

## Lab Assignment-1(b)

### Octave/MATLAB / Python / Open CV / R

#### %PROBLEM-1%

Generate a matrix A of dimension 512×512 with random integer values between 0 and 255 (using rand function in double data type) and perform following operations over the generated image:

- a) Convert the matrix A into an image B.
- b) Resize the image B in following dimensions: 100×120, 600×512, 1024×1024.
- c) Crop the image B of dimension 300×300 and name it B\_1, the center of B and B\_1 should be same. (It must be done without using imcrop function)
- d) Display the following sentence in matlab command window "The intensity value at coordinate 100×100 is \_\_\_\_\_".

#### %PROBLEM-2%

Consider the Lena image of matlab and perform the following operations,

- a) Perform the operations of Problem 1(b-c).
- b) Rotate the original image of Lena by angles 30, 45, 60, 90, 140 and 320 degrees. (Do not use imrotate function)
- c) Crop the Lena image such that it contains only eyes, nose and mouth. (Do not use imcrop function)
- d) Consider an image of yours and merge it to the Lena image with various weights. (The merging of two images using weights has been covered in the demo of OpenCV, but here you have to do with Matlab)
- e) Convert the Lena image in gray scale first, then convert the gray scale version into logical with all the values greater than 50 to 1, otherwise 0.