**Report on the program 3 of Assignment 1  
Computer Vision (CS-559)**

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**Introduction:**This program takes an image as input and produces an output image which is reflected about its y axis.

**Working of the program:**The program starts with importing the necessary libraries for its working. Skimage is used for converting the image to a numpy array as well as displaying the numpy array in the form of an image in the output. Initially, the image is taken as input and converted to a numpy array containing the corresponding pixel values in the image. Then, an output array is initialized in order to store the results of the reflection operation. The main logic of the reflection of image takes last row from input image and stores it in the first row of output image. After that, it takes second last row from input image and stores it in the second row of output image. This process is repeated till all the rows from the input image are traversed once. Finally, the output array is shown in the form of image in the output.

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**Findings:**The images are just values in a matrix. In order to manipulate images, it is necessary to have a basic knowledge about various matrix operations. The reflection operation is a simple operation which consists of traversing the input image in reversed order. There are several applications of reflection operation. This operation can be helpful for creating depth effect in the image. Also, it can be used for making illusions which can create a feeling of mystery and abstraction.

**Conclusion:**Although, the reflection operation is a very basic operation performed on an image, it is having several applications in the photography world.