**Sampling and quantization:**

1- Load and display image1 and answer the below question:

a) Computes the difference between values in neighboring pixels and Find the number of bytes and size of the image, and display each case.

b) Representation the image with unit-8 data type, default type (float 64) and by adding bias (128) and plot it.

c) How many bits can manage so that we still have a good image? Plot all of the cases.

**Geometrical spatial operations:**

1. Perform the scaling (1.5\*1.5), translation and rotation (90°) operations for Figure 2 and plot the final image in each case.

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**Histogram equalization:**

1. First, display Gaussian Probability Mass Function (PMF) and Cumulative Mass Function (CMF) with mu=0 and sigma=1 second, apply histogram equalization and histogram matching transform in image3 third, plot each histogram and compare them.

Write a report with description of steps in each number and each case and also put the screenshot of the original images and results in the report.

Attach the code.