

## Black Box Test Plan: ImageEditor program

**Introduction:** Each test case below assumes the **ImageEditor** program is running and that the instructions for running the program have been displayed for the user. The text in bold in the **Description** column represents the test inputs to the program. You can stop program execution by pressing Ctrl+C.

**Test Files: (List each test file below. Submit each file when you submit your project)**

HINT: The Unix diff command may be used to tell whether or not two files are identical. For example,  
`diff HighContrastCSC116.ppm exp_HighContrastCSC116.ppm`

Test ID	Description	Expected Results	Actual Results
testIncorrectExtension  Author: Dr. Balik	Preconditions: ImageEditor program started  **HEADER** Enter input filename or Q to quit: <b>Picture.xyz</b>  (Ctrl+C to stop execution)	Invalid filename  Enter input filename or Q to quit:	Invalid filename  Enter input filename or Q to quit
testQuit  Author: Dr. Balik	Preconditions: ImageEditor program started  **HEADER** Enter input filename or Q to quit: <b>Q</b>	Program quits.	Program quits

testInvalidOption  Author: Dr. Balik	Preconditions: ImageEditor program started  <b>**HEADER**</b>  Enter input filename or Q to quit: <b>test-files/RedC.ppm</b> Enter output filename: <b>test-files/CIC.ppm</b> Enter H-igh Contrast, G-rey Scale, or C-hange Intensity: <b>change</b>  Enter input filename or Q to quit: <b>q</b>	Invalid option	Invalid option Enter inputfilename or Q to quit: q program exits
testInputFileNotFound  Author: Dr. Balik	Preconditions: ImageEditor program started  <b>**HEADER**</b> Enter input filename or Q to quit: <b>test-files/notafile.ppm</b>	File does not exist  Enter input filename or Q to quit:	Error, file is either not accepted or the file does not exist please try again.  Enter input filename or Q to quit:
testOutputFileExists  Author: Dr. Balik	Preconditions: ImageEditor program started  <b>**HEADER**</b> Enter input filename or Q to quit: <b>test-files/RedC.ppm</b> Enter output filename: <b>test-files/GSC.ppm</b>	test-files/GSC.ppm exists - OK to overwrite (y,n)?:	test-files/GSC.ppm exists - OK to overwrite (y,n)?:

<p>testOutputFileNotOverwritten</p> <p>Author: Dr. Balik</p>	<p>Check timestamp on GSC.ppm  <b>ls -l test-files/GSC.ppm</b></p> <p>Preconditions: ImageEditor program started</p> <p><b>**HEADER**</b></p> <p>Enter input filename or Q to quit:  <b>test-files/RedC.ppm</b></p> <p>Enter output filename:  <b>test-files/GSC.ppm</b></p> <p>test-files/GSC.ppm exists - OK to overwrite (y,n)? : <b>n</b></p> <p>Enter input filename or Q to quit: q</p> <p>Recheck timestamp  <b>ls -l test-files/GSC.ppm</b></p>	<p>Date and time for test-files/GSC.ppm has not changed</p>	<p>Date and time for test-files/GSC.ppm has not changed</p>

<p>testOutputFileOverwritten</p> <p>Author: Dr. Balik</p>	<p>Check timestamp on GSC.ppm <b>ls -l test-files/GSC.ppm</b></p> <p>Preconditions: ImageEditor program started</p> <p><b>**HEADER**</b></p> <p>Enter input filename or Q to quit: <b>test-files/RedC.ppm</b></p> <p>Enter output filename: <b>test-files/GSC.ppm</b></p> <p>test-files/GSC.ppm exists - OK to overwrite (y,n)?: <b>y</b></p> <p>Enter H-igh Contrast, G-rey Scale, or C-hange Intensity: <b>g</b></p> <p>Enter input filename or Q to quit: <b>Q</b></p> <p>Recheck timestamp <b>ls -l test-files/GSC.ppm</b></p>	<p>Date and time for test-files/GSC.ppm has changed</p>	<p>Date and time for test-files/GSC.ppm has changed</p>
<p>testSinglePixelToHighContrast</p> <p>Author: Dr. Balik</p>	<p>Enter input filename or Q to quit: <b>test-files/test1.ppm</b></p> <p>Enter output filename: <b>test-files/out_test1.ppm</b></p> <p>Enter H-igh Contrast, G-rey Scale, or C-hange Intensity: <b>h</b></p> <p>Enter input filename or Q to quit: <b>q</b></p>	<p>out_test1.ppm is created in the test-files directory.</p> <p>out_test1.ppm is exactly the same as exp_test1.ppm:</p> <p>P3 1 1 255 0 255 255</p>	<p>out_test1.ppm is created in the test-files directory.</p> <p>out_test1.ppm is exactly the same as exp_test1.ppm:</p> <p>P3 1 1 255 0 255 255</p>

<p>testingGreyScalingAGr eyScaledphoto Author: Nicholas Loftin</p>	<p>Enter input filename or q to quit: test-files/test2.ppm Enter output file: test-files/out_test2.ppm Enter H-igh Contrast, G-rey Scale, or C-hange Intensity: <b>g</b></p> <p><b>Enter input filename or q to quit: q</b></p>	<p>Out_test2.ppm is created in the test-files directory.</p> <p>Out_test2.ppm is exactly the same as the input file</p>	<p>Out_test2.ppm is created in the test-files directory.</p> <p>Out_test2.ppm is exactly the same as the input file</p>
<p>testingOverloadingOfC olors Author: Nicholas Loftin</p>	<p>Enter a file name to edit or q to quit: test-files/test3.ppm Enter an output file name: test-files/out_test3.ppm out_test3.ppm already exists. Is it OK to overwrite the existing file? (y or n)y Enter H-igh Contrast, G-rey Scale, or C-hange intensity: Choice: c Enter the change in red you want (-255 - 255): -100 Enter the change in green you want (-255 - 255): 300 Enter the change in blue you want (-255 - 255): 20 Restarting Enter a file name to edit or q to quit: q</p>	<p>Out_test3.ppm is created in the test-files directory</p> <p>Out_test3.ppm accomodates for the change in color if it is too drastic</p> <p>Original: P3 1 1 255 45 128 220</p> <p>Expected final: P3 1 1 255 0 255 240</p>	<p>Out_test3.ppm is created in the test-files directory</p> <p>Out_test3.ppm is exactly as predicted P3 1 1 255 0 255 240</p>

<p>attemptingToRevertContrast</p> <p>Author: Nicholas Loftin</p>	<p>Enter a file name to edit or q to quit: test-files/test4.ppm</p> <p>Enter an output file name: test-files/out_test4.ppm</p> <p>out_test3.ppm already exists. Is it OK to overwrite the existing file? (y or n)y</p> <p>Enter H-igh Contrast, G-rey Scale, or C-hange intensity: Choice: c</p> <p>Enter the change in red you want (-255 - 255): 200</p> <p>Enter the change in green you want (-255 - 255): -75</p> <p>Enter the change in blue you want (-255 - 255): 40</p> <p>Restarting</p> <p>Enter a file name to edit or q to quit: q</p>	<p>Image used was modified version, and the inputs used are the reverse of what was done to the original.</p> <p>Out_test4.ppm is created in the test-files directory</p> <p>Out_test4.ppm is exactly the same as the original unedited image</p>	<p>Out_test4.ppm is created in the test-files directory</p> <p>Out_test4.ppm is exactly the same as the original unedited image</p>
<p>blackImageToGreyscale</p> <p>Author: Nicholas Loftin</p>	<p>Enter input filename or Q to quit: <b>test-files/test5.ppm</b></p> <p>Enter output filename or Q to quit: <b>test-files/out_test5.ppm</b></p> <p>Enter H-igh Contrast, G-rey Scale, or</p>	<p>Out_test5 is created in the test-files directory</p> <p>Out_test5.ppm is the exact same as the input file</p>	

	<p>C-hange intensity: <b>G</b></p> <p>Enter input filename or Q to quit: <b>Q</b></p>	<p>P3</p> <p>2 2</p> <p>255</p> <p>0 0 0 0 0</p> <p>0 0 0 0 0</p> <p>0 0 0 0 0</p>	
<p>greyScaleToHighContrast</p> <p>Author: Nicholas Loftin</p>	<p>Enter a file name to edit or q to quit: text.ppm</p> <p>Enter an output file name: textgrey.ppm</p> <p>Enter H-igh Contrast, G-rey Scale, or C-hange intensity:</p> <p>Choice: g</p> <p>Restarting</p> <p>Enter a file name to edit or q to quit: test-files/test6.ppm</p> <p>Enter an output file name: test-files/out_test6.ppm</p> <p>Enter H-igh Contrast, G-rey Scale, or C-hange intensity:</p> <p>Choice: h</p> <p>Restarting</p> <p>Enter a file name to edit or q to quit: q</p>	<p>Because of the small scale of the image, there should be nothing left after the high intensity method</p> <p>The image used was the red letter c in front of a black background</p> <p>Out_test6.ppm is created in test-files directory</p> <p>Out_test6.ppm is completely black</p>	<p>Out_test6.ppm is created in test-files directory</p> <p>Out_test6.ppm is completely black</p>
<p>greyScaleTestWithOnePixel</p>	<p>Enter input filename or q to quit: test-files/test7.ppm</p>	<p>out_test5.ppm is created in the test-files directory.</p>	<p>out_test5.ppm is created in the test-files directory.</p>

Author: Nicholas Loftin	Enter output file: test-files/out_test7.ppm Enter H-igh Contrast, G-rey Scale, or C-hange Intensity: <b>g</b>  <b>Enter input filename or q to quit: q</b>	out_test7.ppm is exactly the same as exp_test7.ppm: P3 1 4 255 150 150 150 160 160 160 200 200 200 45 45 45	out_test7.ppm is exactly the same as exp_test7.ppm: P3 1 4 255 150 150 150 160 160 160 200 200 200 45 45 45
testConvertLargeFileTo HighContrast  Author: Dr. Balik	Preconditions: ImageEditor program started  <b>**HEADER**</b>  Enter input filename or Q to quit: <b>test-files/ColorfulCSC116.ppm</b> Enter output filename: <b>test-files/HighContrastCSC116.ppm</b> Enter H-igh Contrast, G-rey Scale, or C-hange Intensity: <b>H</b>  Enter input filename or Q to quit: <b>Q</b>	HighContrastCSC116.ppm is created in the test-files directory.  HighContrastCSC116.ppm is exactly the same as exp_HighContrastCSC116.pp m	HighContrastCSC116.ppm is created in the test-files directory.  HighContrastCSC116.ppm is exactly the same as exp_HighContrastCSC116.ppm
testConvertLargeFileTo GreyScale	Preconditions: ImageEditor program started	GreyScaleCSC116.ppm is created in the test-files directory.	GreyScaleCSC116.ppm is created in the test-files directory.



Author: Dr. Balik	<p><b>**HEADER**</b></p> <p>Enter input filename or Q to quit:  <b>test-files/ColorfulCSC116.ppm</b></p> <p>Enter output filename:  <b>test-files/GreyScaleCSC116.ppm</b></p> <p>Enter H-igh Contrast, G-rey Scale, or  C-hange Intensity: <b>g</b></p> <p>Enter input filename or Q to quit: <b>q</b></p>	<p>GreyScaleCSC116.ppm is exactly the same as exp_GreyScaleCSC116.ppm</p>	<p>GreyScaleCSC116.ppm is exactly the same as exp_GreyScaleCSC116.ppm</p>
testLargeFileChangeIntensity	<p>Preconditions: ImageEditor program started</p> <p><b>**HEADER**</b></p> <p>Enter input filename or Q to quit:  <b>test-files/ColorfulCSC116.ppm</b></p> <p>Enter output filename:  <b>test-files/ChangeIntensityCSC116.ppm</b></p> <p>Enter H-igh Contrast, G-rey Scale, or  C-hange Intensity: <b>C</b></p> <p>Red change amount: <b>-50</b></p> <p>Green change amount: <b>100</b></p> <p>Blue change amount: <b>200</b></p> <p>Enter input filename or Q to quit: <b>q</b></p>	<p>ChangeIntensityCSC116.ppm is created in the test-files directory.</p> <p>ChangeIntensityCSC116.ppm is exactly the same as exp_ChangeIntensityCSC116.ppm</p>	<p>ChangeIntensityCSC116.ppm is created in the test-files directory.</p> <p>ChangeIntensityCSC116.ppm is exactly the same as exp_ChangeIntensityCSC116.ppm</p>