Assignment 2:

<u>Objective:</u>

To get good quality image from noisy images f_i where $1 \le i \le n$.

<u>Problem statement:</u>

Let f be an image (Lena). $0 \le x \le 255$ and $0 \le y \le 255$.

Generate

$$f_i(x, y) = f(x, y) + \eta_i(x, y)$$ where $\eta_i(x, y)$ is the Gaussian noise with mean $= 0$ and variance$= 1$

Find $\frac{1}{n}(\sum_{i=1}^{n} f_i(x, y)$, say it as g.

1. Display f, g and f_1, f_2, …… f_n.
2. Do it for n=5, n=10, n=20 and n=30

<u>Explanation:</u>

   Suppose if n=5, you have to generate 5 noisy images f_1, f_2, f_3, f_4 and f_5 from f by adding Gaussian noise. For Gaussian noise, you can use built in function. Then find the average of the noisy images (g) and compare it with original image f.

Note:

Implement the code in python and submit the code and output as a single pdf file with file name as your roll number. The dead line for submission of second assignment is Friday (27/01/2023) 5.00 pm