

Median Filtering:

For a 3×3 median filter, the idea is to:

- Order the 9 pixels from the 3×3 region from darkest to lightest
- Return the median color (i.e., the 5th lightest or 5th darkest).

For this assignment, you may assume that the input is a grayscale image. If it is not, your program should return some plausible result (like picking just one RGB channel to order the pixels, or first applying a RGB to grayscale conversion).