lab-6 probmlemset

## opencv setup

You should follow the links given below to setup opencv:

1. <https://medium.com/@jaskaranvirdi/setting-up-opencv-and-c-development-environment-in-xcode-b6027728003>
2. <https://linuxize.com/post/how-to-install-opencv-on-ubuntu-18-04/>
3. <https://www.learnopencv.com/install-opencv-4-on-windows/>

## boilerplate code

I have provided the boiler plate code in utils directory, include ../utils/image.h and ../utils/wrapper.h to use the image io functions. A detailed description is given in the example code.

## question-1

Read an rgb image and convert it into gray scale.

Give the top dominant intensities in the gray scale image.

## question-2

Blur the image using a Gaussian filter

Find the difference image

Plot the image.

## question-3

Downsample image from n\*n to n/2\*n/2

## question-4

Background detection

## question-5

Blend two images using the following equation.

A\*image1+(1-A)\*image2

## question-6

Convert image to YCbCr and then divide image by a given factor (integer division) and then multiply the image by same factor. Then convert the YCbCr image to RGB. Comment the factors till which there is no change in image perceptually.

## question-7

Generate image bit planes.

# Data

Will be updated at this link.