Simulation and Modelling Lab

Final Laboratory Test, Spring Semester, 2019-20

Start Date: 15th June, 2020, 9AM
Submission Deadline: 16th June, 2020, 9AM

Upload a pdf combining your solutions to Google classroom (to newly created thread SM-Lab-Final-Test)

Your uploaded pdf should contain:

(1) SCREENSHOTS OF OUTPUTS.
(2) CODE-SCREENSHOTS (ALL YOUR CODE-SCREENSHOTS AT THE END OF THE PDF)

(DO NOT upload any contents in addition to above single pdf.)

1. Download the given two images from the Google Classroom thread SM-Lab-Final-Test. Read the two images into two matrices, and print their sizes; no need to display their contents.
   [This is the famous *Lena* image, used widely in researches all over the world, since 1973 till today, due to its high natural image statistical property contents.]
2. Plot a bar diagram depicting the pixel level frequency histogram of the two images.
   [A histogram is nothing but a bar diagram depicting how many times each pixel level (ranging from 0-255 in this case) occurs in the entire image.]
3. Also, find the mean, median and mode of the above two histograms and print those out.
4. Now compute the cumulative frequency distribution of the above two histograms and plot those too.
5. Can you compare the histograms in the two cases, and make a brief note on how the two cases are different and why?