Multistage Median Filter Exercise [Help]

Help: The following tips will help you complete this exercise:

- The .py files located in the 'Noise_Functions' folder, contain one single function each, that you can use to corrupt an image with noise, by importing them to your .py file. Make sure that they are located in the same directory. You will not run these files.
- Make sure that the algorithm works for both odd and even-sized filters. This can be achieved with a modulo operation.
- When choosing the median, make sure that the pixel values of the current window have been sorted.
- The four sub-arrays should be of size n, where $n \times n$ is the shape of the filter. The center pixel of each window should be in all of them.
- The median of an even-sized array is the average of the two middle elements.
- To display two images as one, you can use the NumPy.hstack() or NumPy.vstack() functions.
- When displaying the image, if it is entirely white or black, try specifying its data type using the .astype() function.