

## VIA 515E

### HW 1

You may use your favorite programming environment/language/tool for the following exercises.

1. Download 256x256 colored "Lena" image.
2. Obtain the gray scale image,  $I$ , by taking the average values of R, G, B channels.
3. Obtain the histogram,  $h$ , of the gray scale image,  $I$ .
4. Inspect  $h$  and propose a threshold value,  $T$ , to segment the image into two parts and hence obtain a binary image,  $B$ :
  - i. Part I: Pixels with intensity values above  $T$ .
  - ii. Part II: Pixels with intensity values below  $T$ .
5. Present the output image  $B$ .