**Assignment 1**

**Due: Tues., Sep. 20**

Problem 1:

* There are 4 pictures in the folder ‘sampleImages’. Please read these four pictures in MATLAB and save them to a new created folder. All the pictures should be transformed into gray type and saved in ‘.jpg’, ‘.bmp’, ‘png’, and ‘tiff’ format, respectively.

Problem 2:

* Read the ‘data.txt’ file into a matrix (size 9 x 6) and display it on the screen using MATLAB commands. The output image should be shown in the shape of **‘S’.**

Problem 3:

* Create an array of 512 x 512 zeros.
* Add circles of radius 16 to the array with centers at locations (200, 200), (232,200), (200,300), (248, 300), (200,400), and (264,400), and display.
* Filtering the array with a box 32 x 32 pixels of value 1, using the MATLAB command **filter2**. Then display this image.

**NOTE:** MATLAT is strongly recommend, other programming languages, e.g., C/C++, Python, etc., are also accepted. When each of the exercises is completed, turn it in using the submit script, and also turn in the final output image.