Homework 2

Fourier Transform and Laplacian Pyramids

CSE473/573: Computer Vision and Image Processing

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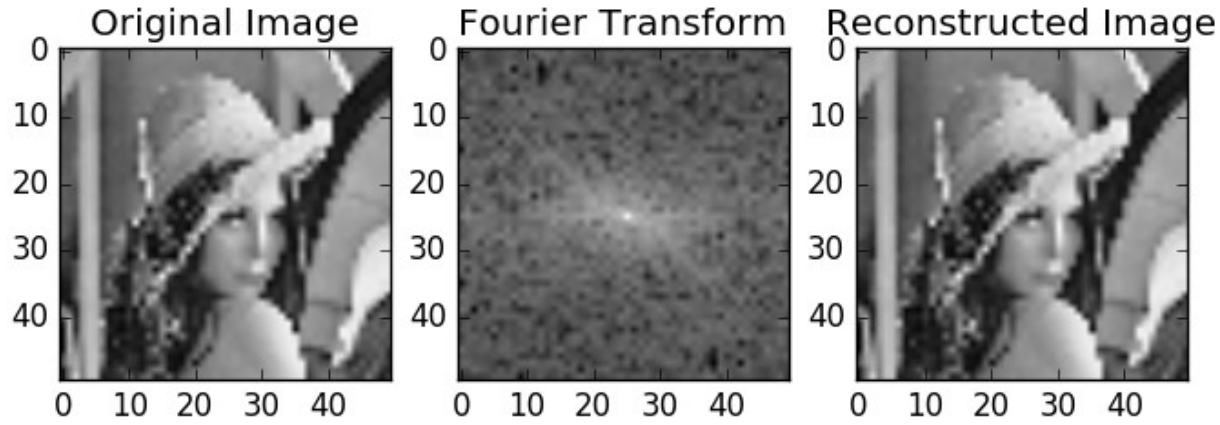
Problem 1



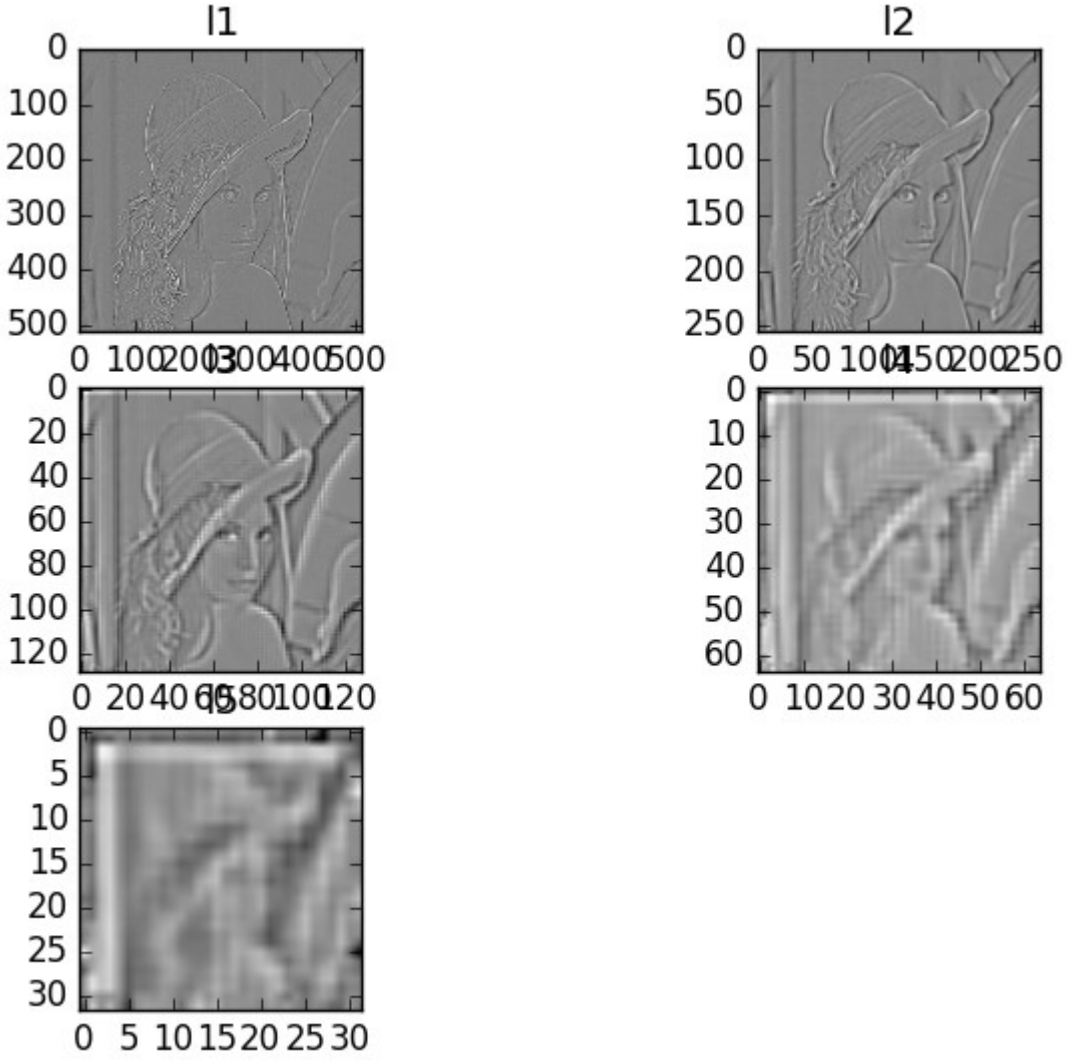
The above figure represents the Original image of size 50x50, its respective Fourier transform and the reconstructed image by Inverse Fourier Transform

The Mean Square Error obtained is: **0**

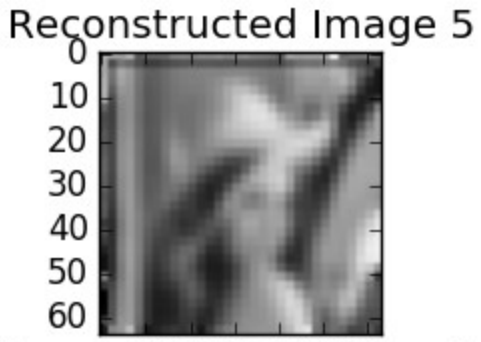
The MSE is zero since there is no information loss when converted from frequency domain to spatial domain.

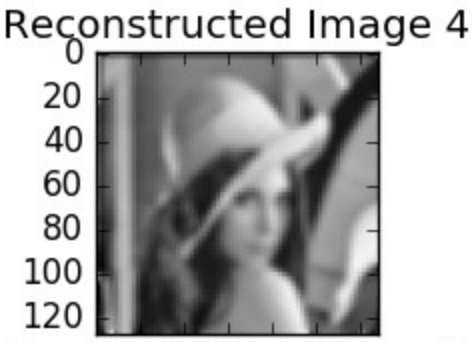
Problem 2

Following is an image of Laplacian Pyramid L1-L5



Following is a list of reconstructed images





The Mean Square Error for reconstructed image is **0** since there is no information loss while reconstructing an image using its Laplacian pyramids