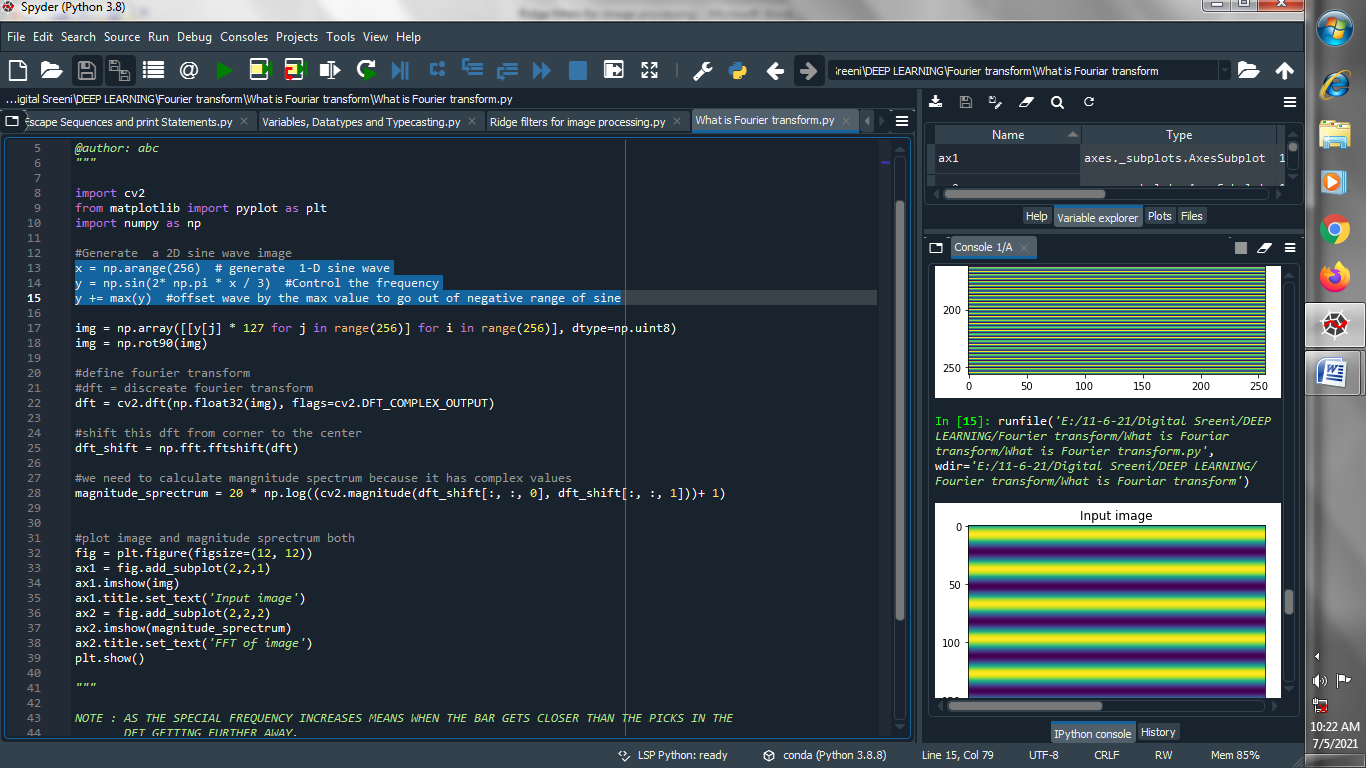
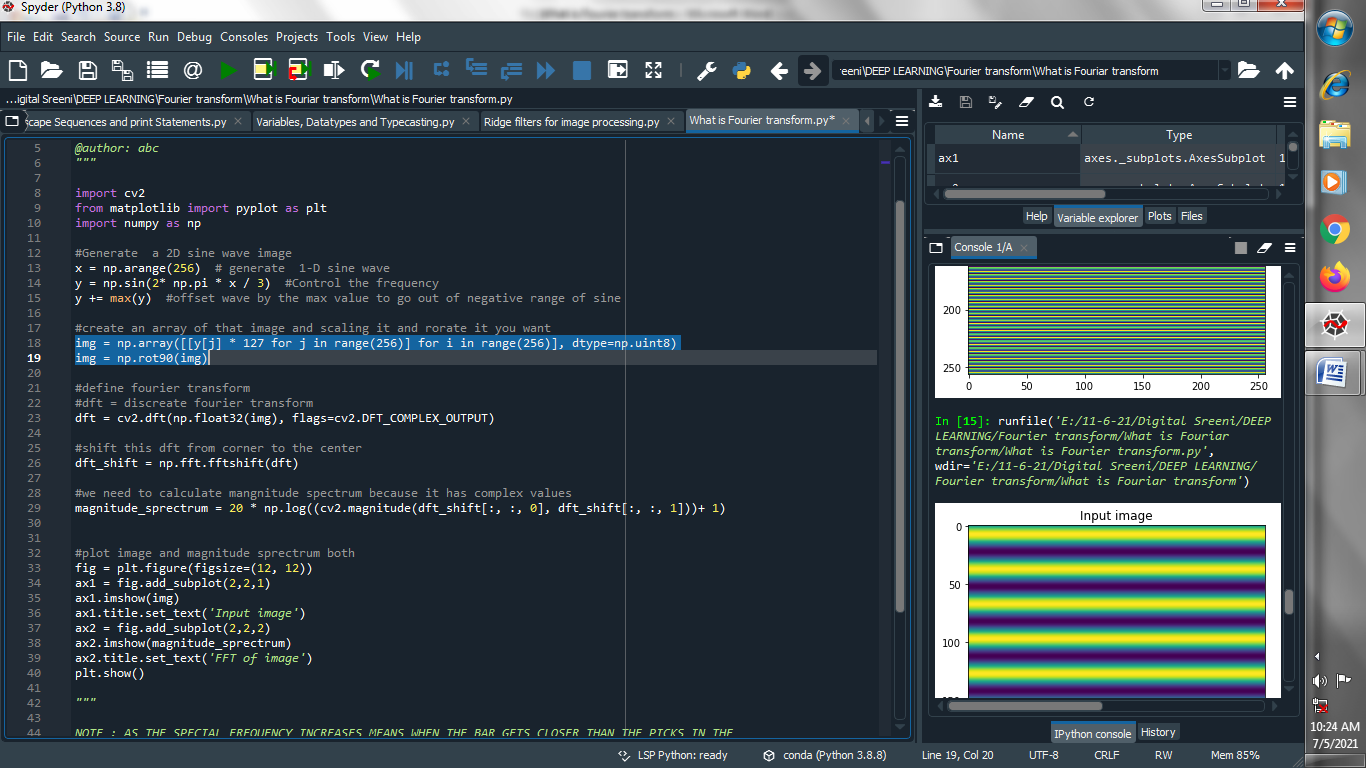
**Fourier Transform :**

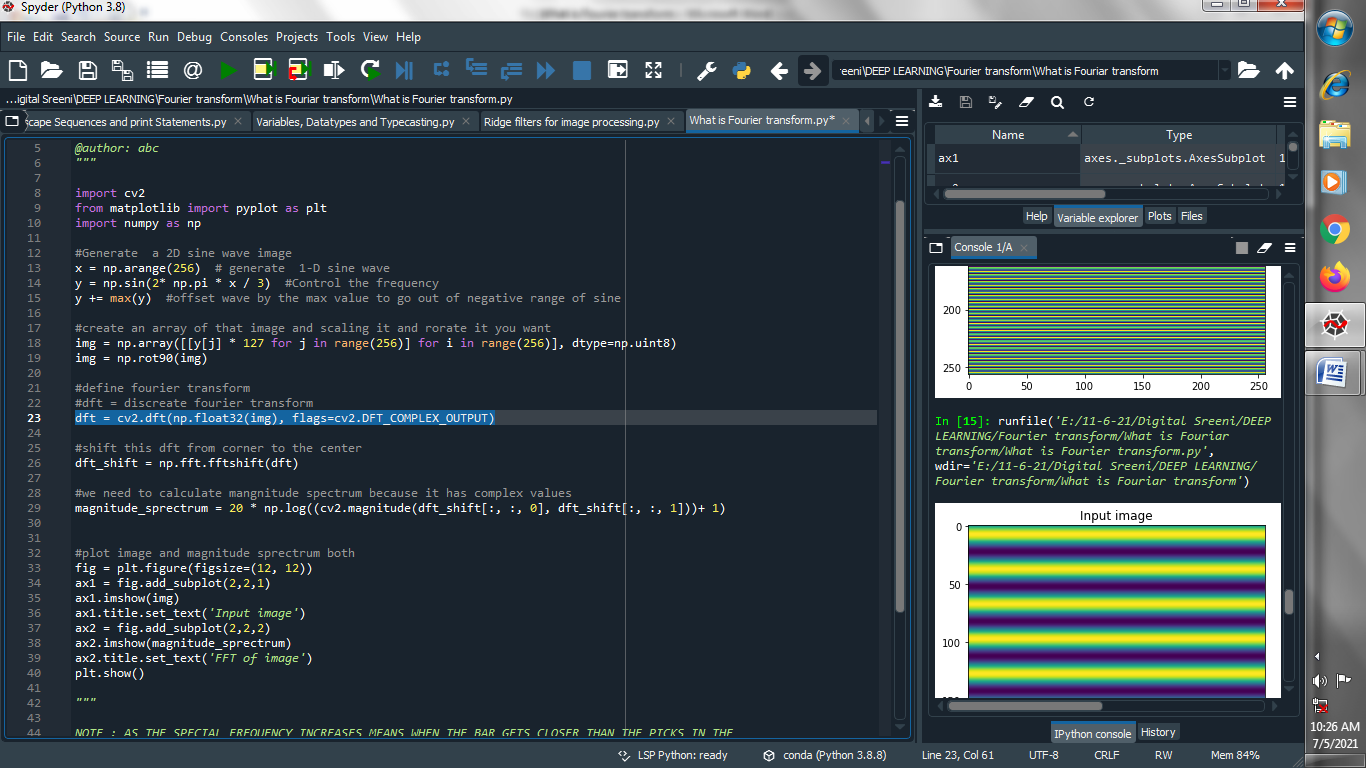
1. **Generate a 2D sine wave image :**

****

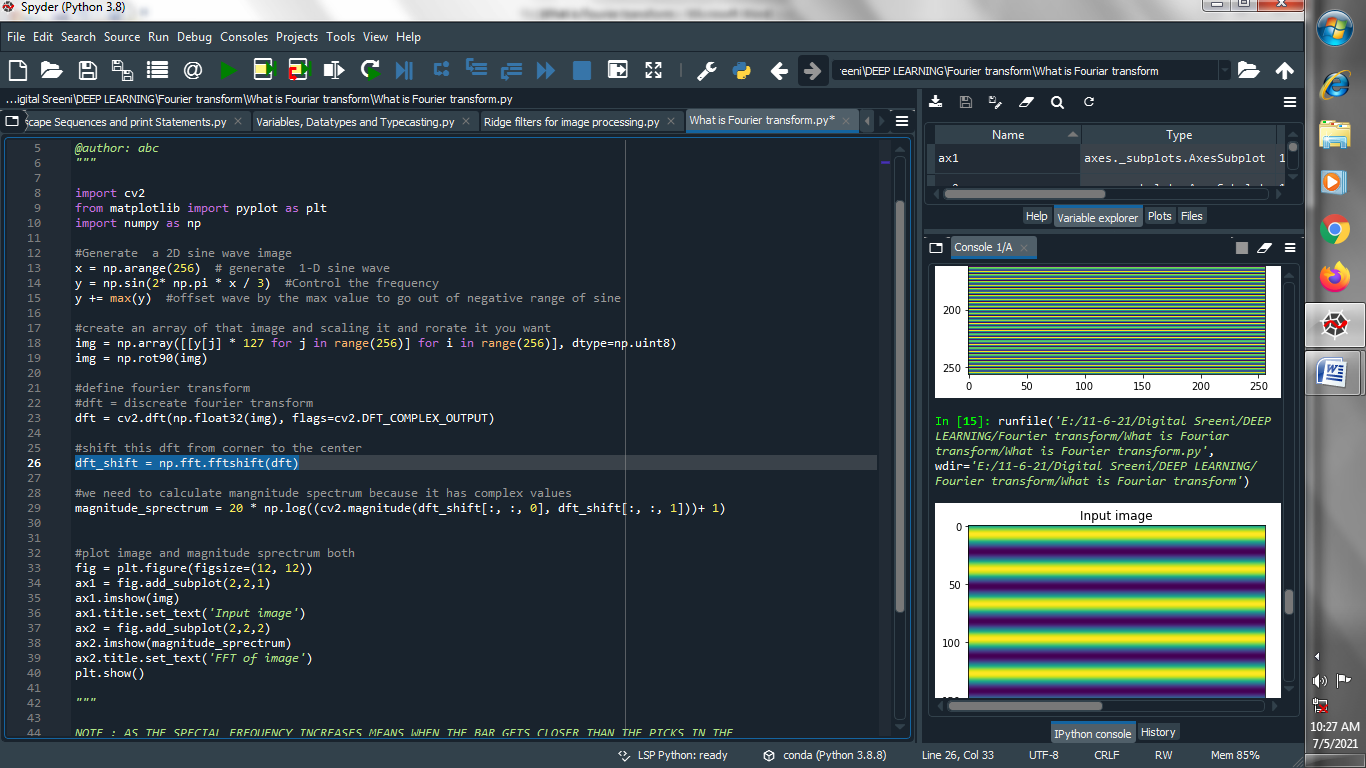
1. **Create an array of that image and scaling it and rotate :**

****

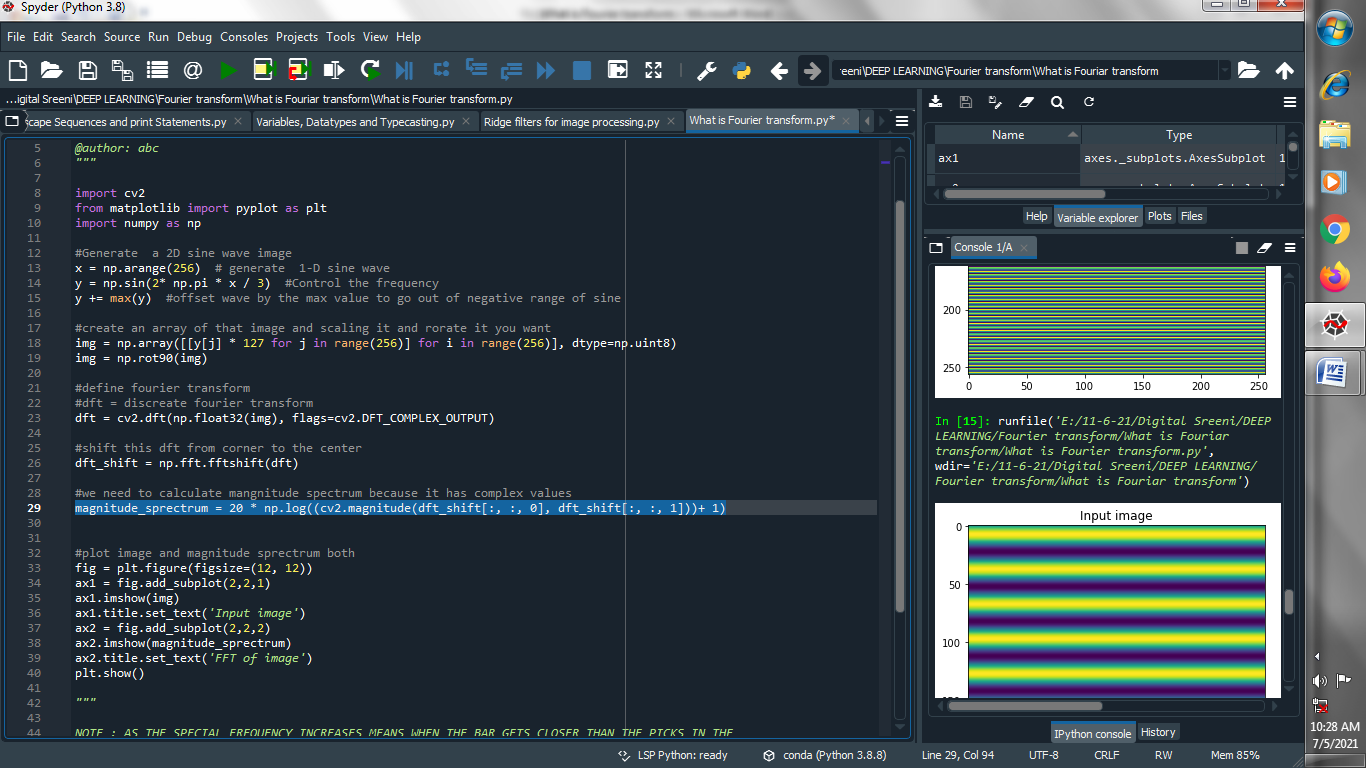
1. **Define fourier transform :**

****

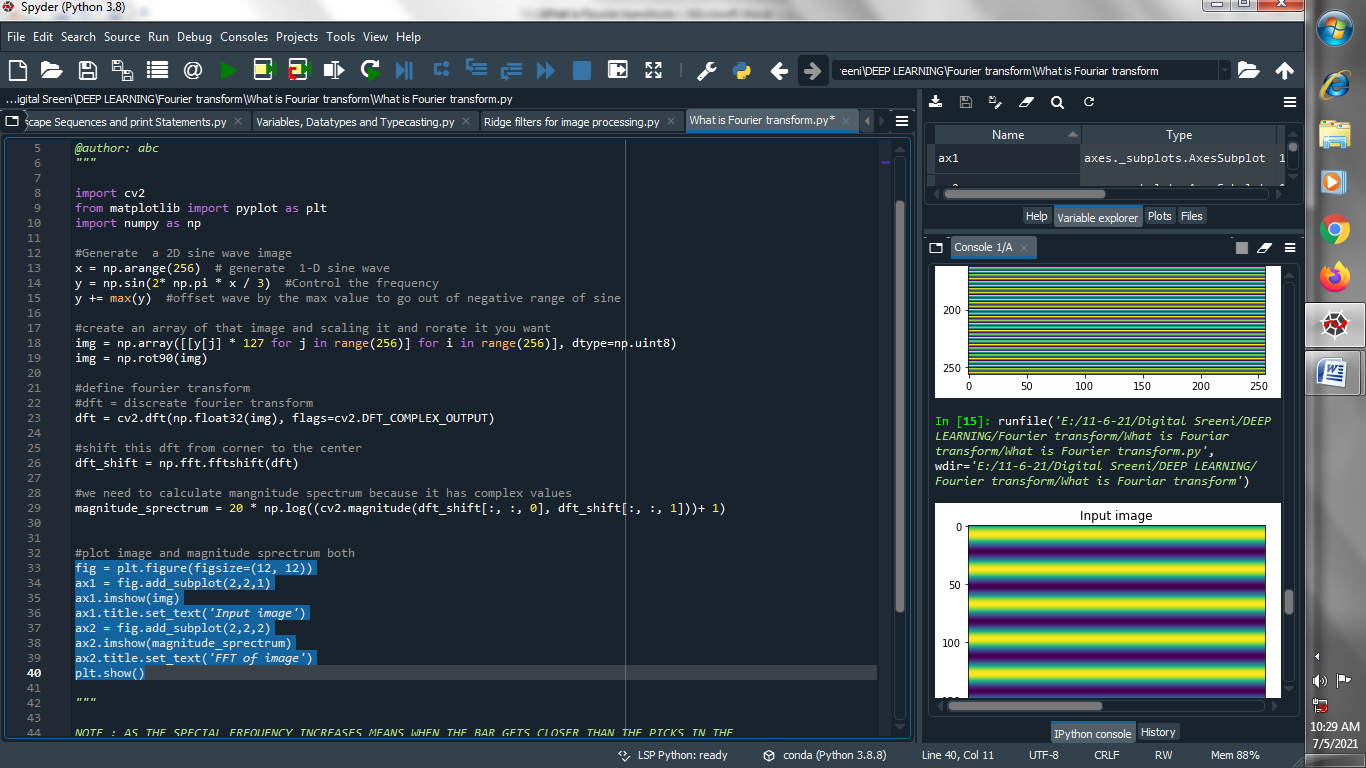
**(4) Shift this dft from corner to center :**

****

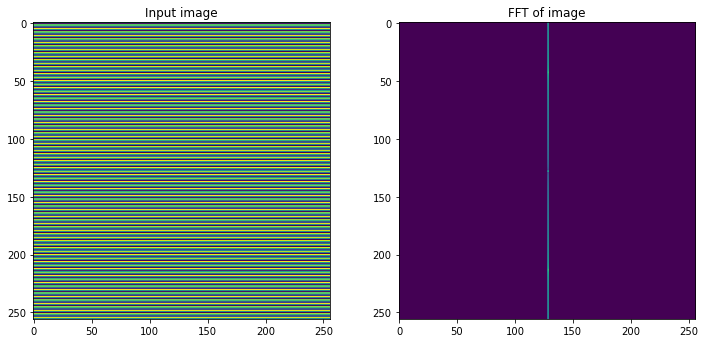
1. **we need to calculate magnitude spectrum because it has complex values .**



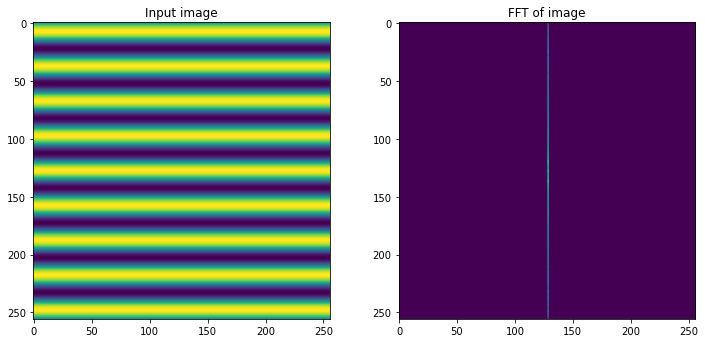
1. **Plot both image and magnitude spectrum :**

****

**Output :**

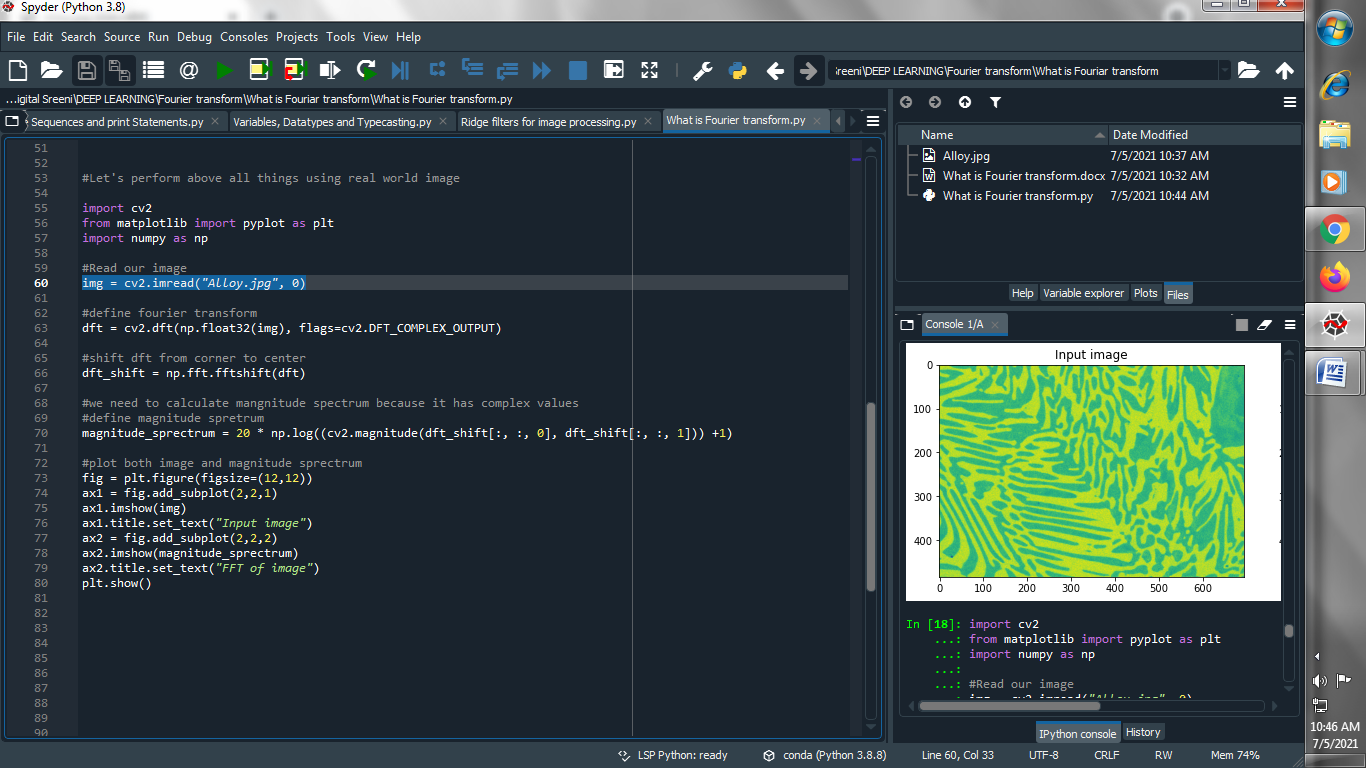
****

**Let’s increase the frequency :**

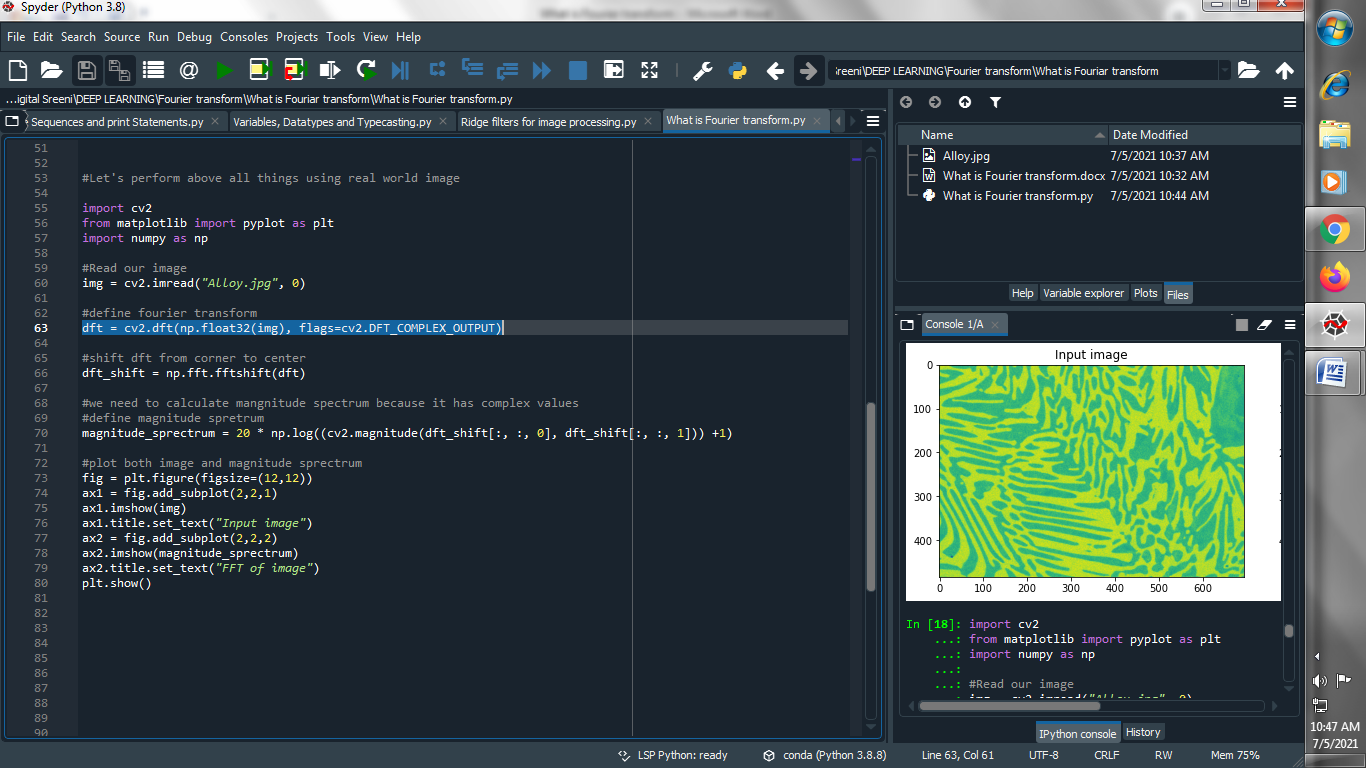
****

**→ Let’s perform above all things using real world image :**

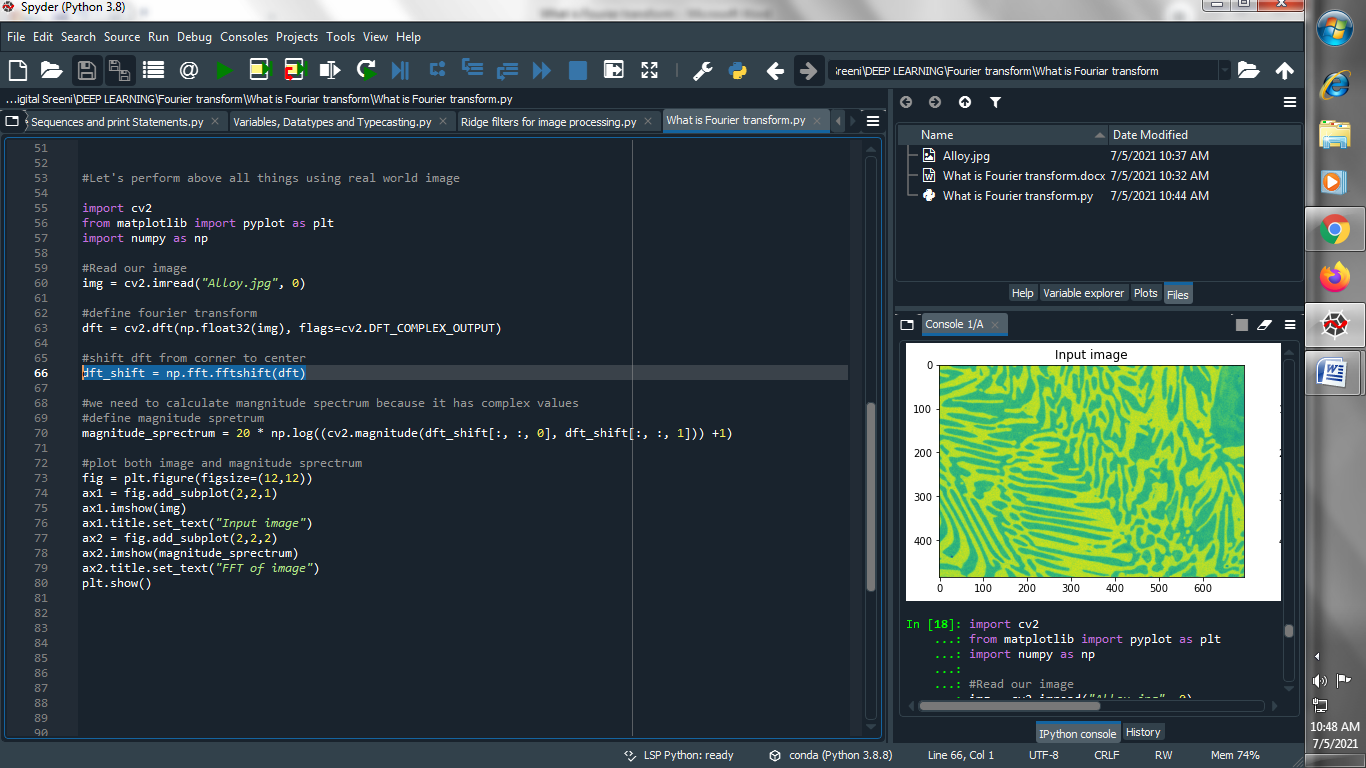
1. **Read our image :**

****

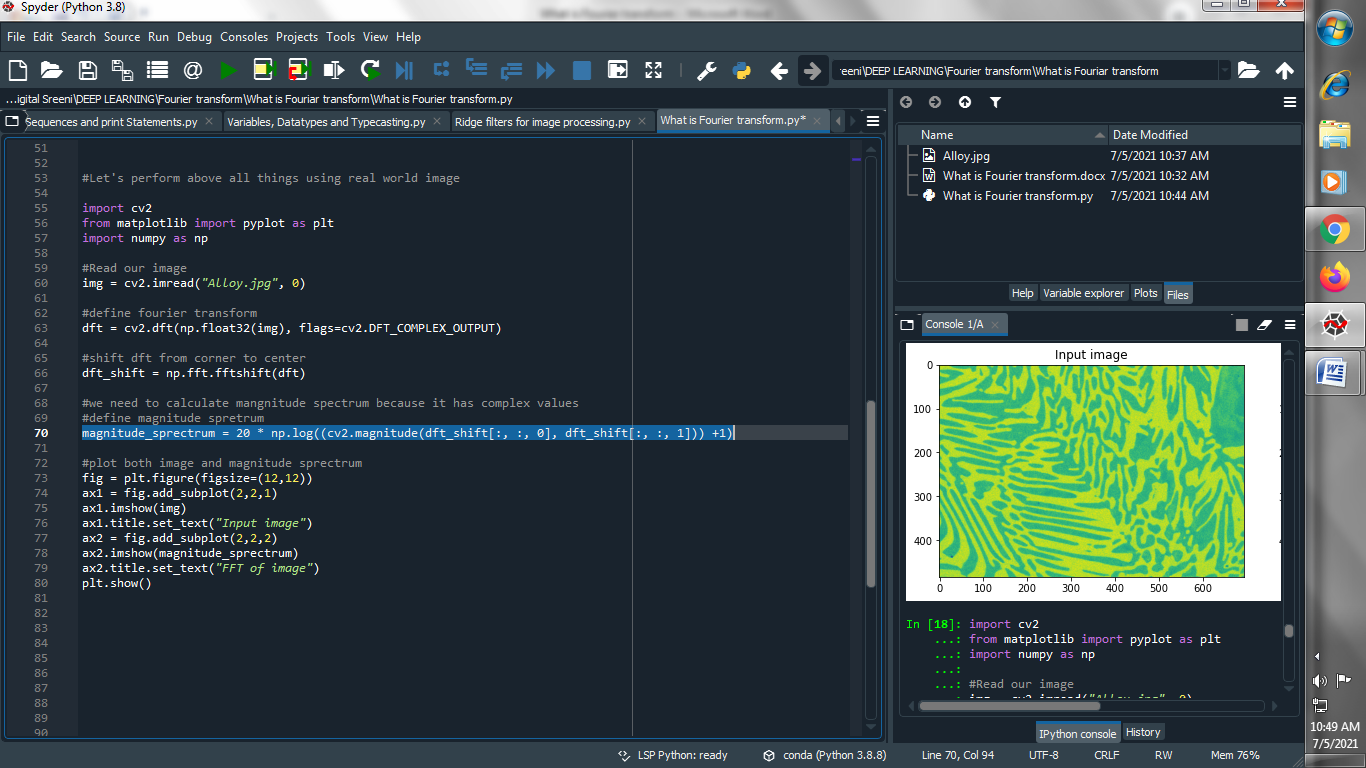
1. **Define fourier transform :**

****

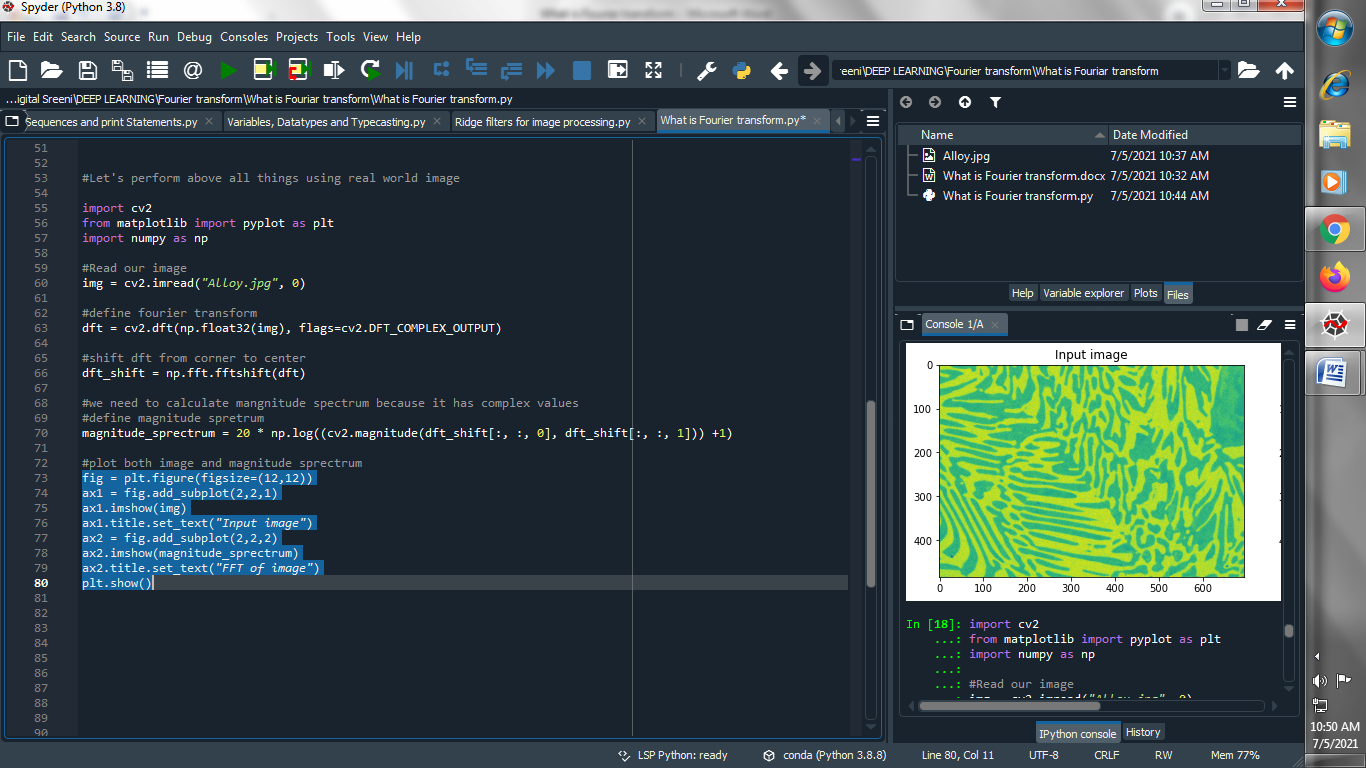
1. **Shift dft(discreate fourier transform) from corner to center :**

****

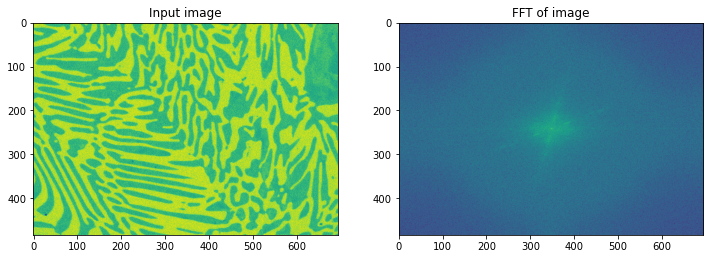
1. **Define magnitude sprectrum :**

****

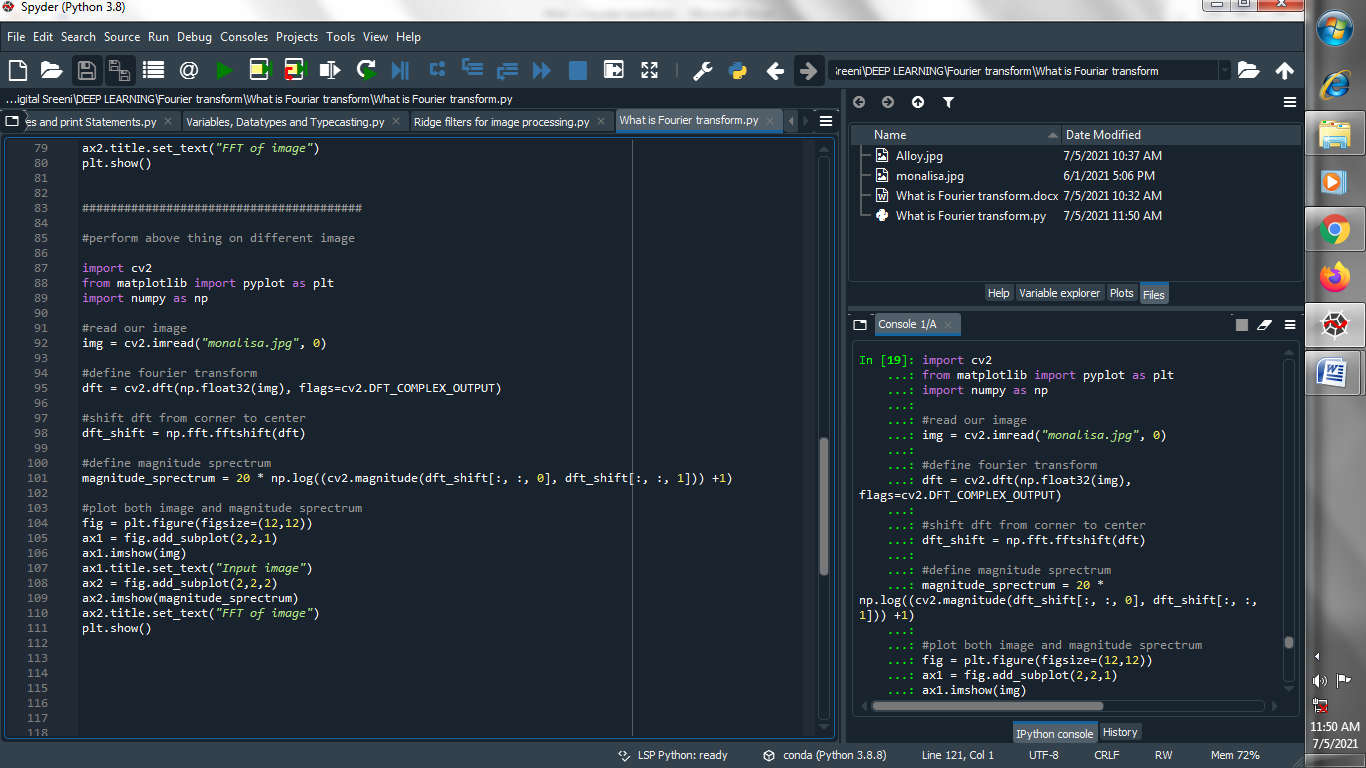
1. **Plot both image and magnitude sprectrum :**

****

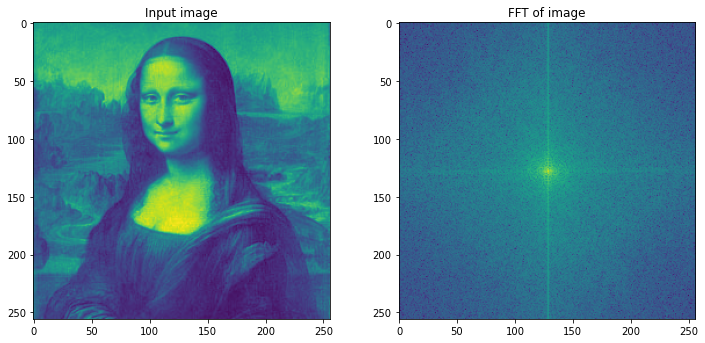
**Output :**

****

**→ Perform above thing on one more image for better understanding :**

****

**Output :**

****