DMET 1002 – Advanced Media Lab
Lab 1 Procedure

Image Pre-processing Review

PART 1: Flipping the Image

Write a MATLAB function to horizontally and vertically flip the "Football_Noise.bmp" colored image using the transformation given in the preparation document.

> **1. Do we need brightness interpolation in this case?**
> **2. Show the output image**

PART 2: Median Filtering of Colored Image

Write a MATLAB function to apply median filtering to the flipped image obtained in PART 1. For a colored image, you will be applying the median filter to each of the Red, Green and Blue components separately. Your function should take the size of the square neighborhood as an input in addition to the flipped image. You are allowed to use the `median` function of MATLAB but NOT the median filter function.

> **3. Show the output image obtained using 3 x 3 median filter and 7 x7 median filter**
> **4. How does the size of the median filter affect the output image?**

PART 3: Conversion to Gray-scale

Modify the function you wrote in PART 2 to output a gray-scale representation of the filtered image using the transformation given in the preparation document.

> **5. Show the gray-scale image corresponding to each of the 3 x 3 and 7 x 7 median filtered images**
> **6. Which of the two images you think will give a better output when segmented? And why?**