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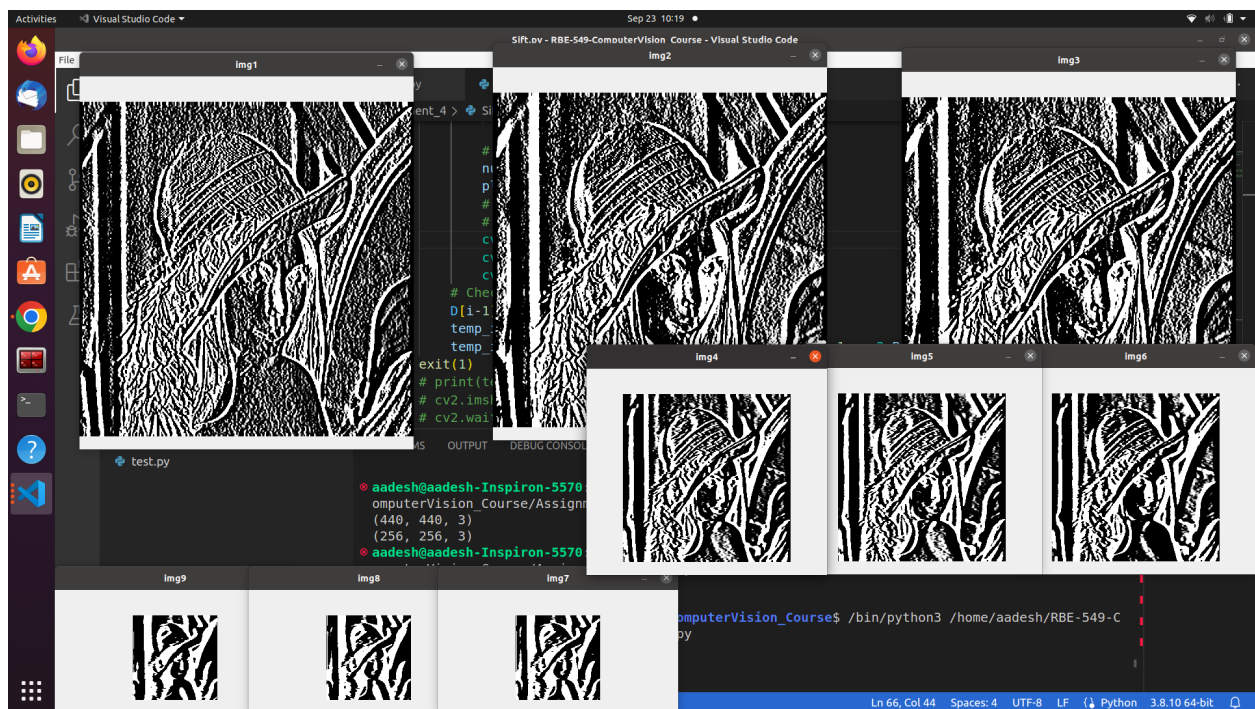
Week 4 Assignment Report

We perform the Sift feature algorithm from David Lowe:

Note: Details have been explained in the code for the algorithm

Scale Space extreme :

We first create a DOG pyramid with 3 octave with 3 levels in each.



These are the Dog pyramid of nine images

The location of all the extremas:

After the dog we find the extrema for the image in neighbour hodd of 27 pixels for each pixel, in each octave then we store those extrema values for each octave and then plot it out.

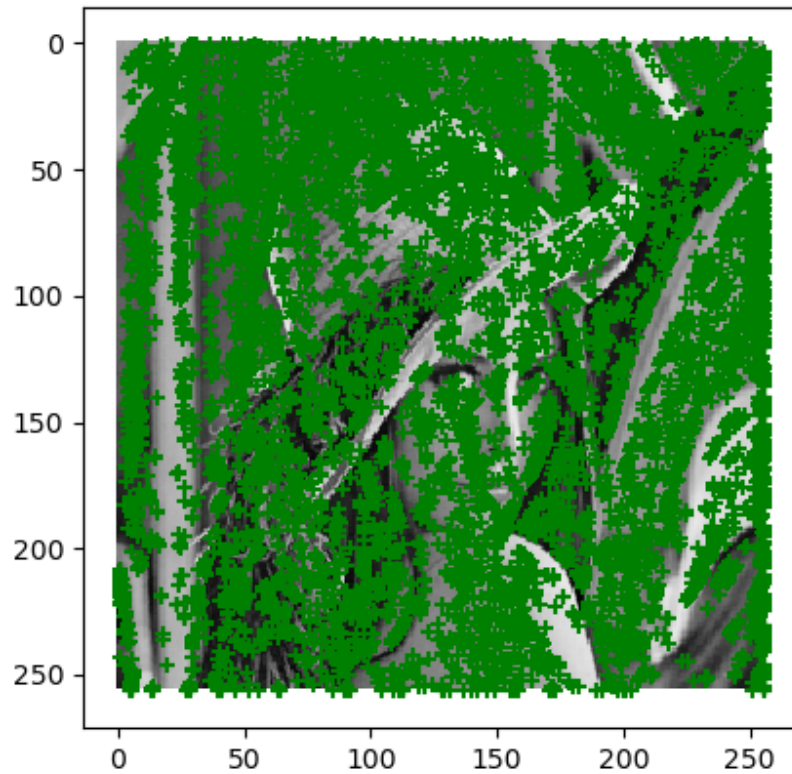


Image after first thresholding:

Then further we convolve and find the second order derivative and threshold them based on the value 0.1.

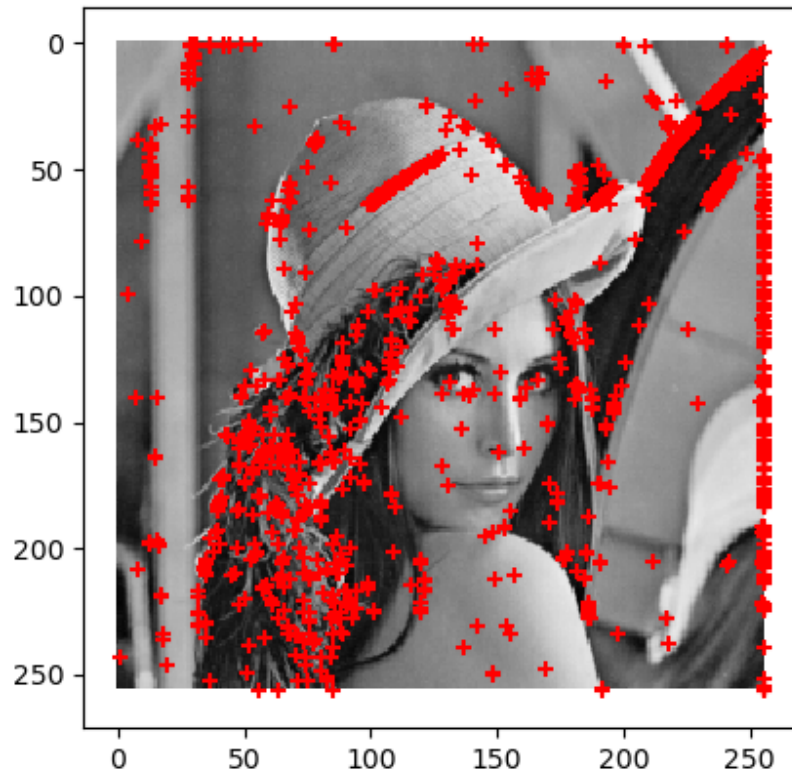


Image after the second thresholding:

Further we find the double derivatives (or the laplacian of the keypoints) and then threshold the points wrt double derivative in D_{xx} , D_{yy} and D_{xy}

and below is the final thresholded results

