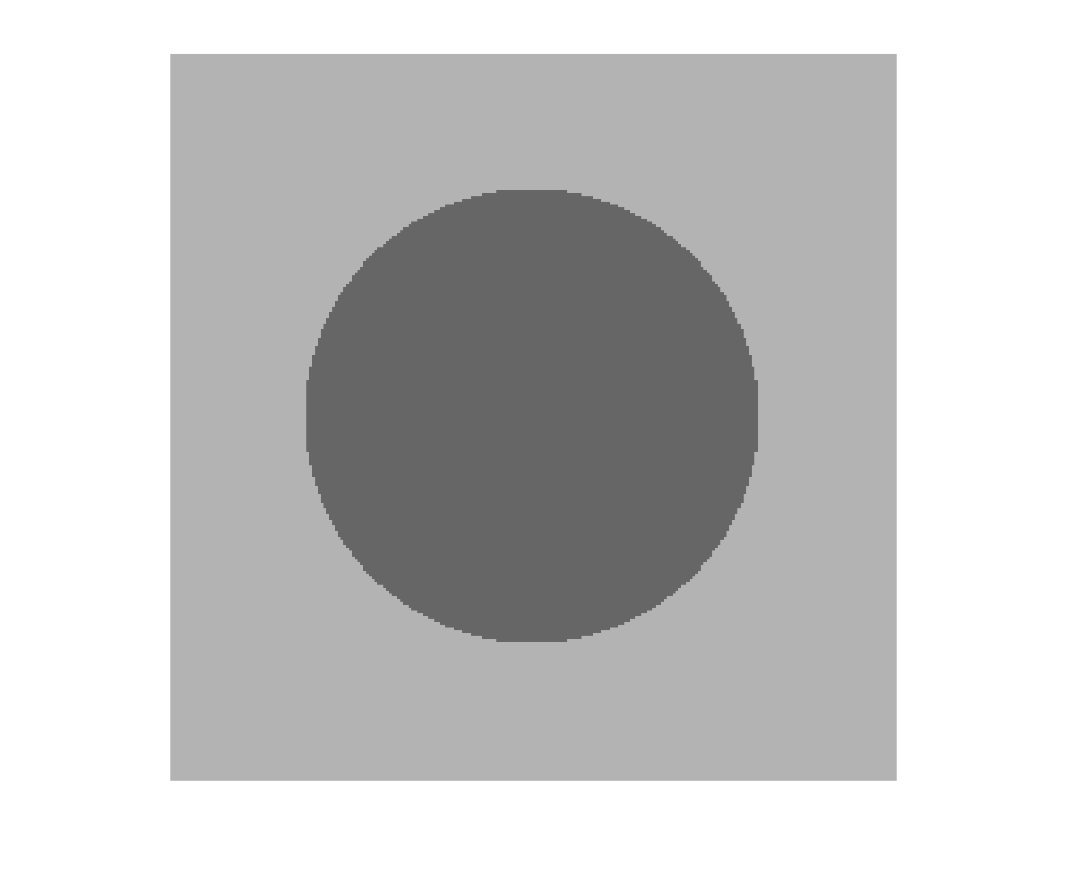
**Assignment 4**

**Requirements:**

1. Generate a 256x256 grayscale image with only two different intensity levels (0.4 and 0.7 within the range [0-1]). The intensity of the center part (the distance between the pixel and the center point < 80) of the image is set to 0.4 and the intensity of the left part of the image is set to be 0.7. **Show the grayscale image in your report.**

e.g.



1. Generate three types of noises
2. Gaussian noise with mean 0 and variance 0.01.
3. Uniform noise with range [-0.05 to 0.05]
4. Salt and pepper noise with d=0.02 (2% of pixels get affected by noise)
5. Add the three types of noises to the grayscale image. **Show the images with noise and plot the histogram of the images with noise** (include the noisy images and the histogram plots in the report).
6. Select proper type of filter and use them to restore the images with noise. **Show your restoration results in the report.**

**Submission:**

1. Your report (include the figures.)
2. A compressed (e.g. “zip” file is preferred) file including all the code files and source images, output images.