Obtain the gray scale images \textit{camera9.bin} and \textit{camera99.bin} from the course web site. These images are $256 \times 256$ 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 $3 \times 3$ 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.

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: 4/21/2010**