

Figure 1:

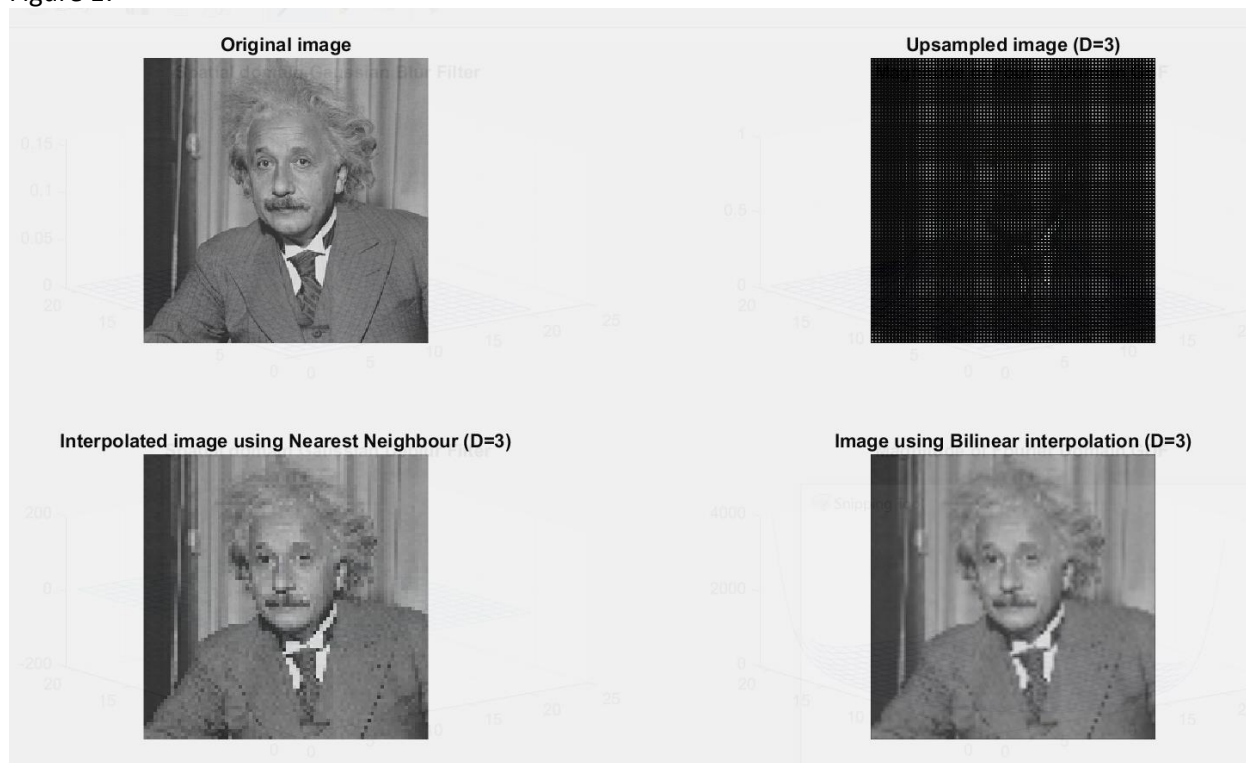
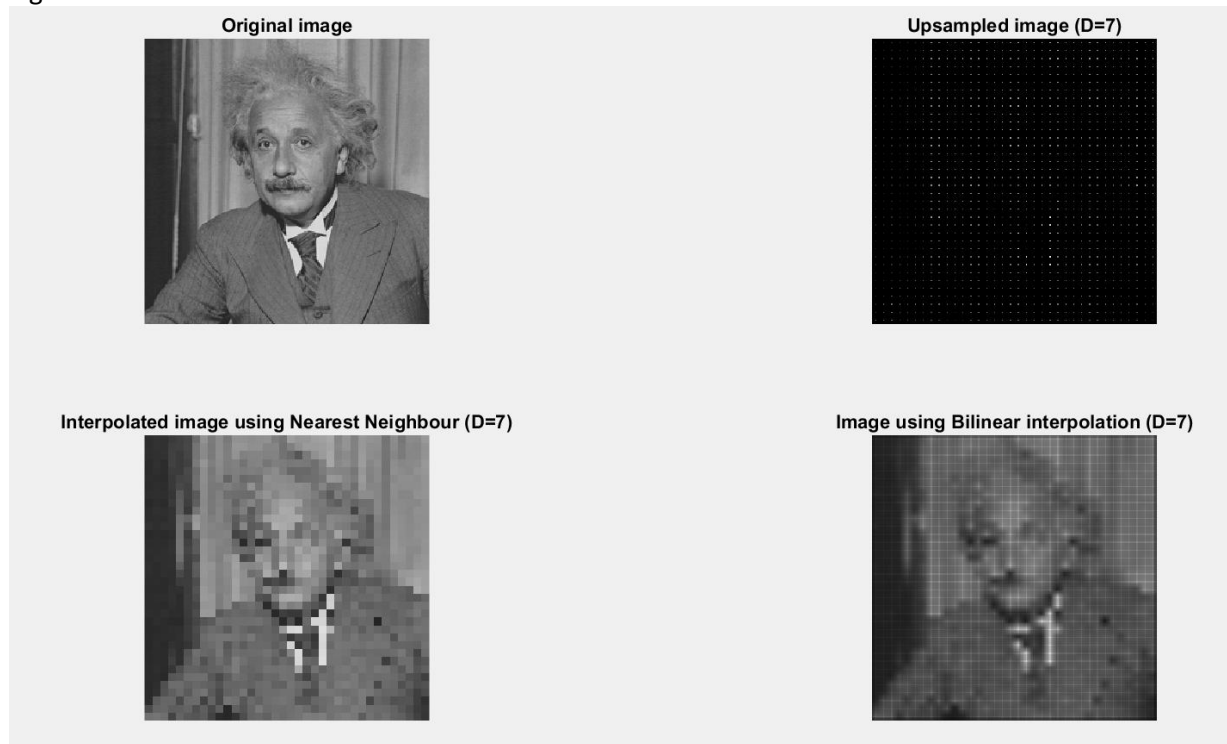


Figure 2:



Q5 Observation:

After downsampling the original image, we determined that the Nearest Neighbor Interpolation strategy was the most effective in restoring the image to its original condition. The bilinear interpolation is followed by the up sampled image. When applied to the original image, the Nearest Neighbor algorithm creates blocky results. This is because in the closest neighbor method, we find the next-closest pixel and assume its intensity value. As a result, the image takes on a blocky appearance. When compared to closest neighbor interpolation, bilinear interpolation estimates a new pixel value using a distance weighted average of the D - nearest pixel values, resulting in a smoother image.