

CS 663 : Digital Image Processing : Assignment 1

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Due Date :- 23rd August, 2019

Question 1: Image Resizing

(a) Image Shrinking

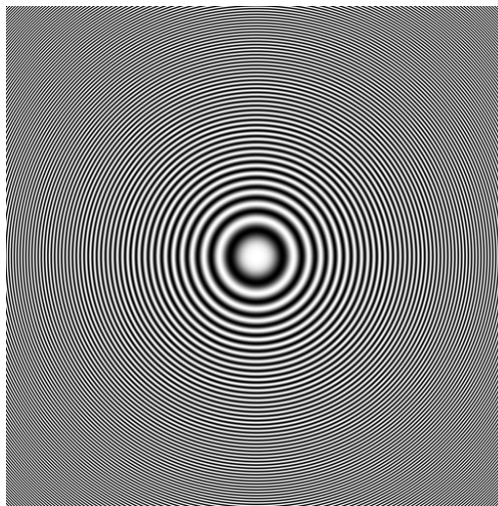
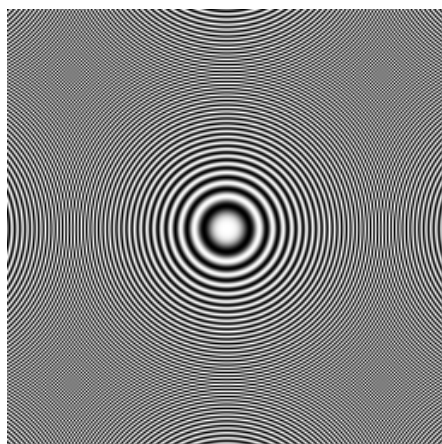
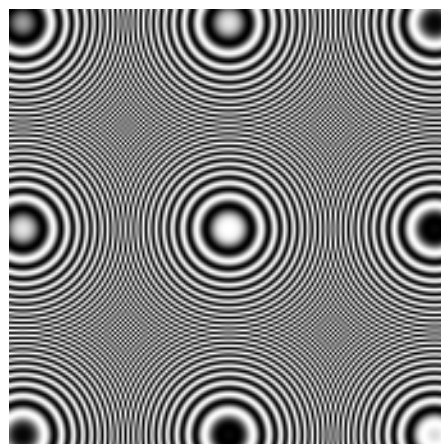


Figure 1: Input Image



(a) $d = 2$



(b) $d = 3$

Figure 2: Images after shrinking (**Moiré effect** is clearly seen)

(b) Image Enlargement using Bilinear Interpolation



(a) Original Image



(b) Enlarged Image

Figure 3: Implementation of Bilinear Interpolation

(c) Image Enlargement using Nearest-Neighbor Interpolation



(a) Original Image



(b) Enlarged Image

Figure 4: Implementation of Nearest Neighbor Interpolation