**Lab Assignment**

**Objective: To analyze effect of high pass and low pass filters on an input image.**

a) Implement a **MeanFilter** function to perform a filtering operation on the input image.

Call this function to process the noisy image by using a weighted 3-by-3 averaging filter and a standard 5-by-5 averaging filter, respectively. Display original image and both filtered image.(Don’t use inbuilt function for filtering.). Plot Histogram of filtered image and compare it with original image.

b) Implement a **MedianFilter** function to perform a filtering operation on the input image.

Call this function to process the same noisy image Circuit by using a standard 3-by-3 median filter and a standard 5-by-5 median filter, respectively. Display original image and both filtered images. (Don’t use inbuilt function for filtering.). Plot Histogram of filtered image and compare it with original image.

c) Use appropriate Matlab function calls to repeat the steps a) and b). Use if/else statements to compare each of your processing results with the corresponding result obtained by calling a Matlab function and display a message to indicate whether your processing result is the same as the one got from Matlab. If the comparison shows the difference between your implementation results and the Matlab’s results, display the difference image(s) with the appropriate titles.