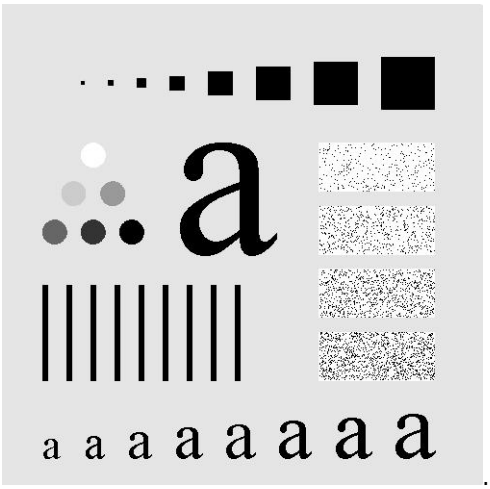
PROJECT 03-07

Spatial Filtering

Write program to perform spatial filtering of an image "Fig_test_pattern_blurring_orig.tif". Change the size of the spatial mask at 3 x 3, 5 x 5, 9 x 9, 15 x 15, 35 x 35 and compare your results with square average the textbook

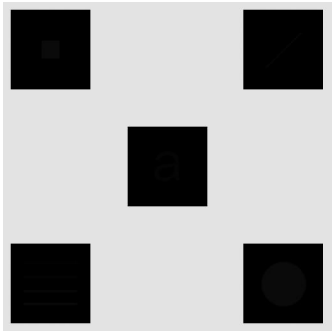


PROJECT 03-08

Local histogram processing

(a) Implement the local histogram equalization on image "embedded_square_noisy" using neighborhood of size 3×3. Note that different from the spatial filtering, you can just replace the original 3×3 subimage by the histogram equalized values and move 3 pixels for each step.

(b) Compare the result with the global histogram equalization.



PROJECT 03-09

Averaging filter and Median Filter

The following image is corrupted by salt-and-papper noise.

(a) Implement 3×3 averaging filter on image "ckt_board_saltpep".

(b) Implement 3×3 median filter on image "ckt_board_saltpep".

(c) Compare and explain the differences between the averaging and media filters

PROJECT 03-010

Enhancement Using the Laplacian

(a) Write program to perform Laplacian enhancement technique on image "Fig_blurry_moon.tif" with both the two masks

0	-1	0
-1	5	-1
0	-1	0

-1	-1	-1
-1	9	-1
-1	-1	-1

(b) Compare the results