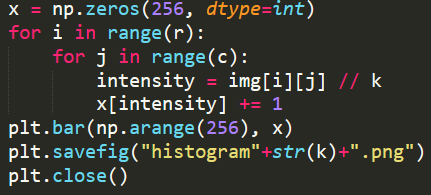
B06502149 資工三 張琦琛

1. Original image and its histogram

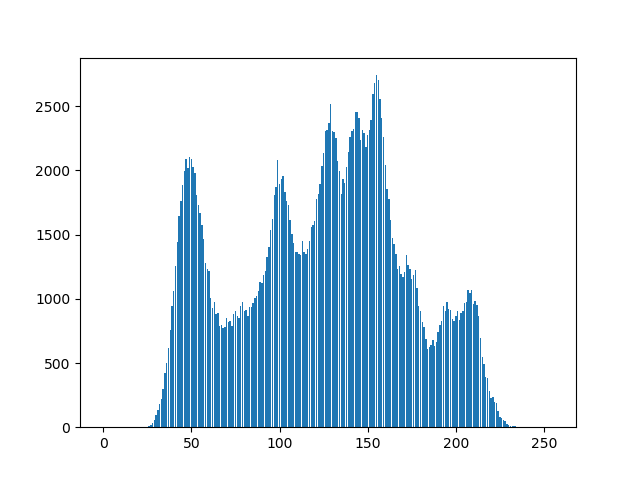
Count every pixel’s intensity and save it in the intensity list x[256], and use matplotlib to generate histogram.

Code fragment:

The input image is the original lena.bmp, and K = 1



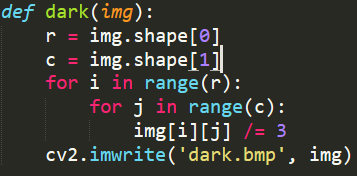
Result:



1. Image with intensity divided by 3 and its histogram

For the first part, we let the intensity of each pixel divided by 3; that is, img[i][j] = img[i][j] / 3.

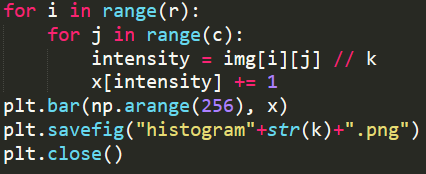
Code fragment:



For the second part, we count every pixel’s intensity of the image after division and save it in the intensity list x[256], and use matplotlib to generate histogram.

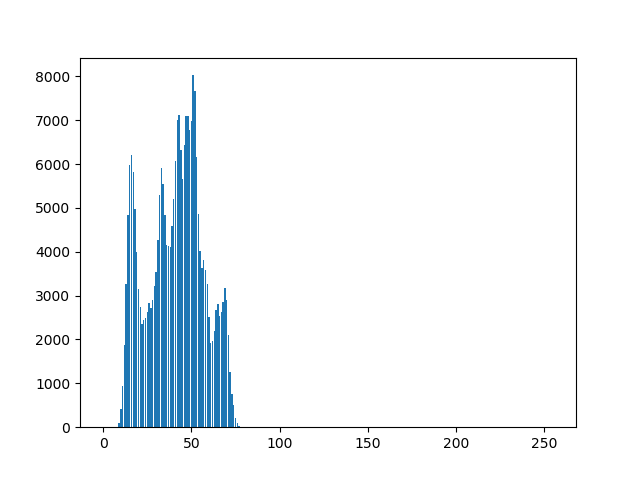
Code fragment:

The input image is the original lena.bmp, and K = 3



Result:



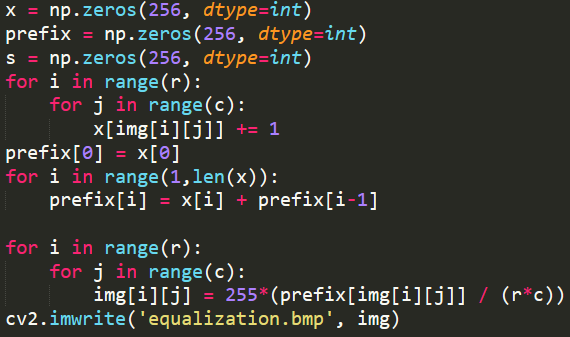


1. Image after applying histogram equalization to (b) and its histogram

We first calculate ,

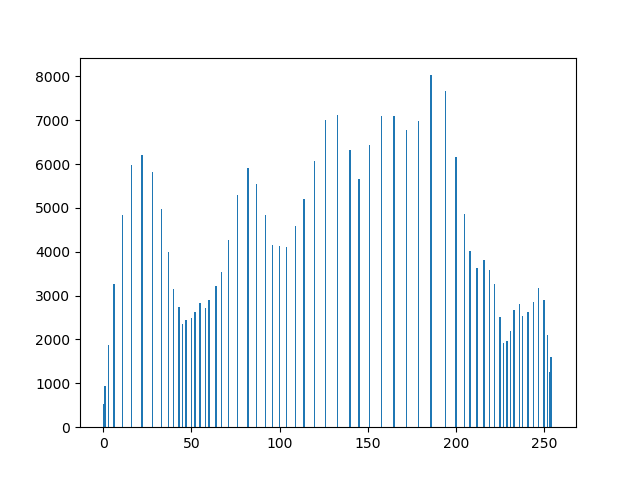
is the total number of pixels and denotes the total number of pixels with intensity . Then, for each pixel in the image, we replace the original value with ; that is, if , then .

Code fragment:



**Result:**

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