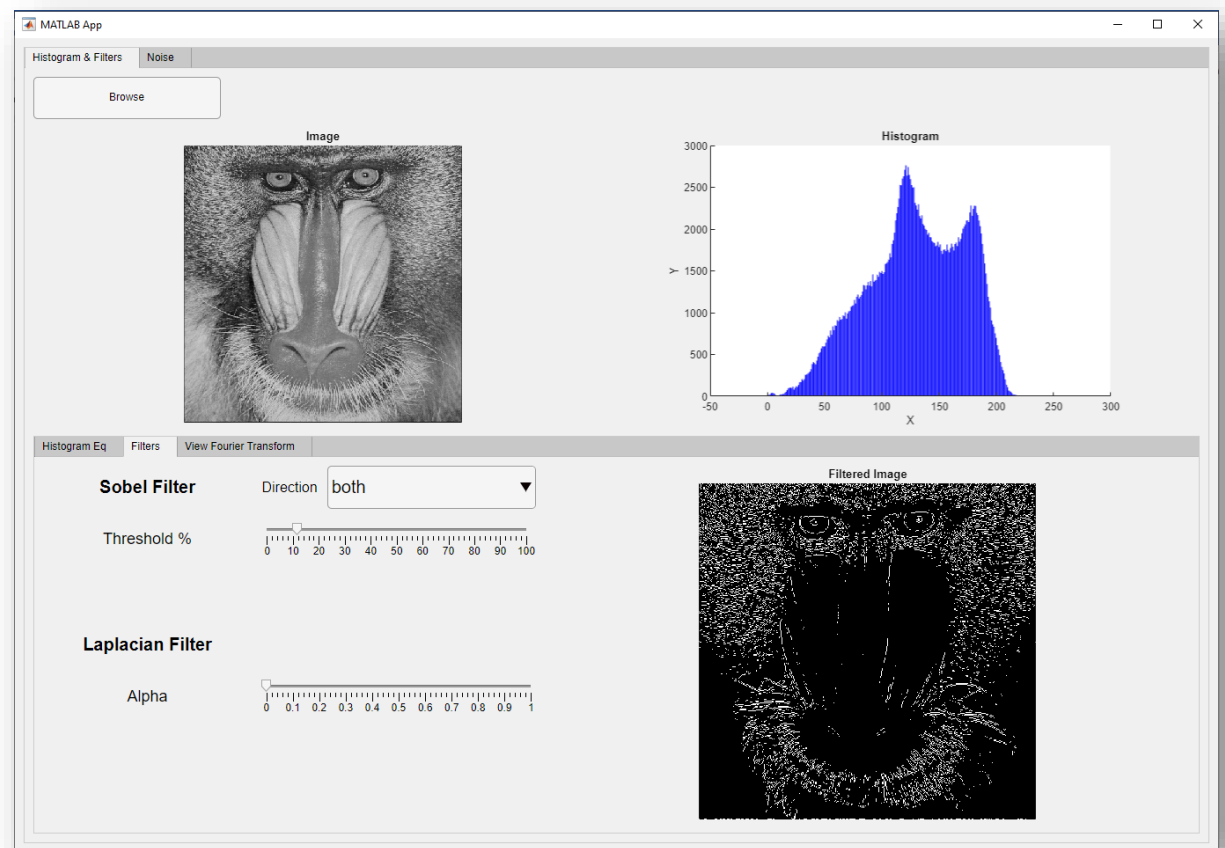
The first tab contains the browse button, where the user can choose an image and it automatically displays the image in grayscale and its histogram.



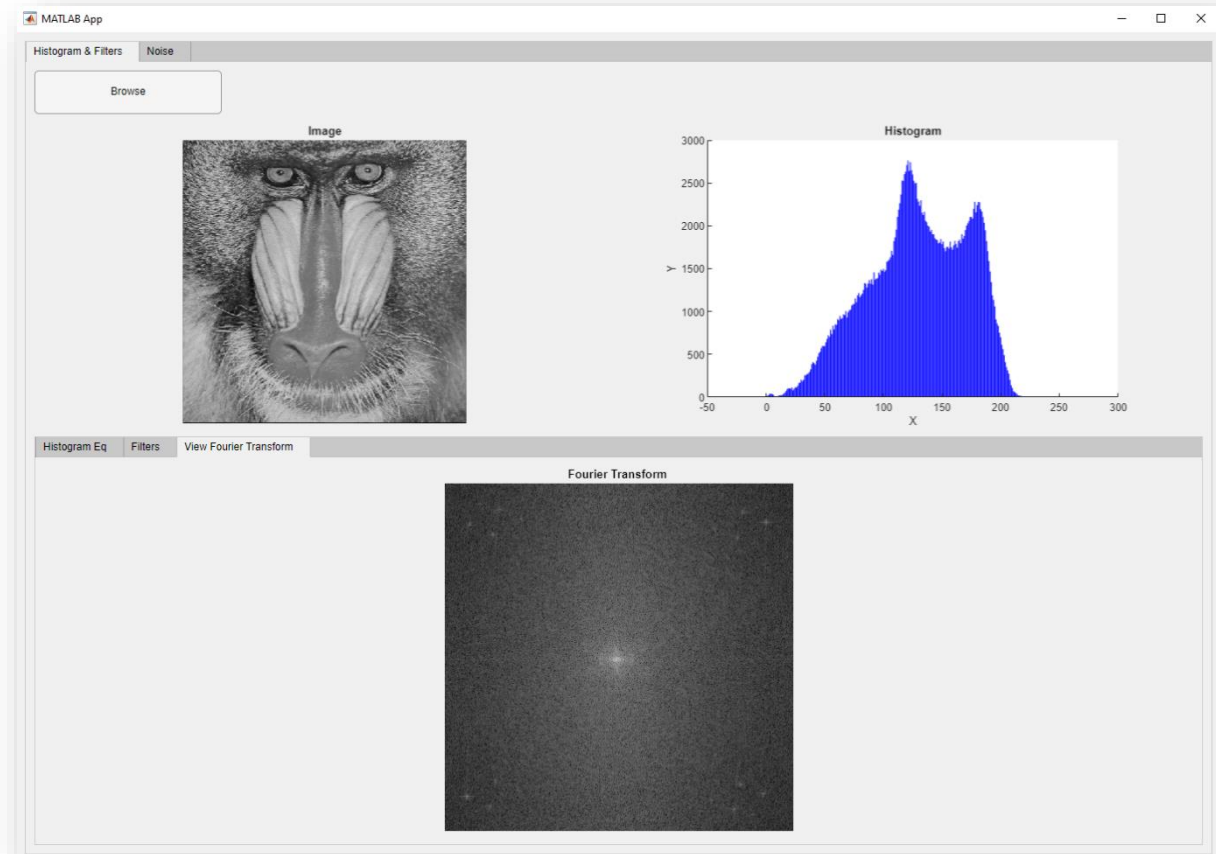
There are three sub-tabs at the bottom of the first page, first one is histogram equalization, where the user can view the equalized image and its new histogram.



The next sub-tab is “Filters” and that is where the user can select the type of filter to apply to the image, and select each filter’s properties using a drop-down menu and sliders. The changes are applied automatically as soon as the user changes the slider.



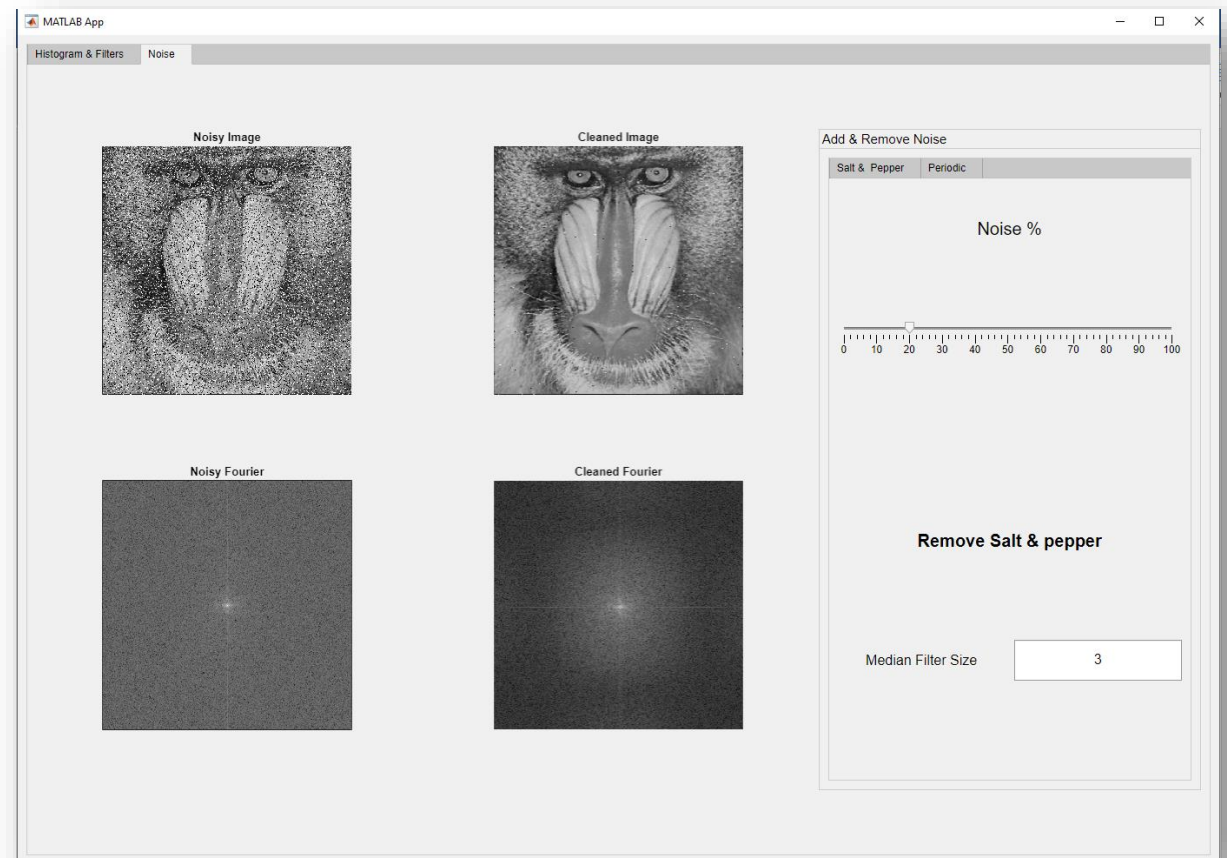
Finally, the last tab shows the original image's Fourier transform.



In the second main tab, the user can add and remove noise.

On the left side, the noisy image is displayed with its Fourier transform at the bottom. The cleaned image and Fourier transform are displayed on the right side.

In the right panel, the user can select the percentage of noise to add to the image, and the size of the median filter.



If the user chooses the “Periodic Noise” tab, the user can add Nx and Ny values and select the method to remove the noise from a drop-down menu. If the user selects “Mask” option, the bottom left panel zooms and centers on the white pixels causing the noise in the Fourier domain, then the user can click on each point and the clean image is then displayed.

