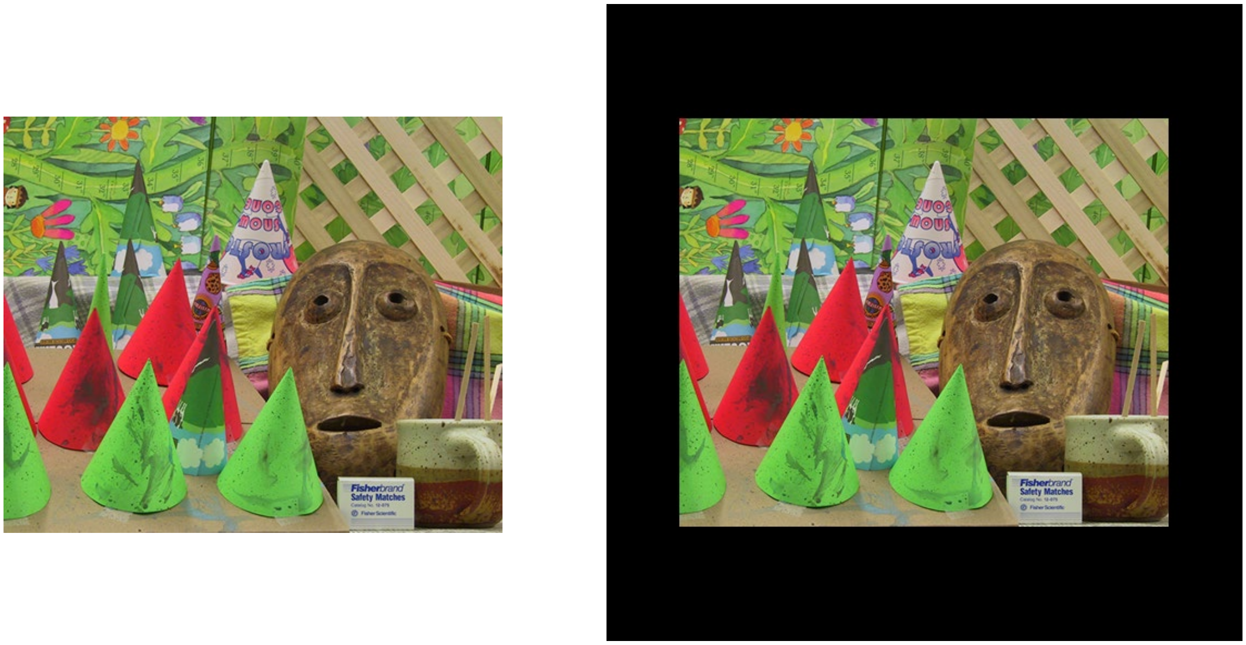
Image Handling Practice

Write a program that loads in an image, creates a larger empty image, and places the original image in the center of the new image. An example is shown below:



Your program should include the following:

- A scaling factor parameter (1.3, 1.5, etc.) for how much larger the new image should be than the original. Multiply the maximum dimension (width or height) of the original image by the scaling factor (n = s*maxDim). The new image should have dimensions nxn.
- A loop(s) for iterating through the pixels of the original image and copying them into the new image.
- Calls to OpenCV and Numpy libraries for opening, displaying, and saving images and creating empty arrays/images.
- Displaying a second version of your image surrounded by a border displaying either its x- or y-gradient using the approach discussed in class. This image should only have 1 color channel.

Submit four files: your code, your original image, and your new/larger image in RGB, and your new/larger image in grayscale showing the gradient. Do **not** put the files in a compressed folder.