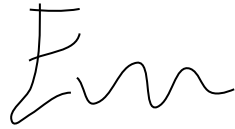# TutorPoint Integration & Testing Report - Final

Information

Testing Manager Name	Testing Manager Signature	Charters	Date of Testing
Daniel Bishop		1) Re-test all aspects of program to ensure no bugs generated by new additions to program	30/05/2020
Eric Walker			

Preliminary Notes

- Some additions to the program were made post iteration 7 to fix bugs. Intended fixes will be tested in this document.
- Whiteboard access and history is not considered functional at this time, and so is not tested. Whiteboard as a whole is not fully functional, but as long as it does not crash too hard, will be accepted.
- If testing encounters a previously discovered but unfixed bug, it is noted but not considered a failure.
- Webcam streaming was tested alongside this document, but is in the Iteration 7 testing document.

1-A. Login Screen Testing Results

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
LoginWindowController.java	Press 'Sign Up' button	Opens register window	Does so	Y	-	
LoginWindowController.java	Press login button with no data entered	Do not login, display appropriate error message in window	Does not login, displays "Please Enter Username" message	Y	-	
LoginWindowController.java	Press login button with valid username, but no password	Do not login, display appropriate error message in window	Does not login, displays "Please Enter Password" message	Y	-	
LoginWindowController.java	Press login button with valid (but not registered username and password) Username: "Eric" Password "EricPassword!1"	Do not login, display appropriate error message in window "user not registered / invalid username and password" etc.	Does not login, displays "Wrong Username or Password" message	Y	-	
LoginWindowController.java	Press login button with valid (and registered) username incorrect password Username: "ChemistryTutor" Password "Test123!"	Do not login, display appropriate error message in window "Wrong Username or Password"	Does not login, displays "Wrong Username or Password" message	Y	-	

LoginWindowController.java	Press login button with valid (but unregistered username and password that exists in database) Username: "Eric" Password "Test123!" (belongs to user "TestStudentOne")	Should not login and display appropriate error message in window "Wrong Username or Password"	Does not login, displays "Wrong Username or Password" message	Y	-	
LoginWindowController.java	Restart Launcher Login with Valid, registered account	Log in and move to main screen	Does so	Y	-	
LoginWindowController.java	Login with valid password, numbers in username Username: "ChemistryTutor9" Password "admin"	Should not accept username, and display an error message.	Does not login, displays "Wrong Username or Password" message	Y	-	
LoginWindowController.java	Login with valid password, non-alphanumerics in username Username: "ChemistryTutor*" Password "admin"	Should not accept username, and display appropriate error message	Does not login, displays "Wrong Username or Password" message	Y	-	
LoginWindowController.java	Attempt to log in with various possible escape and special characters.	Should not accept username, and display appropriate error message	Does not login, displays "Wrong Username or Password" message	Y	-	

LoginWind owControll er.java	Does 'Remember Me' button work? Login with checkbox ticked, then restart	Should autofill username, but not password	Does so	Y	-	
LoginWind owControll er.java	Login twice with the same account	Should reject attempt with appropriate error message	Does so - error message 'unexpected error'	Y	1	Error messag e could be improve d

1-B. Register Screen Testing Results

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
ResgisterScreenController.java	Attempt to register as Test test@example.com P@55word Tutor box unchecked	Should add record to database with specified data	Does so	Y	-	
ResgisterScreenController.java	Attempt to register as "Test " test@example.com P@55word Tutor box unchecked	Should Reject username with appropriate error message displayed	Rejects username on grounds of "Username should only contains letters and …"[sic]	Y	1	Error message is truncated and contains a typo
ResgisterScreenController.java	Attempt to register with blank fields	Should reject attempt with appropriate error message	Rejects attempt with error message "Please Enter Username"	Y	-	
ResgisterScreenController.java	Attempt to register with just a valid username	Should reject attempt with appropriate error message	Rejects attempt with error message "Please Enter Email"	Y	-	
ResgisterScreenController.java	Attempt to register with just a valid username and one email	Should reject attempt with appropriate error message	Rejects attempt with error message "Emails Don't Match"	Y	-	

ResgisterScreenController.java	Attempt to register with just a valid username and mismatched emails	Should reject attempt with appropriate error message	Rejects attempt with error message "Emails Don't Match"	Y	-	
ResgisterScreenController.java	Attempt to register with just a valid username and matched emails	Should reject attempt with appropriate error message	Rejects attempt with error message "Please Enter Password"	Y	-	
ResgisterScreenController.java	Attempt to register with just a valid username and matched emails and one password	Should reject attempt with appropriate error message	Rejects attempt with error message "Passwords Don't Match"	Y	-	
ResgisterScreenController.java	Attempt to register with just a valid username and matched emails and mismatched passwords	Should reject attempt with appropriate error message	Rejects attempt with error message "Passwords Don't Match"	Y	-	
ResgisterScreenController.java	Attempt to register with invalid emails and valid others Emails: Testexample.com, test@example	Should reject attempts with appropriate error message	Does so, with error message "Email Not Valid"	Y	-	
ResgisterScreenController.java	Attempt to register with invalid passwords and valid others Passwords to try:	Should reject attempts with appropriate error message	Does so, with error message "Use 8 or more characters with mix-case	Y	1	Error message is truncated again.

	Pa55word (no symbols); P@ssword (no numbers); p@55word (no capitals); P@55WORD (no lowercase); P@55wor (too short)		lett... numbers & symbols" After the ellipsis was barely visible.			Error message should perhaps read 'mixed-case'
ResgisterScreenController.java	Verify tutor property is passed in; Create two accounts, one a tutor one not	Should create two accounts with tutor field reflecting choices	Does so	Y	-	
ResgisterScreenController.java	Verify username uniqueness requirement; Create account with same username as previous account	Should reject attempt with appropriate error message	Does so, with error message "Username Already Taken"	Y	-	
ResgisterScreenController.java	Verify email uniqueness requirement; Create account with same email as previous account	Should reject attempt with appropriate error message	Does so, with error message "Email Address Already Registered"	Y	-	
ResgisterScreenController.java	Verify back button functions Press 'Back to Login' button	Should return to login screen	Does so	Y	-	

1-C. Dynamic Home Screen Testing Results

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
HomeWindowController.java	Loaded into home screen using account 'Admin'	Window should load with a carousel of top subjects and a list of top tutors	Both carousels load populated	Y	-	
HomeWindowController.java	Click on left/previous button on carousels while at start of list	Carousels should not move	Neither move	Y	-	
HomeWindowController.java	Click on right/next button on carousels while at start of list	Carousels should advance and load more subjects/tutors	Both carousels load more items	Y	-	
HomeWindowController.java	Click on right/next buttons when at the end of loadable content	Carousels should not move	Top Subjects carousel still has old issue, but otherwise works fine	Y	1	Old issue: when top subjects downloads just a single item, it does not display it, but instead displays another instance of the previous 5 elements. Clicking back once returns to the original instance

						of the previous 5 items. Clicking back again returns to the penultimate 5 elements as expected.
HomeWindowController.java	Spam-click right/next button	Should iterate smoothly through subjects/tutors, or at least ignore overclicking	No longer lags, but still shows old issue	Y	1	Old issue: spam clicking produces overlapping items between shown states
HomeWindowController.java	Click on downloaded subjects/tutors	Should display discover screen for that tutor/subject	Does so	Y	-	
HomeWindowController.java	Click each tab to verify user is taken to appropriate screen	Tabs should take user to appropriate non-home screen				

1-D. User Account Viewing/Modifying Testing Results

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
Account details screen	Attempt to view username, password, email, profile picture and tutor status	Should allow viewing of username, email, profile picture and tutor status, but not password for security reasons	Works as intended	Y	-	
Account details screen	Attempt to change username to the same username TestStudentOne -> TestStudentOne	Should not allow it and give appropriate error message	Disallows change, giving error message "Same as current username"	Y	1	Capitalisation of error message
Account details screen	Attempt to change username to an already taken username TestStudentOne -> TestStudentTwo	Should not allow it and give appropriate error message	Disallows change, giving error message "Username Already Taken"	Y	-	
Account details screen	Attempt to change username to an empty string	Should not allow it and give appropriate error message	Disallows change, giving error message "Please Enter Username"	Y	-	

	TestStudentOne ->					
Account details screen	Attempt to change username to an invalid username TestStudentOne -> TestStudentOne1	Should not allow it and give appropriate error message	Disallows change, giving error message "Username should only contains letters and have no spaces"[sic]	Y	1	typo in error message
Account details screen	Attempt to change username to an untaken username, but with no password TestStudentOne -> TestStudentOn	Should not allow it and give appropriate error message	Disallows change, giving error message "Please Enter Password"	Y	-	
Account details screen	Attempt to change username to an untaken username, but with incorrect password TestStudentOne -> TestStudentOn	Should not allow it and give appropriate error message	Disallows change, giving error message "Incorrect Password"	Y	-	

Account details screen	Attempt to correctly change username TestStudentOne -> TestStudentOn	Should allow it and update username	Does so	Y	-	
Account details screen	Verify change is effected by logging in to account again, first using old username, then new username	Should only allow login using new username	Works as intended	Y	-	
Account details screen	Attempt to change password to valid password with incorrect and absent current passwords	Should not allow attempts and give appropriate error messages	Does not allow password to be changed. Shows error message "Incorrect Password" and "Please Enter Password" as expected.	Y	-	
Account details screen	Attempt to change password to valid, mismatched passwords with valid current password	Should not allow attempt and give appropriate error message	Does not allow password to be changed. Shows error message "Passwords Don't Match".	Y	-	

Account details screen	Attempt to change password to current password with valid current password	Should not allow attempt and give appropriate error message	Updates password to the same thing	Y	2	Should probably reject password changing attempt, but not important
Account details screen	Attempt to change password to various invalid passwords: no symbol; no number, no capital; no lowercase; too short, with valid current password	Should not allow attempts and give appropriate error messages	Does not allow password to be changed. Shows error message "Use 8 or more characters with mix-case letters, numbers & symbols".			
Account details screen	Attempt to correctly change password Test123!-> Test123@	Should allow it and update password	Does so	Y	-	
Account details screen	Verify change is effected by logging in to account again, first using old password, then new password	Should only allow login using new password	Does so	Y	-	

Account details screen	Attempt to change email to valid email with incorrect and absent current passwords	Should not allow attempts and give appropriate error messages	Rejects attempts with error messages "Incorrect Password" and "Please Enter Password".	Y	-	
Account details screen	Attempt to change email to absent email with valid current password	Should not allow attempt and give appropriate error message	Rejects attempt with error message "Please Enter Email".	Y	-	
Account details screen	Attempt to change email to mismatched emails with valid current password	Should not allow attempt and give appropriate error message	Rejects attempt with error message "Emails Don't Match".	Y	-	
Account details screen	Attempt to change email to invalid email with valid current password	Should not allow attempt and give appropriate error message	Rejects attempt with error message "Email Not Valid".	Y	-	
Account details screen	Attempt to change email to already taken email with valid current password	Should not allow attempt and give appropriate error message	Rejects attempt with error message "Email Already Registered".	Y	-	

Account details screen	Attempt to correctly change email testts1@example.com-> testchanged@example.com	Should allow it and update email	Does so	Y	-	
Account details screen	Verify change is effected by logging in to account again, and returning to account details screen	Should display new email	Does so	Y	-	
Account details screen	Attempt to set profile picture for the first time, but cancel file choosing dialogue	Should not change anything or crash	Does not	Y	-	
Account details screen	Select a profile picture and do not cancel	Should not permanently change anything, but display it in the window - verify by logging out and back in	Does so	Y	-	

Account details screen	Select a profile picture and then press 'Update Image' button	Should create a file in the server resources. Change should be persistent between logins	Does so. Profile picture was still present after relogging.	Y	-	
Account details screen	Attempt to change tutor account status with incorrect and absent current passwords	Should not allow attempts and give appropriate error messages	Rejects attempts with error messages "Incorrect Password" and "Please Enter Password".	Y	-	
Account details screen	Attempt to change tutor account status to same as current with valid current password	Can either allow or disallow attempt, but should not change status	Allows attempt	Y	-	
Account details screen	Attempt to change tutor account status to different to current with valid current password	Should allow attempt, and change status	Allows attempt, changes status	Y	-	

| Account details screen | Attempt to change all information back to previous states TestStudentOne Test123! testts1@example.com | Should allow changes back to previous values: values of username and email are no longer taken. Cannot revert profile picture. | Does so | Y | - | |

1-E. Joining Lesson Testing Results

Abbreviations: ChemistryTutor = CT, TestStudentOne = TS1, TestStudentTwo = TS2, TestStudentThree = TS3,
TS1 + TS2 are both following CT. TS3 is not.

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
	Log in as CT Log in with TS1 and TS2 CT start stream	CT should not show as live for TS1 and TS2, then show up when stream is started	Functions as intended, CT was added to Live Tutors list as expected	Y	-	
	Log in as CT Log in with TS3 CT start stream	CT should not show up as live for TS3 even after stream is started	CT never showed up on TS3 screen. Showed as intended on TS1 screen which was still open in background	Y	-	
	Log in as CT Log in with TS1 and TS2 CT start stream, draw nothing on whiteboard, join stream with TS1	TS1 should be taken to stream screen, and see nothing on whiteboard	Works as intended	Y	-	

	Following from previous test, draw on CT whiteboard. TS2 join stream	TS2 should see previously drawn shapes from CT. TS1 should see shape appear when drawn.	TS2 does not see past drawn shape from Tutor. Otherwise as expected	N	3	The whiteboard feature is unfinished - Test was not expected to wholly succeed
	Log in as CT Log in with TS1 and TS2 CT start stream, join stream with TS1 and draw on whiteboard, TS2 join stream	TS2 should see shapes drawn by TS1 prior to joining	TS2 does not see the shapes	N	3	Same as above, Whiteboard is an unfinished feature
	Reload windows Log in as CT Log in with TS1 and TS2 CT start stream, do not upload a presentation, join stream with TS1	TS1 should see a placeholder presentation slide	Placeholder slide is seen	Y	-	
	Following on from previous test, CT upload presentation TS2 join stream	TS1 should receive newly uploaded presentation TS2 should get presentation upon loading in	Works as intended	Y	-	Slight delay between each presentation, but not too bad

	Can other tutors affect a tutor's stream? Log in as CT, TS1. Log in as PhysicsTutor. PhysicsTutor and CT start streaming TS1 join CT stream. PhysicsTutor modify presentation and Whiteboard	Changes made on PhysicsTutor should not affect CT stream for CT nor TS1	No changes were observed by CT or TS1	Y	-
	Can student leave stream? TS1 join CT stream, then TS1 press disconnect button	TS1 should no longer see CT stream window	Works as intended	Y	-
	Tutor ending stream for student - TS1 in CT stream, CT press stop streaming button	CT should be put into not live state, and TS1 should be kicked from steam is if they disconnected themselves	Works as intended	Y	-
	Tutor ending stream for student not yet logged in	TS1 should never see CT as live	CT was not observed as live by TS1	Y	-

	Log in as CT. start streaming. Stop streaming Log in as TS1. CT should not be shown in list of live tutors					
	Tutor ending stream for following student who is logged in, but not in stream CT and TS1 log in CT start streaming CT stop streaming	TS1 should see CT appear as live, then disappear	CT appeared in TS1 live list, then disappeared as expected		Y	-

1-F. 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 is a tab containing 3 different panes, but panes do not display video, presentation and whiteboard	N	3	Multiview is not an implemented feature and so test was not expected to pass
StreamWindowController	Can each of the areas in the multi view be resized? Attempt to resize by clicking and dragging.	The panes should resize	Two of the panes could have their vertical balance adjusted. Vertical divider could not be moved	N	3	Multiview is not a fully implemented feature and so test was not expected to pass
StreamWindowController	Can just the video section be shown? Click on 'Video' tab	The screen should display an area with the video	The screen displays an area with the video	Y	-	
StreamWindowController	Can just the presentation section be	The screen should display an area with the presentation	The screen displays an area with 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 with the whiteboard	The screen displays an area with the whiteboard	Y	-	

1-G-i. Whiteboard Pen Testing Results

Note: not all whiteboard features are fully implemented. While the program should not crash, some features will not function as intended.

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
WhiteboardWindowController.java	Attempt to draw a pen line	Line should be drawn on whiteboard	Line was drawn	Y	-	Line was very laggy - took a noticeable time to draw after mouse moved
WhiteboardWindowController.java	Attempt to draw a pen line not in whiteboard space	Line should not be drawn	Line was not drawn	Y	-	
WhiteboardWindowController.java	Attempt to draw a pen line from whiteboard, to off whiteboard and back on	Line should be drawn on whiteboard, both before leaving and after returning to whiteboard, but not off whiteboard	Worked as expected	Y	-	

1-G-ii. Whiteboard Shapes Testing Results

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
Whiteboard screen	Draw a shape of each type	Should add shapes where clicked and dragged. Clicking and dragging should display a preview of where the shape will be drawn	Worked as intended	Y	-	Preview was very laggy, similar to pen line
Whiteboard screen	Draw a highlighter line over the top of previously drawn shapes	Should draw a translucent line over shapes	Worked as intended	Y	-	Preview was very laggy again
Whiteboard screen	Erase drawn objects	Should remove drawn features where touched by eraser	Did so	Y	-	Laggy again
Whiteboard screen	Draw more of each pen/shape in different colours	Should draw as before, but with new colours (excepting eraser)	Shapes are drawn with new colour correctly	Y	-	

Whiteboard screen	Draw more of each pen/shape in different thicknesses	Should draw as before, but with different thicknesses (excepting eraser)	Shapes are drawn with new thickness	Y	-	
Whiteboard screen	Does shape preview match drawn shape	Shape should be drawn to match mouse position, regardless of if laggy preview has caught up	It does so	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	It is	Y	-	

1-G-iii. 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	Text is drawn fine except that it is drawn in black, rather than the selected colour	N	3	Whiteboard is not a finished module
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 nothing, as text tool is now deselected	Works as intended	Y	-	
	Following from previous test, reselect text and draw.	Should draw 'tset'	Works as intended	Y	-	
Whiteboard.java	Draw special characters - '@, #, $, %, &, * éê+' and '\n "' \\'	Should draw special characters same as any other	Works as intended	Y	-	
Whiteboard.java	Capacity - can the entire bee movie script be entered?	Should draw entire bee movie script	Due to text only drawing on single line, visible text was	Y	-	

			truncated by display width, but this is a non-issue			

1-G-iv. Whiteboard Mirroring Testing Results

Acronyms are shared with 1-E.

Assume all clients mentioned in tests are in a stream together

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 CT's canvas	All items should be drawn on the CT's screen, and also on TS1's screen	Worked as intended	Y	-	
Whiteboard module	Attempt to erase items on CT's whiteboard	Items should be removed from both CT and TS1's screens identically	Works as intended	Y	-	
Whiteboard module	Repeat above tests, but draw on TS1 screen	Items should be drawn/removed from both screens identically.	Works mostly as intended Old bugs #58 and #36 reoccurred	N	3	Bug #58 is when a student draws a pen or eraser and extra line segments connecting non-sequential points are generated.

						Bug #36 is where a mirrored shape preview is rendered beneath other shapes.
Whiteboard module	Mirroring with more than 2 clients: open 3 clients, draw on each. Note: no pen or eraser	Should reflect the drawing on all 3 windows to each other	Worked as intended (aside from bugs rediscovered above)	Y	-	

1-H-i. Presentation Loading Testing Results

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
Presentati onObject/ XmlHandle r	Cancel selection dialog	Should not take any action	Nothing happens	Y	1	'Loading…' is displayed despite not actually loading anything
Presentati onObject/ XmlHandle r	Attempt to select non-.xml file; "D:\Random\ray mears.png"	Should not even allow file to be viewed	Cannot find file as selection window is filtered for 'Presentation Files' (.xml)	Y	-	
Presentati onObject/ XmlHandle r	Load url pointing to xml file that is not a 'slideshow' "D:\VSCodeSWENG\TutorP oint\client\src\main\resou rces\application\media\X ML\Exploratory\NotPresen tation.xml"	Should reject attempt with appropriate error message	File is rejected with error message 'File is not a slideshow document.'	Y	-	
Presentati onObject/ XmlHandle r	Load url pointing to xml file that has no slides "D:\VSCodeSWENG\TutorP oint\client\src\main\resou	Should reject attempt with appropriate error message	File is rejected with error message 'Presentation Rejected as zero slides	Y	1	Slightly odd capitalisation

	rces\application\media\X ML\Exploratory\Presentati onNoSlides.xml"		were successfully registered.'			
Presentati onObject/ XmlHandle r	Load url pointing to xml file that has invalid document info "D:\VSCodeSWENG\TutorP oint\client\src\main\resou rces\application\media\X ML\Exploratory\Presentati onBadDocumentInfo.xml"	Should reject attempt with appropriate error message	File is rejected with error message 'File rejected due to invalid 'totalslides' field.'	Y	-	This error message is appropriate as totalslides is an attribute of documentinfo
Presentati onObject/ XmlHandle r	Load url pointing to xml file that has invalid defaults "D:\VSCodeSWENG\TutorP oint\client\src\main\resou rces\application\media\X ML\Exploratory\Presentati onBadDefaults.xml"	Should reject attempt with appropriate error message	File is rejected with error message 'File rejected due to invalid 'fontsize' field.'	Y	-	This error message is appropriate as fontsize is an attribute of defaults

1-H-ii. Presentation Display and Timing Testing Results

All tests use a presentation file with features allowing test to be performed

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
TimingManager/PresentationObject	Are slides sized correctly?	Slides should be sized the same as they are defined in the xml, and cut off visual features outside of these boundaries	This happens correctly	Y	-	
TimingManager/PresentationObject	Will large slides create scrollbars when they are larger than the viewing area? Load large slide presentation	Sliders should appear at right and bottom of the viewing area and allow the entire slide to be viewed by scrolling	Functions as expected	Y	-	
TimingManager/PresentationObject	Do timered slides move on to next slide when finished	Slides should move on to the next slide after their allotted time	They do	Y	-	

TimingManager/PresentationObject	Do slides loop forwards correctly	Final slide should return to 0th slide upon slide change	Does so	Y	-	
TimingManager/PresentationObject	Do slides loop backwards correctly	0th slide should not change upon pressing 'Prev Slide' Button	Does not change	Y	-	
TimingManager/PresentationObject	Do timings work upon manual slide change	Changing slide should cause timed elements to appear and disappear as intended	Works as intended	Y	-	
TimingManager/PresentationObject	Are image, video and text elements displayed correctly?	All elements should appear as described in xml	All elements are displayed as intended	Y	-	

1-H-iii. Presentation Mirroring Results

Acronyms shared with 1-E.

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
Presentation Handler.java	TS1 Join CT stream with no currently uploaded presentation	Should display a placeholder presentation	Does so	Y	-	
Presentation Handler.java	CT upload a presentation while TS1 is in stream	TS1 should receive presentation and begin displaying as well	Does so	Y	-	
Presentation Handler.java	TS1 Join CT stream with currently uploaded presentation	TS1 should load and display presentation	Works as intended	Y	-	
Presentation Handler.java	TS1 join CT stream with no uploaded	Presentation should not be shared	Presentation is not shared	Y	-	

	presentation, but CT has attempted to load an invalid presentation					
Presentation Handler.java	CT attempt to load invalid presentation while TS1 is in stream	Presentation should not be shared	Presentation is not shared		Y	-	
Presentation Handler.java	TS1 join stream when CT is on not the 0th slide	TS1 should load and move to appropriate slide	Does so		Y	-	
Presentation Handler.java	Does slide change for TS1 when CT changes slide? Forwards and backwards	Pressing Previous and next slide buttons on CT screen should move presentation on TS1 screen	Does so		Y	-	

| Presentation Handler.java | Can student (TS1) change slides? | TS1 should not even have buttons to try to change slide | TS1 does not have any bottons | Y | - | |

1-I. Text Chat Testing Results

Acronyms shared with 1-E.

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
Text Chat	Log in as CT Log in with TS1 and TS2 CT start stream, type nothing in text chat, join stream with TS1	TS1 should join to a blank text chat	As expected	Y	-	
Text Chat	Following from previous test, CT and TS1 type messages in text chat	Messages should be shared between clients	Was so	Y	-	
	Following from previous, are User's messages labeled with their usernames	Messages should take the form <userName> : <message>	The messages looked right	Y	-	

Text Chat	Following from previous test, TS2 join stream	Should not see previous chat logs.	Was so	Y	-	
Text Chat	Following from previous test, all 3 clients type in text chat.	Messages should be shared between all clients	As expected	Y	-	
Text Chat	Keep adding more messages until text chat area is overflowed	Chat should not expand, add a sidebar and stay at the bottom	Worked as intended	Y	-	
Text Chat	While text chat is overflowed, scroll partway up and continue adding more messages	Chat should maintain position	Did so	Y	-	
Text Chat	Send escape characters	Should simply send as a string, with no issue	As expected	Y	-	
Text Chat	Change view tab - is chat persistent	Text chat should be present for any tab of the stream	As expected	Y	-	

		window with constant contents				
Text Chat	Attempt to send empty string	Should not send anything	Does Not send anything	Y		

1-J. Following Testing Results

Acronyms shared with 1-E.

Module Under Test	Test Performed	Expected Outcome	Observed Outcome	Test Passed (Y/N)	Error Level	Notes
	Follow CT as TS1	TS1 should be considered as following CT; CT should show up for TS1 when CT goes live and this should be persistent between logins	Works as intended	Y	-	
	Unfollow CT as TS1	TS1 should not be considered as following CT; CT should not show up for TS1 when CT goes live and this should be persistent between logins	Works as intended	Y	-	
	Follow CT as CT	Should not allow this to happen.	CT cannot follow itself. No onscreen error message, but logs show '[ERROR] TutorWindowController - FAILED_BY_DATABASE_ERROR'	Y	2	logging/user feedback could be better, but core function is acceptable

	Follow Maths as TS1	Should make subjects appear in subscriptions 'because you liked <subject>' section, where <subject> is now maths. Change should be persistent between logins	Was so	Y	1	Pressing follow button made subject title font size change. So did pressing print screen to show people.