# Lab Questions

## Lab1

1. Demo of basic python environment, IDE and usages (No need to submit, self-practice)
2. Read and save a gray level figure using plt, …
3. Create a 32 by 32 black square in the ‘center’ of image you read
4. Create a 128 by 128 black-and-white checkboard with square size 16 by 16
5. Create a 128 by 128 black-and-white strips image with strip width 16
6. Create a 128 by 128 image where the gray level changes linearly along y direction

## Lab2

1. Implement gamma transformation
2. Implement bit-planes
3. Implement histogram equalization
4. Compare the following spatial filters’ effects on the same image:

Gaussian

Sobel -- x

Sobel -- y

Laplace

1. Implement Example 3.57 in P 129

# Lab3

1. 利用numpy.fft 模组编写2维图像的Fourier变换与反变换，在图像上检查效果。
2. 比较ILPF,BLPF和GLPF对同一图像滤波的结果。
3. 比较IHPF,BHPF和GHPF对同一图像滤波的结果。
4. 还原p200， 例4.21的操作。
5. 利用滤波方法去除图像的横纹。