CS 4 Computer Science Bootcamp
Summer B 2019

Homework Assignment 04:

1. Give a formula for the number of **bits** an RGB image of size n x m requires.

2. If an image is of size 500 x 800, how many **bytes** does the RGB image occupy?

3. When we double an image of size n x m, how many **bytes** the new image will require?

4. When we halve an image of size n x m, how many **bytes** the new image will require?

5. If we limit each pixel colors from 256 to 16, and therefore use only 4 bits for each color, how many **bytes** an image of size n x m would require?

6. Explain what the following function does to the n x n size image represented using "`im`".

    ```
    p = cImage.Pixel(0,255,0)
    for i in range(n):
        im.setPixel(i,i,p)
    ```

7. Explain what the following function does to the n x n size image represented using "`im`".

    ```
    p = cImage.Pixel(255,255,255)
    for i in range(n):
        im.setPixel(i,0,p)
        im.setPixel(i,n,p)
        im.setPixel(0,i,p)
        im.setPixel(n,i,p)
    ```