

EE-608:DIGITAL IMAGE PROCESSING

Lab Assignment 7

(Warning : Don't use chatgpt)

AIM:

- 1) Write a function to apply a low pass filter to a given image and observe the image and fourier plot before and after.
- 2) Write a function to apply a high pass filter to a given image and observe the image and its fourier plot before and after.
- 3) For the two operations above. Verify that convolution in one domain is multiplication in another domain through the program and its plot.

Doubts: You can approach us. Use leena image or any other image of (512,512).

Libraries: Opencv to read or write image

Matplotlib to display image

Numpy wherever necessary

Basic python functions

Deliverables:

Just give a concise report of what you understand in your own words, not too heavy theory taken from the web.

- 1) Write a python or matlab code to implement above given tasks.
- 2) Analyze the tasks clearly and the mathematics behind the task.
- 3) Plot the results and make a report of results and observations.