Report for part 1
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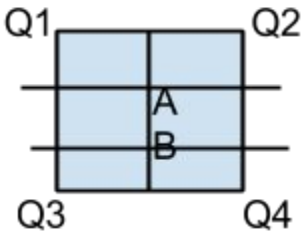
1 a. myShrinkImageByFactorD.m - This function shrink the size of the original image by undersampling i.e. leaving pixels from the original image . This shrink the original image but results in loosing information.

This function is called inside myMainScript.m which produces the original image as well as output image.

1 b. myBilinearInterpolation.m - This function increases the size of input image as given in the question using bilinear interpolation.

Two rows of pixels has to be added between 2 consecutive rows of input and 1 column of pixels has to be added between 2 consecutive columns.



Here A=(Q1+Q2+2Q3+2Q4)/6 and B=(2Q1+2Q2+Q3+Q4)/6

This function is called inside myMainScript.m which produces the original image as well as output image.

1 c. myNearestNeighborInterpolation.m - Increases size similar to part 1b, but using nearest neighbor interpolation.
Here A=Q1, B=Q4.
Clearly, bilinear interpolation gives better results than nearest neighbor interpolation.