

INTRODUCTION
TO
IMAGE PROCESSING

EEE410

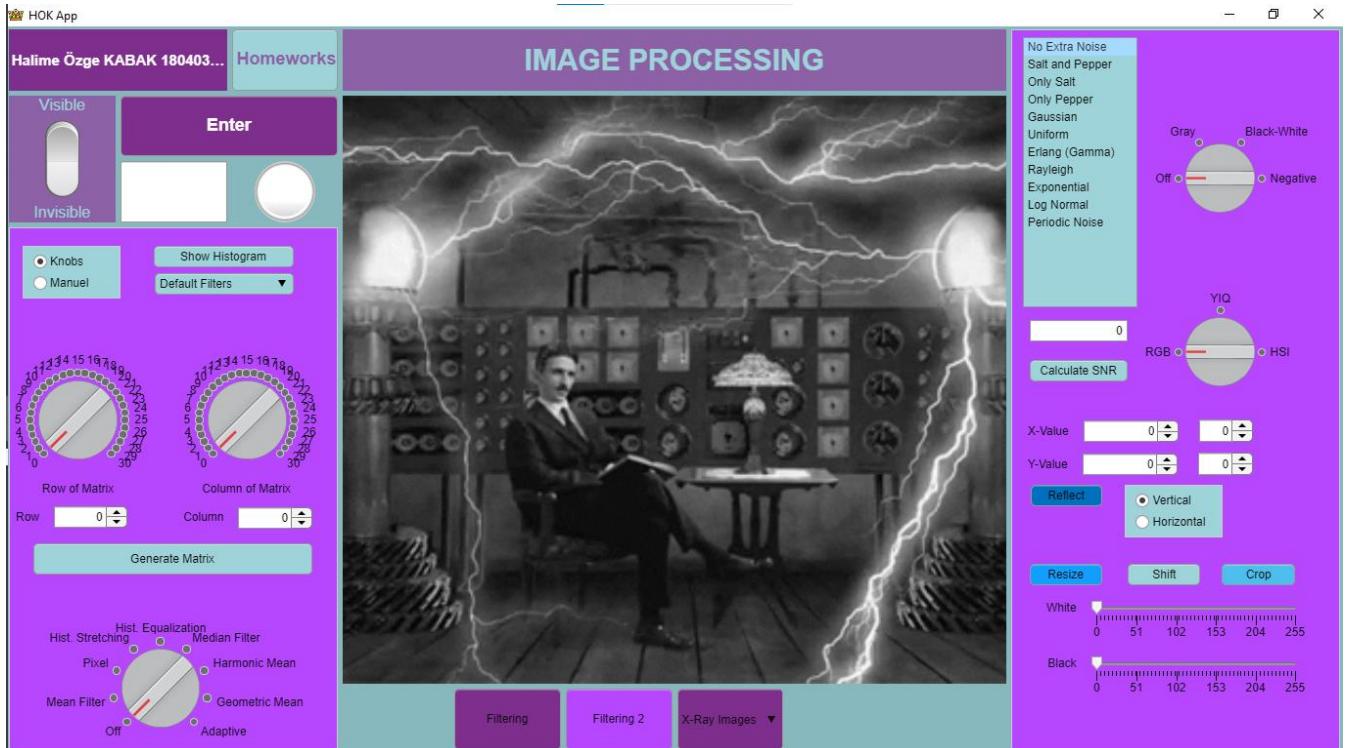
HOMEWORK 6

HALİME ÖZGE KABAK

180403001

◆ MATLAB

- ❖ This is my graphical user interface in MATLAB.

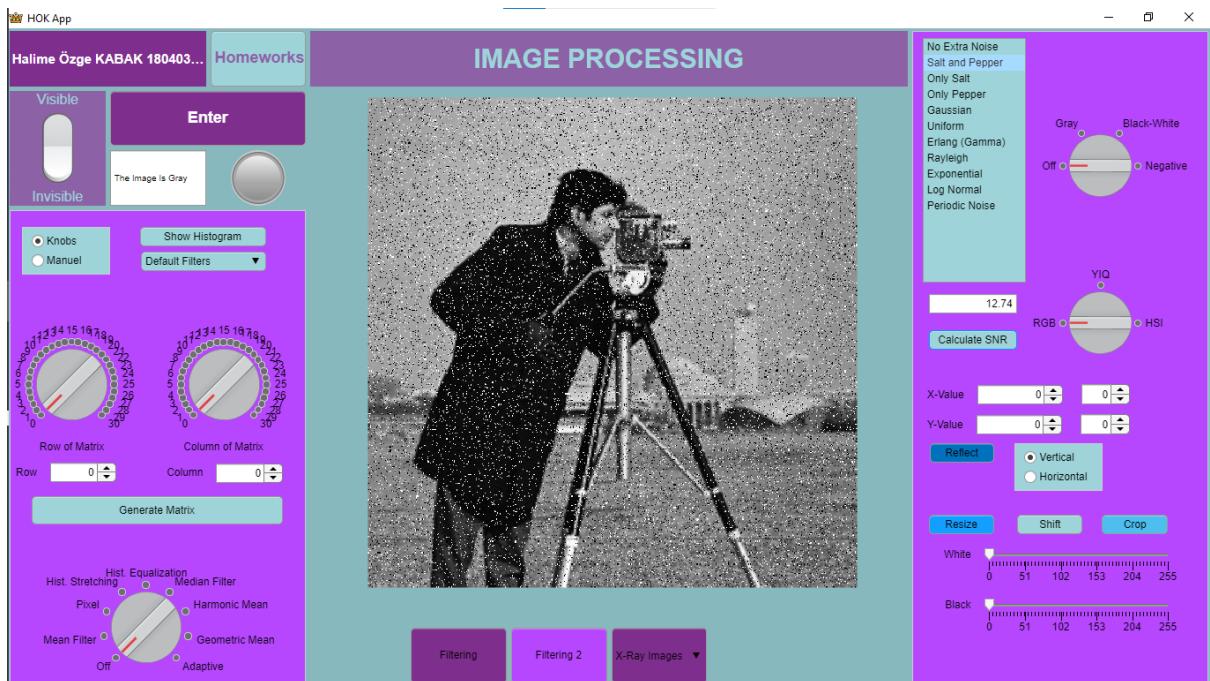


- ❖ In this assignment, we were asked to add noise to the picture, so I added 10 different noises to the picture in the form of a list. I added an extra adaptive, harmonic mean and geometric mean filter to remove these noises. I used Signal to Noise Ratio (SNR) as the noise measurement metric.

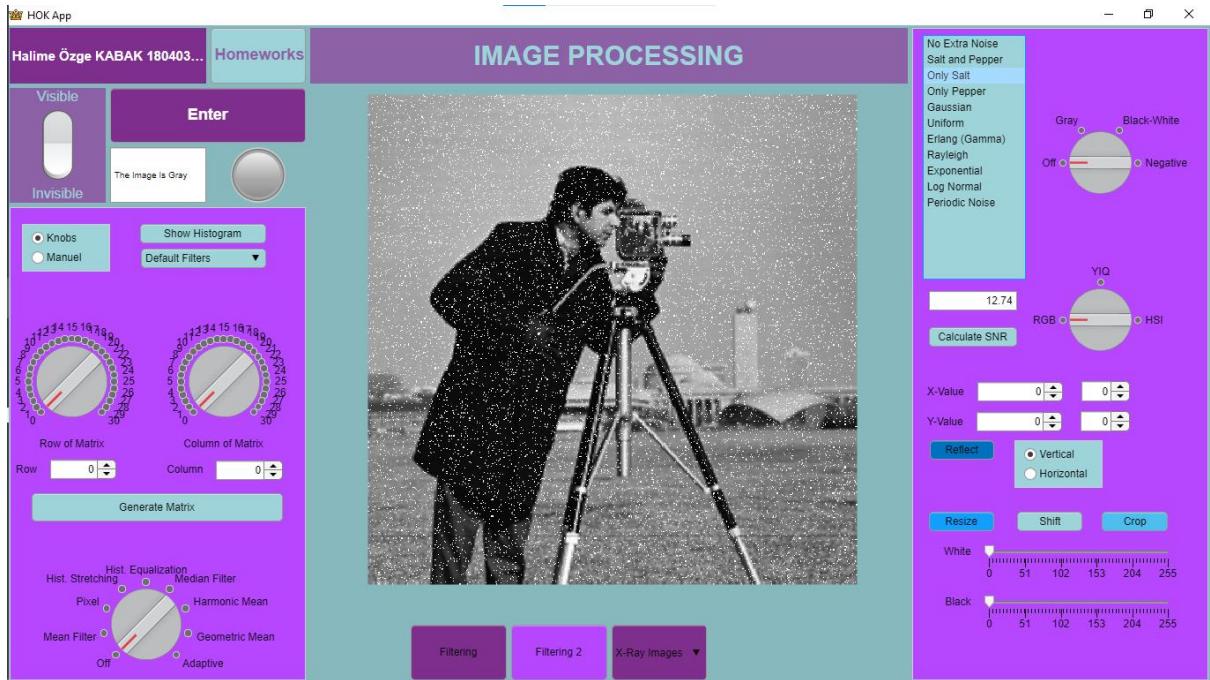
Initial Image:



1) Salt and Pepper



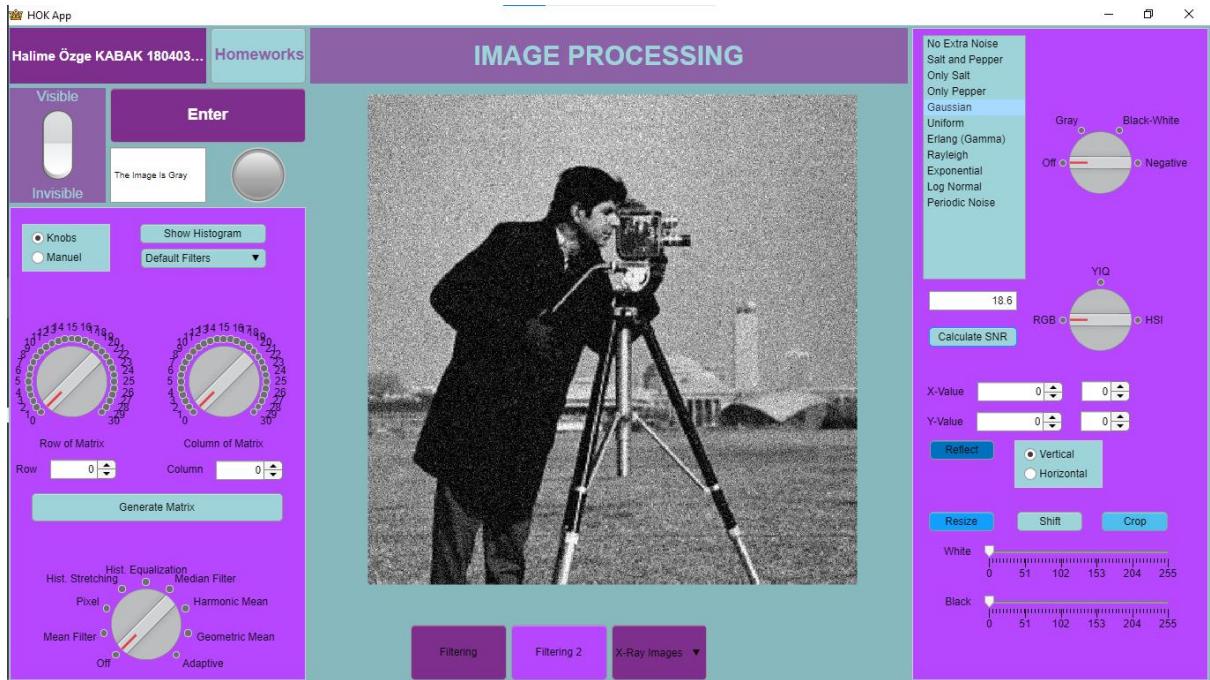
2) Only Salt



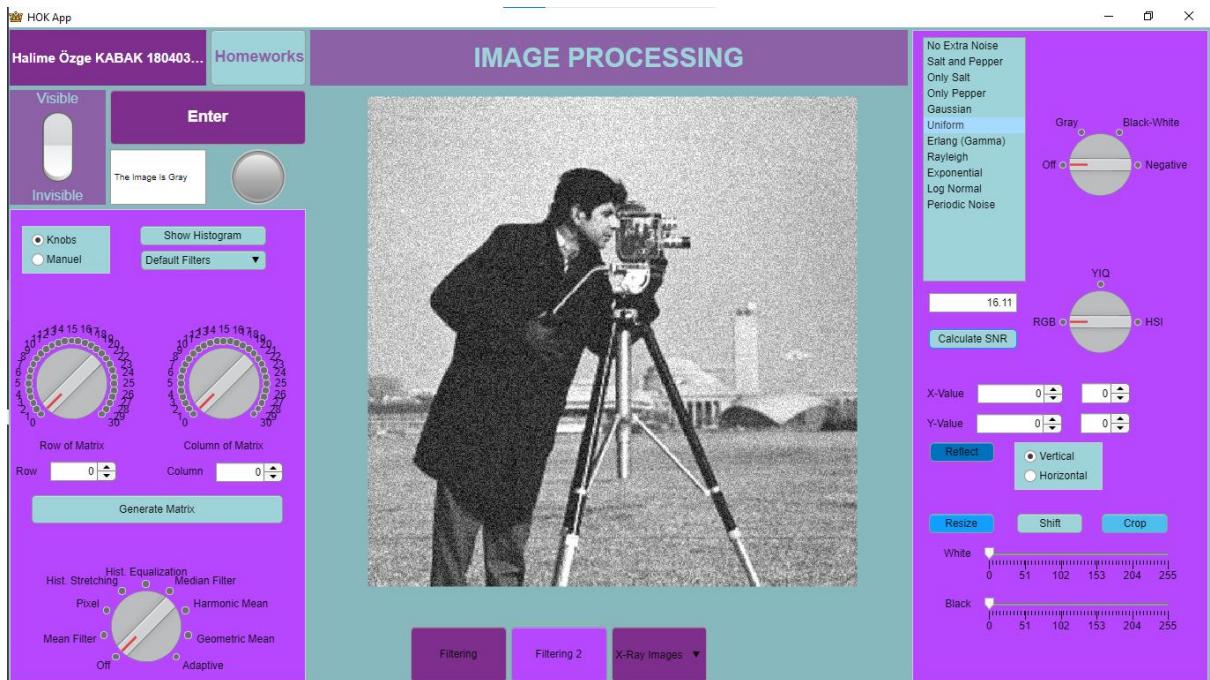
3) Only Pepper



4) Gaussian



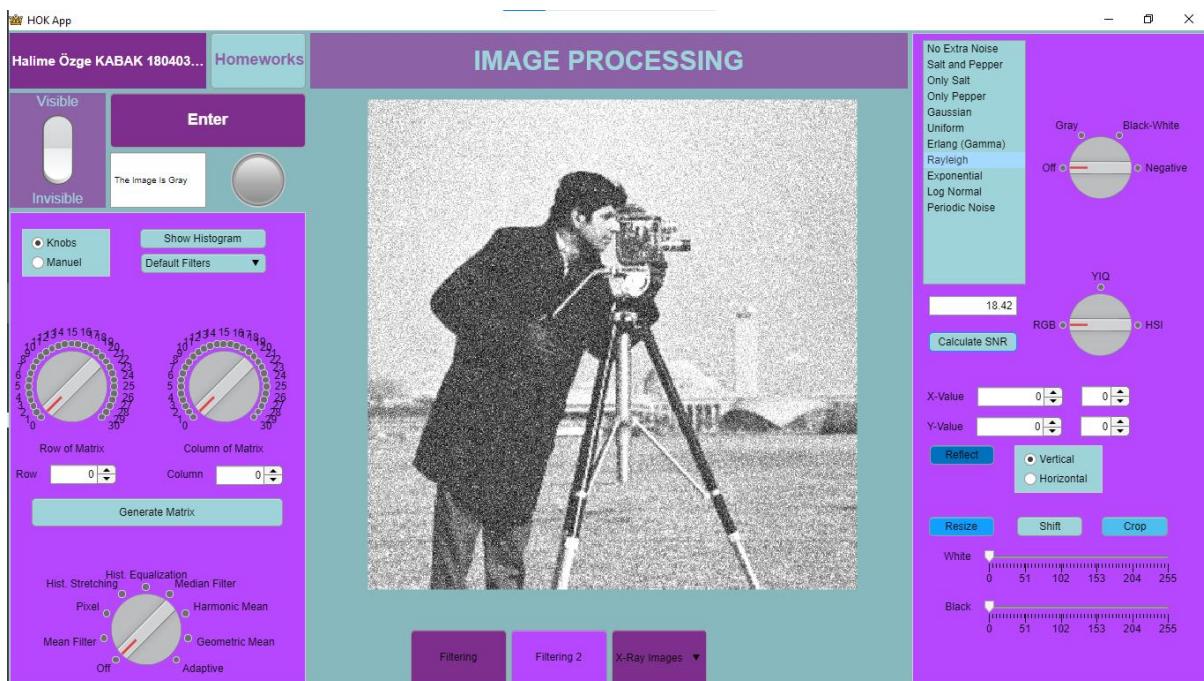
5) Uniform



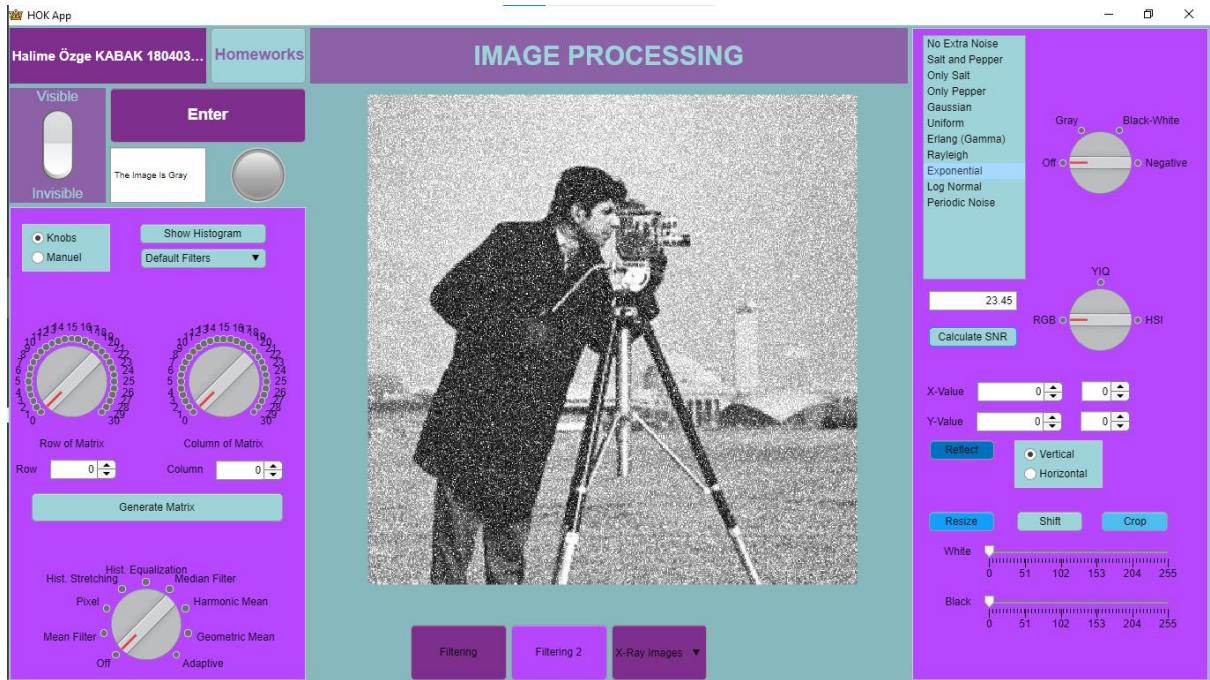
6) Erlang



7) Rayleigh



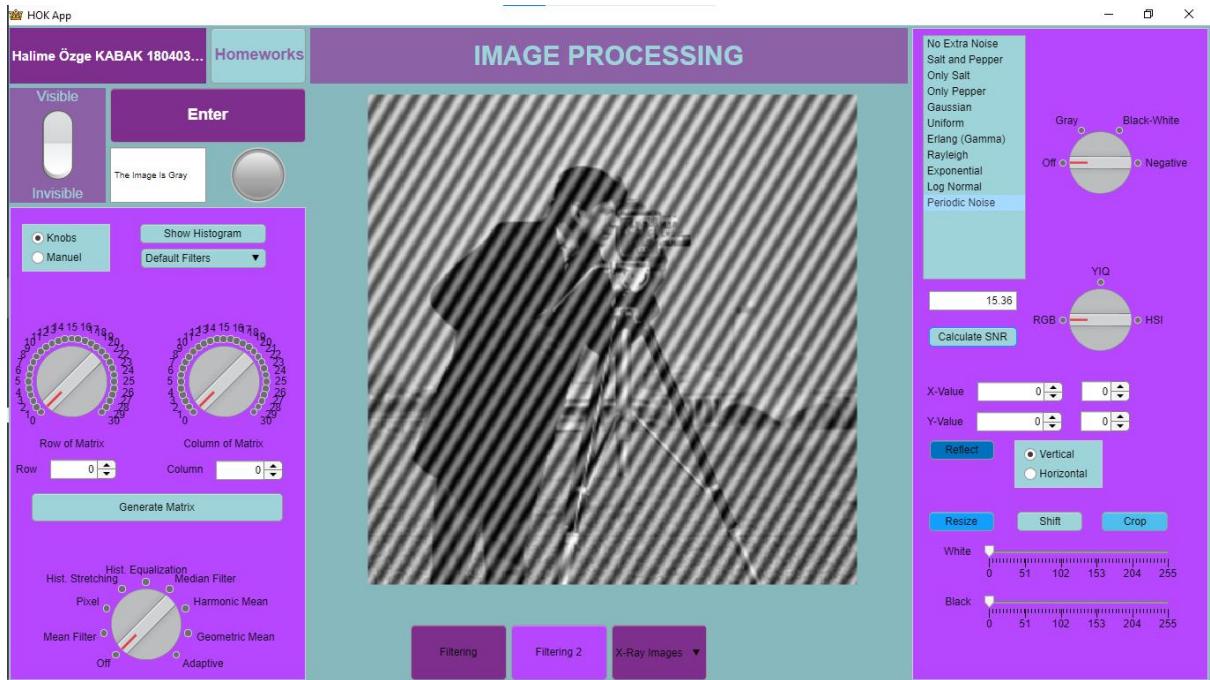
8) Exponential



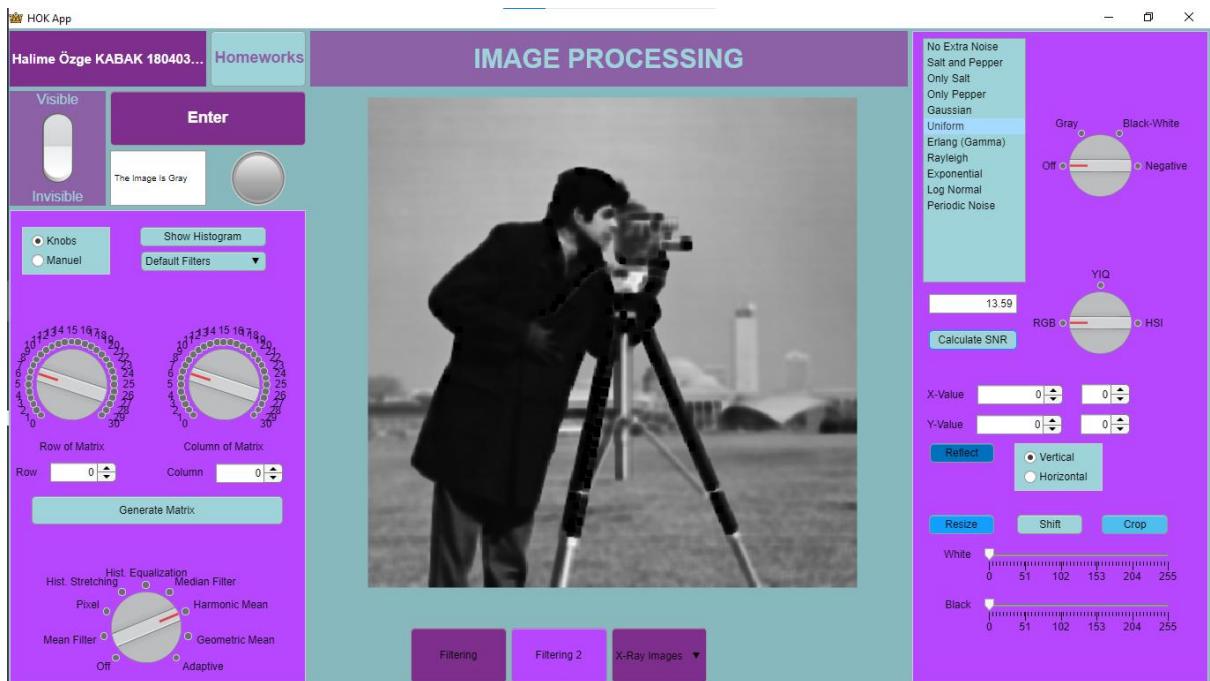
9) Log Normal



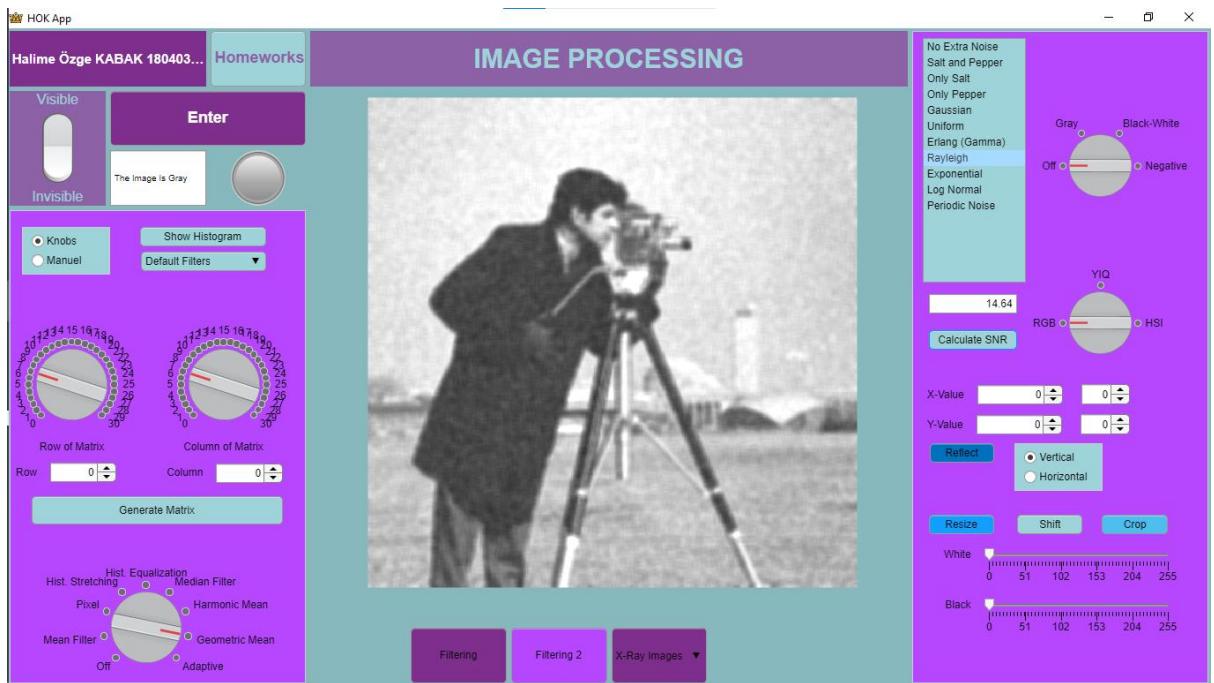
10) Periodic



➤ Harmonic Mean Filter Result (Uniform Noise)



➤ Geometric Mean Filter Result (Rayleigh Noise)



➤ Adaptive Filter Result (Log Normal Noise)



➤ Mean Filter Result (Salt and Pepper Noise)



◆ PYTHON

❖ I added 8 different noises to the image.

1) Uniform



2) Gaussian



3) Log Normal



4) Rayleigh



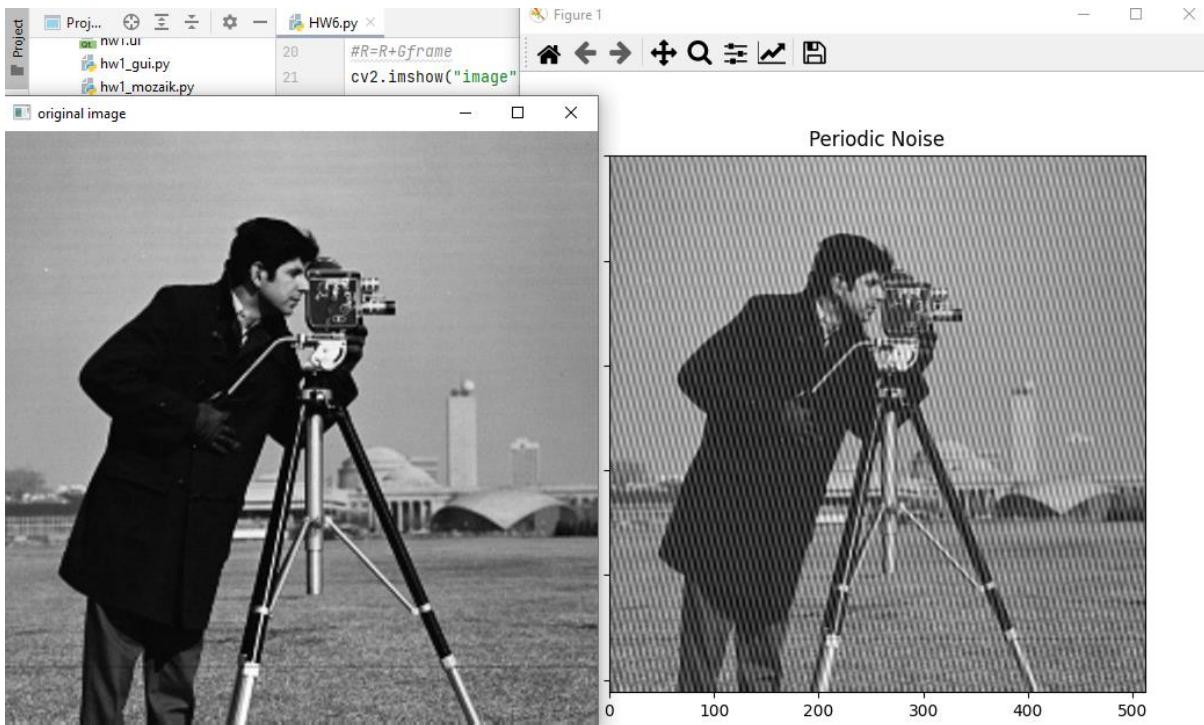
5) Exponential



6) Erlang



7) Periodic



8) Salt and Pepper

