Lab 3

NOTE: kernels were saved in a file, “lab3\_complete.mat”

NOTE: calculationsfor questions 1 and 3 were completed in excel.

Question1:

|  |  |  |  |
| --- | --- | --- | --- |
| result |  |  |  |
| 0 | 0 | 0 | 0 |
| 0 | 3.889 | 5.222 | 0 |
| 0 | 4.556 | 5.000 | 0 |
| 0 | 0 | 0 | 0 |

Sample formula = (B2\*G2)+(C2\*H2)+(D2\*I2)+(B3\*G3)+(C3\*H3)+(D3\*I3)+(B4\*G4)+(C4\*H4)+(D4\*I4)

Question2: It will probably add sharpness to the image, it seems to work on finding rectangles

Question3:

|  |  |  |  |
| --- | --- | --- | --- |
| result |  |  |  |
| 0 | 0 | 0 | 0 |
| 0 | -19 | -29 | 0 |
| 0 | 41 | 49 | 0 |
| 0 | 0 | 0 | 0 |

Sample formula: = (see above. Question 3 was put into separate worksheet)

Question 4: It will probably add focus to the image, as in some parts will be blurred while some parts will be focused.

Question5:

%question 5

clear

load("lab3\_complete.mat");

imshow(imageOfInterest);%nice meme, it's you

disp("press any key to continue...");

pause();



Question 6:

%question 6

q6Ans = conv2(imageOfInterest,kernalFrom1,'valid');

q6Ans2 = uint8(q6Ans);

imshow(q6Ans2);%blurs the image

disp("press any key to continue...");

pause();



Question 7:

%question 7

q7Ans = conv2(imageOfInterest,kernalFrom2,'valid');

q7Ans2 = uint8(q7Ans);

imshow(q7Ans2);%edge detection

disp("press any key to continue...");

pause();



Question 8:

%question 8

q8Ans = conv2(imageOfInterest,kernalq8,'valid');

q8Ans2 = uint8(q8Ans);

imshow(q8Ans2);%more blur

disp("press any key to continue...");

pause();



Question 9:

%question 9

q9Ans = conv2(imageOfInterest,kernalq9,'valid');

q9Ans2 = uint8(q9Ans);

imshow(q9Ans2);%sharpen

disp("done");

