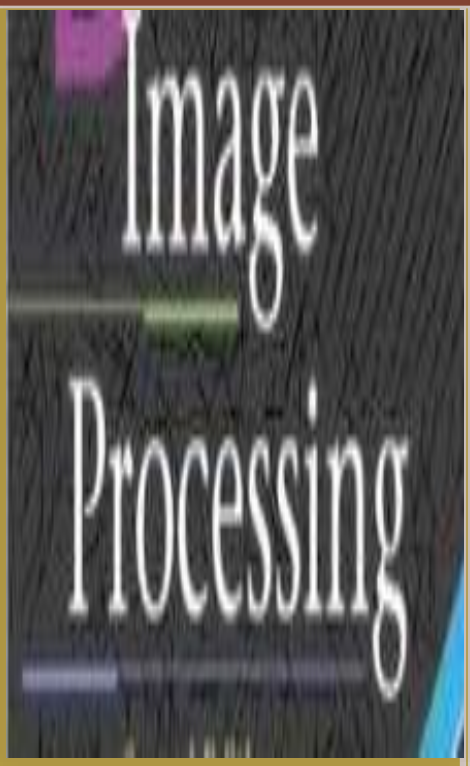
Faculty of
Electronic Engineering
كلية الهندسة الإلكترونية

Menoufia University

Programming Assignments



Date: .....

To Instructor: Dr. Mohamed Berbar

Submitted by:

1-

The main Interface

1. When you run the project the following window will appear to you.

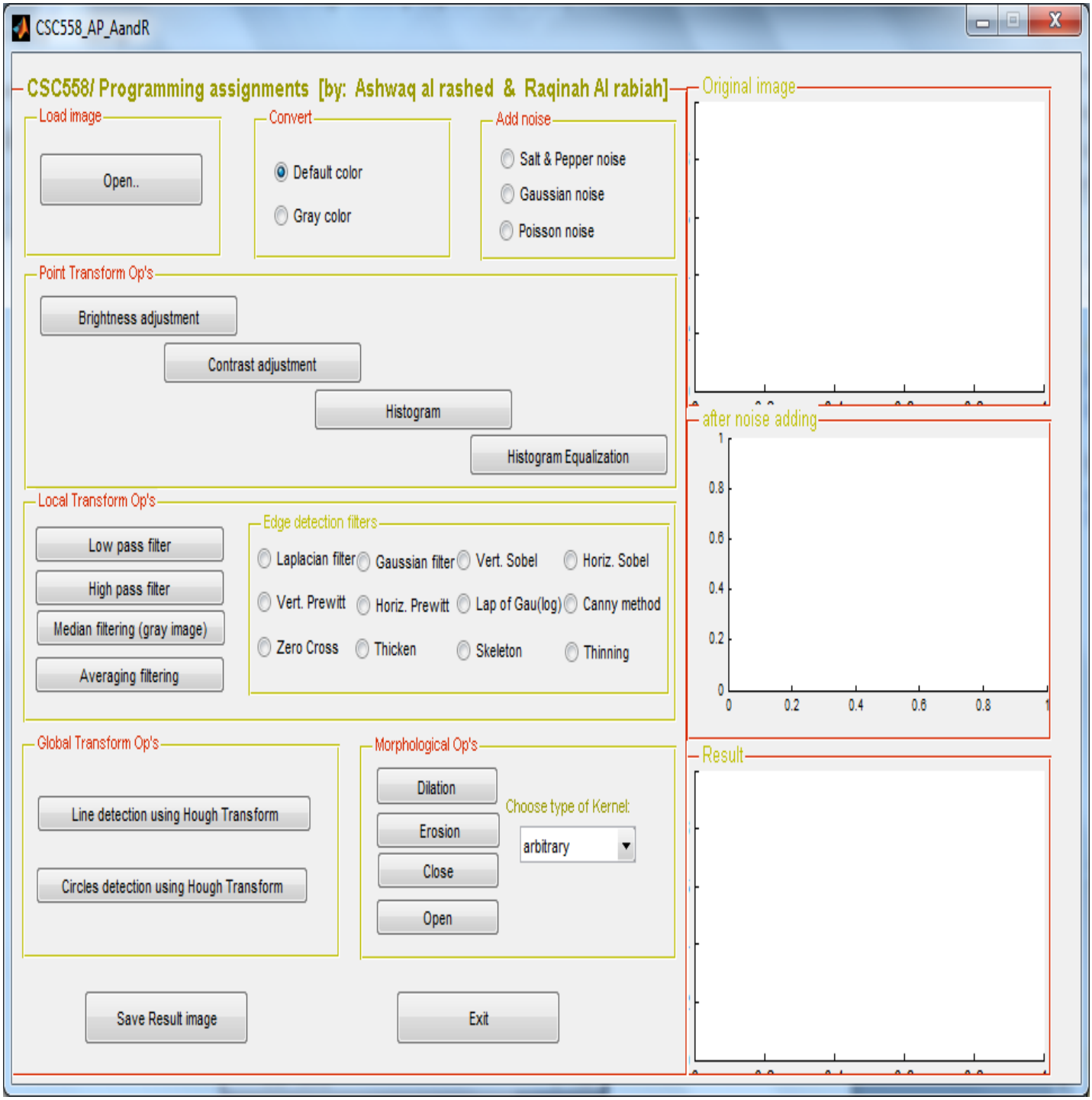


Fig. 1 Main Window

2. When you click open button, the dialog box will appear. Then choose your photo and click open.

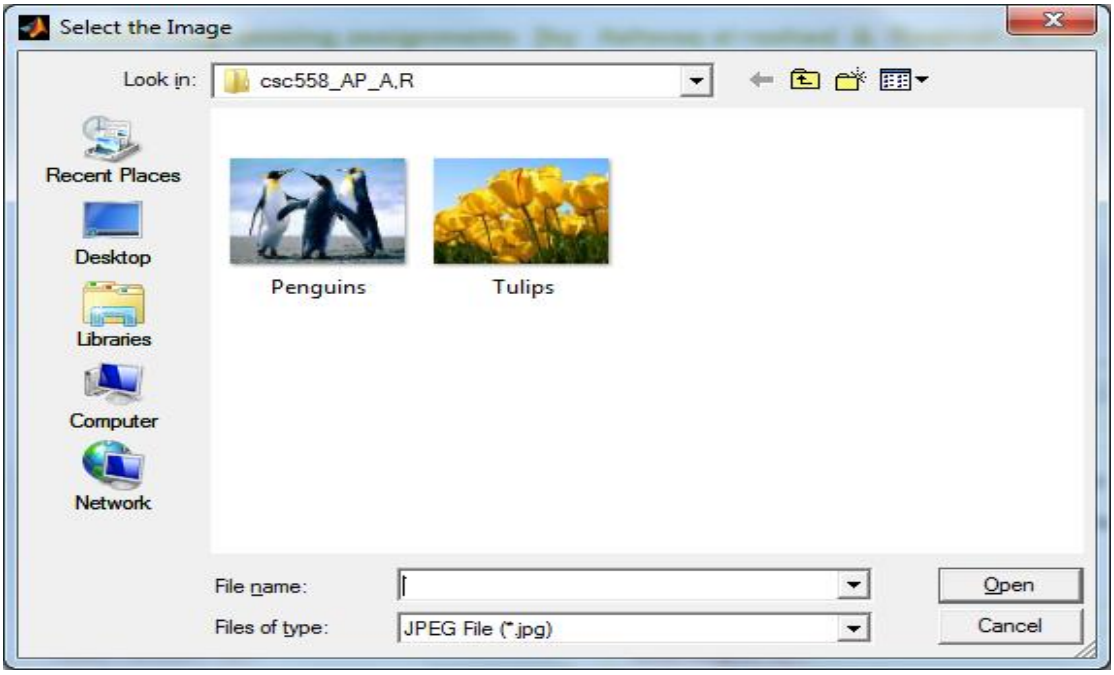


Fig. 2 Open Window

3. -The image will display in RGB as a default color and you can convert it by click in Gray color radio options for do the operations.

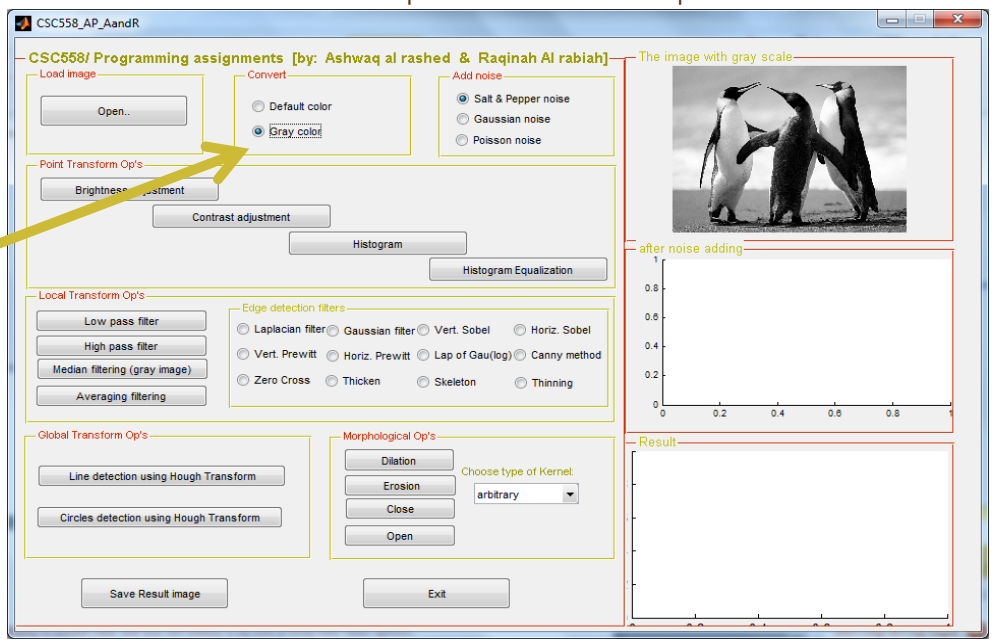


Fig 3:

4. **You can add noise (salt & pepper or Gaussian or Poisson) to the Image, so you can apply the filters on it.**

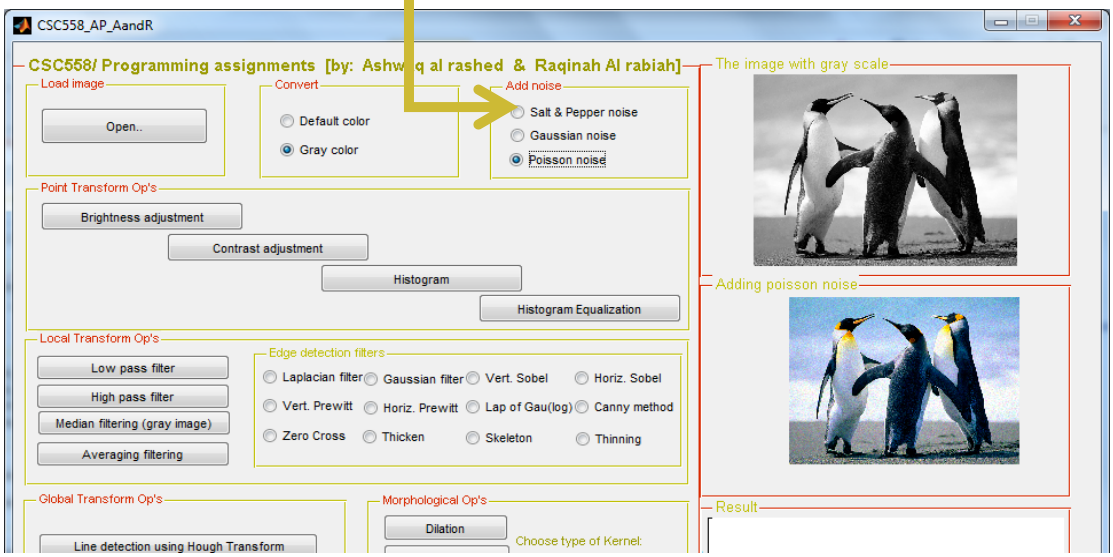


Fig 4:

5. **-You can do the point transformation (brightness, contrast, histogram and histogram equalization).**

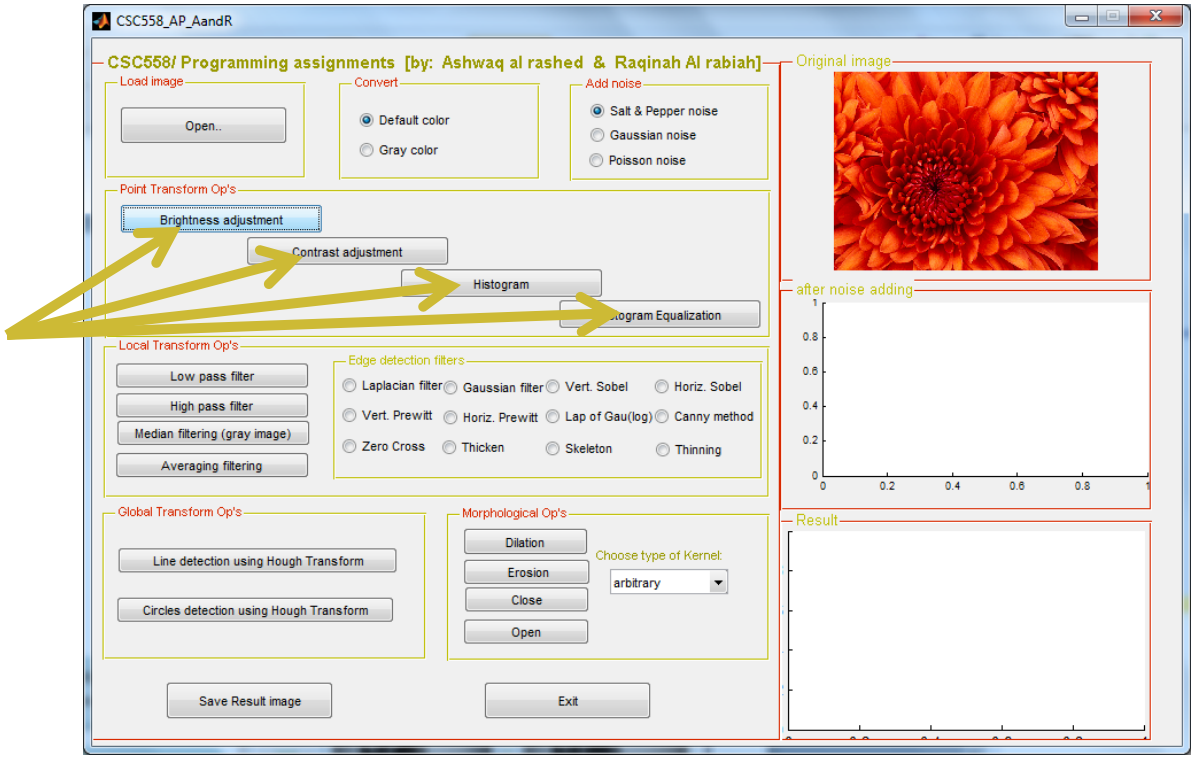


Fig: 5

6. -After apply brightness adjustment and enter 0 value that darker.

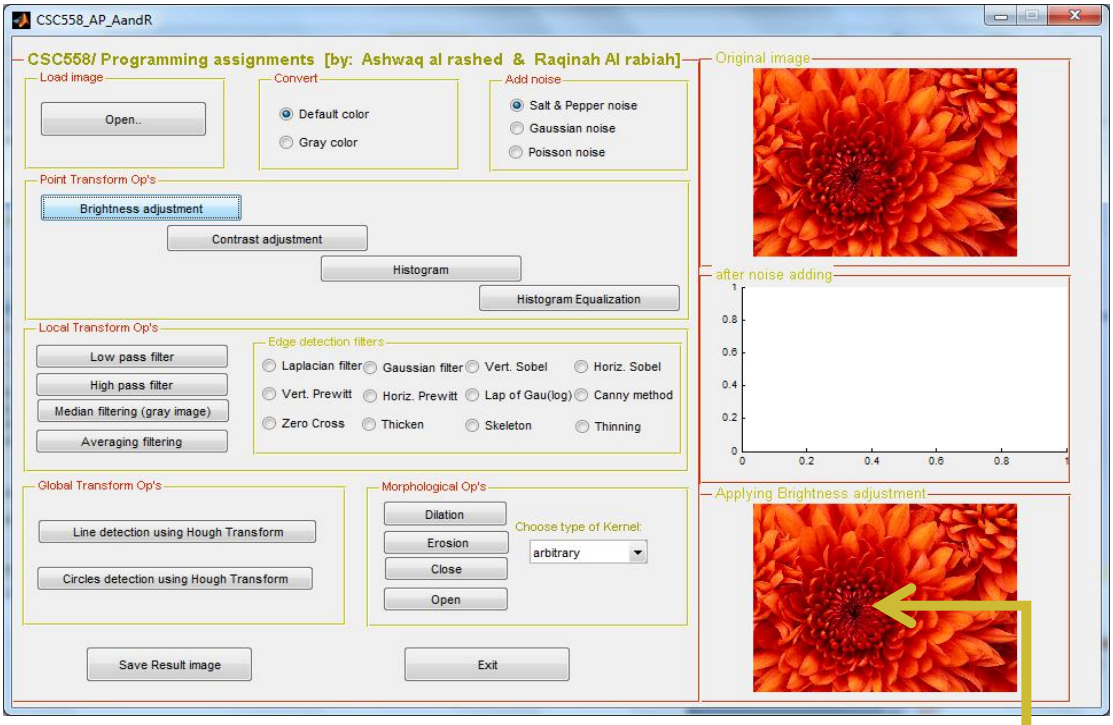


Fig: 6

7. -After to click histogram button.

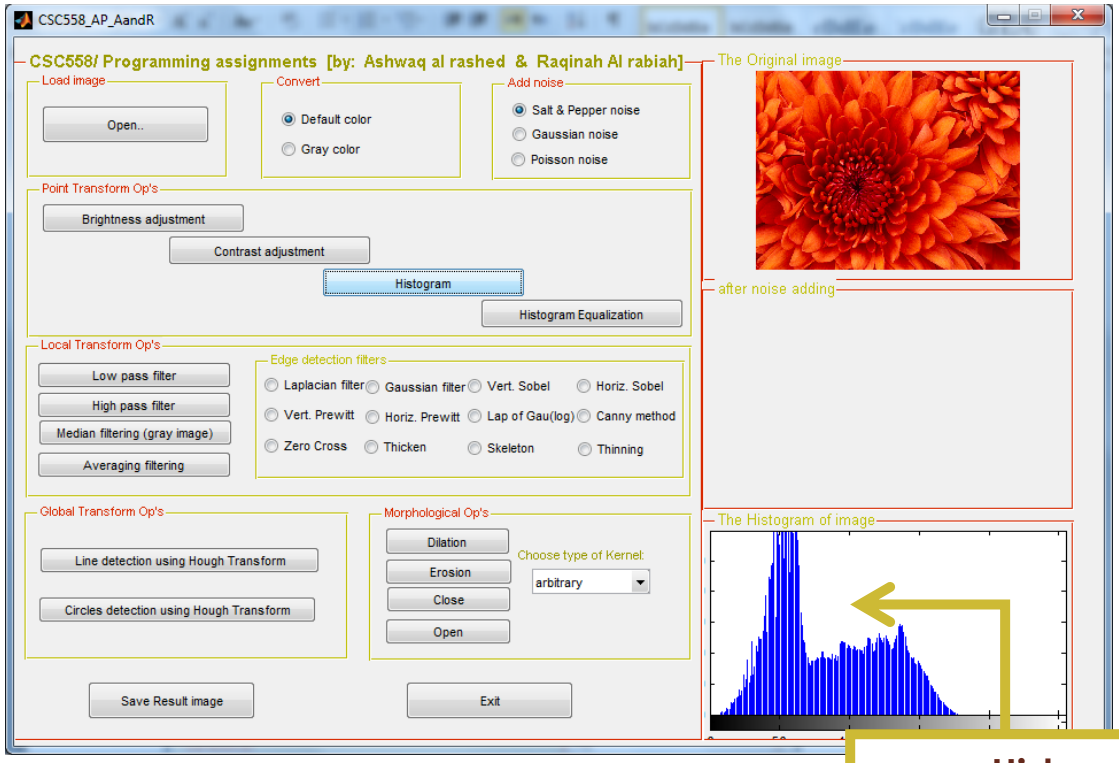


Fig: 7

8. You do the local transformation operations (low pass, high pass, median and averaging filter) by press on these commands:

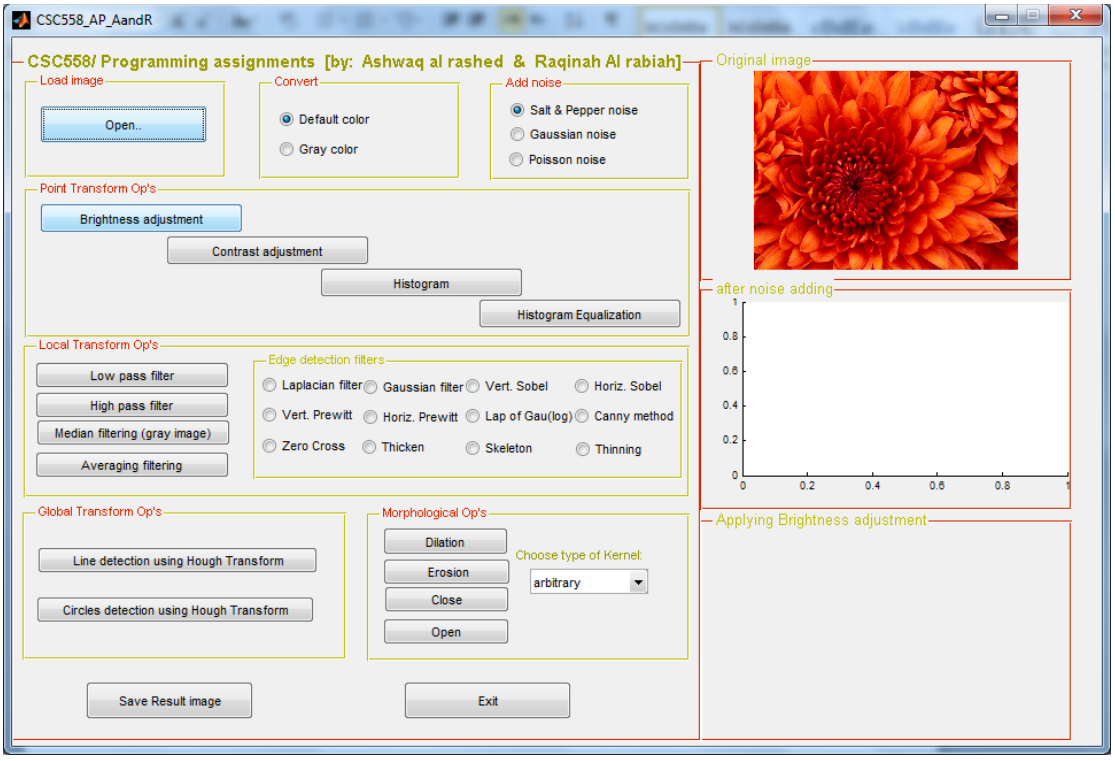


Fig: 8

9. -After apply averaging filter.

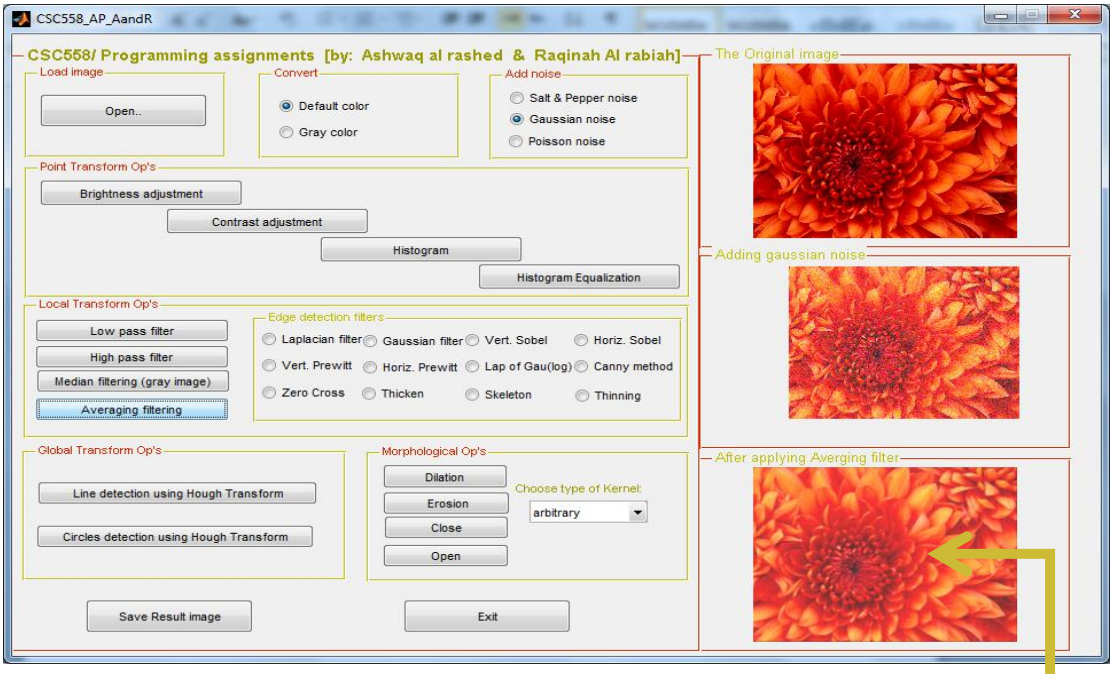


Fig: 9

averaging filter

10. -You can do edge detection filters (laplacain, Gaussian, vertical sobel, horizontal sobel, vertical prewitt, horizantle prewitt, log, canny method, zero cross, thicken, skeleton and thinning)

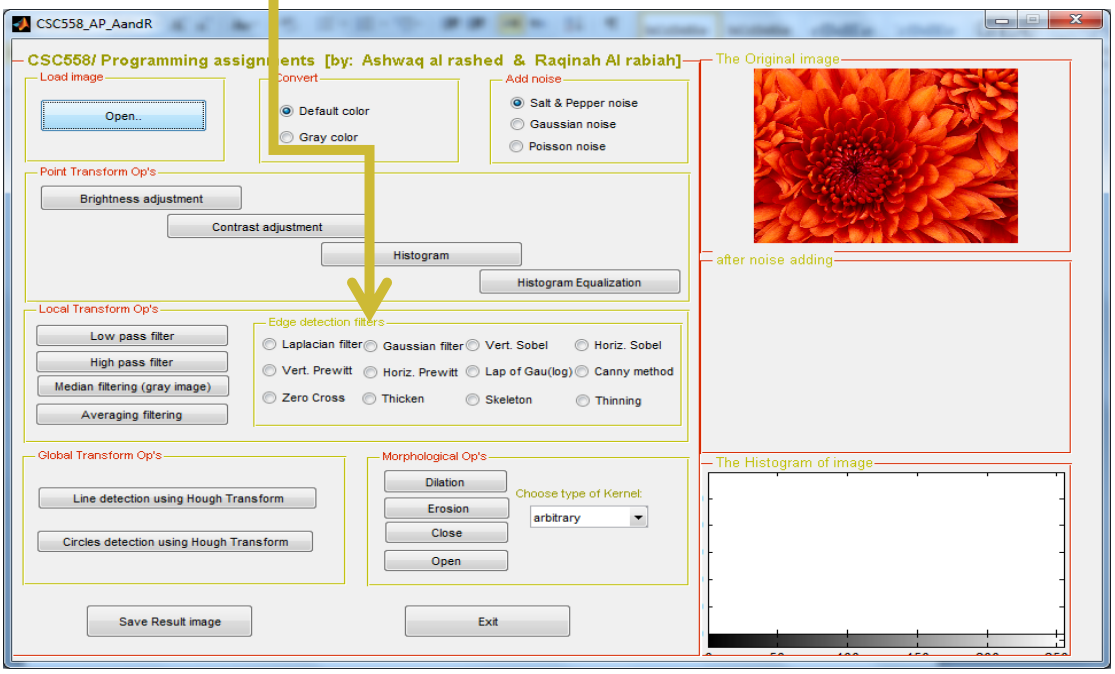


Fig: 10

11. After apply Laplacian filter.

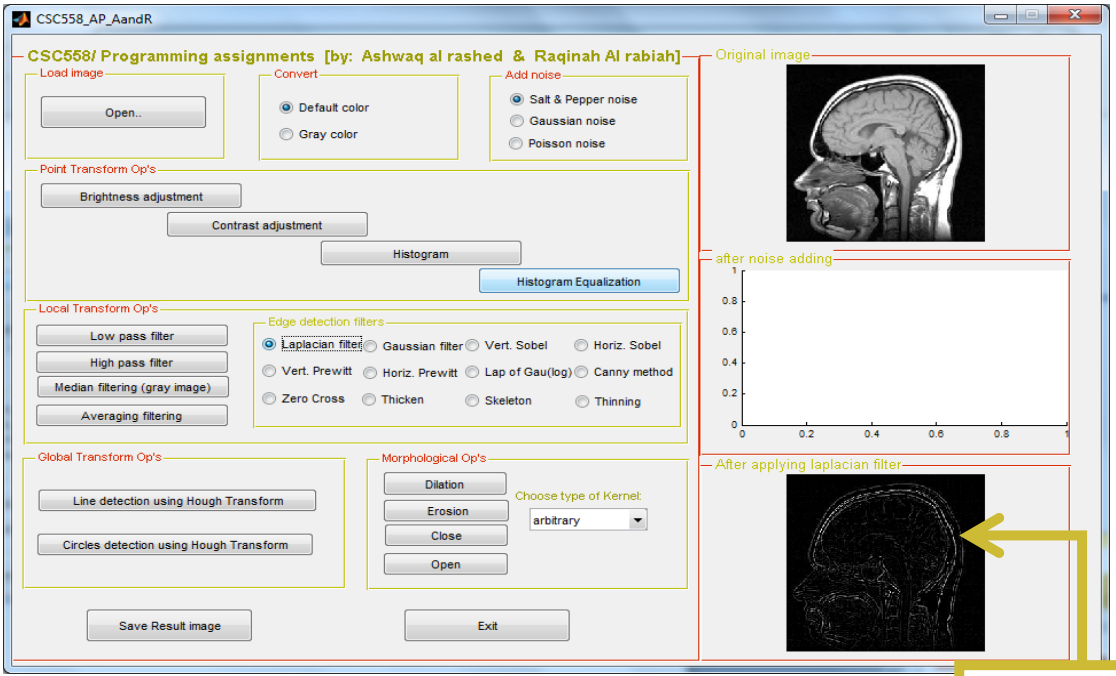


Fig: 11

12. You can do global transformation (line and circle) detection using hough transform.

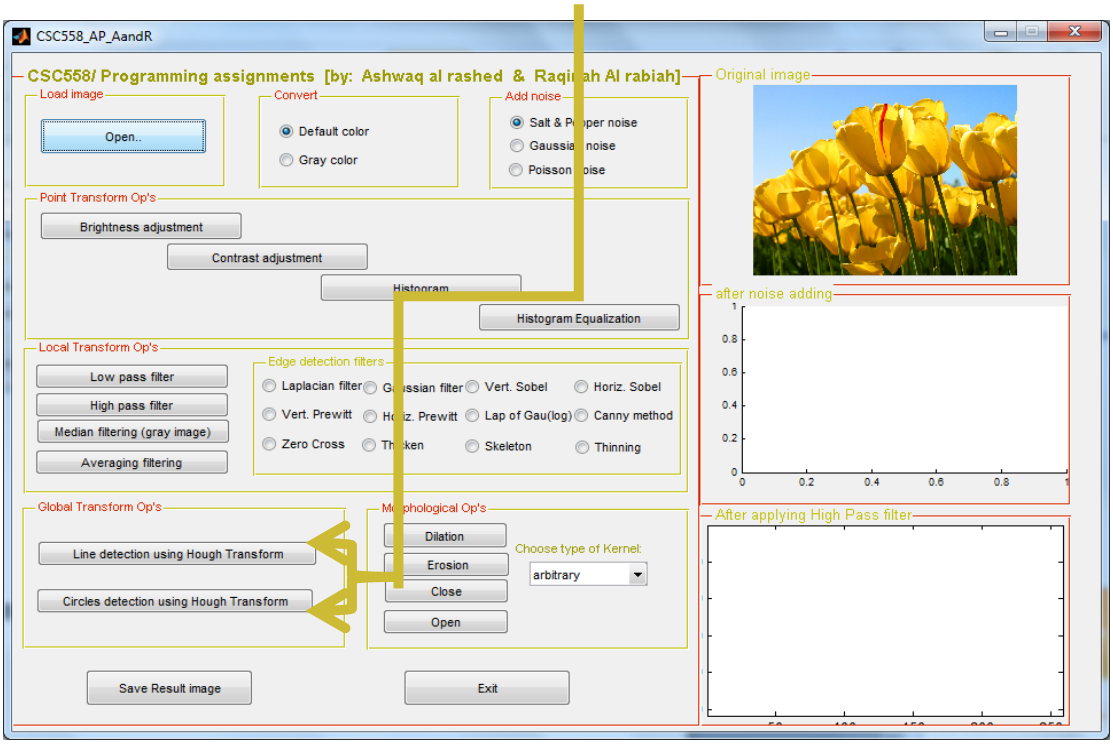


Fig: 12

13. -After apply line detection using hough transform.

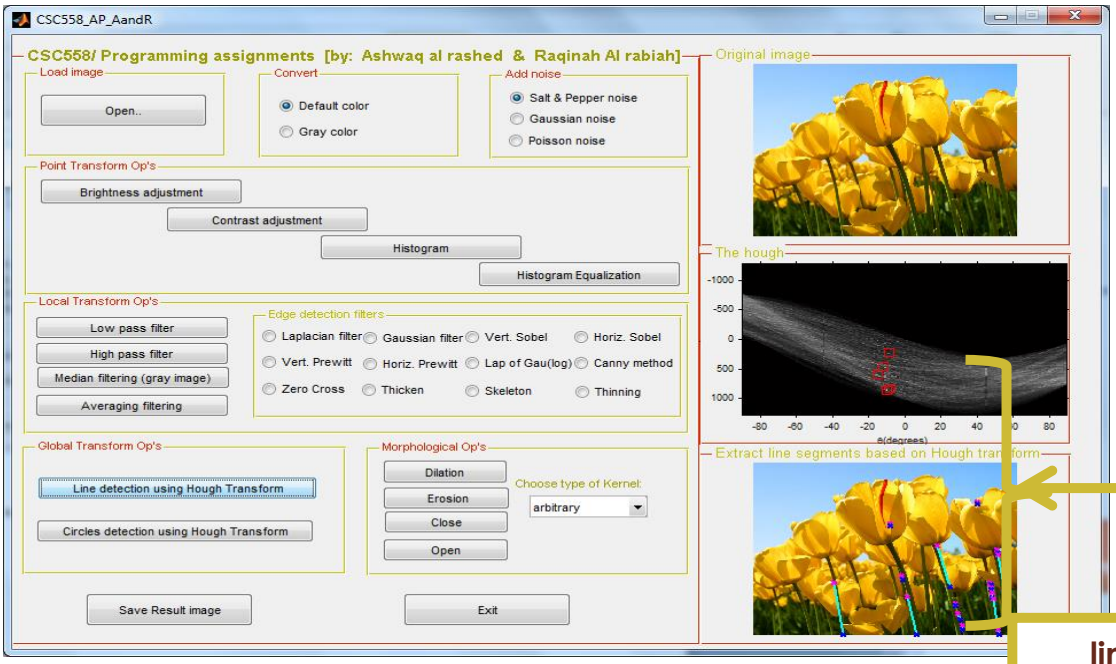


Fig: 13

14.-After apply circle detection using hough transform and enter 2 for radius value.

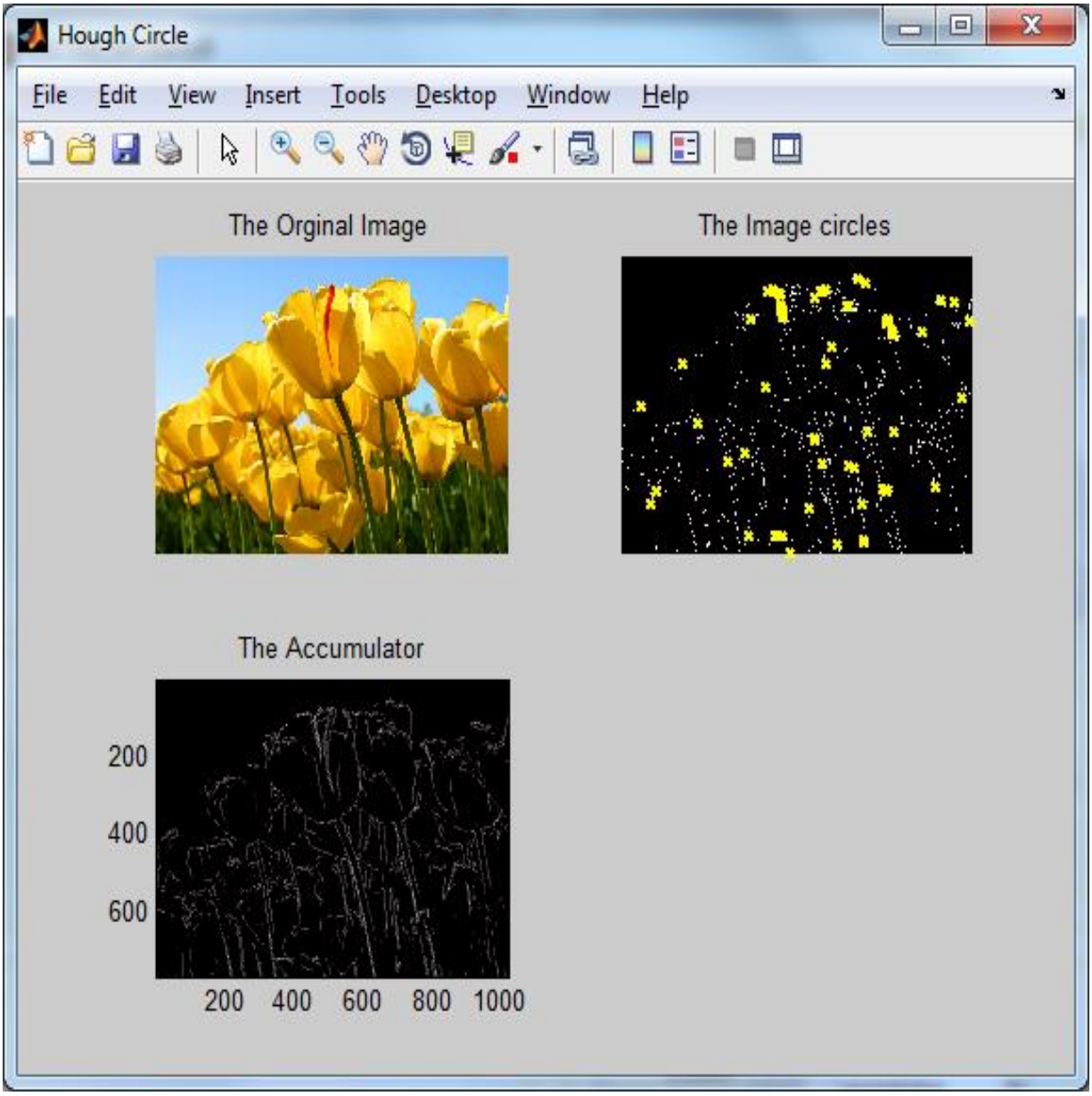


Fig:14

15.-You can do morphological operations (dilation, erosion, open and close) and choose the type of the filter (Arbitrary, diamond, disk, line, octagon, pair, periodic, line, rectangle, and square.)

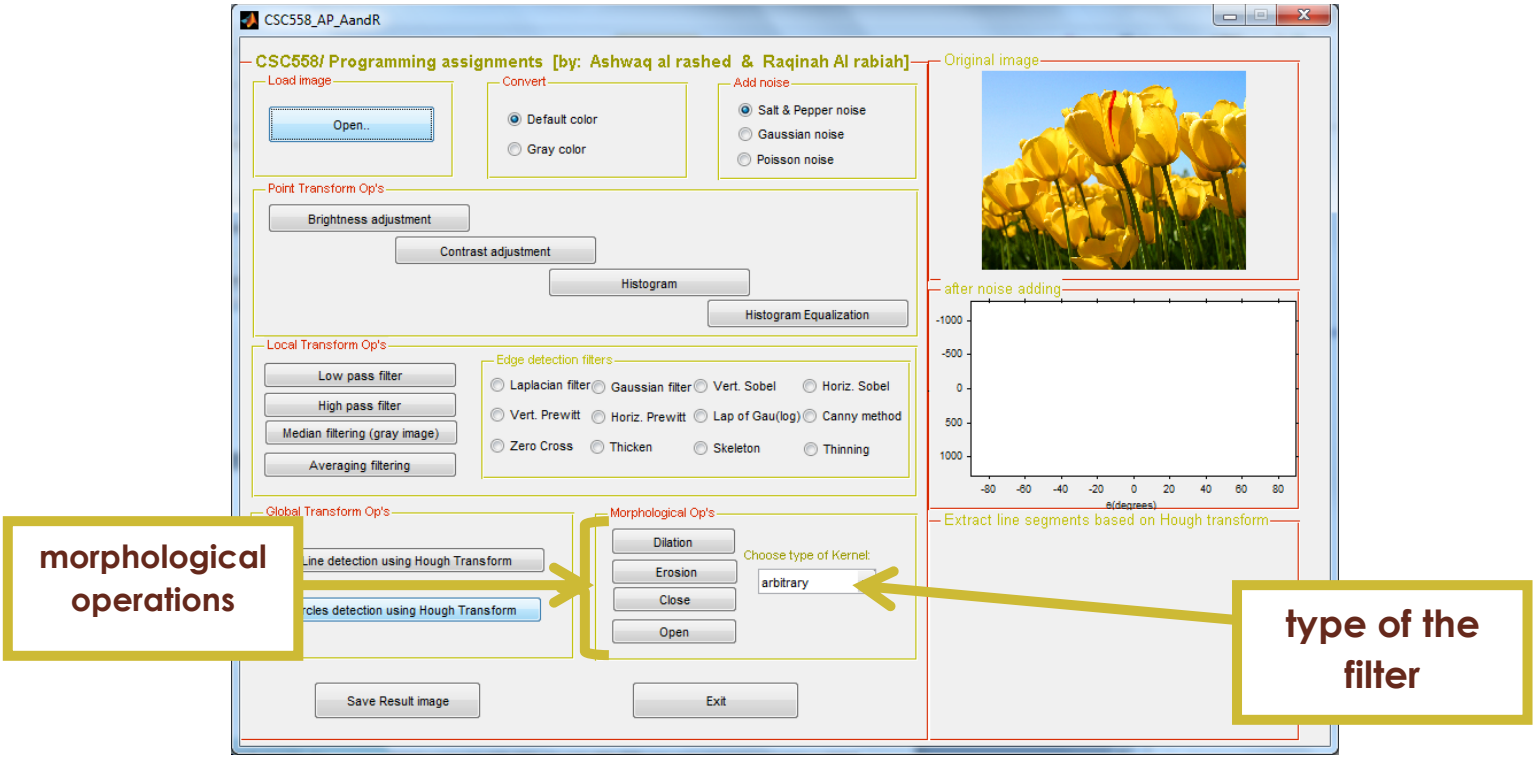


Fig: 15

16. -After apply dilation and type of filter is rectangle.

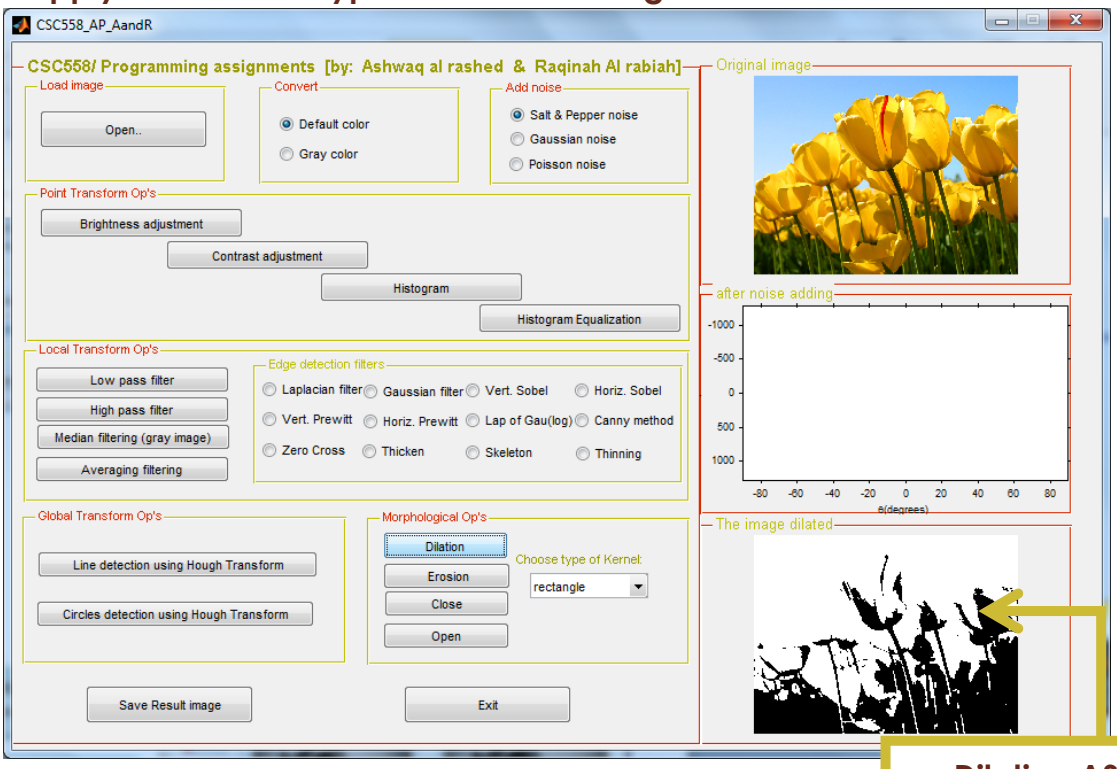


Fig: 16

17.-Also, you can save the image after apply operation to the image.

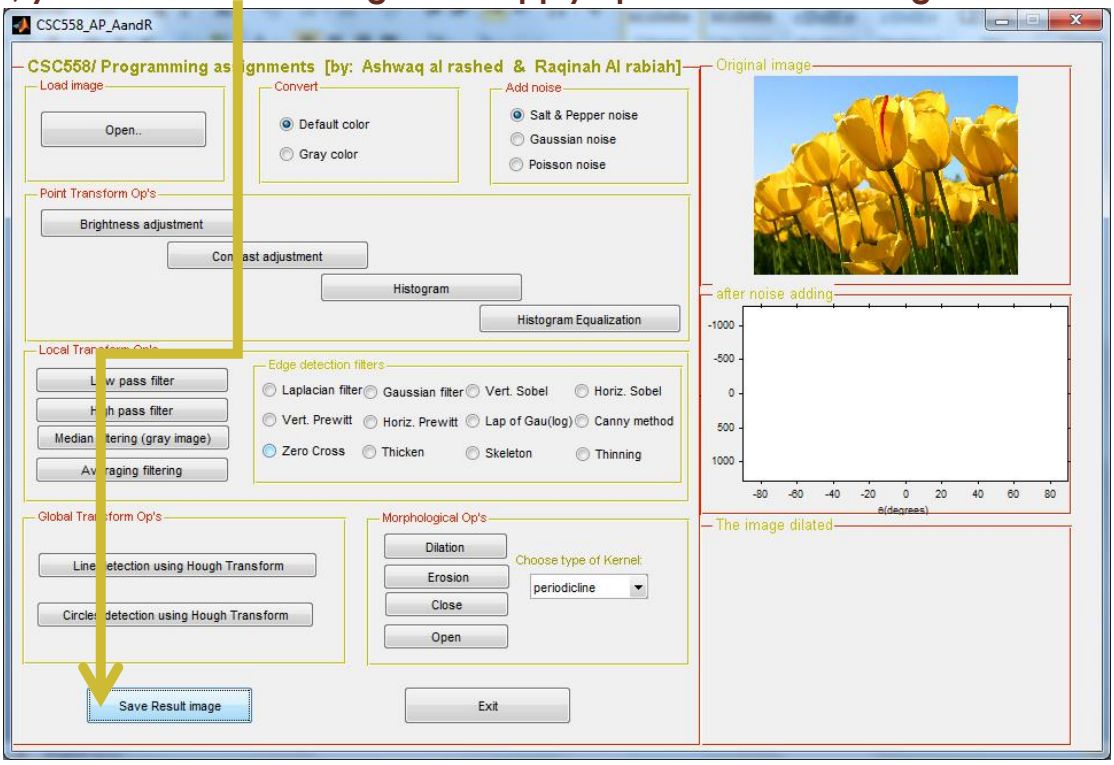


Fig:17

18.-After click save image result, then dialog box will appear.

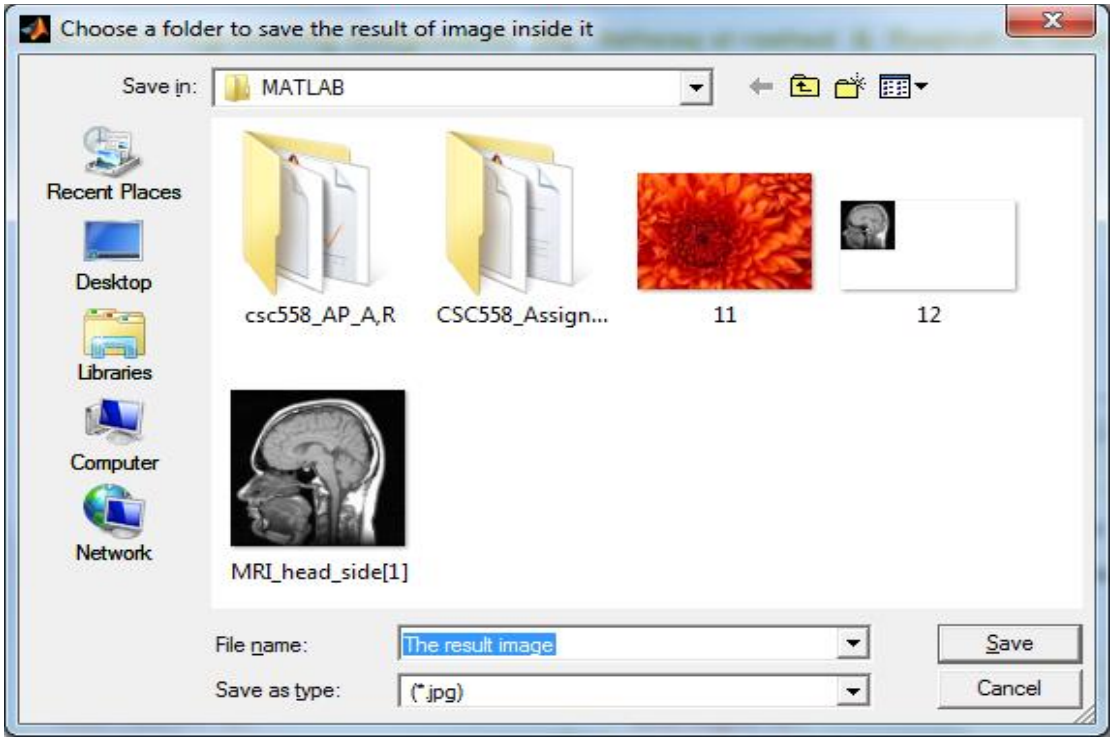


Fig: 18

19. -Exit button for end the program.

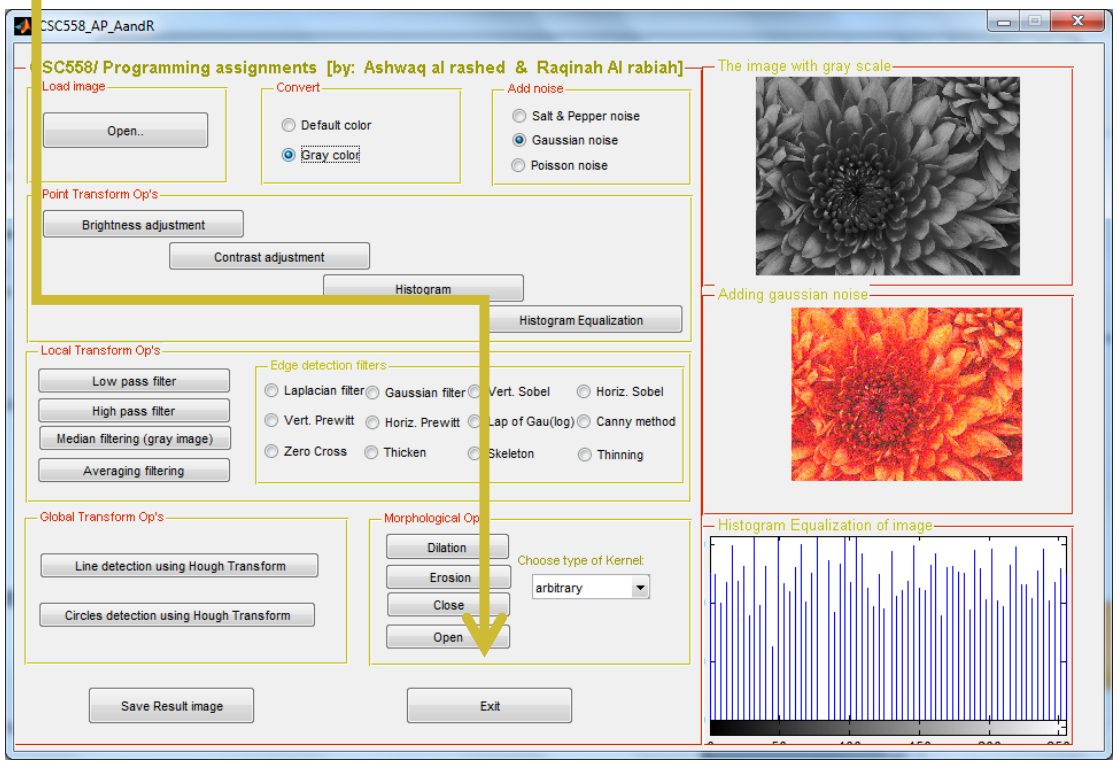


Fig: 19