

NOTE- In the matlab code I have used `imsave()` as it save proper images , while using `imread()` the images were not getting stored properly.

STEP 2 image:-

Here  $p = 2 \times M$  and  $q = 2 \times N$

This is the padding image



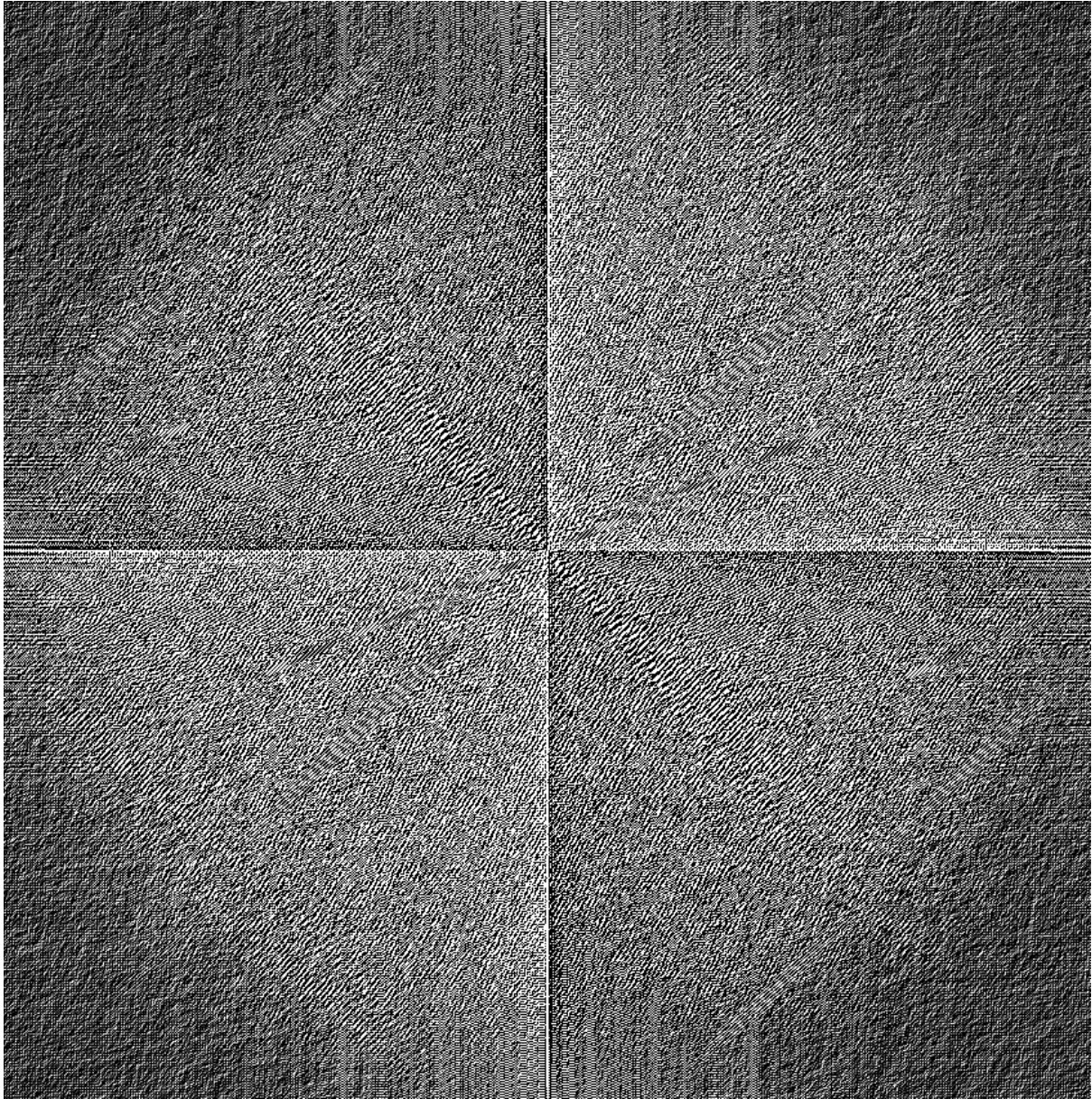
STEP 3 image-

Here I have multiplied the padded image with  $(-1)^{x+y}$ .



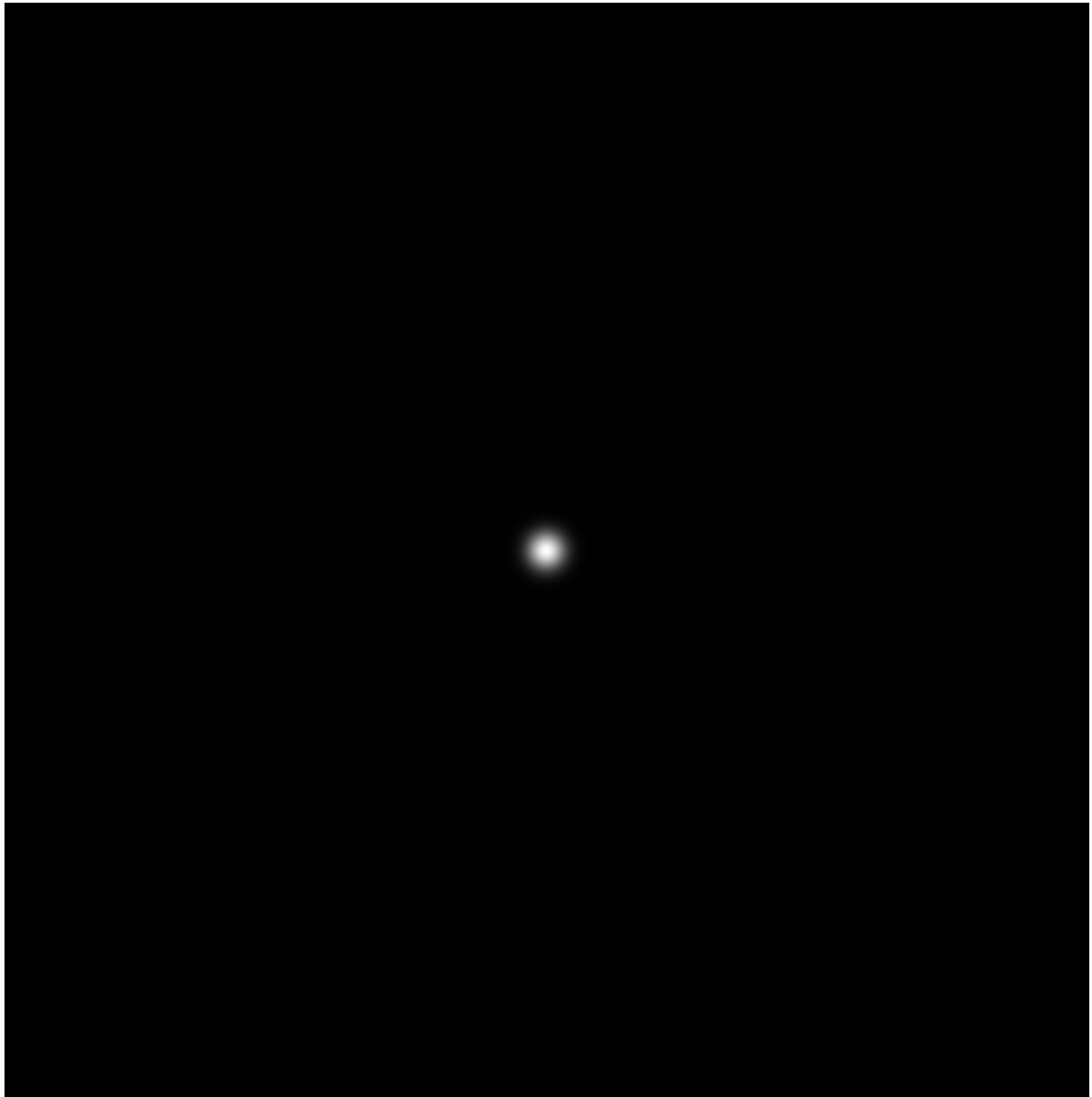
STEP 4 image:-

Converting the padded image to DFT.



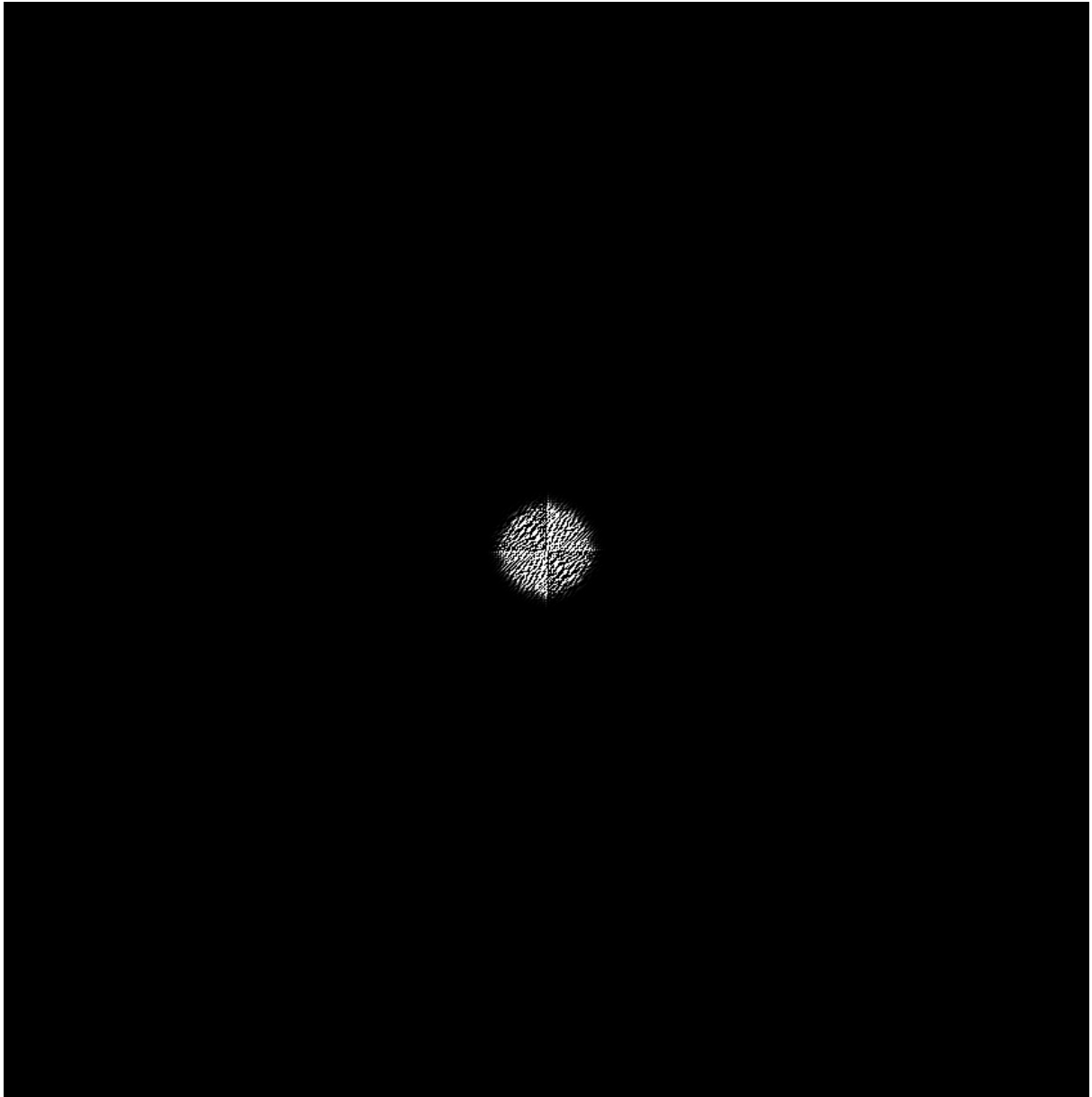
STEP 5 image:-

Here we have made  $H(u,v)$  gaussian low pass filter.



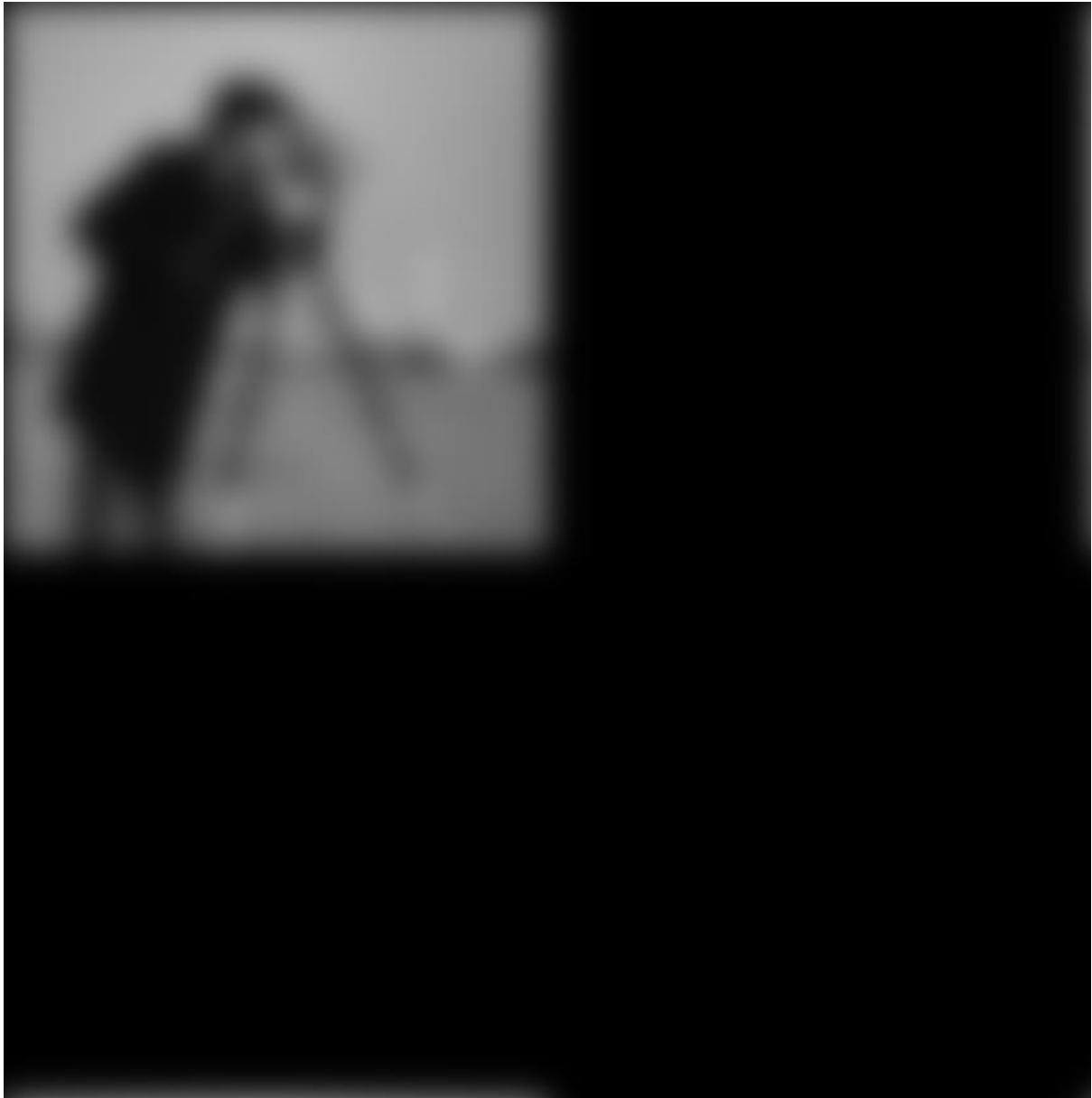
STEP 6 image:-

Multiplying the DFT image and  $H(u,v)$ .



STEP 7 image:-

Apply inverse DFT transformation and get back the padded image, after applying gaussian low pass filter



STEP 8 image:-

After obtaining the padded image , remove the padding and get the final image.

