
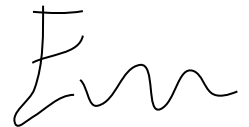


TutorPoint Integration & Testing Report - Iteration 4

Information

Testing Manager Name	Testing Manager Signature	Charters	Date of Testing
Daniel Bishop		1. Verify that stream window functions correctly 2. Verify that whiteboard text is displayed correctly, and works as intended	20/04/2020
Eric Walker		3. Verify that multiple users can view the same whiteboard, and changes made by one user is reflected on the whiteboards of others 4. Verify that whiteboard user access control is correctly implemented 5. Re-test whiteboard pen and shape visual bugs from iteration 3	

Preliminary Notes

Several modules intended to be finished this iteration were not finished, or were not in a ready for testing state, and have not been tested. Whiteboard sections were completed later, and tested within an iteration. For all whiteboard related tests, client was launched directly to whiteboard window, with user and session ids manually set.

1. Stream Window Testing Results

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
StreamWindowController	Is there a screen to view whiteboard, slides and video all at once	There should be some way of viewing 3 different areas at once	There are 3 sections containing placeholder panes	Y	-	Observing source fxml, there was meant to be a pane of color F60066, but could not see color on screen. unimportant.
StreamWindowController	Can each of the areas in the multi view be resized? Attempt to resize by clicking and dragging.	The panes should resize	The panes resized	Y	-	
StreamWindowController	Can just the video section be shown? Click on 'Video' tab	The screen should display an area for the video	The screen displayed an area for the video	Y	-	
StreamWindowController	Can just the presentation section be	The screen should display an area for the presentation	The screen displayed an area for the presentation	Y	-	

	shown? Click on 'Presentation' tab					
StreamWin dowContro ller	Can just the whiteboard section be shown? Click on 'Whiteboard' tab	The screen should display an area for the whiteboard	The screen displayed an area for the whiteboard	Y	-	

2. Whiteboard Window Text Testing Results

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
Whiteboard.java	Attempt to draw some text 'test' Click and drag text to size.	Text should be drawn to screen in selected colour, at a size defined by clicking and dragging	Works as intended	Y	-	
Whiteboard.java	Click on text button, enter text 'test'. Draw text, then click on text button again, change text 'tset', draw more text	Should first draw 'test', then draw 'tset'	Does so	Y	-	
Whiteboard.java	Enter text 'test', deselect text button, click and drag on screen in an attempt to draw anyway	Should not draw anything	Draws text 'test'	N	2	Whether this works as intended or not depends of intended function of buttons
Whiteboard.java	Enter text 'test', select text, draw text. Enter text 'tset', deselect	Shouldnt draw anything. Since it probably will, should draw 'tset'	Draws text 'test'	N	2	This test is not particularly important, and can be considered the same bug as above, due to relying on

	text, attempt to draw text anyway					erroneous behaviour, but may be useful for debugging
Whiteboard.java	Draw special characters - '@, #, \$, %, &, * éâ+' and '\n "" \\'	Should draw special characters same as any other	Does so	Y	-	
Whiteboard.java	Capacity - can the entire bee movie script be entered?	Should draw entire bee movie script	Probably does so	Y	-	Most of script was offscreen, so actual length of drawn text cannot be verified. Very laggy, but not unworkable.

3. Whiteboard Mirroring Testing Results

Before these tests, two instances of client were opened, with different user ids, but same session ids. These will be referred to as tutor and student.

For tests with more than 2 clients, they shall be named Tutor, Student 1, Student 2, etc.

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
Whiteboard module	Attempt to draw a variety of shapes, pen lines, highlighters and text on tutor's canvas	All items should be drawn on the tutor's screen, and also on the student's screen	All items were drawn, however, with the exception of pen lines, all items were fainter than preview and student on tutor's screen Additionally, on tutor's screen, pen lines occasionally had additional line segments that were not drawn, nor reflected on student's screen	N	3	Unable to reproduce faintness error consistently. Best guess, some canvas or pen colour gets alpha set? Found way to trigger in later test.
Whiteboard module	Attempt to erase items on tutor's whiteboard	Items should be removed from both tutor and student's screens identically	Mostly functional, however the eraser, which functions like a white pen line, suffered the same issue as the pen line: additional line segments that were not drawn, nor reflected on student's screen	N	3	

Whiteboard module	Set student access checkmark, and draw variety of shapes, pen lines, highlighters and text on student's canvas	All items should be drawn on the student's screen, and also on the tutor's screen	<p>Threw exceptions, but kept going. Mirroring did not work very well. Same line segment error as when drawing on tutor.</p> <p>Attempting to draw highlighter on Tutor's canvas afterwards resulted in fainter highlighter lines appearing on student's screen.</p>	N	3	<pre>java.lang.InternalError: Unrecognized PGCanvas token: 67 at javafx.graphics/com.sun.javafx.s g.prism.NGCanvas.renderStream (NGCanvas.java:1164) at javafx.graphics/com.sun.javafx.s g.prism.NGCanvas.renderConten t(NGCanvas.java:610) at javafx.graphics/com.sun.javafx.s g.prism.NGNode.doRender(NGN ode.java:2072) at javafx.graphics/com.sun.javafx.s g.prism.NGNode.render(NGNod e.java:1964) at javafx.graphics/com.sun.javafx.s</pre>
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					g.prism.NGGroup.renderContent (NGGroup.java:270) at javafx.graphics/com.sun.javafx.s g.prism.NGRegion.renderConten t(NGRegion.java:578) at javafx.graphics/com.sun.javafx.s g.prism.NGNode.doRender(NGN ode.java:2072) at javafx.graphics/com.sun.javafx.s g.prism.NGNode.render(NGNod e.java:1964) at javafx.graphics/com.sun.javafx.t k.quantum.ViewPainter.doPaint(ViewPainter.java:479) at javafx.graphics/com.sun.javafx.t k.quantum.ViewPainter.paintIm pl(ViewPainter.java:321)
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						<div>at</div> <div>javafx.graphics/com.sun.javafx.t</div> <div>k.quantum.PresentingPainter.ru</div> <div>n(PresentingPainter.java:91)</div>
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Whiteboard module	Reload windows and repeat above test	“	Threw exceptions again, this time while erasing.	N	3	
Whiteboard module	On same instances as previous test, draw more lines	Don't know	Green lines turned grey and Translucent green highlighter marks turned opaque on student's (broken) canvas, but were fine on tutor's.	N	3	Strange line colours appear to be caused by exceptions. Exceptions appear to be caused by overly vigorous pen/eraser drawing. Oli and Dan believe it may be to do with socket buffer overflowing.
Whiteboard module	Mirroring with more than 2 clients: open 4 clients, draw on each. Note: no pen or eraser	Should reflect the drawing on all 4 windows to each other	Student3 window crashed. Remaining windows are able to mirror between each other.	Y	-	Test considered passed as log inspection leads me to believe that Student3 window failed to connect to the server properly for some reason.

4. Whiteboard Access Control Testing Results

Note: in these tests, pen and eraser will not be used, only shapes and highlighter due to earlier discovered bugs

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
Whiteboard module	With student access unticked, draw on Tutor's Screen	Drawing should be mirrored to student's screen	Drawing is mirrored	Y	-	
Whiteboard module	With student access unticked, draw on Student's Screen	Student should not be able to draw on either whiteboard	Nothing is drawn	Y	-	
Whiteboard module	With student access ticked, draw on Tutor's Screen	Drawing should be mirrored to student's screen	Drawing is mirrored	Y	-	
Whiteboard module	With student access ticked, draw on Student's Screen	Drawing should be mirrored to tutor's screen	Drawing is mirrored	Y	2	While drawing, discovered that on the screen being mirrored to, the shape preview is behind previously drawn shapes, but

						the final shape is drawn at the front. Same applies to text.
Whiteboard module	Can student affect student access checkbox?	Student should be unable to click on student access checkbox.	Clicking on checkbox in student's window has no effect	Y	1	Perhaps student access checkbox should be invisible rather than simply greyed out

5. Whiteboard Retesting From Iteration 3 Results

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
Whiteboard screen	Does shape preview match drawn shape	Shape should be drawn same as the preview at the moment of mouse release	Works as intended	Y	-	
Whiteboard screen	Is shape preview always visible? Drawn shaped, then preview overlapping shape	Shape preview should always be the top layer of the image	<p>As noted in (4.) Shape preview is behind everything but the background on the screen being mirrored to. Works as intended on screen being drawn on.</p> <p>Additionally, shape previews are slightly too far forward: they are in front of the tool selection panel.</p>	N	3	