DIP Assignment

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Question 1:

Steps involved:

1. Loading and reading the image.
2. Defined functions for scaling using replication and interpolation.
3. Showing the original image.
4. Using the above-defined functions to scale up and scale down images.
5. Displaying the obtained images.

Original image:

Image after replication (scale up factor=2):

Image after interpolation(scale down factor=2):

Question 2:

Steps involved:

1. Loading the Lena image in the folder and then importing the image in the program.
2. Writing code for all bit planes and performing bit plane slicing.
3. Reconstructing image for desired bit planes as per the question.
4. Displaying the desired image:

a. Plane 8, plane 7

b. Plane 8, plane 7, and plane 6

c. Plane 8, plane 7, plane 6, and plane 5