Universiti Malaysia PAHANG	COURSE: IMAGE PROCESSING		MARKS:	
	TOPIC: Smoothing & Sharpening in Spatial Domain	CODE: BCM2063	/10	
	Lab Exercise	NO: 3	DURATION: 90 minutes	

QUESTION 1 [5 Marks]

Instruction:

(a) Open "Lena.tiff", read the file into f.

(b) Write a new function (without built-in-function) for smoothed image using 3x3 weight filter as follows:

$^1/_{16}$	$^2/_{16}$	$^1/_{16}$
$^2/_{16}$	$^4/_{16}$	$^2/_{16}$
$^1/_{16}$	$^2/_{16}$	$^1/_{16}$

(c) Display the original image and smoothed image from a new function (b).

(d) Analyse the results of the image output.

QUESTION 2 [5 Marks]

Instruction:

(a) Open "Lena.tiff", read the file into f.

(b) Write a new function to make sharpened image (without built-in-function)

(c) The Laplacian filter is given as:

0	1	0
1	-4	1
0	1	0

(d) Inspect the visual quality of the original image and the output image.

(e) Analyse the result obtained from sharpened image.