HW 1.C for 1.a.ii (Magnitude Neutralization)

1.c) We believe that the Fast Fourier Transform will be the most time consuming.

1.c.i) This table is based on one function call per image. Not a combined time for all three images.
Also to note, these runtimes can vary widely each time the program is run.

Code Block	**Elapsed Time (averaged over 4 runs)**
Imread image	0.585700 E-02 seconds
Convert to Double type	0.326500 E-02 seconds
Convert to Grayscale	0.183425 E-02 seconds
2-D FFT	1.012050 E-02 seconds
Neutralizing the Magnitude	1.249530 E-02 seconds
2-D Inverse FFT	1.309500 E-02 seconds
Calculate Plot Limits to graph	1.752750 E-02 seconds

1.c.ii.2) fft2 and ifft2 each took 0.009 s and 0.006 s to run. Based off of one run.

Profile Summary

Generated 01-Mar-2018 17:11:12 using performance time.

Function Name	Calls	**Total Time**	Self Time*	Total Time Plot (dark band = self time)
HW1_1_a_ii	1	0.104 s	0.016 s	
imread	3	0.054 s	0.007 s	
imread>call_format_specific_reader	3	0.042 s	0.001 s	
imagesci\private\readbmp	3	0.040 s	0.001 s	
imagesci\private\imbmpinfo	3	0.030 s	0.003 s	
...\imbmpinfo>initializeBMPInfoStruct	3	0.019 s	0.001 s	
ima...i\private\initializeMetadataStruct	3	0.018 s	0.002 s	
datestr	3	0.016 s	0.002 s	
timefun\private\dateformverify	3	0.014 s	0.001 s	
timefun\private\formatdate	3	0.012 s	0.007 s	
close	1	0.011 s	0.003 s	
ifft2	3	0.009 s	0.009 s	
imagesci\private\readbmpdata	3	0.009 s	0.001 s	
ima...ivate\readbmpdata>bmpReadData24	3	0.008 s	0.004 s	
close>safegetchildren	1	0.007 s	0.001 s	
imagesci\private\imbmpinfo>readBMPInfo	3	0.007 s	0.001 s	
fft2	3	0.006 s	0.006 s	
allchild	1	0.006 s	0.003 s	
imagesci\private\imbmpinfo>readWin3xInfo	3	0.006 s	0.002 s	
cnv2icudf	3	0.005 s	0.005 s	
angle	3	0.004 s	0.004 s	
rgb2gray	3	0.003 s	0.002 s	
...te\imbmpinfo>readWin3xBitmapHeader	3	0.003 s	0.002 s	
ima...rivate\readbmpdata>readFromFile	3	0.003 s	0.002 s	
fileparts	3	0.003 s	0.002 s	

onCleanup>onCleanup.delete	7	0.002 s	0.001 s	
rot90	3	0.002 s	0.002 s	
imread>get_full_filename	3	0.001 s	0.001 s	
imread>parse_inputs	3	0.001 s	0.001 s	
cell.ismember	3	0.001 s	0.001 s	
ima...ate\imbmpinfo>readBMPFileHeader	3	0.001 s	0.001 s	
imagesci\private\imbmpinfo>getSignature	3	0.001 s	0.001 s	
rgb2gray>parse_inputs	3	0.001 s	0.001 s	
imagesci\private\imbmpinfo>postProcess	3	0.001 s	0.001 s	
...set(rootobj,'ShowHiddenHandles',Temp)	1	0.001 s	0.001 s	
...te\imbmpinfo>readVersion3xColormap	3	0.001 s	0.001 s	
allchild>getchildren	1	0.001 s	0.001 s	
imagesci\private\getFileFromURL	3	0.001 s	0.001 s	
onCleanup>onCleanup.onCleanup	7	0.001 s	0.001 s	
close>request_close	1	0.000 s	0.000 s	
uitools\private\allchildRootHelper	1	0.000 s	0.000 s	
close>getEmptyHandleList	1	0.000 s	0.000 s	
close>checkfigs	1	0.000 s	0.000 s	
ima...vate\readbmpdata>@()fclose(fid)	3	0.000 s	0.000 s	
datestr>getdateform	3	0.000 s	0.000 s	
ispc	3	0.000 s	0.000 s	
ima...ate\imbmpinfo>decodeCompression	3	0.000 s	0.000 s	
ima...rivate\imbmpinfo>@()fclose(fid)	3	0.000 s	0.000 s	