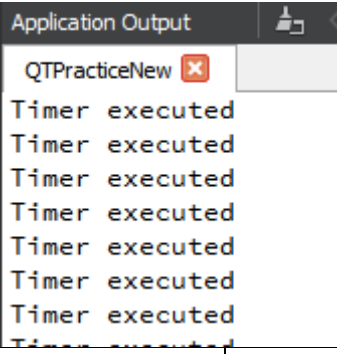






Software Testing Report

QT Unit Test Cases

ID	testCaseMyTimer	Description:	Creates a timer
Test Type: Unit	Quantity	Success criteria:	Pass
Number of attempts:	1	Comments	This timer is created for the saving function.
List of equipment/requirements	Qt with QTesting		
Setup instruction	Run the program (Timer starts as soon as program starts)		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans-Software Tester		
Individual results:	<p>Totals: 3 passed, 0 failed, 0 skipped, 0 blacklisted, 1ms ***** Finished testing of MyTimer *****</p> 		
Test Date:	29/2/20	Result	Creates a timer

ID	testCaseSortAscendingName	Description:	Sort images into ascending order by name
Test Type: Unit	Quantity	Success criteria:	Pass
Number of attempts:	1	Comments	A bubble sort is used to implement this algorithm.
List of equipment/requirements	Qt with QTesting		
Setup instruction	<ol style="list-style-type: none"> 1. Once image/class names loaded to correct widget 2. Select sort by Name (Asc) from the dropdown 3. Press Sort 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans – Software Tester		

Individual results:	Pass   ***** Start testing of sort ***** Config: Using QTest library 5.14.1, Qt 5.14.1 (i386-little_endian-i7.3.0) PASS : sort::initTestCase() PASS : sort::test_case1() PASS : sort::test_case2() PASS : sort::cleanupTestCase() Totals: 4 passed, 0 failed, 0 skipped, 0 blacklisted, 27ms ***** Finished testing of sort ***** Fail (Purposely) FAIL! : sort::test_case2() Compared lists differ at index 0. Actual (sortedList): "tiger" Expected (list2): "deer" ../sortingAlgorithm/tst_sortasc.cpp(85) : failure location PASS : sort::cleanupTestCase() Totals: 3 passed, 1 failed, 0 skipped, 0 blacklisted, 2ms ***** Finished testing of sort *****		
Test Date:	26/03/2020	Result	Passed as expected.

ID	testCaseSortDescendingName	Description:	Sort images into descending order by name
Test Type: Unit	Quantity	Success criteria:	Pass
Number of attempts:	1	Comments	Another bubble sort is used to implement the descending algorithm.
List of equipment/requirements	Qt with QTest		
Setup instruction	1. Once image/class names loaded to correct widget 2. Select sort by Name (Desc) from the dropdown 3. Press Sort		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans – Software Tester		
Individual results:	Pass   ***** Start testing of sort ***** Config: Using QTest library 5.14.1, Qt 5.14.1 (i386-little_endian-i7.3.0) PASS : sort::initTestCase() PASS : sort::test_case1() PASS : sort::test_case2() PASS : sort::cleanupTestCase() Totals: 4 passed, 0 failed, 0 skipped, 0 blacklisted, 27ms ***** Finished testing of sort ***** Fail (Purposely)		

	<pre> FAIL! : sort::test_case2() Compared lists differ at index 1. Actual (sortedList): "lion" Expected (list2): "cow" ./sortingAlgorithm/tst_sortasc.cpp(85) : failure location PASS : sort::cleanupTestCase() Totals: 3 passed, 1 failed, 0 skipped, 0 blacklisted, 45ms ***** Finished testing of sort ***** </pre>		
Test Date:	26/03/2020	Result	Passed as expected.

ID	testCaseSearchImage	Description:	The user will be able to search for an image located in the image widget list.
Test Type: Unit	Quantity	Success criteria:	Pass
Number of attempts:	2	Comments	This is a binary search algorithm.
List of equipment/requirements	Qt with QTesting		
Setup instruction	1. Type desired image into the search bar located above the images window 2. Press Enter		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans – Software Tester		
Individual results:	<pre> ***** Start testing of search ***** Config: Using QTest library 5.14.1, Qt 5.14.1 (x86_64-little_endian-llp6 PASS : search::initTestCase() PASS : search::test_case1() PASS : search::cleanupTestCase() Totals: 3 passed, 0 failed, 0 skipped, 0 blacklisted, 43ms ***** Finished testing of search ***** 18:42:30: C:\Users\Harry\Documents\Uni\Year 2\Software Design and Impleme Fail Purposely: ***** Start testing of search ***** Config: Using QTest library 5.14.1, Qt 5.14.1 (x86_64-little_endian-llp6 PASS : search::initTestCase() FAIL! : search::test_case1() Compared values are not the same Actual (m) : 1 Expected (testIndex): 2 ./searchAlgorithm/tst_search.cpp(70) : failure location PASS : search::cleanupTestCase() Totals: 2 passed, 1 failed, 0 skipped, 0 blacklisted, 14ms ***** Finished testing of search ***** </pre>		
Test Date:	27/03/2020	Result	Passed as expected.

ID	testCaseLinkedList	Description:	The linked list will be used to store data for each image.
Test Type: Unit	Quantity	Success criteria:	Pass


Number of attempts:	1	Comments	This is a QTest for the linked list.
List of equipment/requirements	Qt with QTesting		
Setup instruction	No setup instruction		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans – Software Tester		
Individual results:	<pre> ***** Start testing of LinkedList ***** Config: Using QTest library 5.14.1, Qt 5.14.1 (i386-little_endian-ilp32 s PASS : LinkedList::initTestCase() PASS : LinkedList::cleanupTestCase() Totals: 2 passed, 0 failed, 0 skipped, 0 blacklisted, 3ms ***** Finished testing of LinkedList ***** 18:52:27: C:\Users\Harry\Documents\Uni\Year 2\Software Design and Implemen </pre>		
Test Date:	04/04/2020	Result	Fail- QTest works as expected but linked list failed to be implemented in source code.

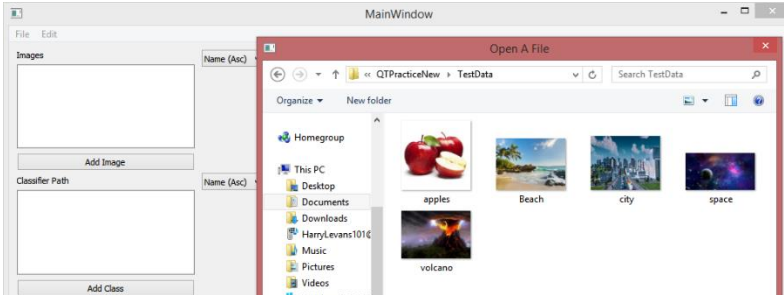
Functional and Acceptance Testing


For the functional and acceptance tests, all functionalities of the program, recognised by the specification and the requirements list are included below in the Test Cases. The acceptance tests, those carried out by an end user can also be found below.

Test Cases

ID	testCaseCustomView	Description:	When an image is loaded, the scroll bars on the graphics view allowing the user to scroll up/down and left/right.
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	Extra functionality for the user when editing an image.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1. Load an image		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans-Software Tester		


Individual results:			
Test Date:	29/2/20	Result	Pass- can scroll to navigate an image.


ID	testCaseOpenImage	Description:	Open an image and display to the screen
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	3	Comments	The user should be able to navigate through file explorer for the desired image.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Press File 2. Select Open 3. Choose Image 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans-Software Tester		
Individual results:			

	<div>Image Pane</div> 		
Test Date:	29/02/2020	Result	Image is displayed on the image pane



ID	testCaseImageFormat	Description:	The system should be compatible with different image files (.jpg, .png etc)																				
Test Type:	Quality	Success criteria:	Pass																				
Number of attempts:	1	Comments	This test checks what images the system is compatible with.																				
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support																						
Setup instruction	No setup instruction required																						
Failure correction procedure	Report back to developer																						
Engineer(s)/Technician(s)	Harry Evans-Software Tester																						
Individual results:	<div><div>Images</div><table><tr><td>city.jpg</td><td>18:07</td><td>23/04/20</td><td>^</td></tr><tr><td>forest.jpg</td><td>16:49</td><td>29/03/20</td><td></td></tr><tr><td>space.jpg</td><td>18:07</td><td>23/04/20</td><td></td></tr><tr><td>stormy.png</td><td>18:07</td><td>23/04/20</td><td></td></tr><tr><td>search.cpp</td><td>15:39</td><td>25/04/20</td><td>v</td></tr></table><div>< ></div></div>			city.jpg	18:07	23/04/20	^	forest.jpg	16:49	29/03/20		space.jpg	18:07	23/04/20		stormy.png	18:07	23/04/20		search.cpp	15:39	25/04/20	v
city.jpg	18:07	23/04/20	^																				
forest.jpg	16:49	29/03/20																					
space.jpg	18:07	23/04/20																					
stormy.png	18:07	23/04/20																					
search.cpp	15:39	25/04/20	v																				
Test Date:	25/04/2020	Result	Pass – the system does allow the user to																				

			add a file but only the compatible files are loaded to the image pane and to the widget list when starting the program.
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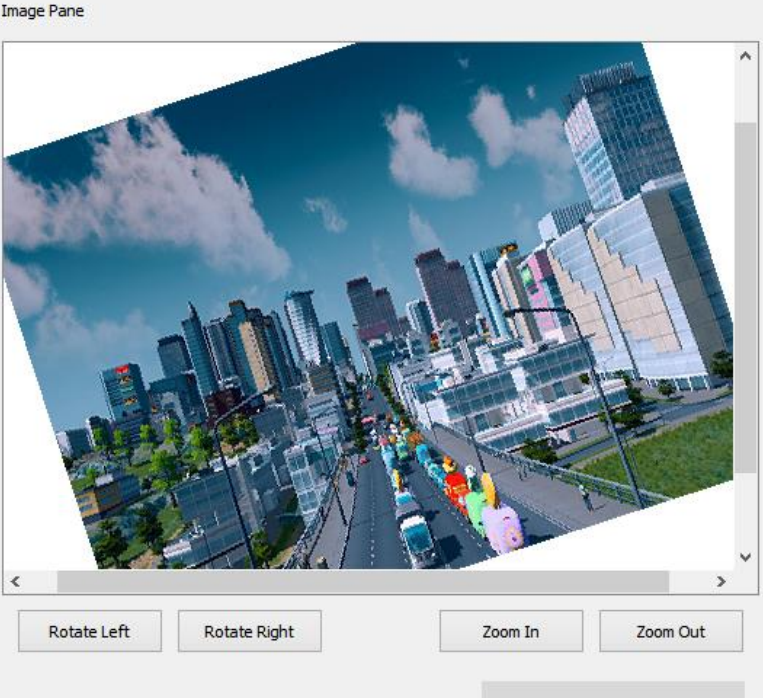
ID	testCaseScaleIn	Description:	Zoom into an image
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	The button version of allowing a user to zoom in.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Open Image to the Image pane 2. Press Zoom in 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans-Software Tester		
Individual results:	<div> <div>Image Pane</div>  <div> <div>Rotate Left</div> <div>Rotate Right</div> <div>Zoom In</div> <div>Zoom Out</div> </div> </div>		

	<div> <div>Image Pane</div>  <div> <div>Rotate Left</div> <div>Rotate Right</div> <div>Zoom In</div> <div>Zoom Out</div> </div> </div>		
Test Date:	15/03/2020	Result	Image zooms in correctly


ID	testCaseScaleOut	Description:	Zoom out an image
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	The button version of allowing a user to zoom out.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Open Image to the Image pane 2. Press Zoom out 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans-Software Tester		

<p>Individual results:</p>	<div data-bbox="598 197 1369 851"> <p>Image Pane</p>  <div> <div>Rotate Left</div> <div>Rotate Right</div> <div>Zoom In</div> <div>Zoom Out</div> </div> </div> <div data-bbox="598 884 1369 1538"> <p>Image Pane</p>  <div> <div>Rotate Left</div> <div>Rotate Right</div> <div>Zoom In</div> <div>Zoom Out</div> </div> </div>		
<p>Test Date:</p>	<p>15/03/2020</p>	<p>Result</p>	<p>The image pane zooms out as expected.</p>

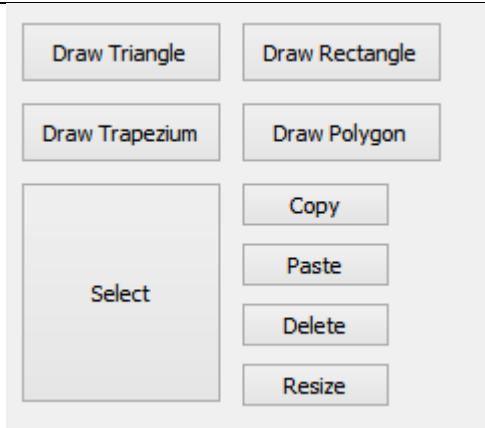
ID	testCaseRotateLeft	Description:	Rotate an image to the left
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	The user may need functionality

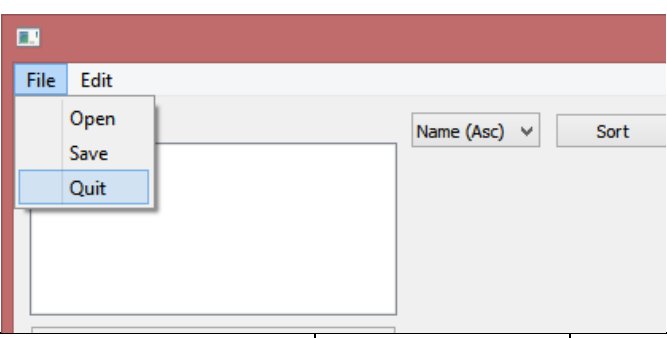
			allowing them to rotate the image.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Open Image to the Image pane 2. Press Rotate Left 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans- Software Tester		
Individual results:			
Test Date:	15/03/2020	Result	Pass

ID	testCaseRotateRight	Description:	Rotate an image to the right
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	The user may need functionality allowing them to rotate the image.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Open Image to the Image pane 2. Press Rotate Right 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans – Software Tester		

Individual results:	<div><div>Image Pane</div><div></div><div><div>Rotate Left</div><div>Rotate Right</div><div>Zoom In</div><div>Zoom Out</div></div></div>		
Test Date:	15/03/2020	Result	Pass

ID	testCaseSetShapes	Description:	The user must only be able to use the provided shapes to draw on top of an image. Only the borders of the shape will be visible.
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	This test is to make sure we are only including the functionalities asked for on the spec.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	No setup Instruction required		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		

Individual results:			
Test Date:	20/04/2020	Result	Pass

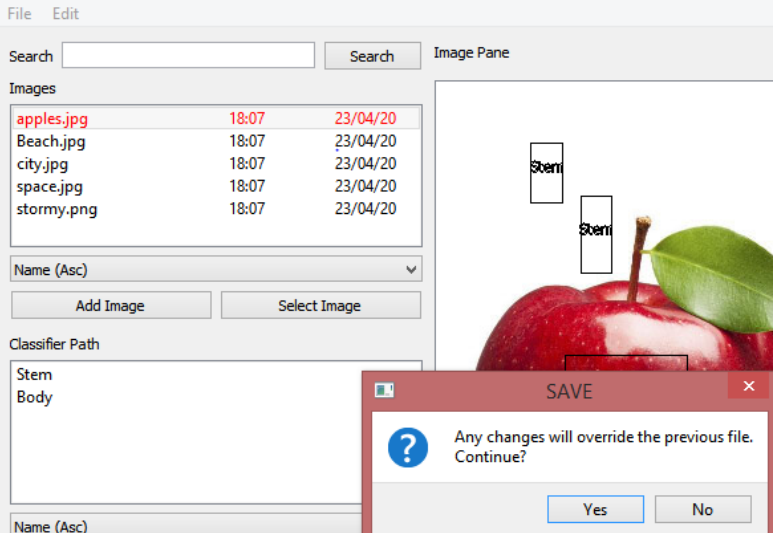
ID	testCaseQuit	Description:	Quit the application
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	Allows the user to exit the program when desired instead of having to close the application manually.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1. Press File 2. Press Quit		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans – Software Test		
Individual results:			
Test Date:	15/03/202	Result	Application Closes

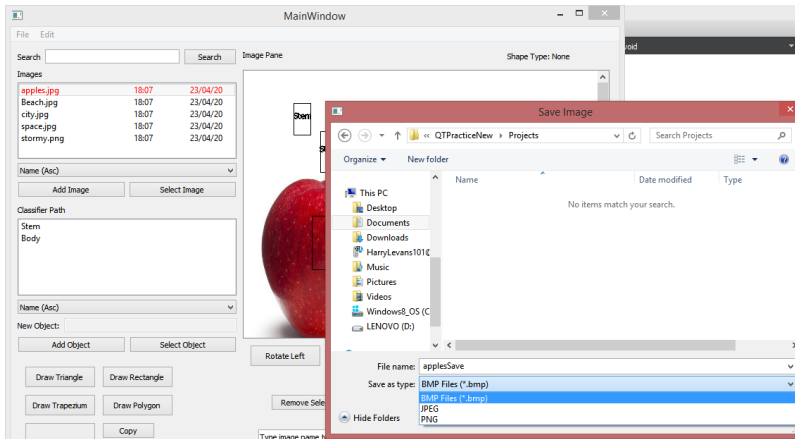
ID	testCaseChangeFilename	Description:	The user must be able to change the filename of their annotation
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Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	2	Comments	Allows the user to further personalise their annotation, as well as not having duplicate filenames.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1) Select image to replace in image widget list 2) Type new image name in the correct type box 3) Press Replace		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	Fail		
Test Date:	23/04/2020	Result	Fail- can update file name on GUI but not in file directory although the user does have access to do this manually.

ID	testCaseFileFormat	Description:	Each annotation must follow the hierarchial data format 5 (HDF5) or JSON.
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	2	Comments	This format will be followed when an annotation is saved.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	Follows procedure once image is saved.		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		


Individual results:	<pre>//JSON int listSize = shape->shapeList.size(); QJsonObject Root; Root["Number of Annotations"] = listSize; /* QJsonArray images; for(int i = 0; i < filesInDirectory.size(); i++){ QJsonObject individualImage; individualImage["ImageName"] = filesInDirectory[i].name; individualImage["Shapes"] = }*/ QJsonObject individualImage; for (int i = 0; i < filesInDirectory.size(); i++){ QJsonArray shapesInImage; if (className.split(".")[0] == filesInDirectory[i].name.split(".")[0]){ for (int j = 0; j < shape->shapeList.size(); j++){ QJsonObject point; QJsonArray pointsArray; for (int k = 0; k < shape->shapeList[j]->pointsVector.size(); k++){ point["x"] = shape->shapeList[j]->shape[k].x(); point["y"] = shape->shapeList[j]->shape[k].y(); pointsArray.append(point); } QJsonObject shapeData; shapeData["Shape Type"] = shape->shapeList[j]->shapeType; shapeData["Class Type"] = shape->shapeList[j]->classType; shapeData["Points"] = pointsArray; } } }</pre>		
Test Date:	24/04/2020	Result	Pass- follows JSON

ID	testCaseSave	Description:	Save an image
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	2	Comments	Currently only saves image, not individual data
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> Once image is loaded and edited Press File Press Save Continue pop up box 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:			

	<div> <div>Press Continue</div>  <div>Select image format</div> </div>		
Test Date:	24/04/2020	Result	Pass- Image saves using JSON format.

ID	testCaseSaveNoAnnotImages	Description:	The number of annotated images must be saved.
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	2	Comments	Currently only saves image, not individual data
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> Once image is loaded and annotated Press File Press Save Press continue on pop-up box 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	<pre> }, "Number of Annotations": 4 } </pre> <p>Inside the JSON file, at the bottom, it says the number of annotated images</p>		
Test Date:	25/04/2020	Result	Pass

ID	testCaseSaveImagesFileNames	Description:	For each annotation,
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			and each image, the filename must be saved.
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	2	Comments	Currently only saves image, not individual data
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Once Image is loaded and annotated 2. Press File 3. Press Save 4. Press continue on the pop-up box 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	<pre> { "Image": { "ImageName": "city.jpg", "Shapes": [</pre> <p>At the top of the JSON file.</p>  <p>Can load new images to image widget.</p>		
Test Date:	25/05/20	Result	Pass

ID	testCaseSaveNoShapesPerImage	Description:	For each annotation, the program must save the number of shapes on each image.
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	2	Comments	The file for saving will hold data for the number of shapes


List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Once Image is loaded and annotated 2. Press File 3. Press Save 4. Press continue on the pop-up box 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	<pre> "Shapes": [{ "Class Type": "building", "Points": [{ "x": 343, "y": 168 }, { "x": 431, "y": 168 }, { "x": 431, "y": 235 }, { "x": 343, "y": 235 }], "Shape Type": "Rectangle" }, { "Class Type": "car", "Points": [</pre> <p>The file doesn't explicitly save the actual number of shapes but it has the data for every shape.</p>		
Test Date:	25/05/2020	Result	Pass

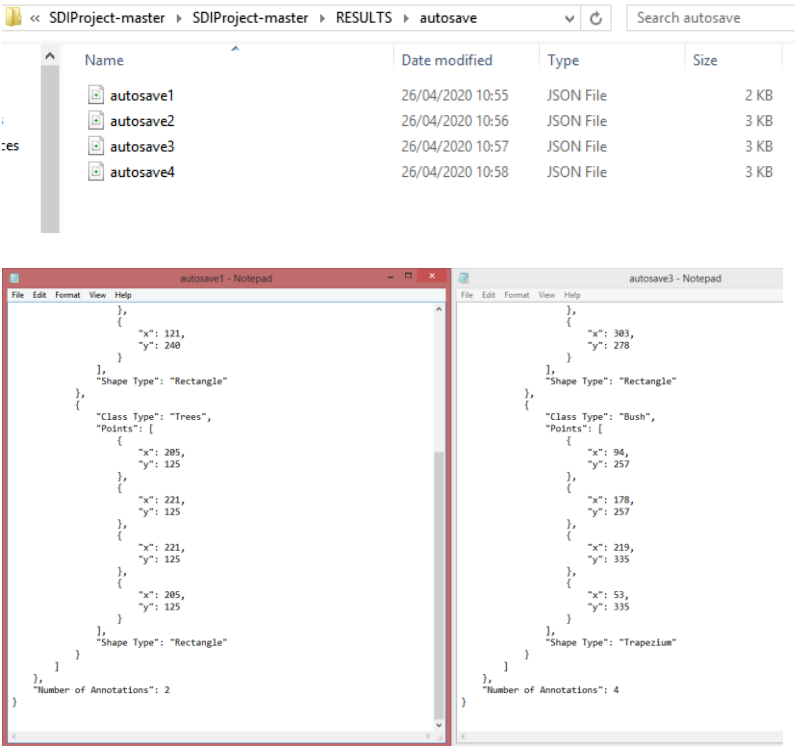
ID	testCaseSaveShapePoints	Description:	For each annotation, and each image, the program must save the points of each shape.
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	2	Comments	The file should hold individual data for each shape.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		

Setup instruction	<ol style="list-style-type: none"> 1. Once Image is loaded and annotated 2. Press File 3. Press Save 4. Press continue the pop-up box 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	<pre> "Shapes": [{ "Class Type": "building", "Points": [{ "x": 343, "y": 168 }, { "x": 431, "y": 168 }, { "x": 431, "y": 235 }, { "x": 343, "y": 235 }], "Shape Type": "Rectangle" }, { "Class Type": "car", "Points": [</pre>		
Test Date:	25/05/2020	Result	Pass

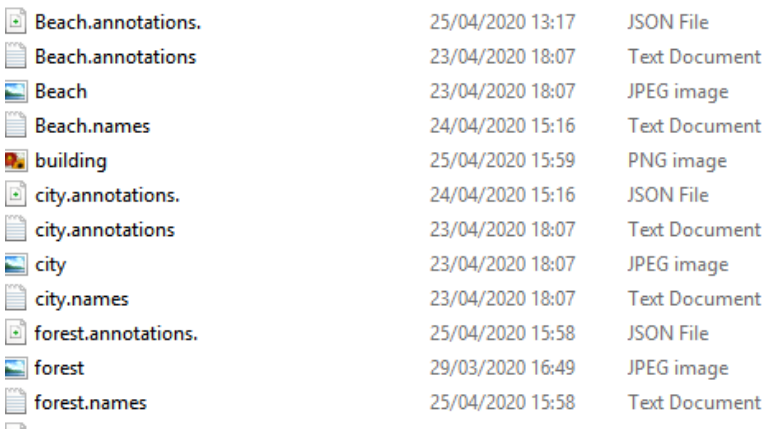
ID	testCaseThread	Description:	The program makes use of threading, this thread will spawn every 60 seconds
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	2	Comments	Every 60 seconds a thread will spawn, after this test, the thread will cause the program to be saved.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	No setup instruction, on start the thread will sleep and spawn every 60 seconds.		

Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	<pre> Timer executed File Autosaving... Timer executed Timer executed Then 60 seconds later, the thread will spawn again: Timer executed File Autosaving... Timer executed Timer executed Timer executed </pre>		
Test Date:	25/05/2020	Result	Pass

ID	testCaseThreadSave	Description:	The program makes use of threading, this thread will spawn every 60 seconds, this thread will trigger an autosave.
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	2	Comments	Every 60 seconds a thread will spawn, causing the program to autosave.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	No setup instruction, on start the thread will sleep and spawn every 60 seconds.		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	<p>Every 60 seconds</p>  <pre> SIGNAL RECEIVED Timer executed SIGNAL RECEIVED Timer executed SIGNAL RECEIVED </pre> <p>You can see the location the autosave writes to.</p>		

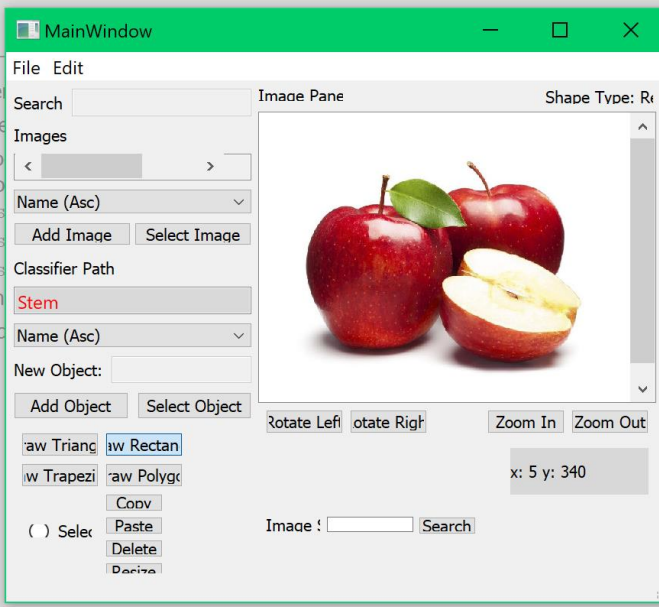
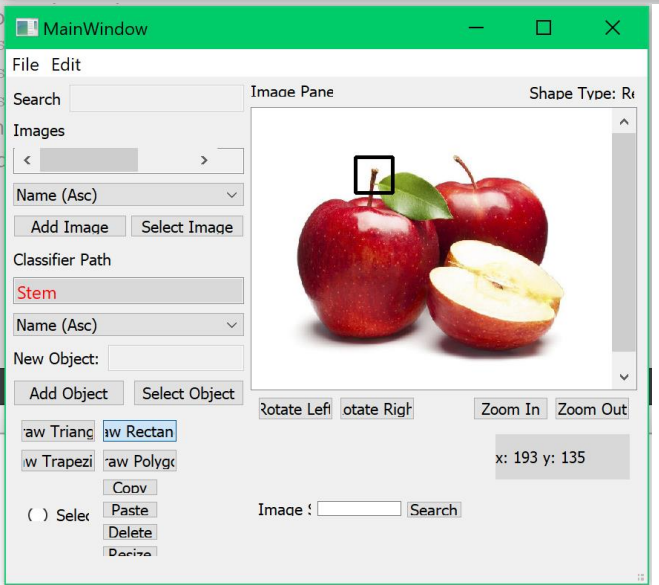
	 <p>Comparing autosave1 and autosave4</p>		
Test Date:	26/05/2020	Result	Pass

ID	testCaseAnnotationExt	Description:	Saved files must follow the *.annotations extension
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	Every file will follow the same structure and hierarchy
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1. Save an annotation		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		

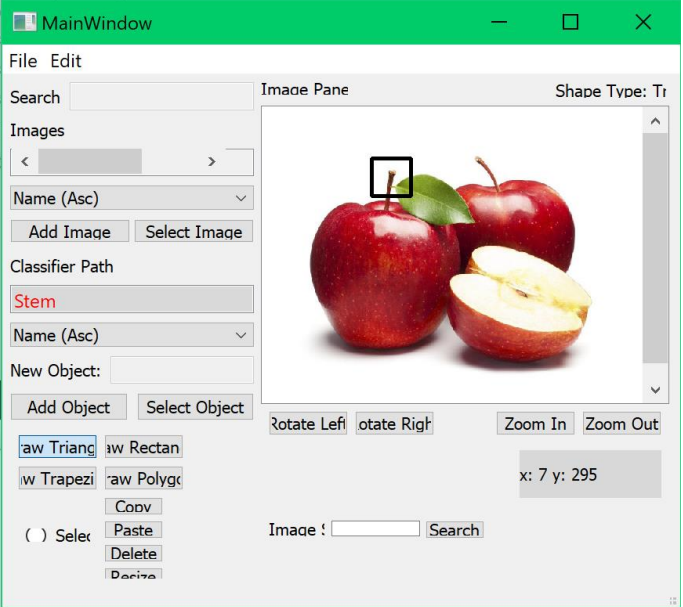
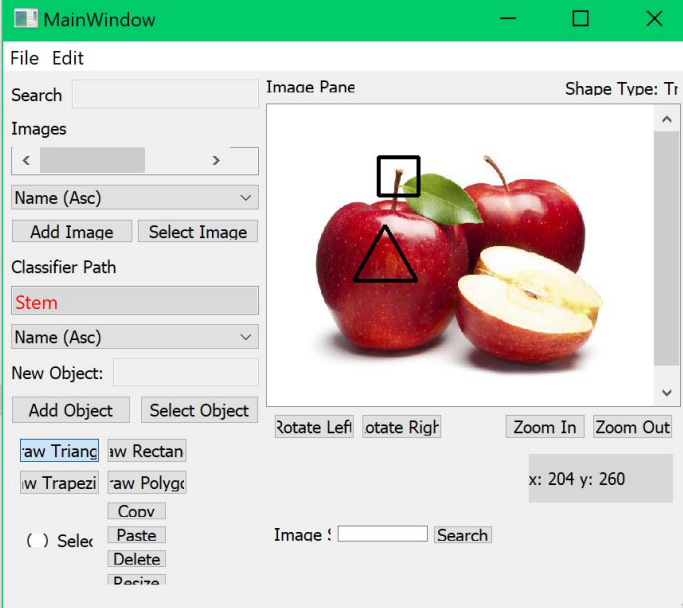
Individual results:			
Test Date:	25/05/2020	Result	Pass

ID	testCaseFileCheck	Description:	Prompt the user to overwrite the file if it already exists
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	This is to stop other files being overwritten.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Save an annotation 2. Enter filename 3. There will be a prompt message if filename already exists. 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:			
Test Date:	25/05/2020	Result	Fail

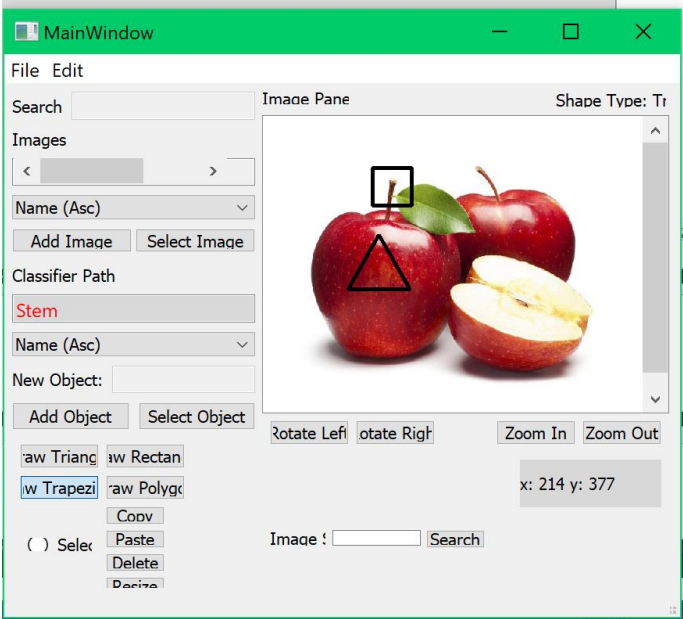
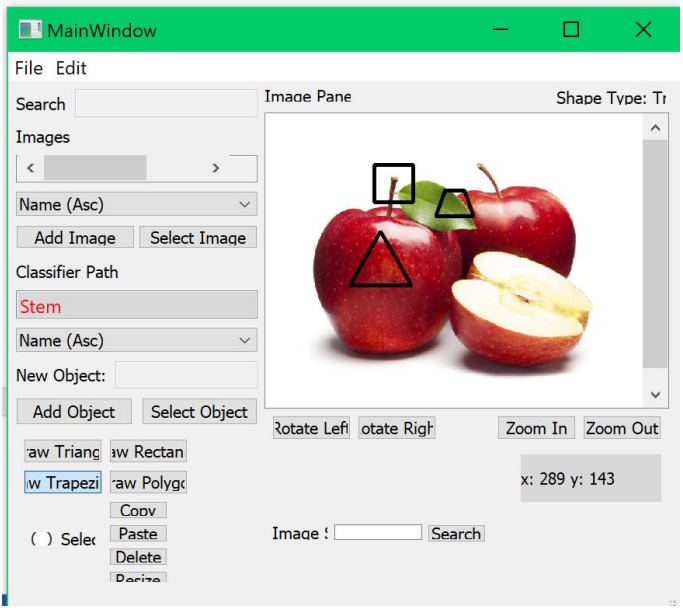
ID	testCaseDrawRectangle	Description:	Draw a rectangle on the image pane
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	2	Comments	The rectangle will be drawn by the user clicking and dragging on the canvas.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		

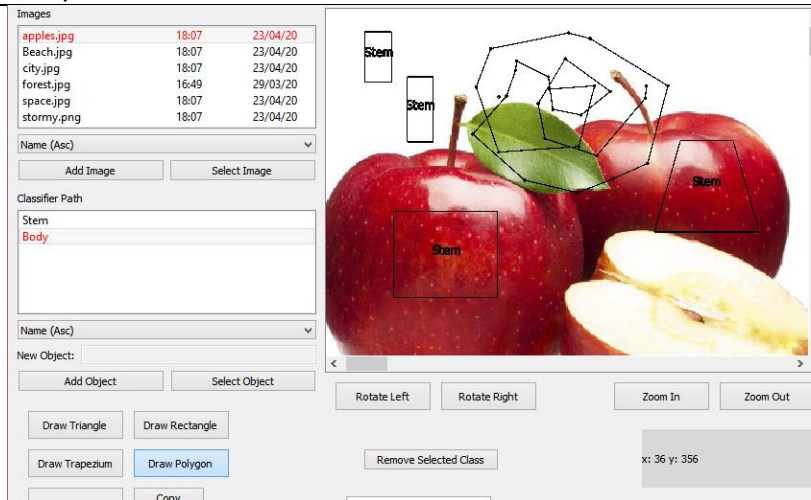
Setup instruction	<ol style="list-style-type: none"> 1. Load image to image pane 2. Press Draw Rectangle 3. Click on the image pane and drag to draw shape and determine size 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	 		
Test Date:	17/04/2020	Result	Pass

ID	testCaseDrawTriangle	Description:	Draw a triangle on the image pane
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	1	Comments	The triangle will be drawn by the user clicking and dragging on the canvas.

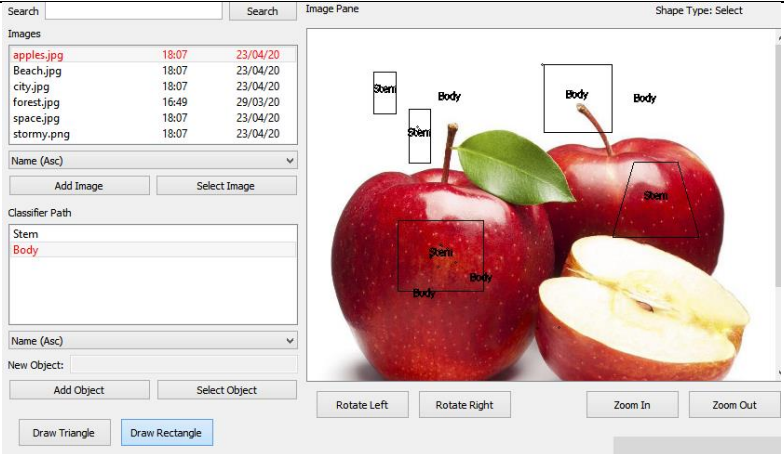
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Load image to the image pane 2. Press Draw Triangle 3. Click and drag on the image pane. 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	 		
Test Date:	17/04/2020	Result	Passed

ID	testCaseDrawTrapezium	Description:	Draw a trapezium on the image pane
Test Type:	Quantity	Success criteria:	Pass

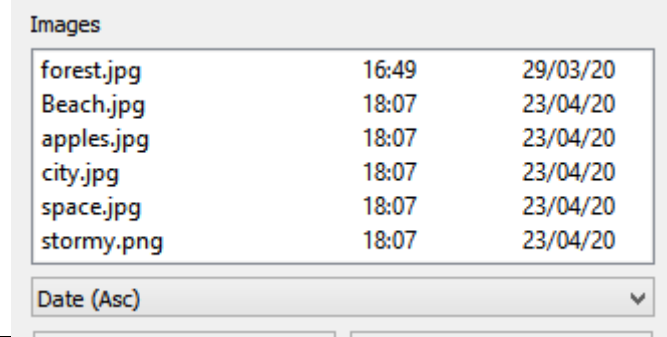
Number of attempts:	1	Comments	The trapezium will be drawn by the user clicking and dragging on the canvas.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Load image to the image pane 2. Press Draw Trapezium 3. Click and drag on the image pane. 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	 		
Test Date:	17/04/2020	Result	Passed

ID	testCaseDrawPolygon	Description:	The user can draw a polygon with a range of 3-8 sides.
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	2	Comments	The user will be able to plot points on the canvas and the program will draw lines between them.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Once an image is loaded to the image pane 2. The user can plot points on the pane with a minimum of 3 points and maximum 8. 3. Press stop when desired number of points is reached if its less than 8. 4. The points are joined up by lines. 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:			
Test Date:	25/04/2020	Result	Fail- lines are drawn but user can't stop drawing lines.

ID	testCaseMoveShape	Description:	A shape can be moved around the screen
Test Type: Unit	Quantity/Quality	Success criteria:	Pass
Number of attempts:	2	Comments	A shape can be selected and


			dragged to another position within the image pane boundaries.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> Once shape is drawn to the screen Image should be able to be dragged 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:			
Test Date:		Result	Fail- You can see the class name of the middle of the shape moves to the new position, but the shape gets redrawn back in the original position.

ID	testCaseSortAscendingDate	Description:	Sort images into ascending order by date
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	2	Comments	The user should be able to sort the images with the earliest date at the start and latest date at the end.

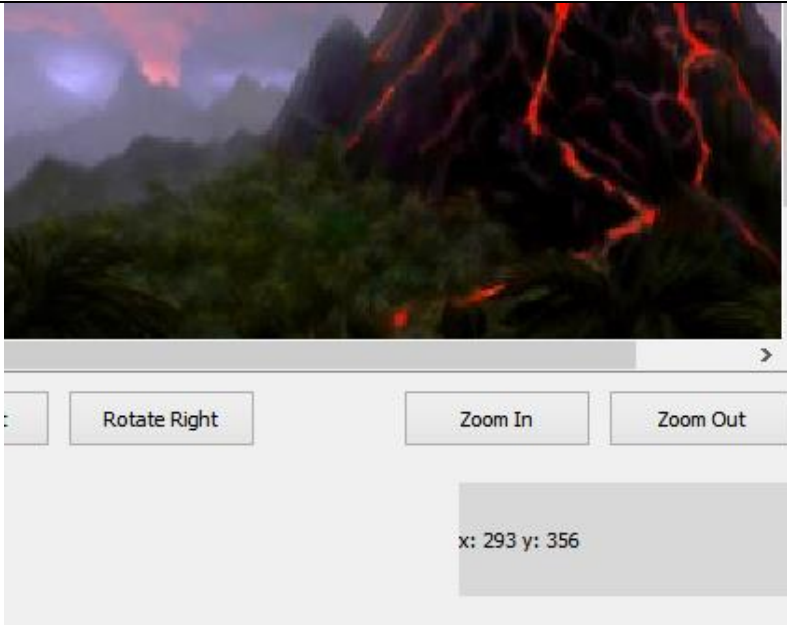
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Once image/class names loaded to correct widget 2. Select sort by Date (Asc) from the dropdown 3. Press Sort 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:			
Test Date:	25/04/2020	Result	Pass- test passes displaying the earliest images at the top and latest at the bottom

ID	testCaseSortDescendingDate	Description:	Sort images into Descending order by date
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	2	Comments	The user should be able to sort the images with the latest date at the start and earliest date at the end.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Once image/class names loaded to correct widget 2. Select sort by Date (Desc) from the dropdown 3. Press Sort 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		

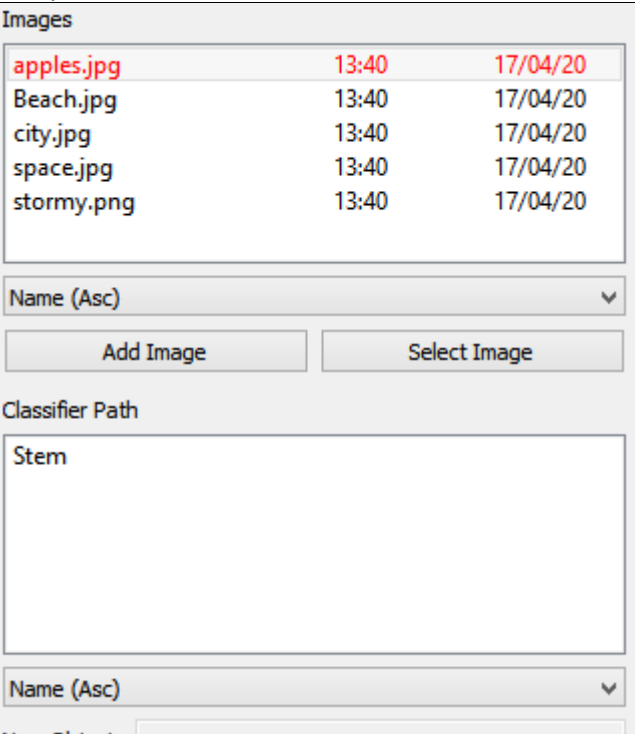
Individual results:	<div>Images</div> <table><tr><td>stormy.png</td><td>18:07</td><td>23/04/20</td></tr><tr><td>space.jpg</td><td>18:07</td><td>23/04/20</td></tr><tr><td>city.jpg</td><td>18:07</td><td>23/04/20</td></tr><tr><td>apples.jpg</td><td>18:07</td><td>23/04/20</td></tr><tr><td>Beach.jpg</td><td>18:07</td><td>23/04/20</td></tr><tr><td>forest.jpg</td><td>16:49</td><td>29/03/20</td></tr></table> <div>Date (Desc) ▾</div>			stormy.png	18:07	23/04/20	space.jpg	18:07	23/04/20	city.jpg	18:07	23/04/20	apples.jpg	18:07	23/04/20	Beach.jpg	18:07	23/04/20	forest.jpg	16:49	29/03/20
stormy.png	18:07	23/04/20																			
space.jpg	18:07	23/04/20																			
city.jpg	18:07	23/04/20																			
apples.jpg	18:07	23/04/20																			
Beach.jpg	18:07	23/04/20																			
forest.jpg	16:49	29/03/20																			
Test Date:	25/04/2020	Result	Pass- test passes displaying the latest images at the top and earliest at the bottom																		

ID	testCaseSelectImageFolder	Description:	Select an image folder and all images are displayed in the image widget
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	2	Comments	As well as choosing an image from the image widget, the user should also be able to add their own which includes selecting an image folder.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Press File 2. Select Open 3. Select which Image folder to open 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Michael Gibbs		
Individual results:	<div> <div> <div>Images</div> <div> apples.jpg Beach.jpg city.jpg stormy.png volcano.jpg </div> <div> Add Image Select Image </div> <div>Classifier Path</div> </div> <div> <div>Name (Desc) ▾</div> <div>Sort</div> </div> <div>Image Pane</div> <div> <div>Name (Asc) ▾</div> <div>Sort</div> </div>  </div>		

Test Date:	25/03/2020	Result	Pass. Images are displayed on the image list widget.
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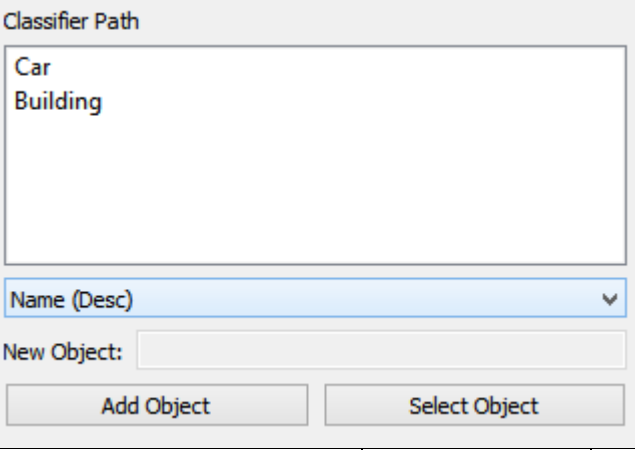
ID	TestCaseShowMousePosition	Description:	The position of the mouse will be tracked by so shapes can be plotted
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	2	Comments	This mouse position can be tracked and will be helpful when implementing the points for the polygon.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	Mouse position is tracked on start		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans – Software Tester		
Individual results:			
Test Date:	20/03/2020	Result	Pass

ID	testCaseGetClassifierNames	Description:	Gathers class names into the classifier widget
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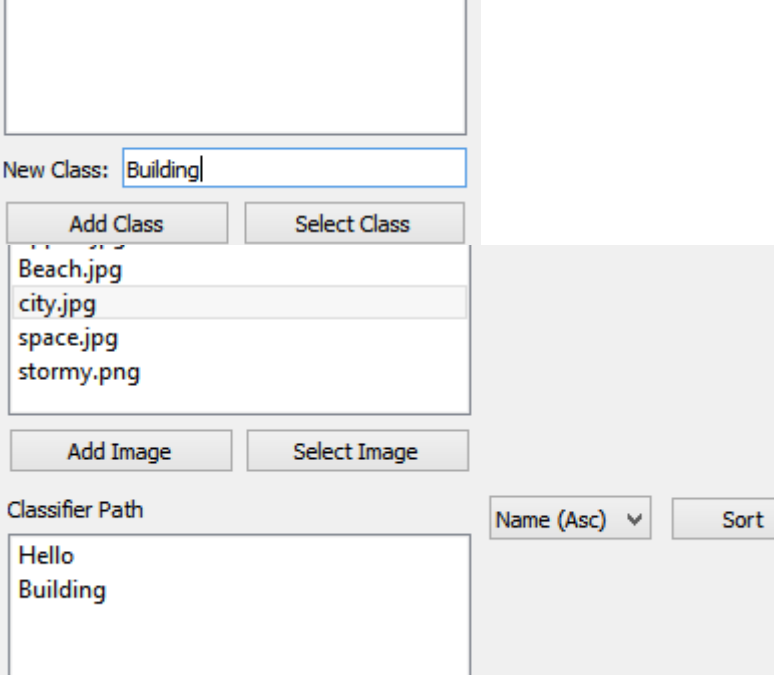
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	All default and previously added class names will be loaded to the class widget
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1) On start, all class names are gathered into a vector corresponding to the image they relate to.		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	 <p>Select a different image and the classifier path changes</p>		

	<div>Images</div> <table><tr><td>apples.jpg</td><td>13:40</td><td>17/04/20</td></tr><tr><td>Beach.jpg</td><td>13:40</td><td>17/04/20</td></tr><tr><td>city.jpg</td><td>13:40</td><td>17/04/20</td></tr><tr><td>space.jpg</td><td>13:40</td><td>17/04/20</td></tr><tr><td>stormy.png</td><td>13:40</td><td>17/04/20</td></tr></table> <div>Name (Asc) ▾</div> <div>Add ImageSelect Image</div> <div>Classifier Path</div> <div>Building Car</div>			apples.jpg	13:40	17/04/20	Beach.jpg	13:40	17/04/20	city.jpg	13:40	17/04/20	space.jpg	13:40	17/04/20	stormy.png	13:40	17/04/20
apples.jpg	13:40	17/04/20																
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city.jpg	13:40	17/04/20																
space.jpg	13:40	17/04/20																
stormy.png	13:40	17/04/20																
Test Date:	10/04/2020	Result	Pass															

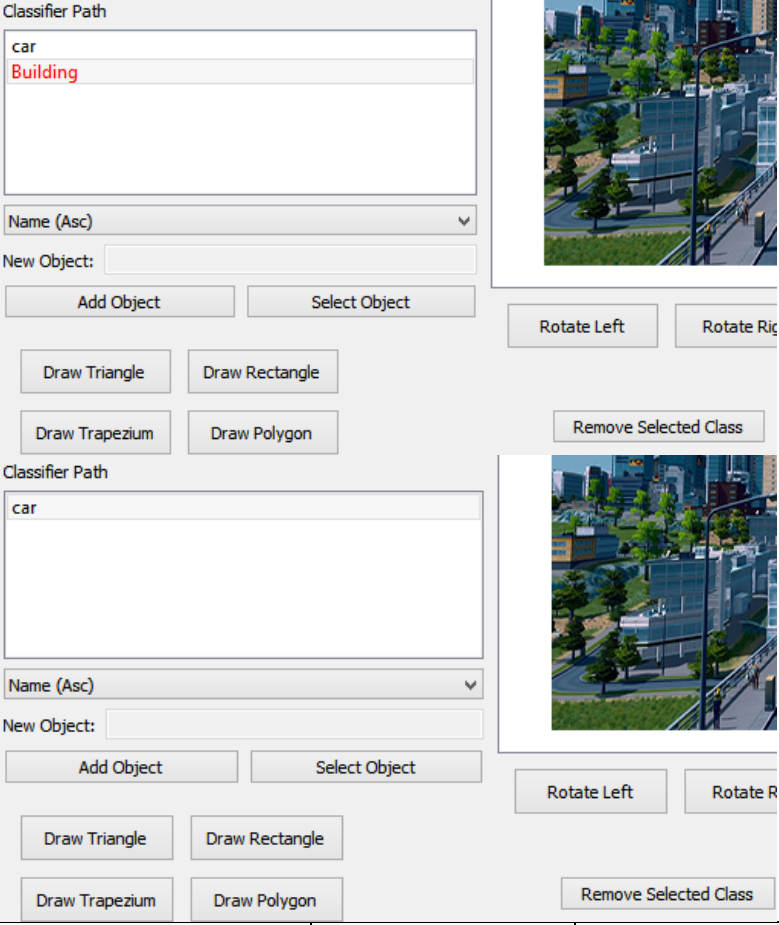
ID	testCaseSortClassNamesAsc	Description:	Classes on the classes pane can be sorted into ascending order
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	1	Comments	Another implementation of the sorting algorithms.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1. Once classes are listed on the class pane 2. Press sort (Asc) from the dropdown 3. Press sort button		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	<div> <div>Classifier Path</div> <div> Building Car </div> <div> Name (Asc) </div> </div>		
Test Date:	10/04/2020	Result	Pass

ID	testCaseSortClassNamesDesc	Description:	Classes on the classes pane can be sorted into descending order
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	1	Comments	Another implementation of the sorting algorithms.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Once classes are listed on the class pane 2. Press sort by (Desc) from the dropdown 3. Press sort button 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:			
Test Date:	10/04/2020	Result	Pass

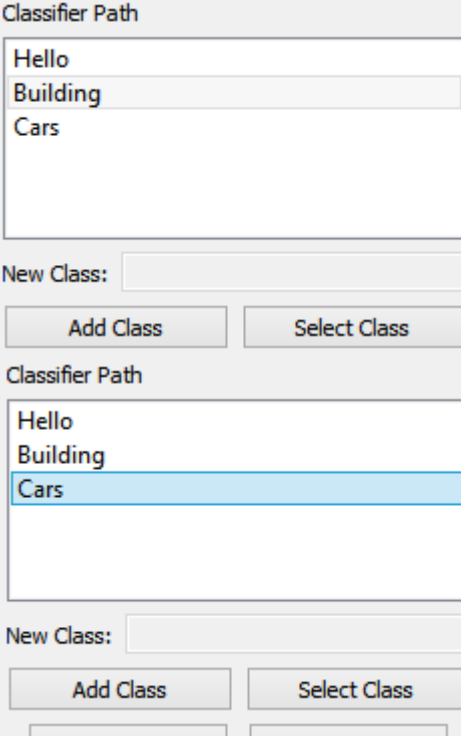
ID	testCaseAddClass	Description:	The user should be able to add a class which is appended to the classes file.
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	2	Comments	The user should be able to add their own classes, this class will be saved so on restart, this class
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		

Setup instruction	1. Press add class button 2. Type in class name 3. Press Enter		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:			
Test Date:	26/03/2020	Result	Class name is successfully added the classes list

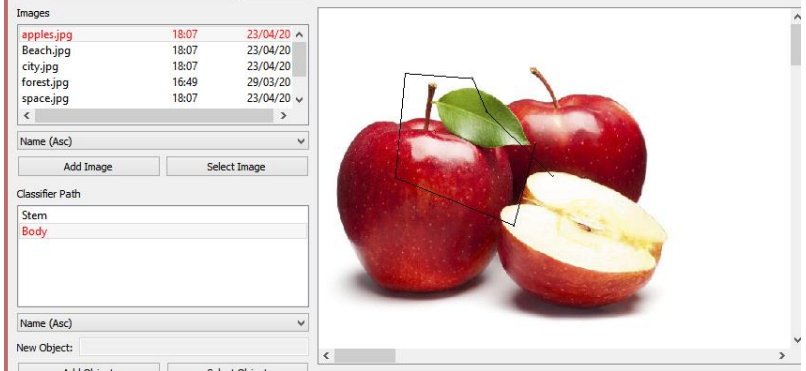
ID	testCaseRemoveClass	Description:	The user should be able to remove a class which is deleted from the classes file.
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	The class will be removed from the GUI and file directory.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1) Select a class by either double clicking on a class or pressing select class button. 2) Press Remove Selected Class button		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		

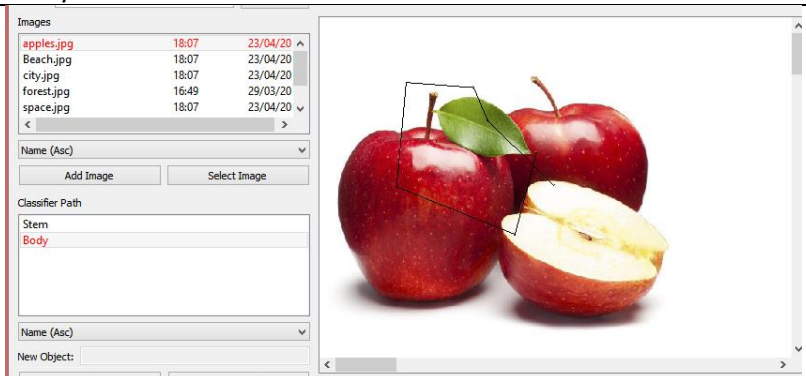
Individual results:			
Test Date:	21/04/2020	Result	Pass

ID	testCaseSelectClass	Description:	The user should be able to select which class from the classes list that they will annotate.
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	The user will have to select a class before annotating an image.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1. Select a class from the classes list widget		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Michael Gibbs – Software Architect		

Individual results:			
Test Date:	26/03/2020	Result	Classes are selectable from the classes list widget.

ID	testCaseDrawPoint	Description:	The program will allow the user to select what shape and the user can plot the points corresponding to what shape they choose.
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	1	Comments	
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Select what shape to draw, i.e 5 sided polygon 2. The user can plot x amount of points on the image pane. 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		

Individual results:			
Test Date:	23/04/2020	Result	Pass- the user plots points on the screen

ID	TestCaseDrawLines	Description:	When a user has plotted points on the image pane, the program will draw lines between these points.
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	1	Comments	
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	<ol style="list-style-type: none"> 1. Select Image 2. Select class 3. Press draw polygon 4. Plot points 		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:			
Test Date:	23/04/2020	Result	Pass- The users' points are joined by lines.

ID	testCaseDeleteShape	Description:	The user can delete a shape
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	1	Comments	Allow the user to delete a shape.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction			
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)			
Individual results:			
Test Date:		Result	Fail

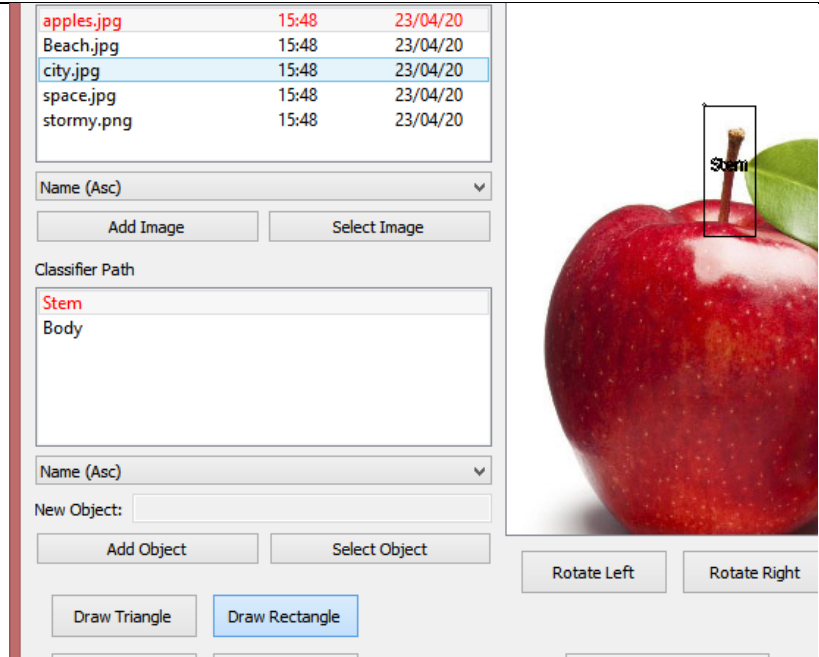
ID	testCaseResizeShape	Description:	The user can select a shape and resize it.
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	1	Comments	The click can select and drag to resize a shape.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction			
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)			
Individual results:			
Test Date:		Result	Fail

ID	testCaseCopyShape	Description:	The user can select a shape to copy and the relevant information will be saved.
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	1	Comments	The user will be able to select and copy a shape and that shapes information will be saved.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		

Setup instruction			
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)			
Individual results:			
Test Date:		Result	Fail

ID	testCasePasteShape	Description:	Once a user has copied a shape, they will be able to paste it onto the image pane.
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	1	Comments	The shapes information will be used to draw the shape again.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction			
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)			
Individual results:			
Test Date:		Result	Fail

ID	testCaseMoveVertex	Description:	Once a shape is drawn, the user can select a vertex and drag it.
Test Type:	Quantity	Success criteria:	Pass
Number of attempts:	1	Comments	
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1.Open an image 2.Select class 3.Draw shape 4.Select shape 5.Drag vertex of shape		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)			
Individual results:			
Test Date:		Result	Fail

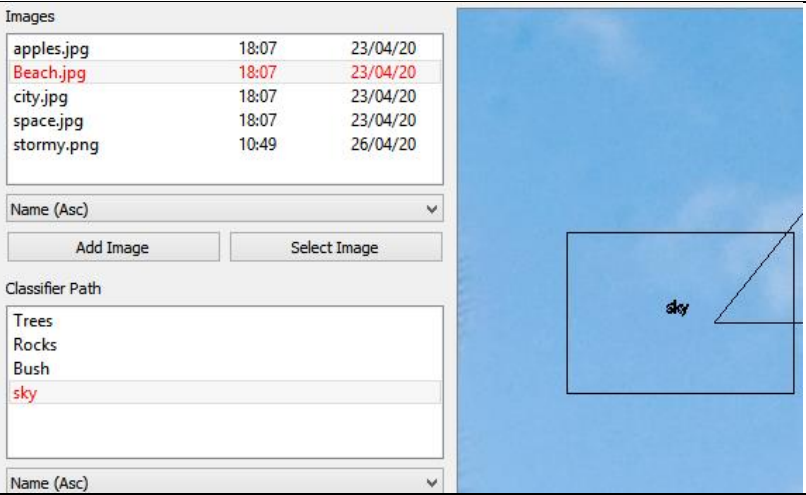
ID	testCaseClassNameTopOfShape	Description:	The class name should be displayed at the top of each shape.
Test Type:	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	When the user annotates their image, they want to be able to see what class/object their shape is for.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1) Load image 2) Select classifier 3) Select shape 4) Draw shape on canvas		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:			
Test Date:	22/04/2020	Result	Pass

QT Integration Test Cases

ID	testCaseEditAnnotationAndSave	Description:	The user should be able to annotate an image and have
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			the option to save it.
Test Type: Integration	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	All integration tests are combining fundamentals of the functional tests.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1) Load image 2) Select class 3) Annotate image 4) Press file 5) Press save		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	<pre>{ "Image": { "ImageName": "Beach.jpg", "Shapes": [{ "Class Type": "sky", "Points": [{ "x": 77, "y": 158 }, { "x": 238, "y": 158 }, { "x": 238, "y": 272 }, { "x": 77, "y": 272 }] }, { "Shape Type": "Rectangle" }], { "Class Type": "sky", "Points": [{ "x": 182, "y": 222 }, { "x": 368, "y": 222 }] }] }</pre>		
Test Date:	24/04/2020	Result	Pass

ID	testCaseOpenImageandSelectClass	Description:	The user can open an image and select a desired classifier
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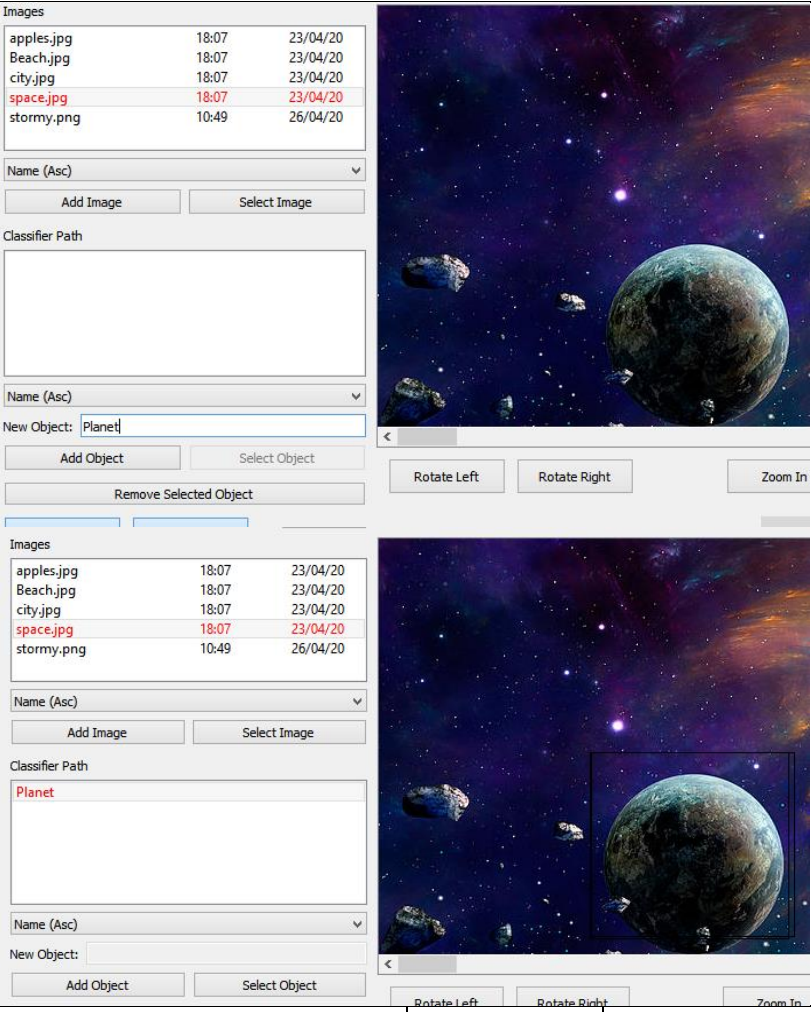
Test Type: Integration	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	Integrating functions to make sure they work together.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1) Load image 2) Select class from class widget		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:			
Test Date:	24/04/2020	Result	Pass

ID	testCaseSortAscGui	Description:	Display the ascending sort on the gui
Test Type: Integration	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	Once sorted, the items will be displayed in the listwidget in the desired order.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1) Open dropdown menu for sorting images 2) Select Name (Asc)		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		

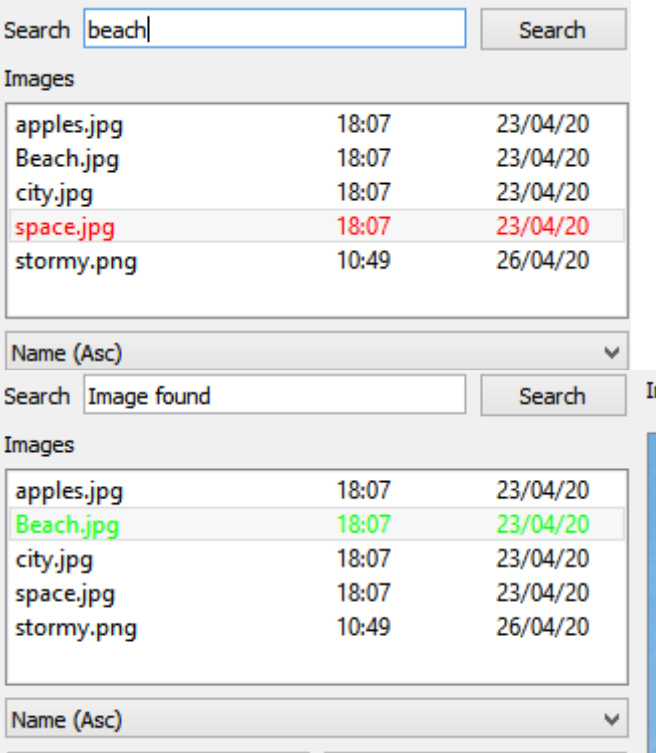
Individual results:	Images		
	apples.jpg	13:40	17/04/20
	Beach.jpg	13:40	17/04/20
	city.jpg	13:40	17/04/20
	space.jpg	13:40	17/04/20
	stormy.png	13:40	17/04/20
Name (Asc) ▾			
Test Date:	10/04/2020	Result	Pass

ID	testCaseSortDescGui	Description:	Display the descending sort on the gui															
Test Type: Integration	Quality	Success criteria:	Pass															
Number of attempts:	1	Comments	Once sorted, the items will be displayed in the listwidget in the desired order.															
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support																	
Setup instruction	1) Open dropdown menu for sorting an image 2) Select name (desc)																	
Failure correction procedure	Report back to developer																	
Engineer(s)/Technician(s)	Harry Evans																	
Individual results:	<div>Images</div> <table><tr><td>stormy.png</td><td>13:40</td><td>17/04/20</td></tr><tr><td>space.jpg</td><td>13:40</td><td>17/04/20</td></tr><tr><td>city.jpg</td><td>13:40</td><td>17/04/20</td></tr><tr><td>Beach.jpg</td><td>13:40</td><td>17/04/20</td></tr><tr><td>apples.jpg</td><td>13:40</td><td>17/04/20</td></tr></table> <div>Name (Desc) ▾</div>			stormy.png	13:40	17/04/20	space.jpg	13:40	17/04/20	city.jpg	13:40	17/04/20	Beach.jpg	13:40	17/04/20	apples.jpg	13:40	17/04/20
stormy.png	13:40	17/04/20																
space.jpg	13:40	17/04/20																
city.jpg	13:40	17/04/20																
Beach.jpg	13:40	17/04/20																
apples.jpg	13:40	17/04/20																
Test Date:	10/04/2020	Result	Pass															

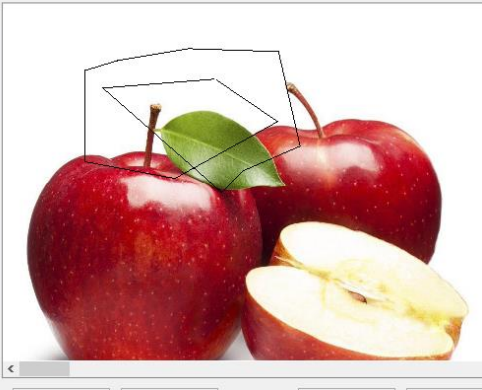
ID	testCaseAddClassAndDrawShape	Description:	The user can add their own class which they can use to annotate shapes with.
Test Type: Integration	Quality	Success criteria:	Pass

Number of attempts:	1	Comments	Combining functionality for the user to make sure program functions can be integrated.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1) Press add object 2) Type object name 3) Select object 4) Select a shape to draw 5) Click and drag on canvas		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:			
Test Date:	24/04/2020	Result	Pass

ID	testCaseSearchandLoadImage	Description:	The user can search an image
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			and load this image to the image pane.
Test Type: Integration	Quality	Success criteria:	Pass
Number of attempts:	1	Comments	Combing functionality for the user.
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support		
Setup instruction	1) Type desired image in search bar 2) Press search 3) If image found, selected highlighted image.		
Failure correction procedure	Report back to developer		
Engineer(s)/Technician(s)	Harry Evans		
Individual results:	 <p>The screenshot displays a search interface with two panels. The top panel shows a search for 'beach' with a list of images: apples.jpg, Beach.jpg, city.jpg, space.jpg (highlighted in red), and stormy.png. The bottom panel shows a search for 'Image found' with a list of images: apples.jpg, Beach.jpg (highlighted in green), city.jpg, space.jpg, and stormy.png. Both panels include a 'Name (Asc)' dropdown menu.</p>		
Test Date:	24/04/2020	Result	Pass

ID	TestCaseSelectClassAndDrawPolygon	Description:	The user should be able to select a class and draw a polygon between 3 and 8 sides.
Test Type: Integration	Quality	Success criteria:	Pass

Number of attempts:	1	Comments	This test currently just needs functionality to allow the user to break or break when 8 points are plotted.															
List of equipment/requirements	Qt Creator, Windows 7 or 10 32-bit or 64-bit, 256 MB of RAM, 500 MHz CPU, 1 GHz preferred for 60-FPS velvet-smooth UI, OpenGL ES 2.0 support																	
Setup instruction	1) Load image and choose class object																	
Failure correction procedure	Report back to developer																	
Engineer(s)/Technician(s)	Harry Evans																	
Individual results:	<div><div><div>Search</div><div>Image found</div><div>Search</div></div><div>Image Pane</div><div>Shape Type: Polygon</div><div>Images</div><table><tr><td>apples.jpg</td><td>18:07</td><td>23/04/20</td></tr><tr><td>Beach.jpg</td><td>18:07</td><td>23/04/20</td></tr><tr><td>city.jpg</td><td>18:07</td><td>23/04/20</td></tr><tr><td>space.jpg</td><td>18:07</td><td>23/04/20</td></tr><tr><td>stormy.png</td><td>10:49</td><td>26/04/20</td></tr></table><div>Name (Asc) v</div><div>Add Image</div><div>Select Image</div><div>Classifier Path</div><div>Stem</div><div>Body</div><div>Name (Asc) v</div><div>New Object:</div><div>Add Object</div><div>Select Object</div></div> <div></div>			apples.jpg	18:07	23/04/20	Beach.jpg	18:07	23/04/20	city.jpg	18:07	23/04/20	space.jpg	18:07	23/04/20	stormy.png	10:49	26/04/20
apples.jpg	18:07	23/04/20																
Beach.jpg	18:07	23/04/20																
city.jpg	18:07	23/04/20																
space.jpg	18:07	23/04/20																
stormy.png	10:49	26/04/20																
Test Date:	24/04/2020	Result	Fail- test works until user 8 points have been exceeded, program doesn't break out of point drawing															

For Jenkins:

For Search Algorithm

Console Output

```
Started by user Harry Evans
Running as SYSTEM
Building in workspace C:\Program Files (x86)\Jenkins\workspace\testing
No credentials specified
> C:\Program Files\Git\bin\git.exe rev-parse --is-inside-work-tree # timeout=10
Fetching changes from the remote Git repository
> C:\Program Files\Git\bin\git.exe config remote.origin.url https://github.com/HarryEvs21/Testing.git # timeout=10
Fetching upstream changes from https://github.com/HarryEvs21/Testing.git
> C:\Program Files\Git\bin\git.exe --version # timeout=10
> C:\Program Files\Git\bin\git.exe fetch --tags --force --progress -- https://github.com/HarryEvs21/Testing.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> C:\Program Files\Git\bin\git.exe rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
> C:\Program Files\Git\bin\git.exe rev-parse "refs/remotes/origin/origin/master^{commit}" # timeout=10
Checking out Revision fdf60e780e553118d6d5e7b45bd227132fff8b1a (refs/remotes/origin/master)
> C:\Program Files\Git\bin\git.exe config core.sparsecheckout # timeout=10
> C:\Program Files\Git\bin\git.exe checkout -f fdf60e780e553118d6d5e7b45bd227132fff8b1a # timeout=10
Commit message: "Search Algorithm"
> C:\Program Files\Git\bin\git.exe rev-list --no-walk c6d13bfc98c7498f45df13c131d124c35b2bf40 # timeout=10
Finished: SUCCESS
```

For Sorting Algorithm

Console Output

```
Started by user Harry Evans
Running as SYSTEM
Building in workspace C:\Program Files (x86)\Jenkins\workspace\testing
No credentials specified
> C:\Program Files\Git\bin\git.exe rev-parse --is-inside-work-tree # timeout=10
Fetching changes from the remote Git repository
> C:\Program Files\Git\bin\git.exe config remote.origin.url https://github.com/HarryEvs21/Testing.git # timeout=10
Fetching upstream changes from https://github.com/HarryEvs21/Testing.git
> C:\Program Files\Git\bin\git.exe --version # timeout=10
> C:\Program Files\Git\bin\git.exe fetch --tags --force --progress -- https://github.com/HarryEvs21/Testing.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> C:\Program Files\Git\bin\git.exe rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
> C:\Program Files\Git\bin\git.exe rev-parse "refs/remotes/origin/origin/master^{commit}" # timeout=10
Checking out Revision 9b72199f7be24ee23283918abd68b56623c220c2 (refs/remotes/origin/master)
> C:\Program Files\Git\bin\git.exe config core.sparsecheckout # timeout=10
> C:\Program Files\Git\bin\git.exe checkout -f 9b72199f7be24ee23283918abd68b56623c220c2 # timeout=10
Commit message: "Sorting Algorithm"
> C:\Program Files\Git\bin\git.exe rev-list --no-walk fdf60e780e553118d6d5e7b45bd227132fff8b1a # timeout=10
Finished: SUCCESS
```

For Linked List

```
Started by user Harry Evans
Running as SYSTEM
Building in workspace C:\Program Files (x86)\Jenkins\workspace\testing
No credentials specified
> C:\Program Files\Git\bin\git.exe rev-parse --is-inside-work-tree # timeout=10
Fetching changes from the remote Git repository
> C:\Program Files\Git\bin\git.exe config remote.origin.url https://github.com/HarryEvs21/Testing.git # timeout=10
Fetching upstream changes from https://github.com/HarryEvs21/Testing.git
> C:\Program Files\Git\bin\git.exe --version # timeout=10
> C:\Program Files\Git\bin\git.exe fetch --tags --force --progress -- https://github.com/HarryEvs21/Testing.git
+refs/heads/*:refs/remotes/origin/* # timeout=10
> C:\Program Files\Git\bin\git.exe rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
> C:\Program Files\Git\bin\git.exe rev-parse "refs/remotes/origin/origin/master^{commit}" # timeout=10
Checking out Revision c6d13bfc98c7498f45df13c131d124c35b2bf40 (refs/remotes/origin/master)
> C:\Program Files\Git\bin\git.exe config core.sparsecheckout # timeout=10
> C:\Program Files\Git\bin\git.exe checkout -f c6d13bfc98c7498f45df13c131d124c35b2bf40 # timeout=10
Commit message: "Linked list"
> C:\Program Files\Git\bin\git.exe rev-list --no-walk 2cd75262325e7100975d8f1efc2645734de5c9e2 # timeout=10
Finished: SUCCESS
```

Test Cycle

EXECUTED	PASSED	44
	FAILED	11
	(Total) TESTS EXECUTED (PASSED + FAILED)	55
PENDING		0
IN PROGRESS		0
BLOCKED		0
(Sub-total) TEST PLANNED		55
(PENDING + IN PROGRESS + BLOCKED + TEST EXECUTED		

Test Objectives

Test No.	Requirement Description			Expected Outcome	Test Cases Executed %	Test Cases Passed %	Test Cases Pending	Priority	No of defects
1	Simple GUI where the user MUST be able to navigate to the chosen file			User can navigate the interface to select a file	100	100	0	High	0
2	System SHOULD list the compatible image files (e.g. *.jpg *.png) available in that folder.			Compatible image files will be listed with the required format.	100	100	0	Medium	0
3	The files SHOULD be sorted into:	Ascending Order	By the file name	The files will successfully be sorted into ascending order by the file name.	100	100	0	Medium	1
4			By the file date	The files will be sorted into ascending order by the file date	100	100	0	Medium	1
5		Descending Order	By the file name	The files will successfully be sorted into descending order by the file name.	100	100	0	Medium	1
6			By the file date	The files will be sorted into descending order by the file date	100	100	0	Medium	1
7	Users MUST be able to navigate and select class folders.			A browse button which will allow the user to navigate to their chosen file.	100	100	0	High	0
8	Files in this folder MUST have a *.names extension.			All files will have a *.names extension	100	100	0	Medium	1
9	All classes SHOULD be listed in a classes pane.			All classes will be listed in either ascending or descending order.	100	100	0	High	0
10	The file line number MUST be preserved.			The file line number will be preserved in the appropriate folder.	0	0	1	Medium	0

11	Users MUST be able to add classes.		The user will be prompted too add a class through a button.	100	100	0	High	1
12	There SHOULD be a way for the user to name the class right away.		The user will be made to name the class on creation.	100	100	0	Medium	3
13	Users MUST be able to remove classes.		The user will be prompted to remove a class using a button	100	100	0	Medium	2
14	The class file MUST be able to be appended to.		The user will be allowed to edit the classes file appending what shape they want to use.	100	100	0	Medium	1
15	Users SHOULD be able to use the following shapes:	Triangle	A class for each shape will be used storing the appropriate attributes and methods for each one.	100	100	0	High	0
16		Rectangle		100	100	0	High	0
17		Trapezium		100	100	0	High	0
18		Polygon		100	66	1	High	1
19	The polygon shape MUST have up to 8 points, including the start.		The program will only allow between 3 and 8 points.	100	66	1	High	1
	Data: The number of points	Normal: 5	The shape will be drawn with 5 points	100	66	1	High	1
		Boundary: 8	The shape will be drawn with 8 points	100	66	1	High	1
		Erroneous: 10	The program will return an error prompting the user to enter a valid number of points.	100	66	1	High	1
20	The user MUST (only) be able to use the shapes to draw on top of the image.		The system will check the current position of the shape and if the shape is outside of the image boundaries, an error will occur and the shape will be placed back in it's original position.	100	100	0	High	0

21	The shapes MUST have no fill (only the outline)		The system won't allow the user to change the shape fill colour.	0 (no test needed as no functionality)	0	0	Low	0
22	Shapes MUST be displayed on the image.		The system will only allow shapes to be drawn within specific boundaries of the image pane.	100	100	0	High	0
23	There SHOULD be an annotations file (with extension *.annotations).		Files will be loaded successfully with the correct extension.	100	100	0	Medium	0
24	User SHOULD be able to save the image with annotations.		File handling options will be available to the user giving them the option to save their annotation. This save will happen successfully.	100	100	0	High	2
25	The system SHOULD prompt the user to overwrite the file if another exists with the same name.		The system will take an input from the user for a filename. This filename will be compared to other filenames to check for duplicates. If there is a duplicate, an error will occur, and the user will have to input another filename.	100	0	1	Medium	0
26	User SHOULD be able to change the name of an existing file.		The system will allow the user to change a filename. The same algorithm will be used to check for a duplicate filename.	100	0	0	Medium	1
27	Annotations MUST follow the hierarchical data format 5 (HDF5) or JSON.		All annotations will follow HDF5.	100	100	0	Medium	2
28	The following data MUST be	Number of annotated images	This data can be stored as a list or linked list	100 (Data is stored in JSON formatting)	100	0	High	2

029	stored in each annotation file:	Image file name	Will be appended to the list and algorithm applied to check for duplicates.	100	100	0	High	2
30		Number of shapes per image	Will be successfully stored as an integer.	100	100	0	High	2
31		Shape type	Will be successfully stored as an attribute.	100	100	0	High	2
32		Point_1(X,Y)	Will be successfully stored as 2 integers.	100	100	0	High	2
33		Point_2(X,Y)		100	100	100	High	2
34		Point_n(X,Y)		100	100	100	High	2
35	The selected image SHOULD be displayed on the image pane.		The coordinates/boundaries of the image pane will be stored, so the image will be placed within this boundary.	100	100		High	4
36	The user SHOULD be able to increase the size of a shape using the mouse.		The system will take in user input from the mouse which will be used to resize the shape. An algorithm will be used to make sure the shape is not resized outside of the image boundaries. If this occur, the shape will revert to its original size.	100	0	1	High	0
37	The user SHOULD be able to move the vertex of a polygon with the mouse.		Input from the mouse will be taken when a vertex has been clicked on. This will then allow the user to drag the selected vertex and place it into a new position. The shape will be then filled in its new position. If the vertex has been dragged outside of the image boundaries, then an error will	100	0	1	Medium	0

		occur, and the shape will be reverted to its original position.					
38	User MUST be able to delete a shape.	The system will allow the user to select a shape and delete it from the image pane.	100	0	0	Low	1
39	User SHOULD be able to copy shapes.	The system will allow the user to copy a shape. The size and dimensions of the shape will be stored.	100	0	1	Low	0
40	User SHOULD be able to paste shapes.	The copied information of the shape will be used to create a new shape when the user chooses the paste option. If no shape has been copied, then an error will occur notifying the user that there is no copy information.	100	0	1	Low	0
41	The name of the class SHOULD be visible at the top of the shape.	The name of the class will be successfully displayed at the top of the shape.	100	100	0	Low	0
42	The application MUST be automatically saved.	The system will overwrite the last save file automatically.	100	100	0	High	1
43	The autosave MUST happen every minute.	A clock system will be used and every 60 seconds, the previous save file will be overwritten with the new save file.	100	100	0	Medium	1
44	The autosaving process MUST be done using threads.	The system will use threads to save each part of the program.	100	100	0	Medium	1

45	Storing data MUST use a data structure from the first term .	The system will make efficient use of a data structure to store data.	100	100	0	Medium	0
46	All sorting algorithms MUST be from the first term .	The system will use sorting algorithms from the first term.	100	100	0	High	4
47	All searching algorithms MUST be from the first term .	The system will use searching algorithms efficiently from the first term.	100	100	0	High	0

Test Defects

Defect ID	Bug Description			Test Case ID	Priority	Severity	Open Date	Status	Raised By	Tested on version: Alpha/Beta	Workaround
	Steps to Reproduce	Expected Results	Actual Results								
1	1)Select File 2)Press open 3) Select Image folder	User can navigate the interface to select a file	Open image but doesn't display all images in the image widget	testCaseSelectImageFolder testCaseOpenImage	Medium	Low	15/03/2020	Open	Harry Evans	Alpha	Need append images list or view which want them to image widget list.
1.1		Images should be displayed in the image widget list and be selectable to be displayed on the image pane.	The results work as expected.	testCaseSelectImageFolder testCaseOpenImage	Medium	Low	25/03/2020	Closed	Michael Gibbs	Alpha	
2	1) Select image to open	Image should load correctly on the image pane.	Image is too large for image pane.	testCaseOpenImage	Medium	Medium	14/03/2020	Open	Harry Evans	Alpha	Need function which

	2) Press select Image										scales in image
2.2	1) Select image to open 2) Press select Image	Image loads too large but can now be scaled out to fit canvas.	Passed. Image can now be scaled out	testCaseOpenImage testCaseScaleOut	Medium	Medium	15/03/2020	Closed	Harry Evans	Alpha	
3	1) Select image to open 2) Press select Image	Image should load correctly on the image pane.	Image loads too small on the image pane.	testCaseOpenImage	Medium	Medium	14/03/2020	Open	Harry Evans	Alpha	Need functi which s out th imag
3.1	1) Select image to open 2) Press select Image	Image loads too small but should be able to scale in and increase the size of the image.	Passed. Image can now be scaled in.	testCaseOpenImage testCaseScaleIn	Medium	Medium	15/03/2020	Closed	Harry Evans	Alpha	
4	No setup Instruction	Compatible image files will be listed with the required format. The user shouldn't be allowed to upload an incompatible image.	The user can add an incompatible file, but it can't be loaded to the image pane and on restart, the file isn't loaded to the widget list.	testCaseImageFormat	Low	Low	25/04/2020	Closed	Harry Evans	Beta	

5	1) Press Name (Asc) from dropdown	The files will successfully be sorted into ascending order by the file name.	Sorting algorithm works (via QTest) but doesn't display on GUI in main application	testCaseSortAscName	High	High	26/03/2020	Open	Harry Evans	Alpha	Similar defect need vector w contains sorted and re-w them to GUI
5.1	1) Press Name (Asc) from dropdown	The sorted files should be re-written to the GUI.	Passed. Sorted list is written to the GUI.	testCaseSortAscName testCaseSortAscGui	High	High	10/04/2020	Closed	Harry Evans	Beta	
6	1) Press Date (Asc) from dropdown	The files will be sorted into ascending order by the file date	Sorting algorithm works (via QTest) but doesn't display on GUI in main application	testCaseSortAscDate	High	High	26/03/2020	Open	Harry Evans	Alpha	Similar defect need vector w contains sorted and re-w them to GUI
6.1	1) Press Date (Asc) from dropdown	The sorted files should be re-written to the GUI.	Passed. Sorted list is written to the GUI.	testCaseSortAscDate	High	High	10/04/2020	Closed	Harry Evans	Beta	
7	1) Press Name (Desc)	The files will successfully be sorted into	Sorting algorithm works (via QTest) but	testCaseSortDescName	High	High	26/03/2020	Open	Harry Evans	Alpha	Similar defect need vector w

	from dropdown	descending order by the file name.	doesn't display on gui in main application								contains sorted and re-w them to GUI
7.1	1) Press Name (Desc) from dropdown	The sorted files should be re-written to the GUI.	Passed. Sorted list is written to the GUI.	testCaseSortDescName testCaseSortDescGui	High	High	10/04/2020	Closed	Harry Evans	Beta	
8	1) Press Date (Desc) from dropdown	The files will be sorted into descending order by the file date	Sorting algorithm works (via QTest) but doesn't display on gui in main application	testCaseSortDescDate	High	High	26/03/2020	Open	Harry Evans	Alpha	Similar defect need vector w contains sorted and re-w them to GUI
8.1	1) Press Date (Desc) from dropdown	The files will be sorted into descending order by the file date	Passed. Sorted list is written to the GUI.	testCaseSortDescDate	High	High	10/04/2020	Closed	Harry Evans	Beta	
9	1) Press Add Object 2) Type object name	The user will be prompted too add a class through a button.	The object doesn't get added to the class list widget	testCaseAddClass	High	High	24/03/2020	Open	Harry Evans	Alpha	The cl needs t added to classes for th image t

	3) Press enter										written the G
9.1	1) Press Add Object 2) Type object name 3) Press enter	Class object should be added to the class widget list on GUI	The object does get added to the class list widget. The class path is re-written with the new object and displayed.	testCaseAddClass	High	High	26/03/2020	Closed	Harry Evans	Alpha	
10	1) Double click on a class or press select class when pressed 2) Press remove class button	The user will be prompted to remove a class using a button	On button being pressed, selected classes were not being removed.	testCaseRemoveClass	Medium	Medium	16/04/2020	Open	Harry Evans	Beta	Class object n to b remove from t appropri file then written GUI
10.1	1) Double click on a class or press select class when pressed 2) Press remove	The user will be prompted to remove a class using a button	The class is removed from the GUI but not from the classes file.	testCaseRemoveClass	Medium	Medium	17/04/2020	Open	Harry Evans	Beta	Class object n to b remove from t appropri file then written GUI

	class button										
10.2	1) Double click on a class or press select class when pressed 2) Press remove class button	Class should be removed from GUI and class file.	Passed.	testCaseRemoveClass	Medium	Medium	21/04/2020	Closed	Harry Evans	Beta	
11	1) once image is displayed on the image pane 2) Press draw rectangle	The user can click the draw rectangle button and drag on the image pane where the shape will be drawn.	A rectangle is automatically displayed on the screen, without the ability for the user to click and drag.	testCaseDrawRectangle	High	High	15/03/2020	Open	Harry Evans	Alpha	Wrong function being used to draw rectangle
11.1	rectangle	The user should now be able to click and drag where the rectangle can be placed.	Rectangle can now be drawn as expected.	testCaseDrawRectangle	High	High	14/04/2020	Closed	Harry Evans	Alpha	
12	1) Once the user is ready to save annotation	File handling options will be available to the user giving them the option to	The image information is saved as a whole, so it can be re-	testCaseSaveImage	High	Medium	20/03/2020	Open	Harry Evans	Alpha	Need algorithm using HTML or JSON to collect

	2) Press File 3) Press save	save their annotation. This save will happen successfully.	opened, it can't be edited.								annota informa then wri file in co structu
12.1	1) Once the user is ready to save annotation 2) Press File 3) Press save	The image information is all saved individually, i.e. shape properties, image etc	Can't implement the save using HDF5	testCaseSaveImage testCaseFileFormat	High	Medium	21/04/2020	Open	Harry Evans	Beta	Need algorit using H or JSON colle annota informa then wri file in co structu
12.2	1) Once the user is ready to save annotation 2) Press File 3) Press save	Implementation of saving using a JSON format	Annotations can now be saved using a JSONM format	testCaseSaveImage testCaseFileFormat	High	Medium	22/04/2020	Closed	Harry Evans	Beta	
13	1) Type filename to replace 2) Type new filename 3) Press replace button	The system will allow the user to change a filename. The same algorithm will be used to check for a duplicate filename.	The filename is replaced on GUI but is without date and filetype. The filename needs to be re-written in directory and	testCaseChangeFilename	Low	Low	22/04/2020	Open	Harry Evans	Beta	Filena needs t change the direc then rewritte the G

			displayed in the same format.								
14	1) Draw a shape to the screen 2) Press Select 3) The shape should now be moveable.	Any drawn shape on the screen can be moved	The shape doesn't move	testCaseMoveShape	Medium	Medium	15/03/2020	Open	Harry Evans-Software Tester	Alpha	Programmer needs to originate shape position and place new shape where mouse is placed
14.1	1) Draw a shape to the screen 2) Press Select 3) The shape should now be moveable.	Shape should be able to be moved when dragged.	Shape duplicates when dragged.	testCaseMoveShape	Medium	Medium	16/04/2020	Open	Micheal Gibbs	Beta	Previous workarounds attempted but failed to overcome
14.2	1) Draw a shape to the screen 2) Press Select 3) The shape should	Shape should be able to be moved when dragged.	The shape stays in its original position but the class name inside the shape moves to the correct position.	testCaseMoveShape	Medium	Medium	20/04/2020	Open	Harry Evans	Beta	Slight progress shape movement but not complete

	now be moveable.										
15	1) Hover mouse over graphics scene	The mouse x and y positions should be displayed on a label below the graphics scene canvas.	This test only works when hovering mouse over a label.	TestCaseShowMousePosition	Medium	Medium	19/03/2020	Open	Harry Evans-Software Tester	Alpha	Need to mouse coordin over graph scen
15.1	1) Hover mouse over graphics scene	We need to track the mouse position on a graphics scene.	Passed. Can now track mouse position on a graphics scene.	TestCaseShowMousePosition	Medium	Medium	20/03/2020	Closed	Harry Evans-Software Tester	Alpha	
16		Datatype fData should be available from multiple classes	FData was out of reach from Image and MainWindow simultaneously	testCaseOpenImage	Medium	Medium	28/03/20	Open	Michael Gibbs	Beta	Function to get c from and class
16.1		Share class should be accessible from both MainWindow and Image	Works as expected	testCaseOpenImage	Medium	Medium	29/03/2020	Closed	Michael Gibbs	Beta	
17	1.Load image 2.Select class 3.Press draw polygon	Polygon class should process the required data for drawing a polygon	Cannot cast from drawnshape to polygonshape	testCaseDrawPolygon	Medium	Medium	10/4/20	Open	Michael Gibbs	Beta	Collect shape p plotted the user draw sh

	4.Plot points										
17.1	1.Load image 2.Select class 3.Press draw polygon 4.Plot points	Polygon can be drawn	Compiles without error, still undesired result.	testCaseDrawPolygon	Medium	Medium	14/04/20	Closed	Michael Gibbs	Beta	
18	No setup required	The thread should spawn, and trigger a save every 60 seconds	Thread triggers but can't connect to mainWindow to start a save.	TestCaseThread testCaseThreadSave	High	High	24/04/2020	Open	Harry Evans	Beta	Look in signals slots overco error
18.1	No setup required	The triggered thread should be connected to mainWindow to start a save.	Test case needs completed.	TestCaseThread testCaseThreadSave	High	High	25/04/2020	Closed	Harry Evans	Beta	
19	1.Draw shape on image 2.Press Select 3.Press delete shape	Delete shape from GUI and shape list	Shape is deleted from the shape list but not from the GUI	testCaseDeleteShape	Medium	Medium	23/04/2020	Open	Beth Rees	Beta	Need function to re write shapes GUI after deletion one sh from the

[illegible]