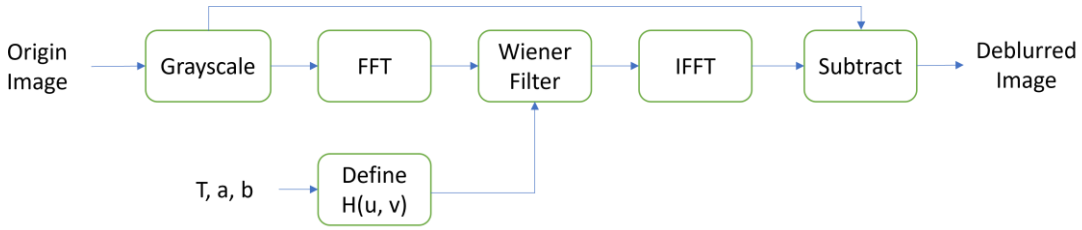
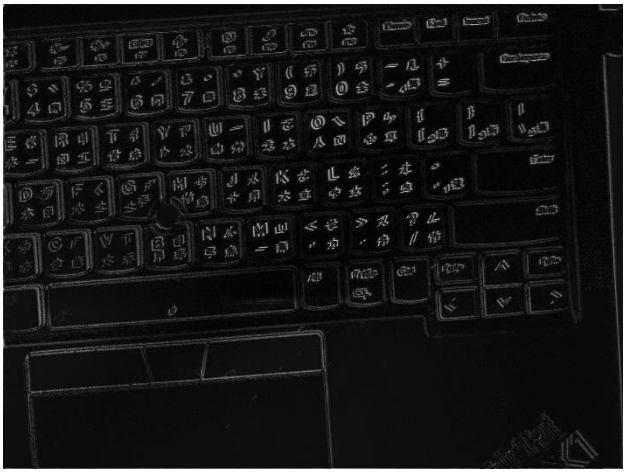
Homework 1 Report

- ## Problem 1

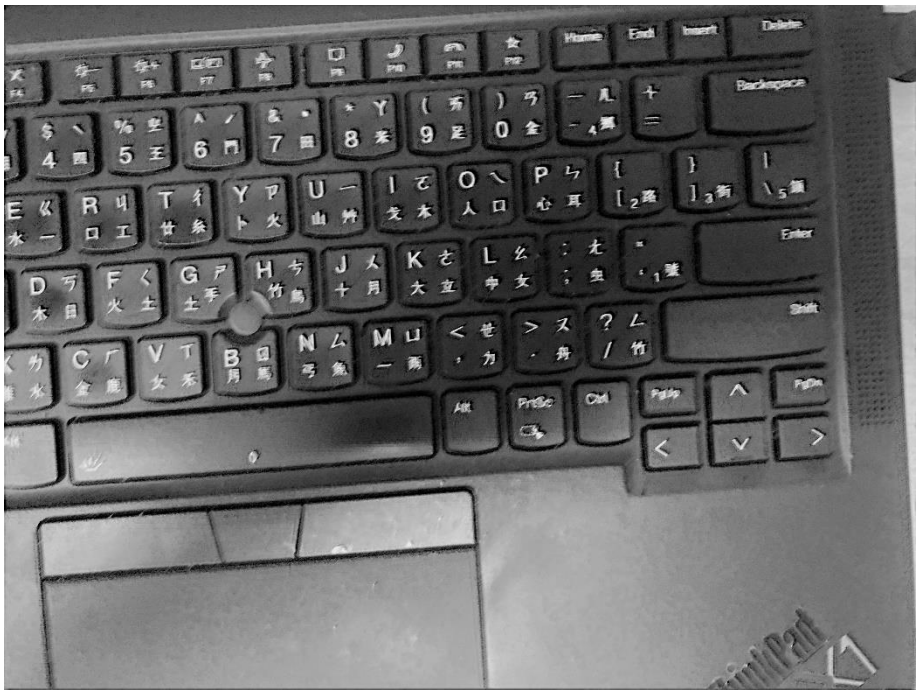
I implemented a deblurring algorithm with the following procedure:



First, I converted the original image to grayscale and normalized it. Then, I performed a Fourier transform to move it to the frequency domain.
Next, I defined the motion blur's H function and used the Wiener Filter along with the inverse Fourier transform to obtain a mask. By adjusting two parameters, 'a' and 'b', I shifted the image to align the central target. Due to the nature of the sine function, the overlapping part became black, as shown in the figure below.



Finally, I subtracted the grayscale image from the mask to obtain the final result.



Reference

1. Opencv: [OpenCV: OpenCV Tutorials]