

CS370: Assignment 3 - Documentation

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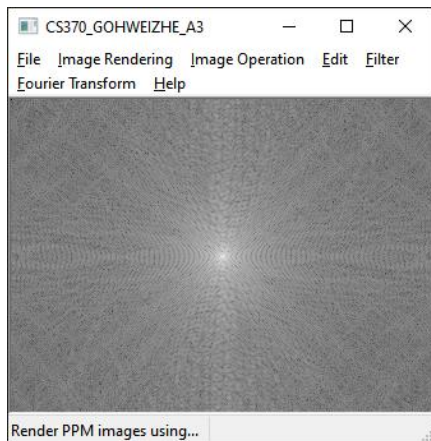
Declaration:

I hereby declare that I adhere to the Academic Integrity Policy stated in the syllabus document. In addition, I also declare that the output images shown in this document are solely taken from the project that I have implemented for this assignment and the same output image will be generated when run in any Digipen PCs using the submitted project.



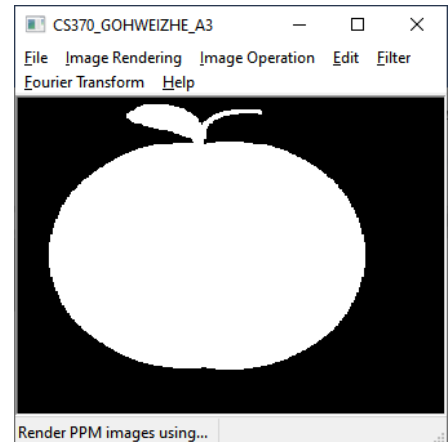
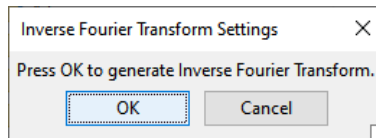
Part 1 - Direct Implementation (Brute Force Method)

Fourier Transform



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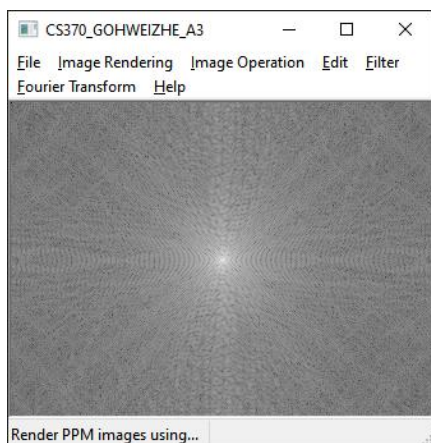
Inverse Fourier Transform



File -> Open -> Load Apple.ppm Image -> Fourier Transform -> DFT – Brute Force Method (10mins) -> Click OK -> Generate Inverse Fourier Transform (15mins)

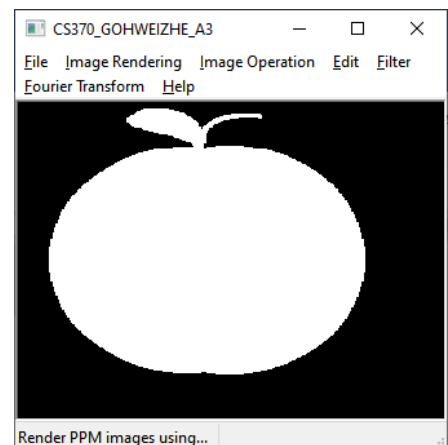
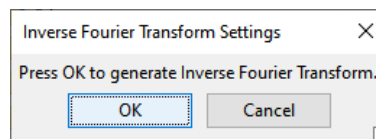
Part 1 - Direct Implementation (Separable Method)

Fourier Transform



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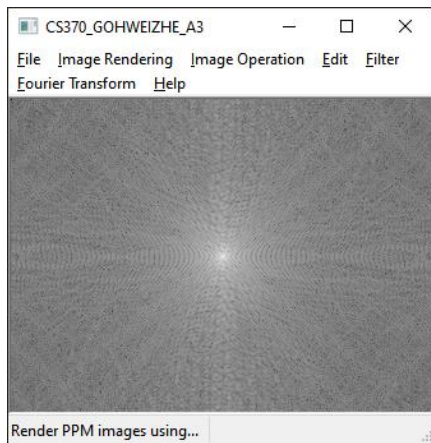
Inverse Fourier Transform



File -> Open -> Load Apple.ppm Image -> Fourier Transform -> DFT – Separable Method -> Click OK -> Generate Inverse Fourier Transform

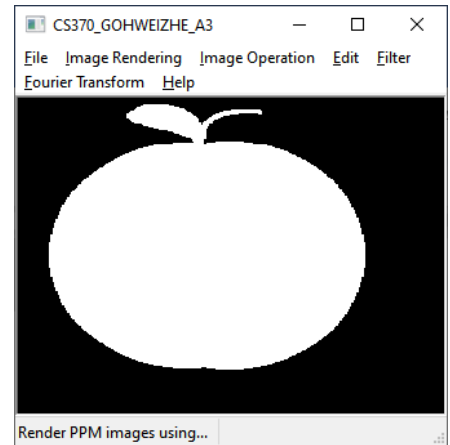
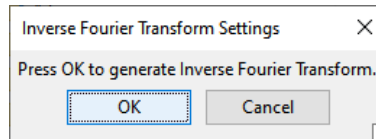
Part 2 – Fast Fourier Transform (Butterfly Method)

Fourier Transform



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Inverse Fourier Transform



File -> Open -> Load Apple.ppm Image -> Fourier Transform -> FFT – Butterfly Method -> Click OK -> Generate Inverse Fourier Transform