ECE 5273
Homework 6

Spring 2023 Dr. Havlicek

Obtain the images *camera9.bin* and *camera99.bin* from the course web site. These are 256×256 gray scale images with 8 bits per pixel. They have been corrupted by salt-and-pepper noise.

Write a program to implement a gray scale median filter, a gray scale morphological opening, and a gray scale morphological closing. In all cases, use a 3×3 square structuring element (window).

To handle edge effects, set output pixels equal to gray level zero when the structuring element hangs over the borders of the image. (Note: we usually handle edge effects by replication for these filters. But setting the output pixels to zero instead simplifies the programming required for doing this assignment).

Turn in:

1. A listing of your program.
2. Printouts of the two original images and the results of applying the median, open and close operations to the original images.
3. A one page discussion of how and why the results of the different operators are different.

DUE: 5/2/2023, 11:59 PM