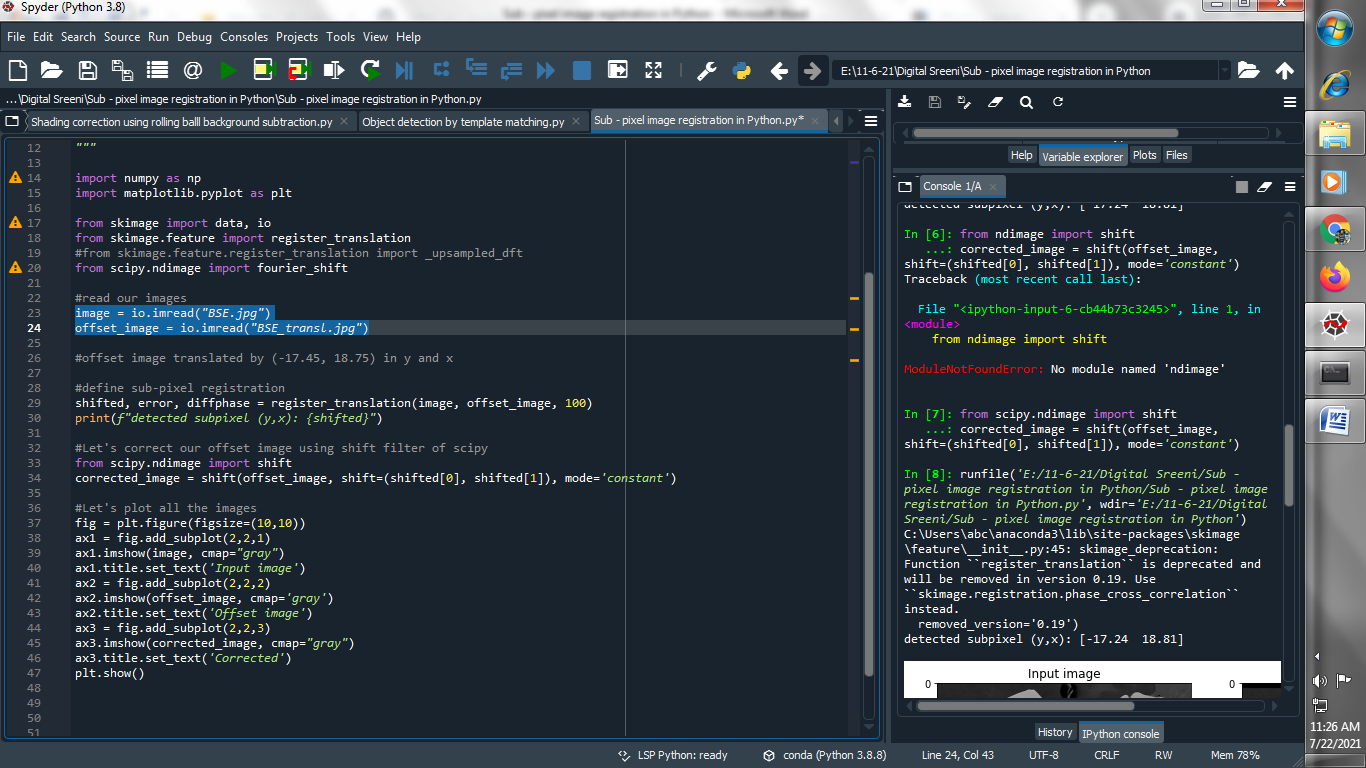
**Sub – pixel image registration in Python :**

→ Three new algorithms for 2D translation image registration to within a small fraction of a pixel that use nonlinear optimization and matrix-multiply discrete Fourier transforms are compared.

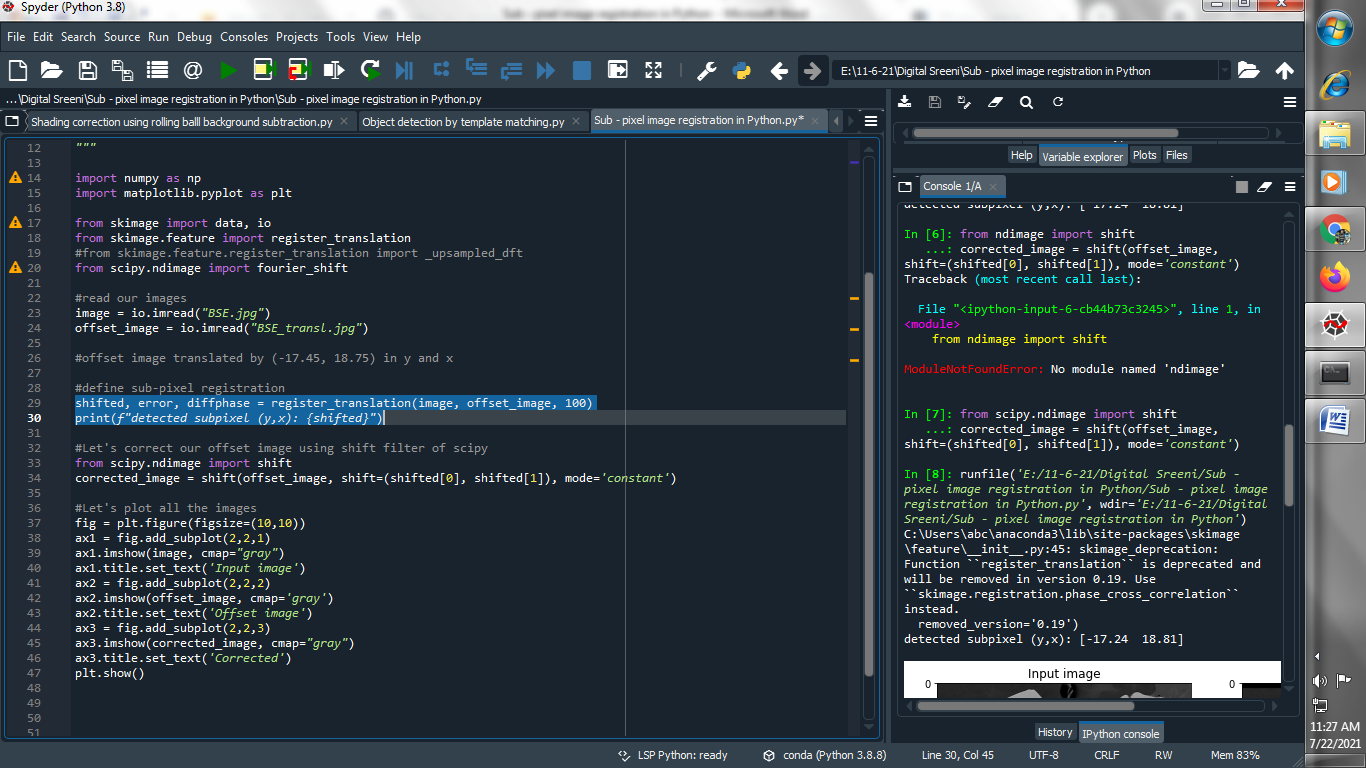
→ These algorithms can achieve registration with an accuracy equivalent to that of the conventional fast Fourier transform upsampling approach in a small fraction of the computation time and with greatly reduced memory requirements.

→ Their accuracy and computation time are compared for the purpose of evaluating a translation-invariant error metric.

**(1) Let’s read our images :**

****

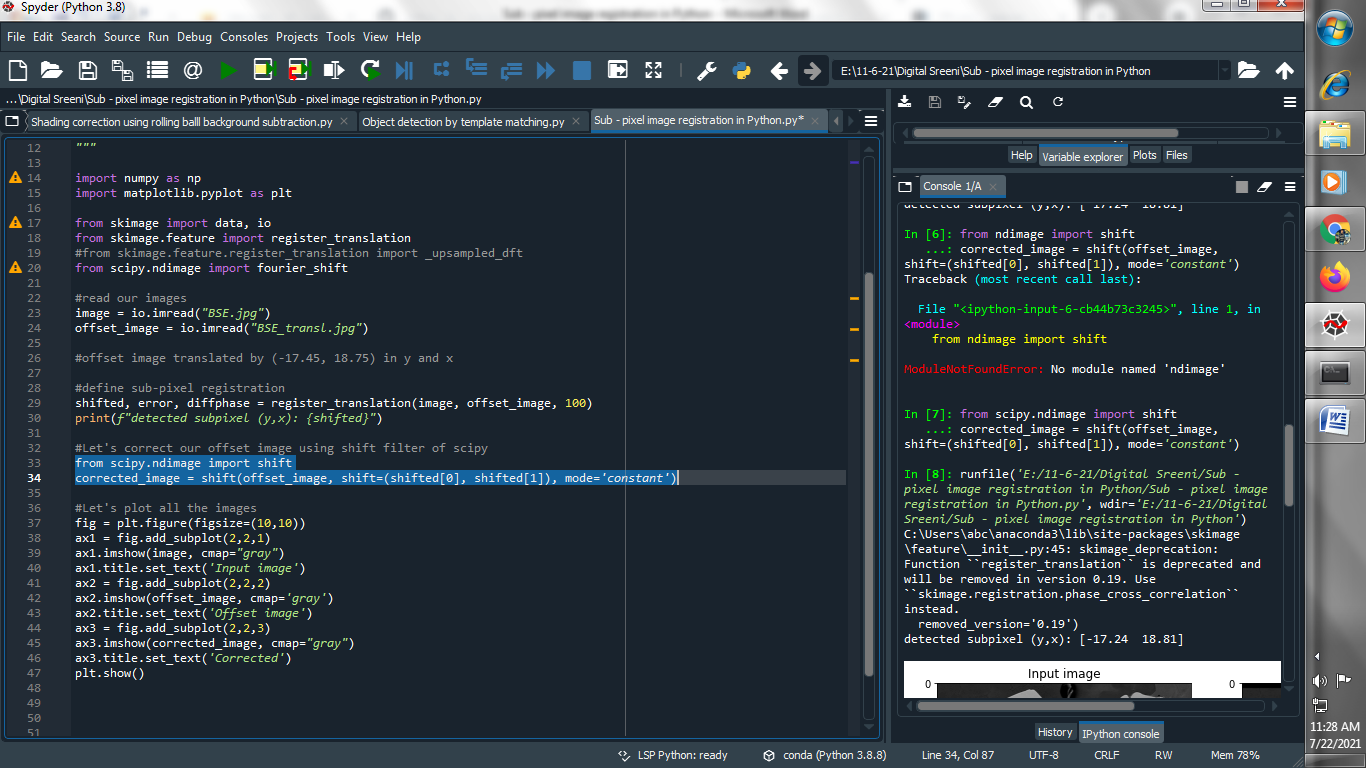
**(2) define sub-pixel registration :**

****

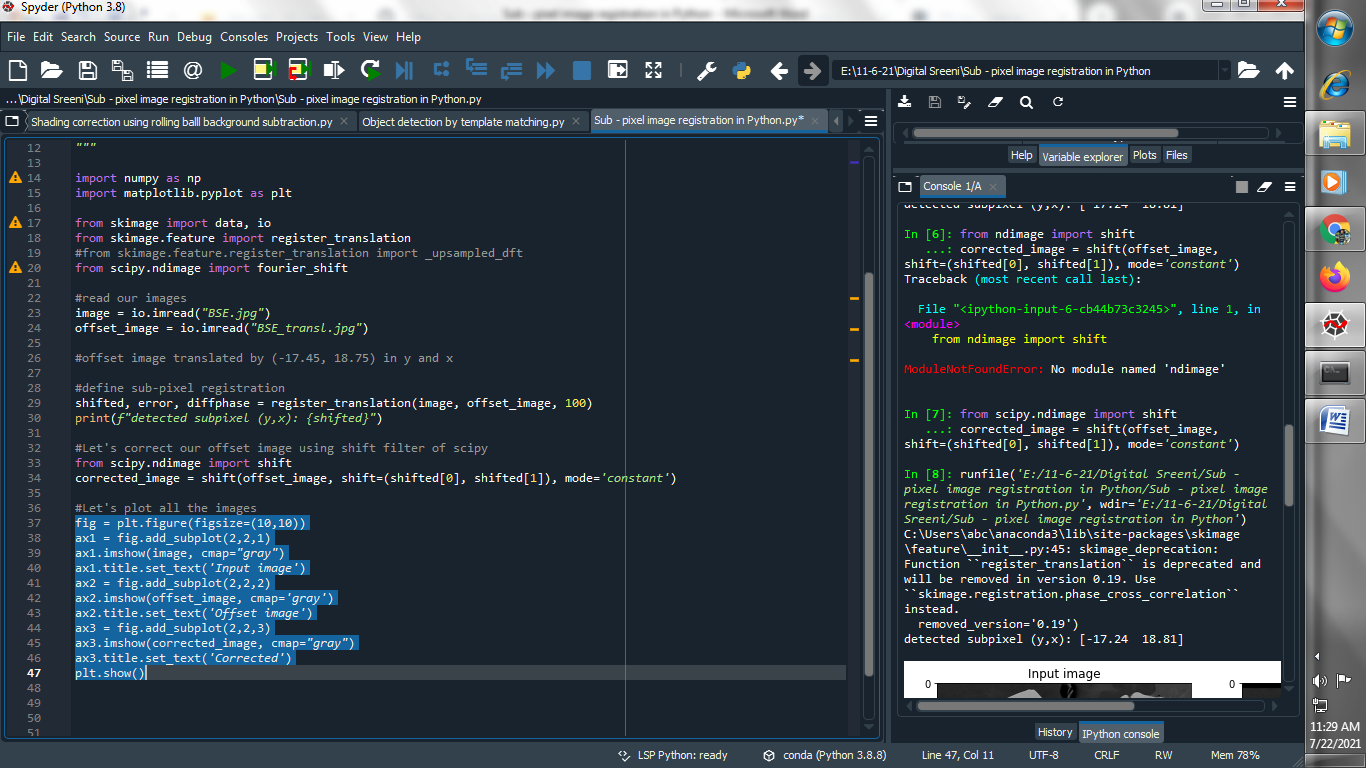
**Output :**

**detected subpixel (y,x): [-17.24 18.81]**

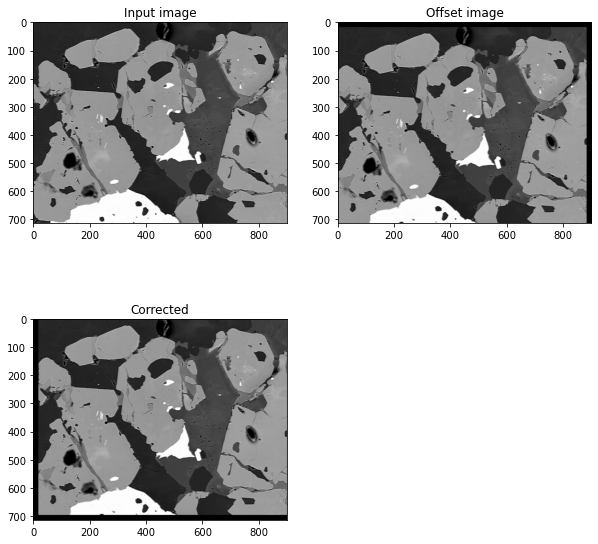
**(3) Let's correct our offset image using shift filter of scipy :**

****

**(4) Let’s plot all the images :**

****

**Output :**

****