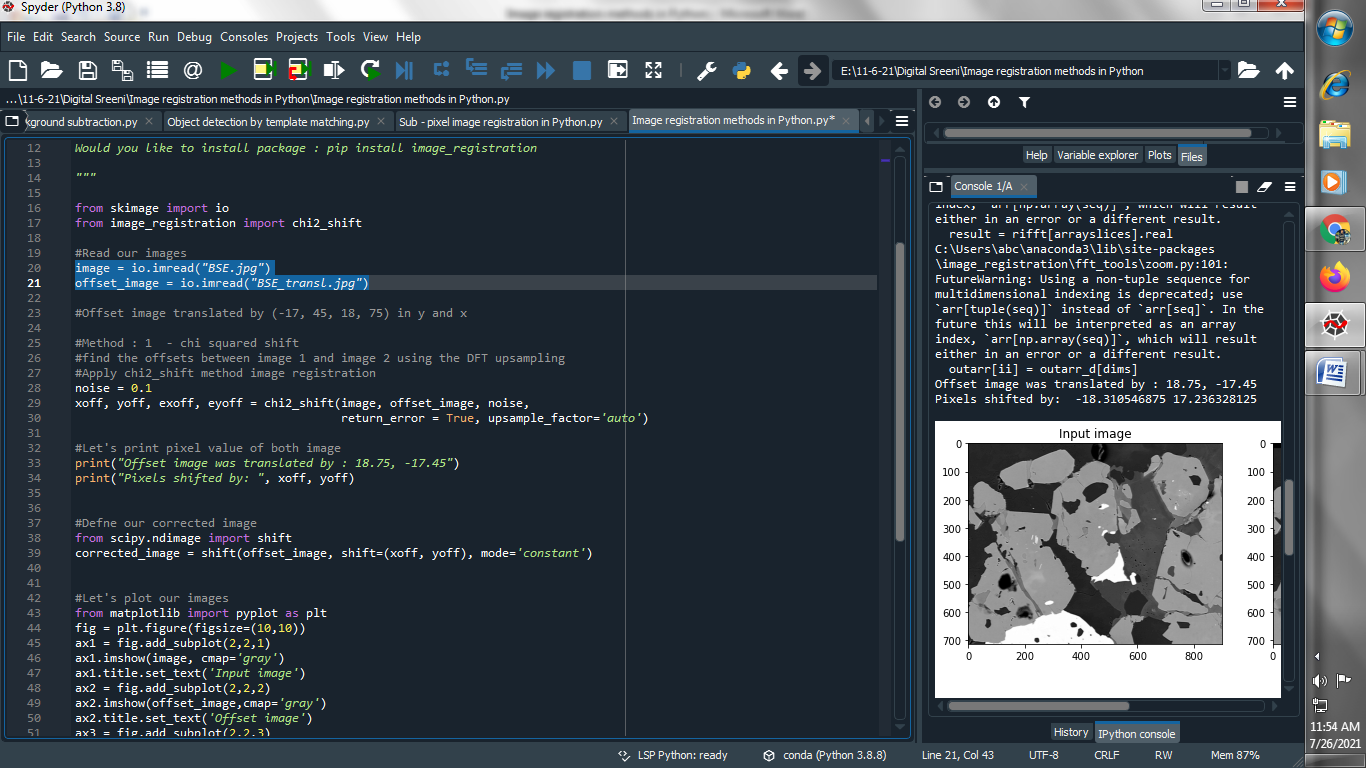
**Image Registration methods in Python :**

→ Image registration is defined as a process that **overlays two or more images from various imaging equipment or sensors taken** at different times and angles, or from the same scene to geometrically align the images for analysis

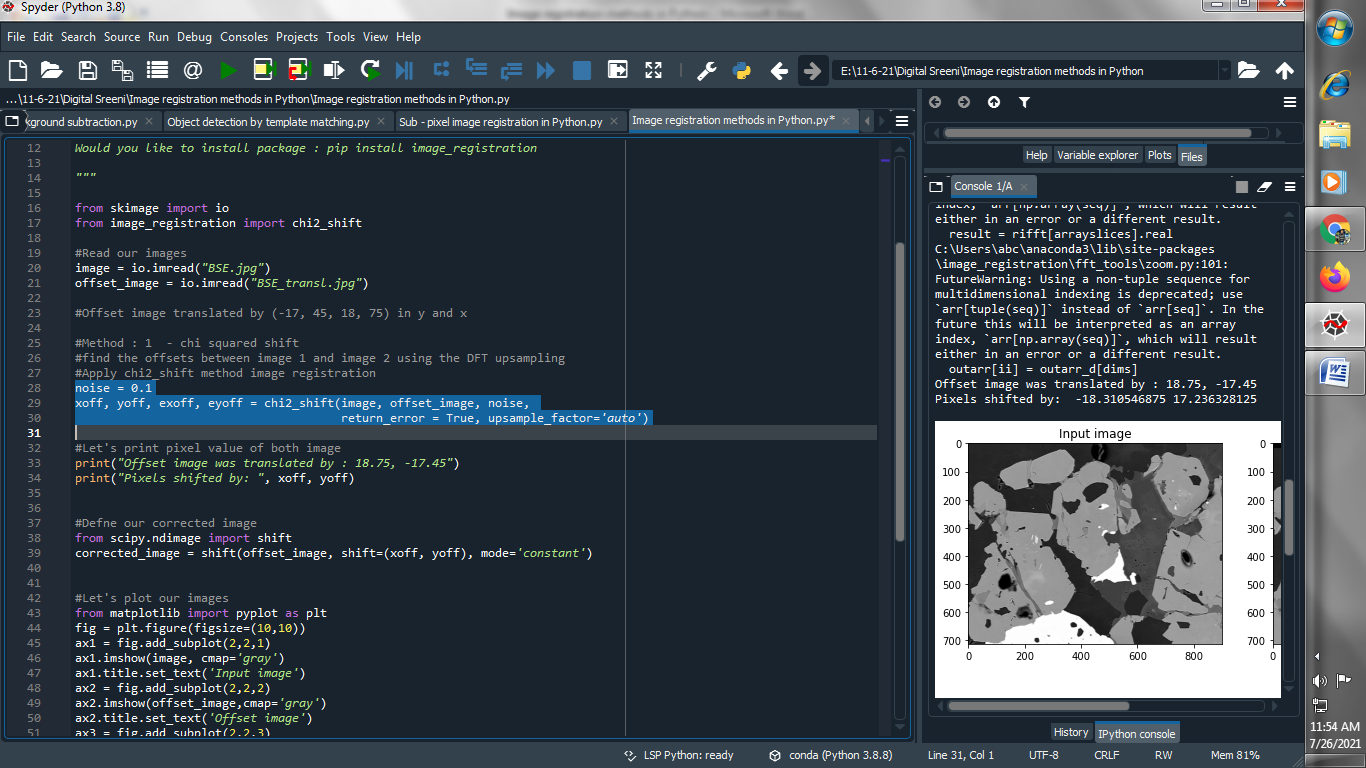
→ **Image registration** is an **image processing** technique used to align multiple scenes into a single integrated **image**. It helps overcome issues such as **image** rotation, scale, and skew that are common when overlaying **images** .

**→Method 1 : Image Registration using chi2\_shift method :**

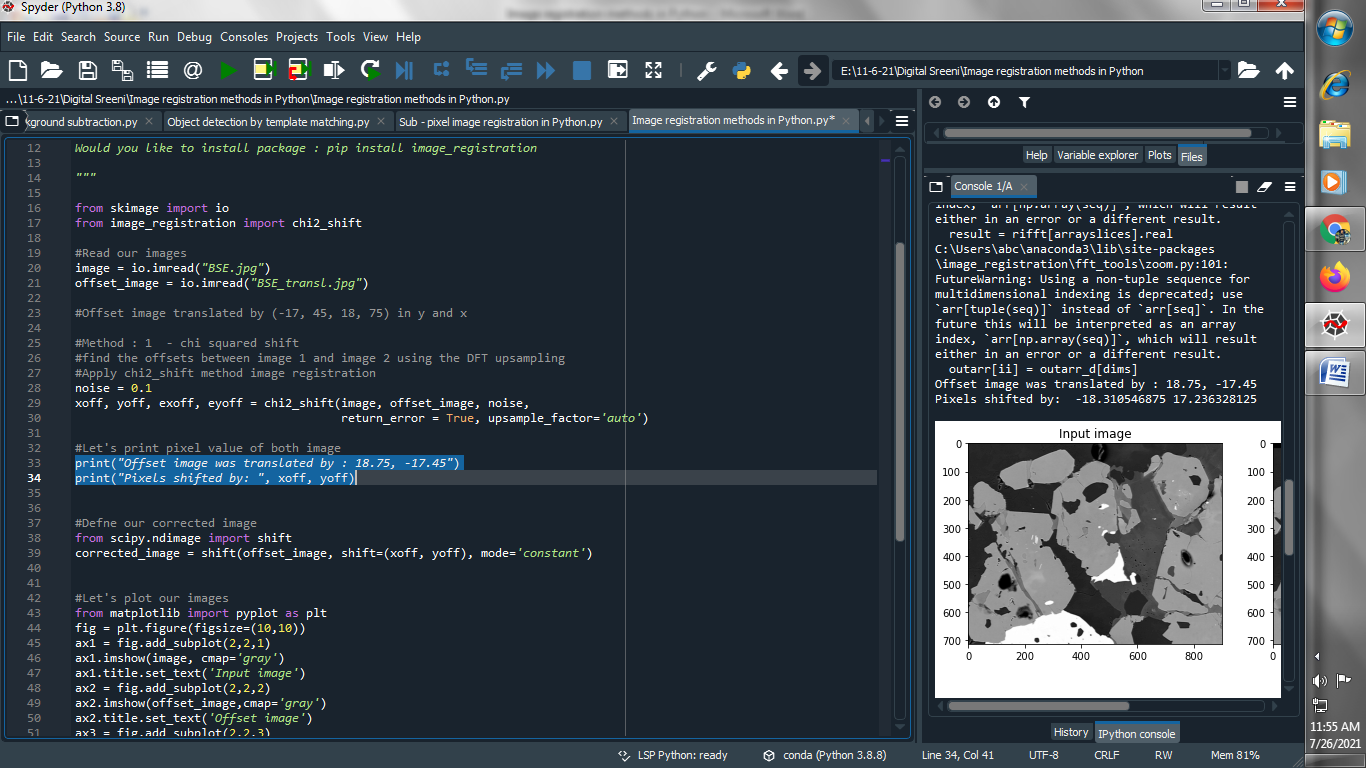
**(1) Read our images :**

****

**(2) Apply chi2\_shift method image registration :**

****

**(3) Let's print pixel value of both image :**

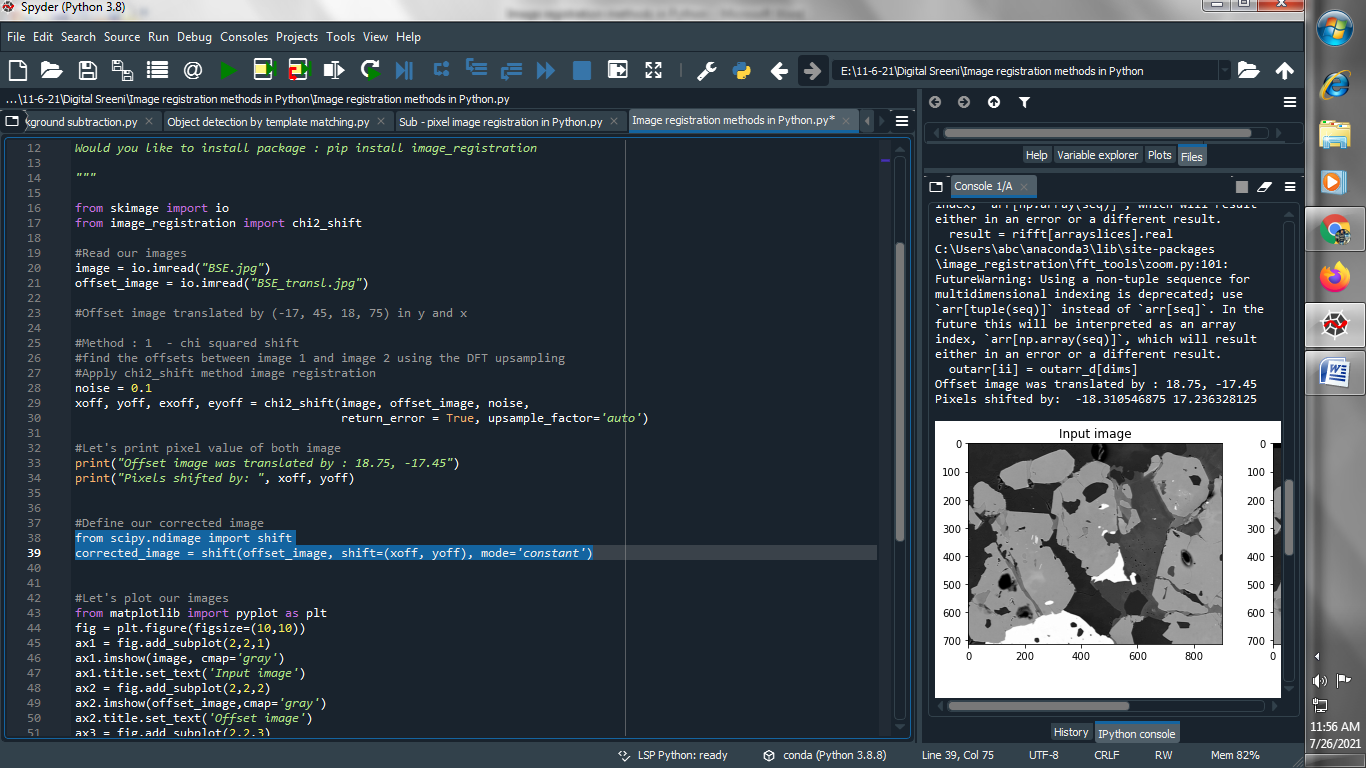
****

**Output :**

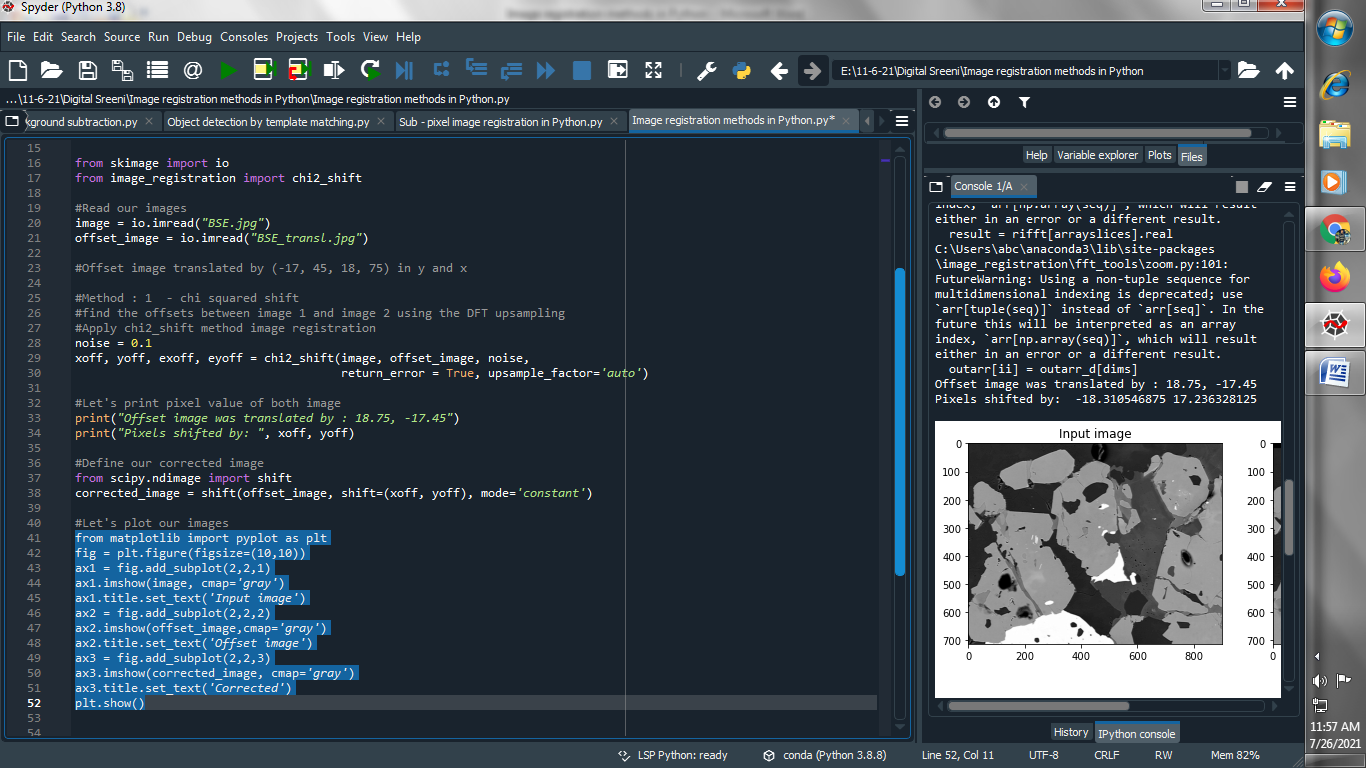
**Offset image was translated by : 18.75, -17.45**

**Pixels shifted by: -18.310546875 17.236328125**

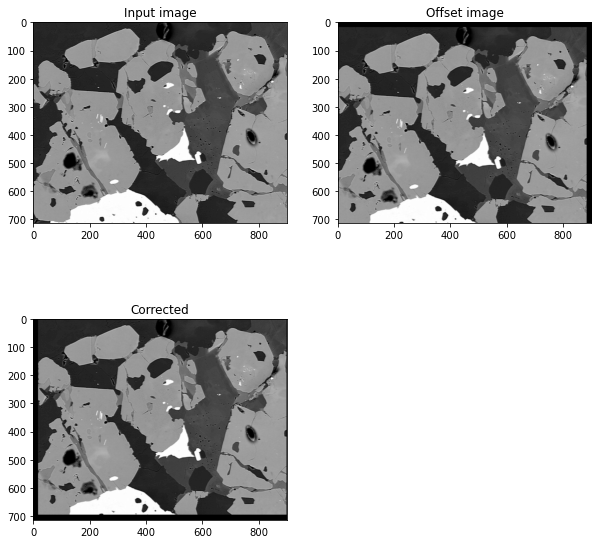
**(4) Define our corrected image :**

****

**(5) Let’s plot our image :**

****

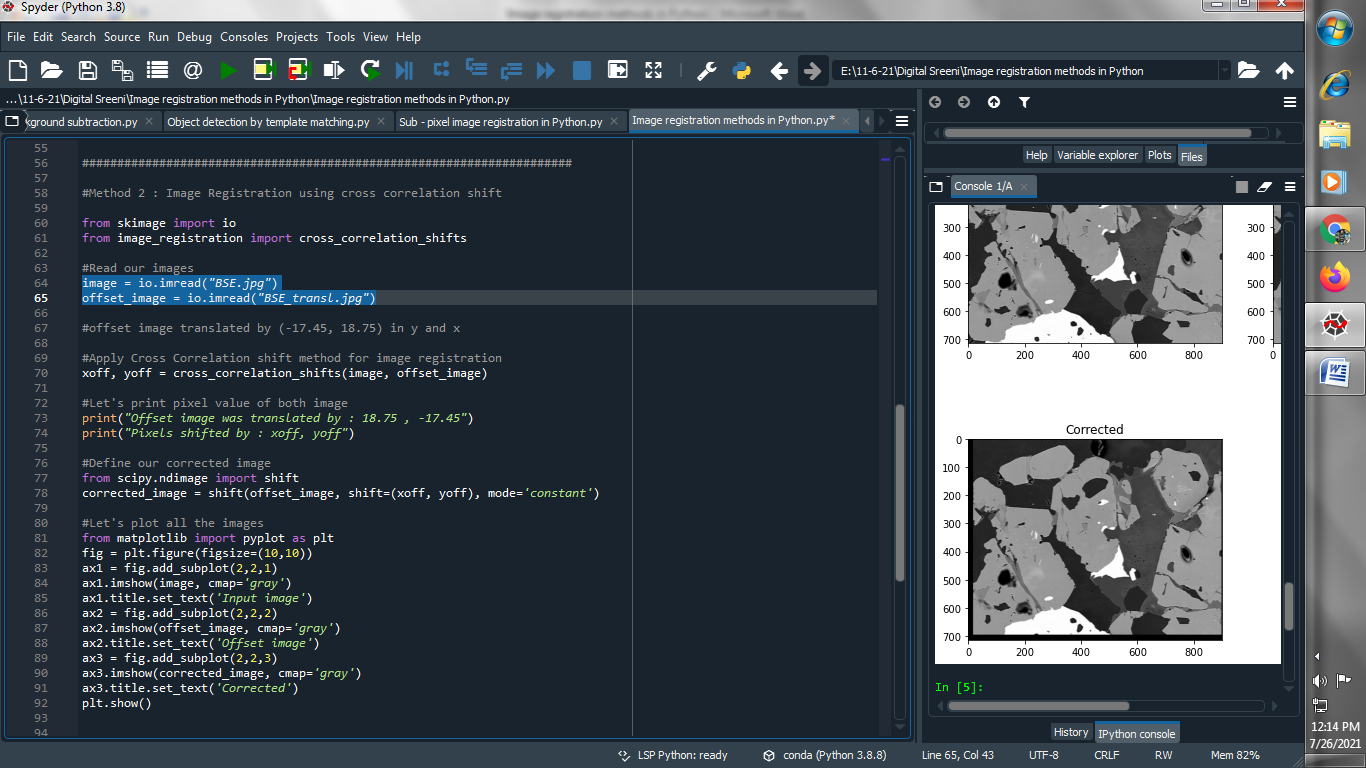
**Output :**

****

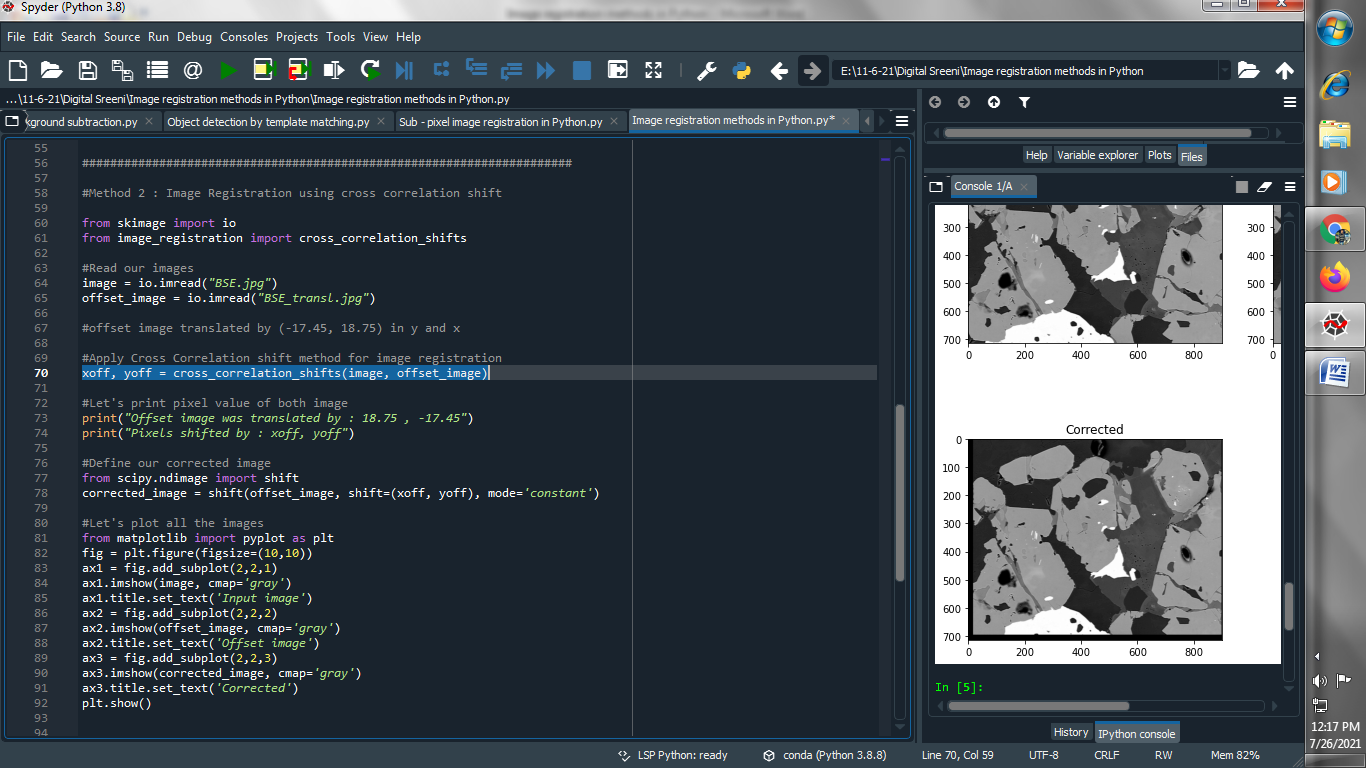
**###################################################################**

**→ Method 2 : Image Registration using cross correlation shift :**

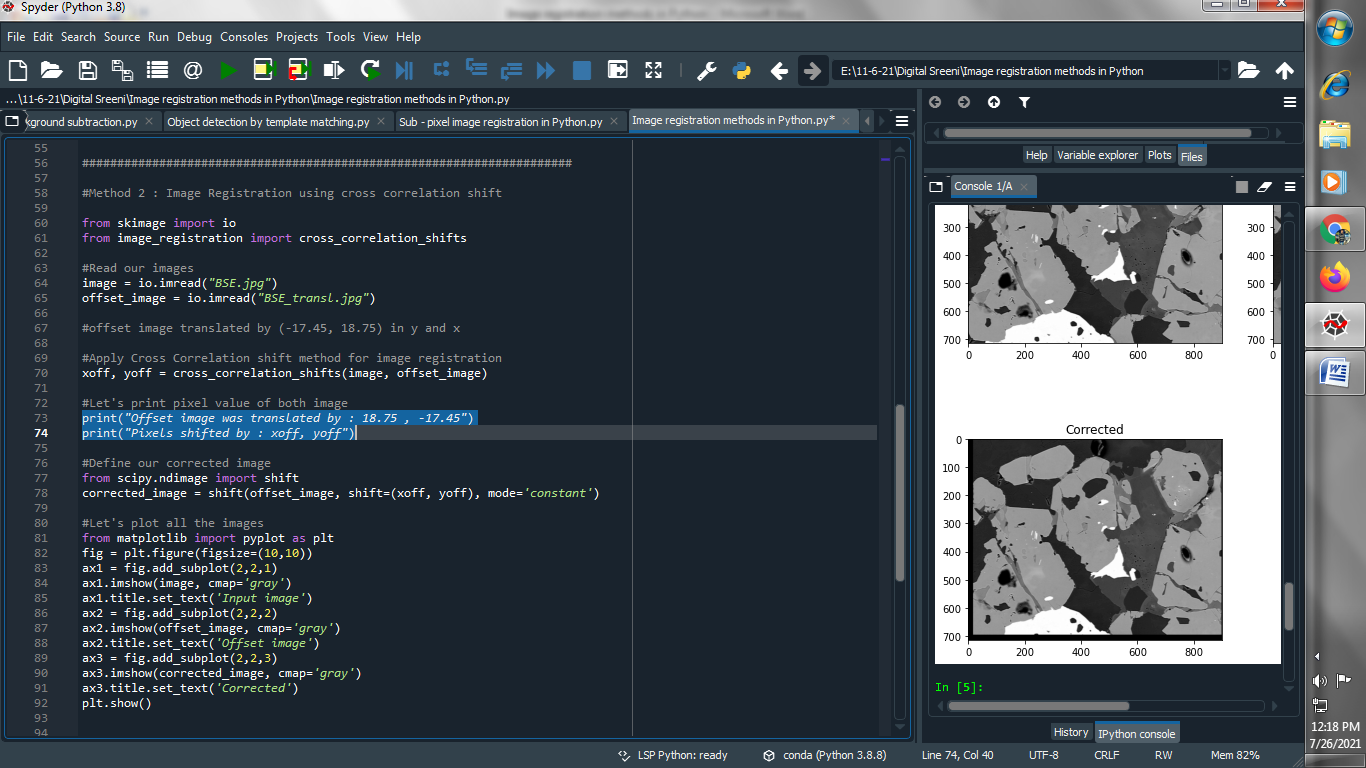
**(1) Read our images :**

****

**(2) Apply Cross Correlation shift method for image registration :**

****

**(3) Let's print pixel value of both image :**

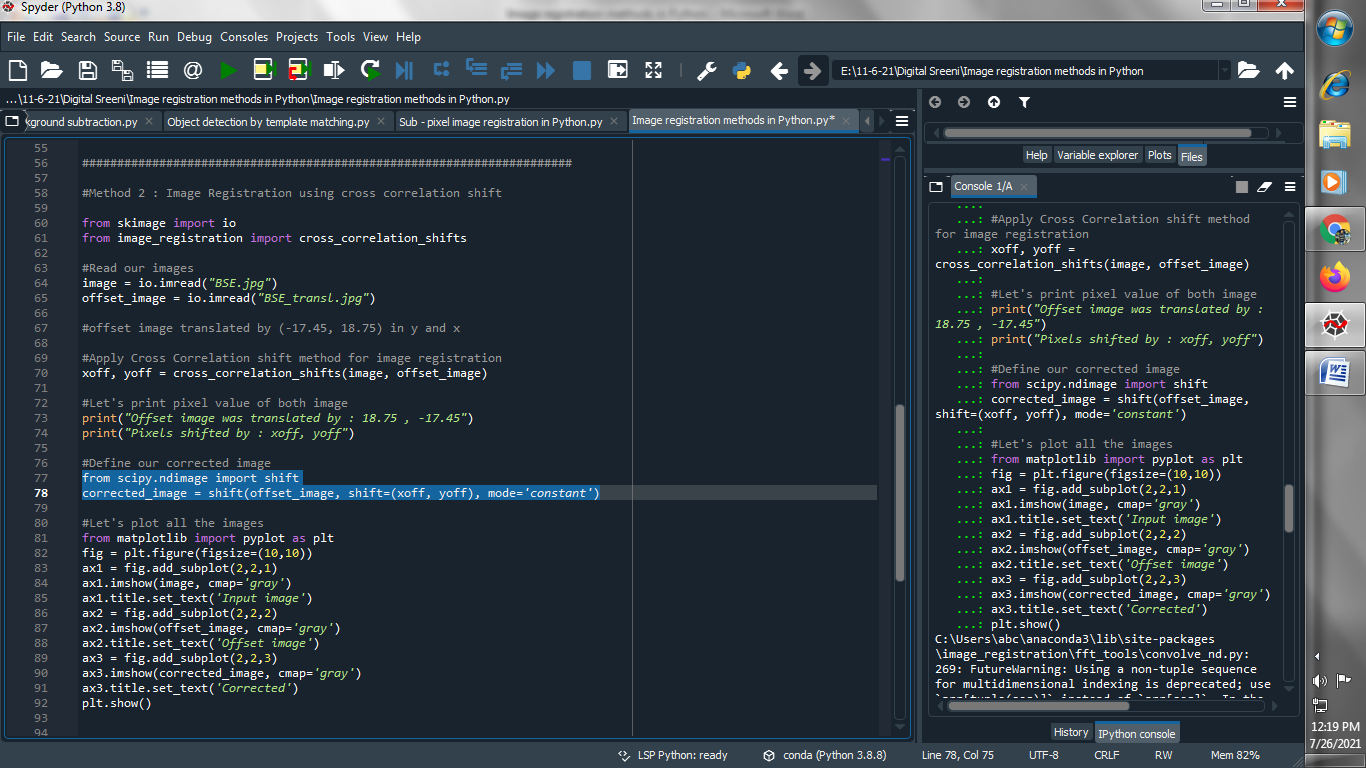
****

**Output :**

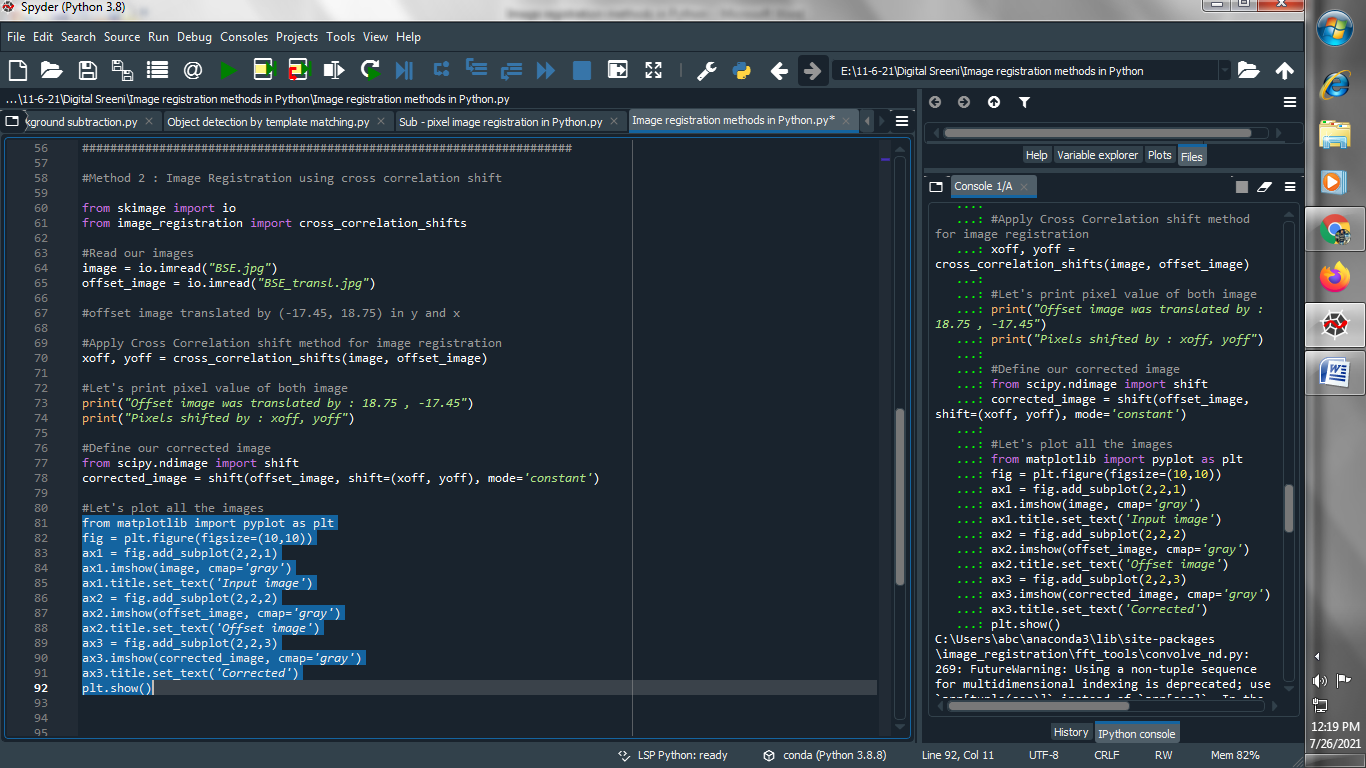
**Offset image was translated by : 18.75 , -17.45**

**Pixels shifted by : -18.383926143153136 17.258670200313837**

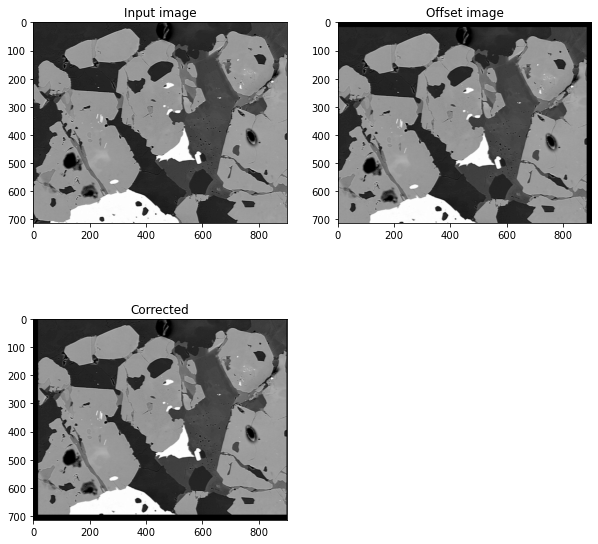
**(4) Define our corrected image :**

****

**(5) Let’s plot our all images :**

****

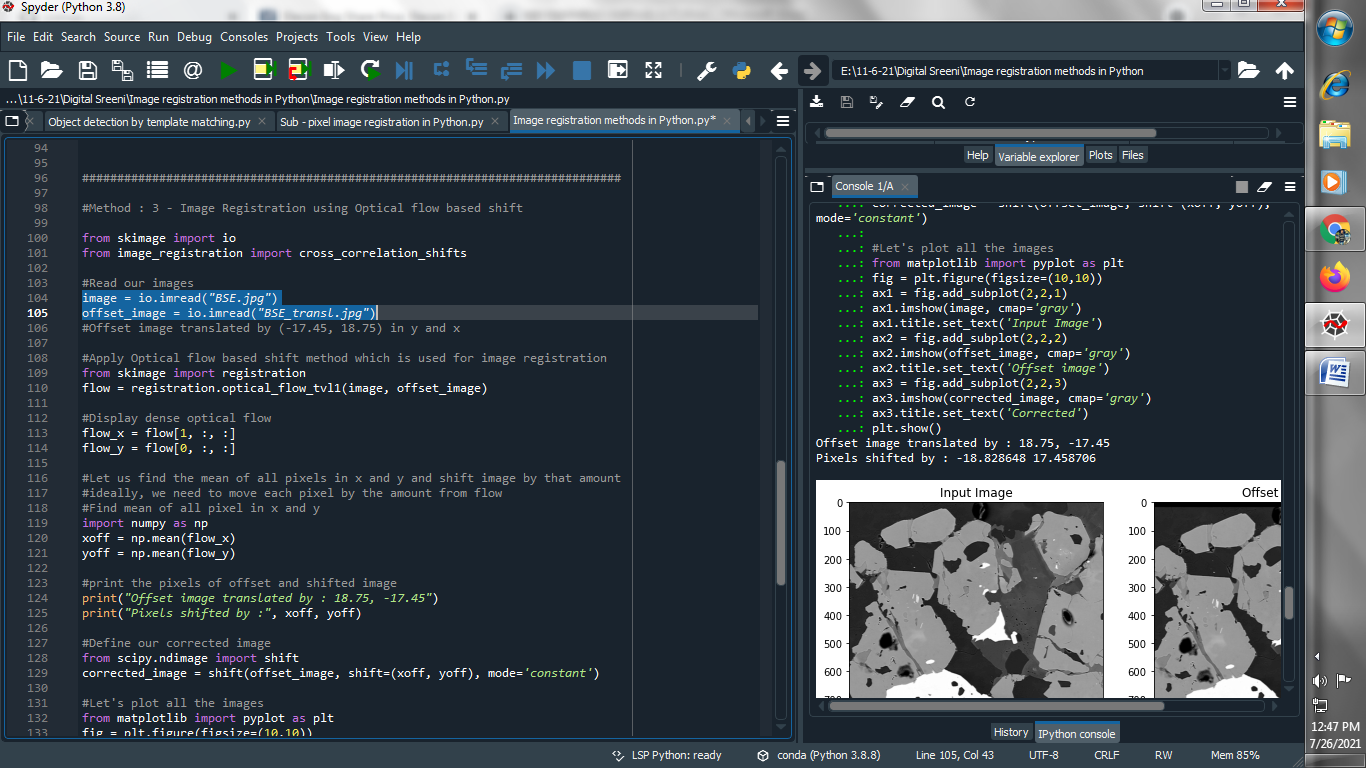
**Output :**

****

**###############################################################################**

**→ Method 3 : Image Registration using Optical flow based shift :**

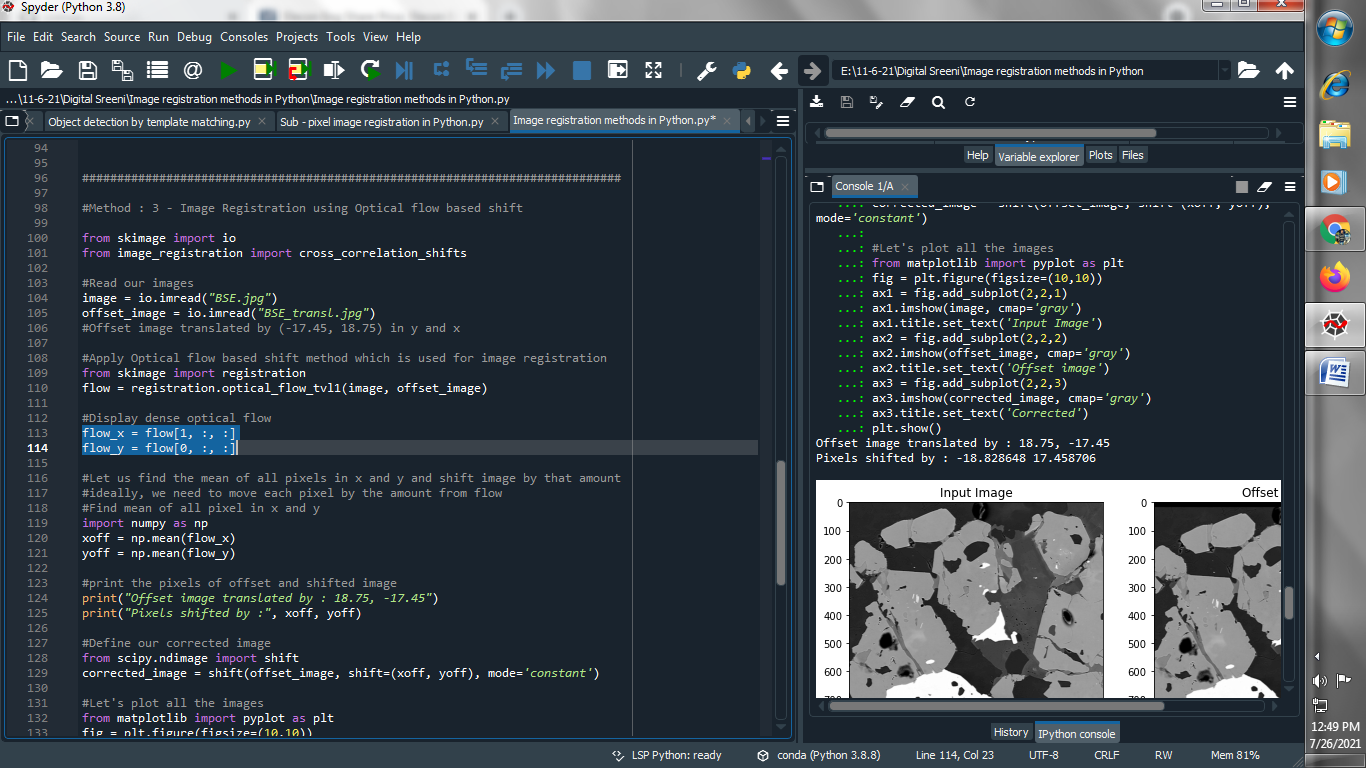
**(1) Read our images :**

****

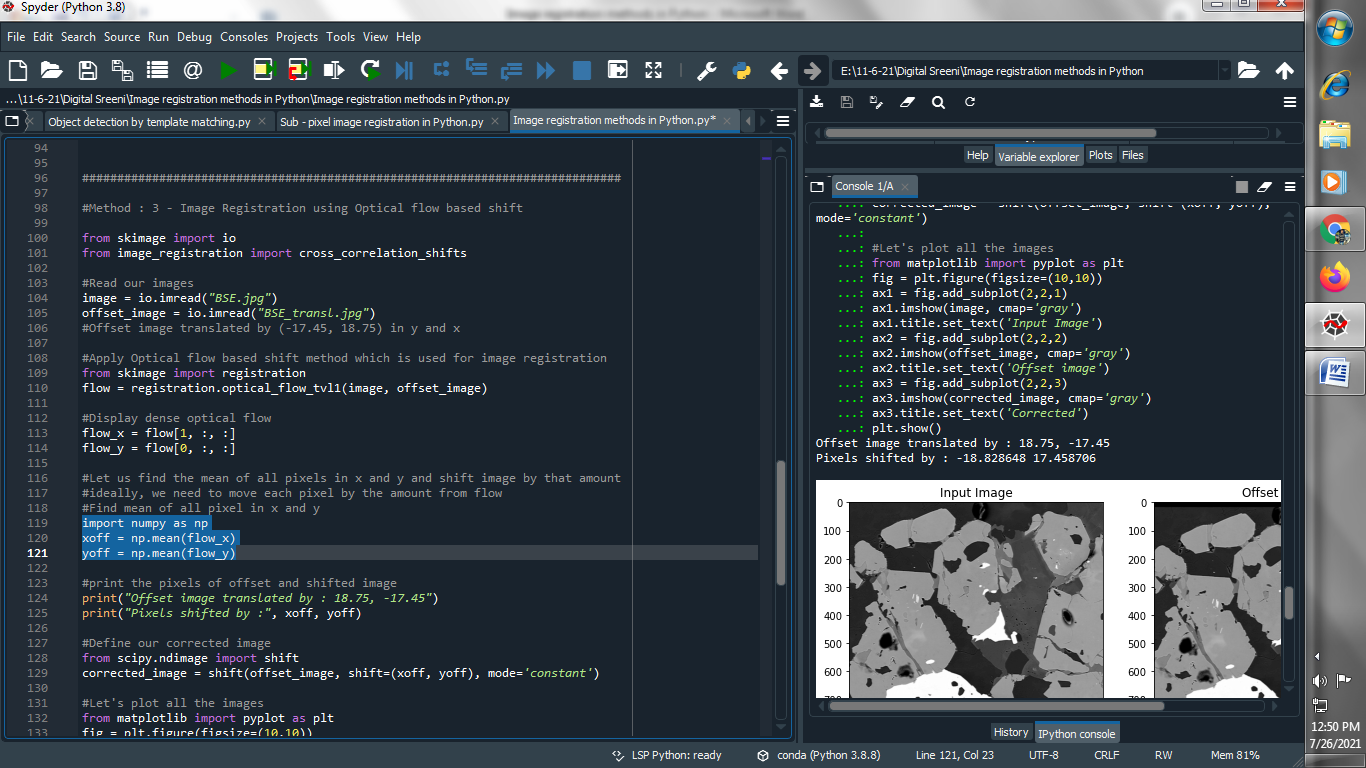
**(2) Apply Optical flow based shift method which is used for image registration :**

****

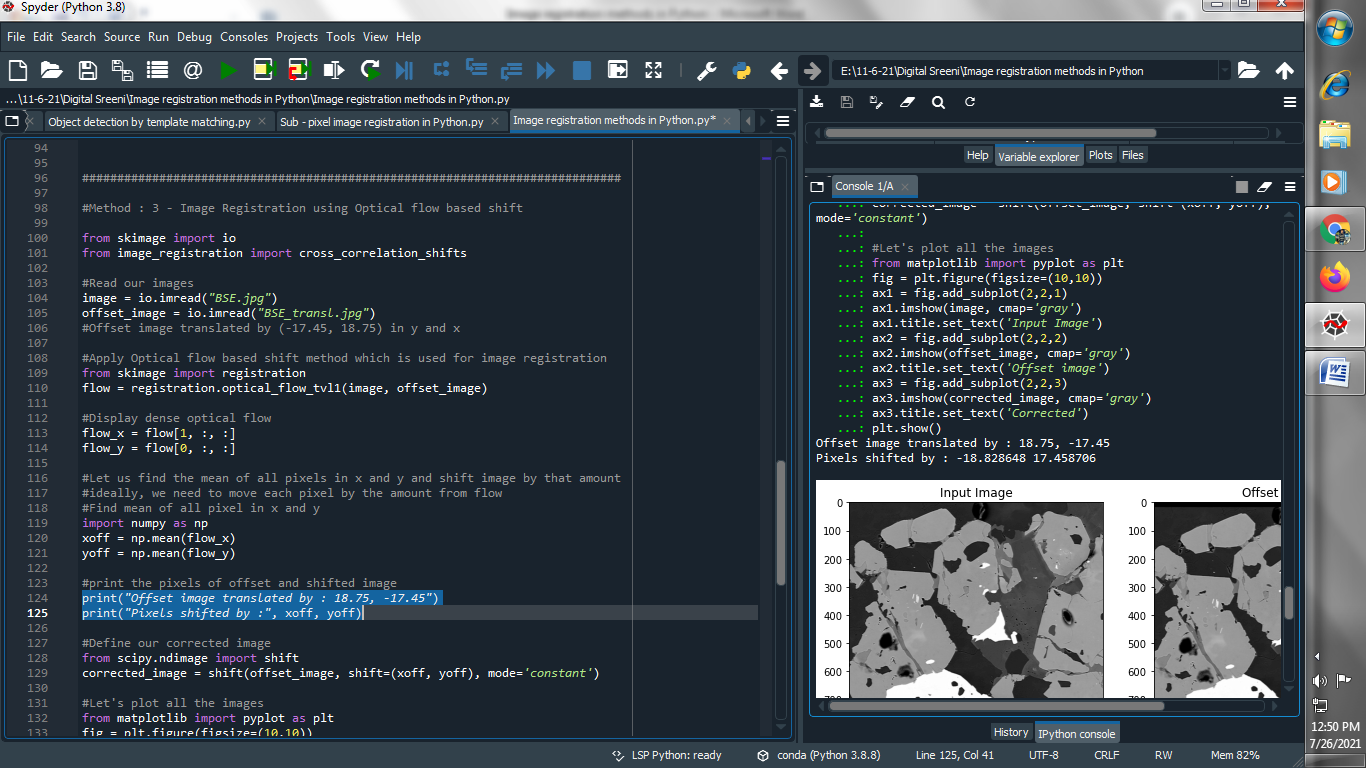
**(3) Display dense optical flow :**

****

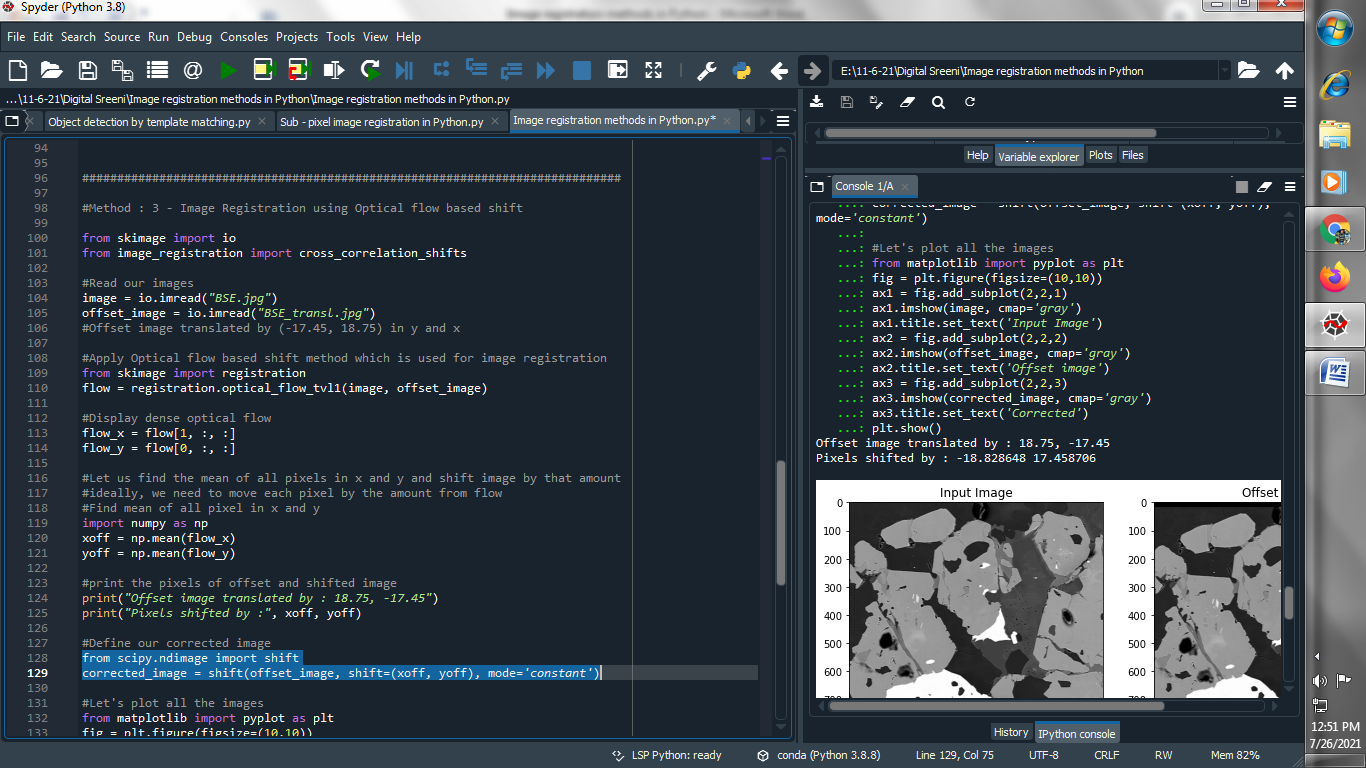
**(4) Find mean of all pixel in x and y :**

****

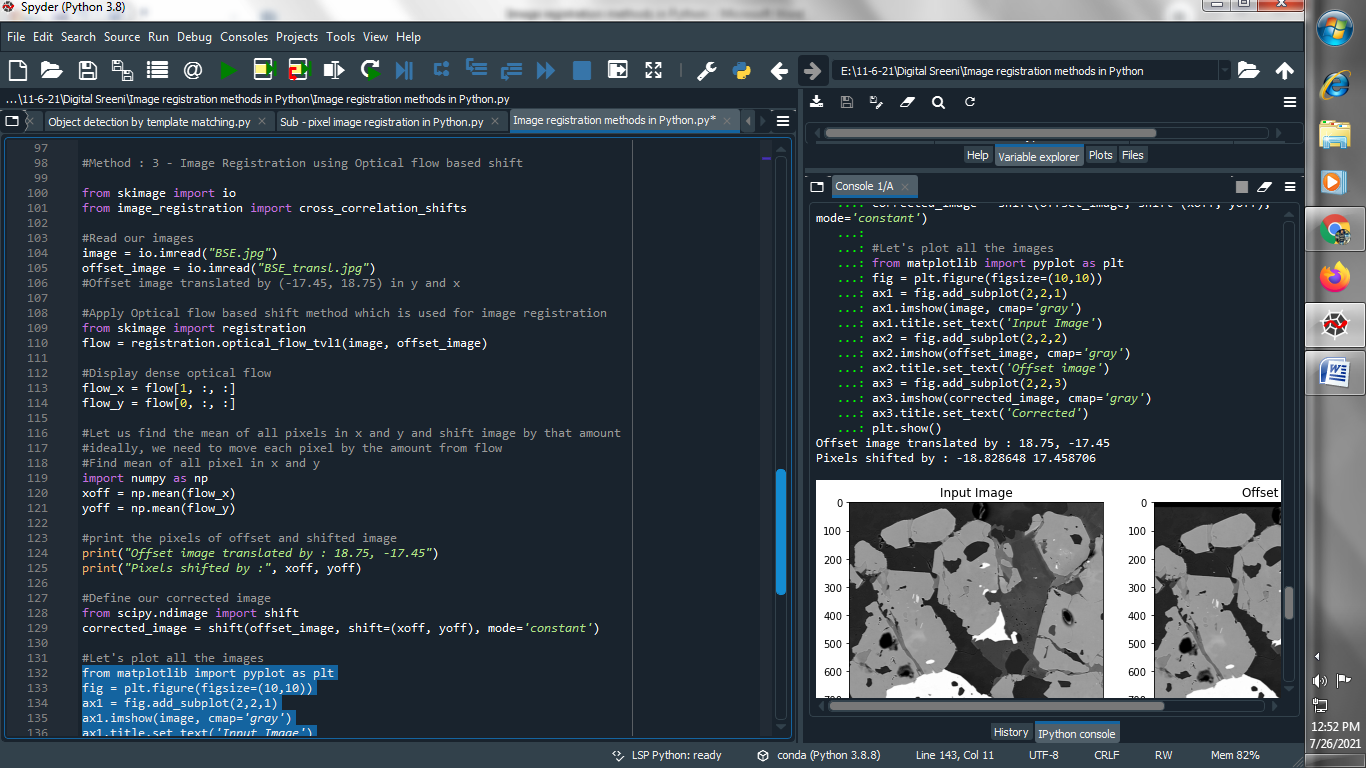
**(5) print the pixels of offset and shifted image :**

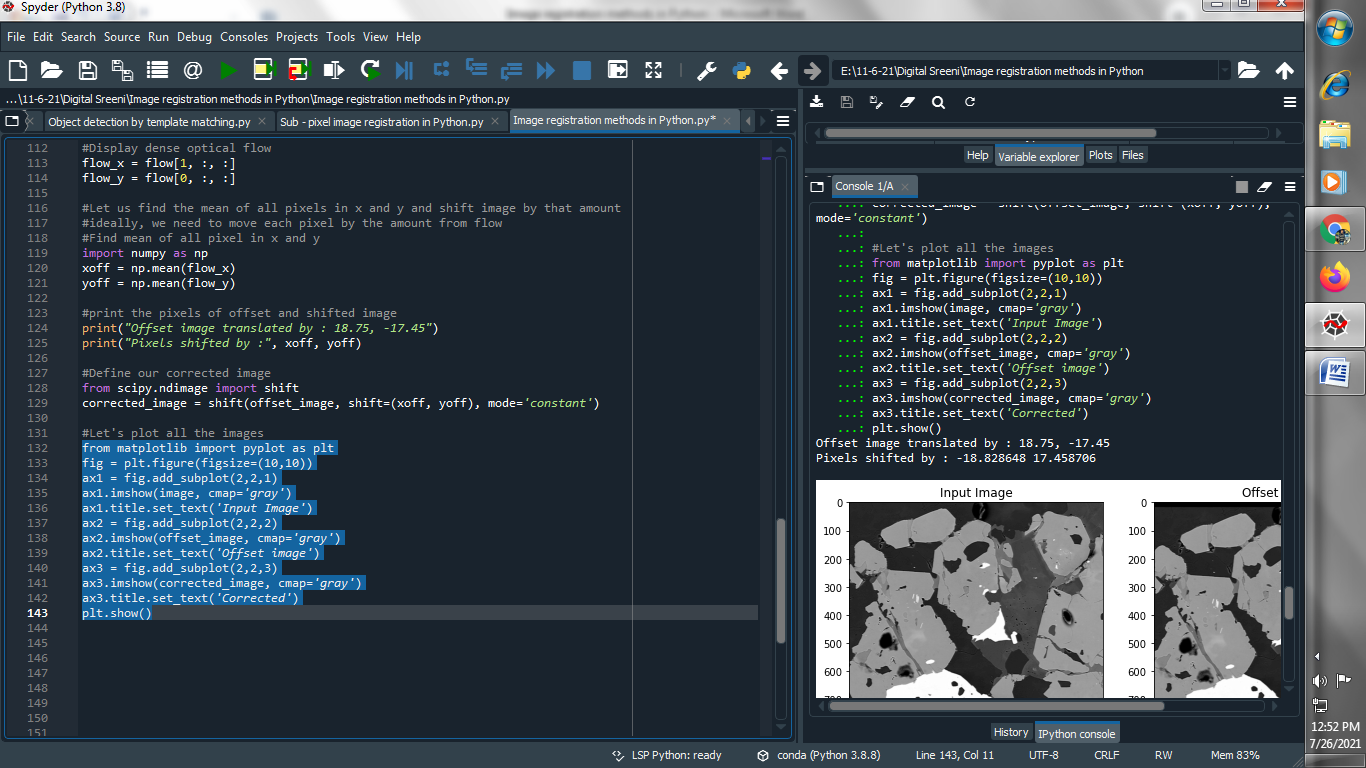
****

**(6) Define our corrected image :**

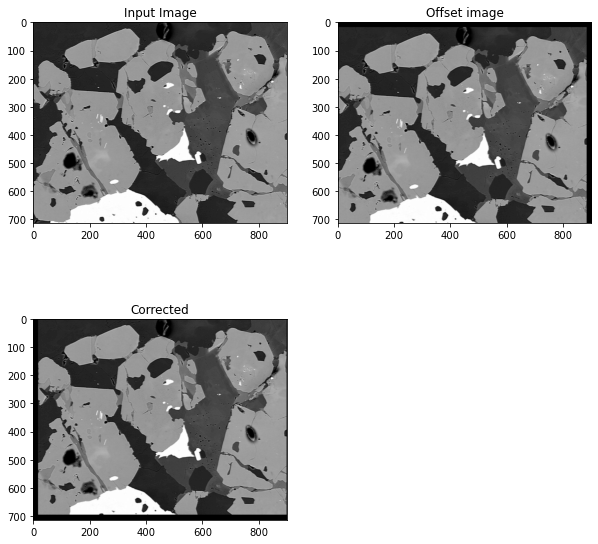
****

**(7) Let’s Plot our images :**

****

****

**Output :**

****