1. Print 512×512 color images mandrill.tiff and koala512.jpg and draw their R,G,B histograms by using Matlab tool, where the images are located in the following website.

http://www.cs.nthu.edu.tw/~cchen/CS6531/Examdata

What do you observe?

2. Print four 512×512 images: lenna.raw, tiffany.raw, Whorl.raw, Arch.raw and draw their respective cumulative distribution functions in the same plot, where the images are located in the following website.

http://www.cs.nthu.edu.tw/~cchen/CS6531/Examdata

What do you observe?

3. Apply a 3-scale 5/3 wavelet transform on the 512×512 images mandrill.raw and koala512.raw, respectively and show the results with appropriate re-quantizations on different subbands.

4. Write an adaptive LBG algorithm to do VQ for image compression/reconstruction on images lenna.raw and mandarill.raw by using 256 codewords and report the PSNR values.

◊ You can use the existing programs to do your work but you should mention where the source codes come from.