

Photoshop
Lesson: Image Processing Using Custom Filters
Lab Report

NAME _____

Instructions. Answer the questions for each of the sections listed below.

Part Two: Testing Masks

Perform each of the following tests and respond to the questions for each item. For each test, zoom in on the image in order to be able to see what changes the filter produces. (300% or 400% should be sufficient.) You may also turn the Preview check box off and on in order to examine what happens more carefully. Finally, be sure to undo (choose **Edit/Undo**) the results in order to restore the image to its original state. (**Note:** if you make a mistake here, the **File/Revert** command can restore the image back to its previous saved state.)

3. Apply the following mask to the house test image.

1	1	1
1	1	1
1	1	1

scale = 9; offset = 0.

- (a) Describe how the filter changes the image (visually).

- (b) How does it make these changes? (Consider the mask values.)

- (c) When would it be beneficial to use a filter like this one? Explain.

4. Apply the following mask to the house test image.

	-1	
-1	+20	-1
	-1	

scale = 1; offset = 0.

- (a) Describe how the filter changes the image (visually).

(b) How does it make these changes? (Consider the mask values.)

(c) When would it be beneficial to use a filter like this one? Explain.

5. Apply the following mask to the house test image.

-1	-1	
-1	1	1
	1	1

scale = 1; offset = 0.

(a) Describe how the filter changes the image (visually).

(b) How does it make these changes? (Consider the mask values.)

(c) When would it be beneficial to use a filter like this one? Explain.

Part Three: Detecting Edges

6. How is the filter able to distinguish edge elements in the image while disregarding (and discarding all pixel neighborhoods that are similar?

7. What threshold value did you employ for enhancing the edge elements?