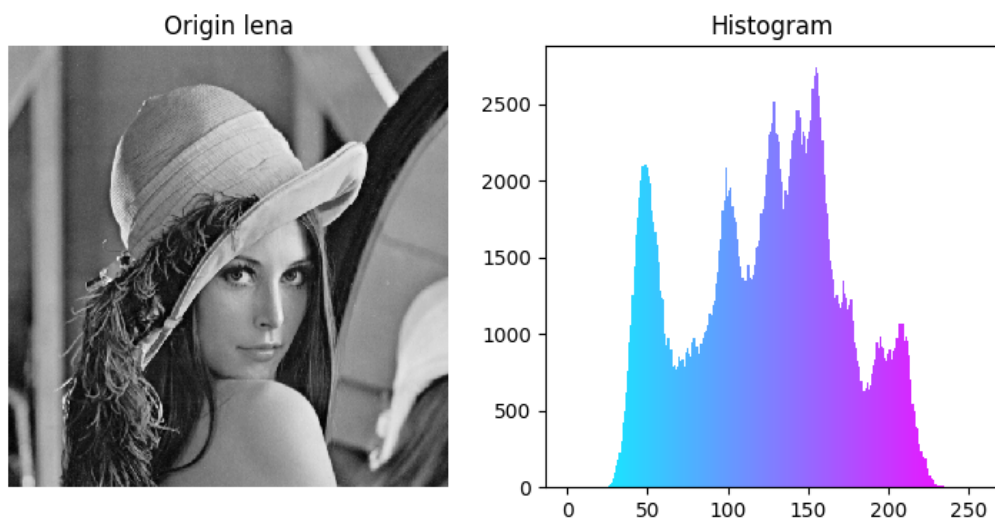


電腦視覺 HW3

B05902011 資工四 梁振寧

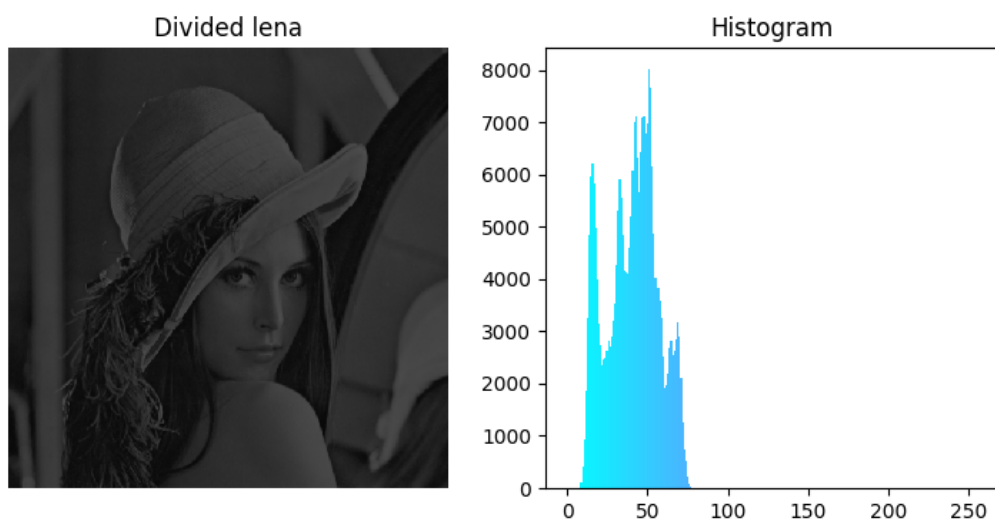
source code : src/img_process.py
using language : python
using material : numpy, PIL, pyplot
* following images are resized to fit in the page

(a). Original



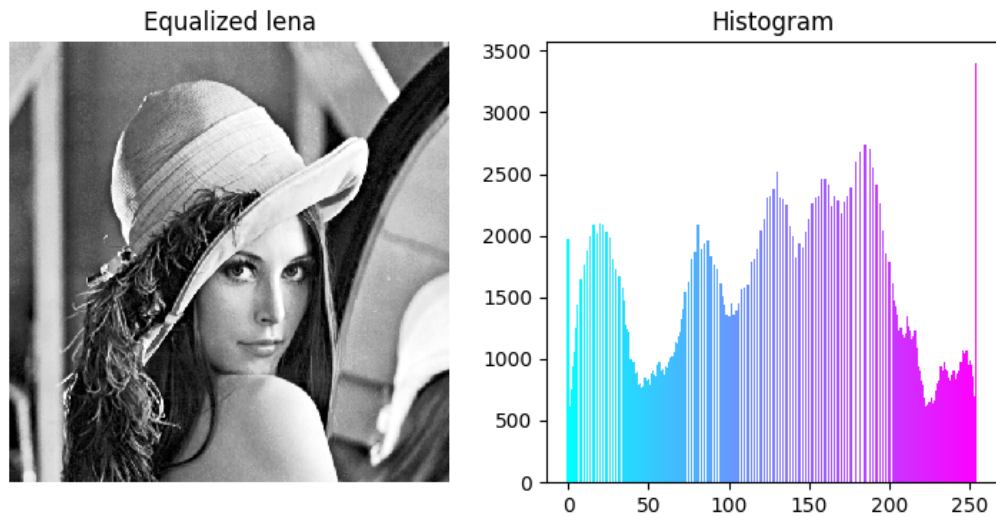
src/a.png

(b). Divided



src/b.png

(c). Equalized



src/c.png

Solution for (a) and (b) is rather simple: traverse through the array and then plot the histogram. For (c), first, calculate the PDF of lena.bmp. Then, generate CDF from PDF, rounding to the nearest integer. At last, map the values of the origin image to the new values.

Reference:

<https://jason-chen-1992.weebly.com/home/-histogram-equalization>