Assignment 1

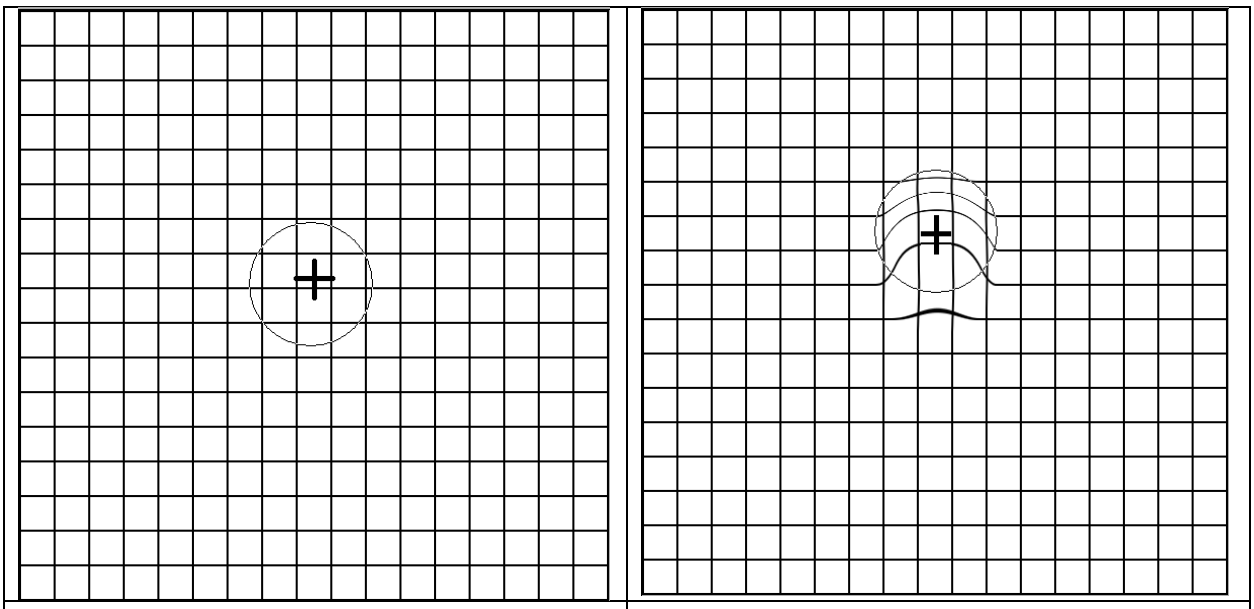
Due Date Dec 1, 2019

In this assignment, you are required to write a program to deform a gray scale image. The program should be in Python or C++ and based on OpenCV. It is expected to perform the following:

1. Loads and displays an image I.
2. Allows the user to select the radius of influence, R_e.
3. Provides a mechanism to select an initial point, P_i , and the application is expected to show the circle of influence around the selected point, as show in Figure 1 (a) .
4. When the user selects a target point, the program is expected to deform and display the resulting image. The deformation is computed from the source point to the target point similar to the result shown in Figure 1 (a).
5. is expected to support image quality (interpolation) at three levels: **nearest neighbor, bilinear interpolation, or cubic**

Note:

1. You can assume the influence circles of the two selected points intersect.
2. You can't use the interpolation function of OpenCV



(a) (b)

Figure 1