LEARNEZ GAME APPLICATION

TEST CASES COVERAGE

Version 1.3
08/11/2019

Members:
Benedict Low Yu
Chong Yew Heng
Tan Wei Xuan
Ong Wei Hua
Marcus Tang
Nicole Sim

Team: Eight
CZ3003 Software System Analysis Design, Tutorial Group **SSP5**

Submitted to—
Dr Shen Zhiqi

VERSION HISTORY

Version #	Implemented By	Revision Date	Approved By	Approval Date	Reason
1.0	Wei Hua, Benedict, Marcus	6/9/2019	Benedict	9/9/2019	*Initial Version*
1.1	Wei Hua	23/9/2019	Benedict	24/9/2019	Updated test cases for Gameplay
1.2	Wei Xuan, Wei Hua, Yew Heng	12/10/2019	Benedict	13/10/2019	Updated test cases for the remaining functions
1.3	Yew Heng, Marcus, Wei Hua	07/11/2019	Benedict	08/11/2019	Final version

1. User's Test Cases

1.1 User Reset Password Test Case

Test Case ID: #01	**Test Case Name:** User Reset Password
Subsystem: Account Manager	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 17 October 2019
Test Executed By: Tan Wei Xuan	**Execution Date:** 18 October 2019
Description: User forgets his/her password.	

	Pre-Conditions
1	Server is up and running.
2	Database is ready.
3	User have valid account.

Steps	**Action**	**Expected System Response**
1	User clicks on "Forget Password".	System prompt "Reset Password" popup.
2	User enters his/her username (Matriculation Number / Staff ID).	
3	User clicks on "Reset".	If username is valid, system prompt success message popup. System generate and sent reset password link to the user's email address. If username is invalid, system prompt error message.

Test Value		**Description**	**Expected Result**	**Actual Result**
#	Matriculation Number / Staff ID			
1		Empty "Matriculation Number / Staff ID" field.	Fail	Fail
2	123	Invalid username.	Fail	Fail
3	U1234567J	Valid username.	Pass	Pass

Post-Conditions	
1	User resets his/her password successfully.

1.2   User Change Password Test Case

Test Case ID: #02	**Test Case Name:** User Change Password
Subsystem: Account Manager	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 17 October 2019
Test Executed By: Tan Wei Xuan	**Execution Date:** 18 October 2019
Description: User changes his/her existing password.	

	Pre-Conditions
1	Server is up and running.
2	Database is ready.
3	User is logged in to the system.
4	User is in the Settings page.

Steps	Action	Expected System Response
1	User clicks on "Change Password".	System prompt "Change Password" popup.
2	User enters his/her new password twice.	
3	User clicks on "Change".	If the two password matches, system prompt success message popup. System updates the password of the user in the database. If the two password does not match, system prompt error message.

Test Value			Description	Expected Result	Actual Result
#	Password	Re-Enter Password			
1			Empty fields.	Fail	Fail
2	Password01		Empty "Re-Enter Password" field.	Fail	Fail
3		Password01	Empty "Password" field.	Fail	Fail
4	Password01	Password02	Password does not match	Fail	Fail
5	Password01	Password01	Password match.	Pass	Pass

Post-Conditions	
1	User changes his/her password successfully.

1.3   User Change Avatar Test Case

Test Case ID: #03	**Test Case Name:** User Change Avatar
Subsystem: Account Manager	**Test Priority:** Low
Test Designed By: Team Eight	**Design Date:** 17 October 2019
Test Executed By: Tan Wei Xuan	**Execution Date:** 18 October 2019
Description: User changes his/her existing avatar.	

Pre-Conditions	
1	Server is up and running.
2	Database is ready.
3	User is logged in to the system.
4	User is in the Settings page.

Steps	Action	Expected System Response
1	User clicks on "Change Avatar" icon.	System redirect to Select Avatar page.
2	User selects an avatar.	System display selected avatar.
3	User clicks on "Choose".	System prompt "Confirm Avatar Change" popup.
4-1	User clicks on "No" icon.	System close "Confirm Avatar Change" popup and remain in the Select Avatar page.
4-2	User clicks on "Yes" icon.	System redirect to Settings page. System updates the avatar of the user in the database.

Post-Conditions	
1	User changes his/her avatar successfully.

1.4 User Logout Test Case

Test Case ID: #04	Test Case Name: User Logout
Subsystem: Account Manager	Test Priority: Low
Test Designed By: Team Eight	Design Date: 17 October 2019
Test Executed By: Tan Wei Xuan	Execution Date: 18 October 2019
Description: User logout from his/her account.	

Pre-Conditions	
1	User is logged in to the system.
2	User is in the Settings page.

Steps	Action	Expected System Response
1	User clicks on "Log Out".	System prompt "Confirm Logout" popup.
2-1	User clicks on "No" icon.	System close "Confirm Logout" popup and remain in the Settings page.
2-2	User clicks on "Yes" icon.	System redirect to Landing page.

Post-Conditions	
1	User logout from his/her account successfully.

1.5   User View Class Leaderboard Test Case

Test Case ID: #05	Test Case Name: User View Class Leaderboard
Subsystem: Leaderboard	Test Priority: High
Test Designed By: Team Eight	Design Date: 28 October 2019
Test Executed By: Ong Wei Hua	Execution Date: 29 October 2019
Description: User views the class leaderboard ranking.	

Pre-Conditions	
1	User is logged in to the system.
2	User is in the Leaderboard page.

Steps	Action	Expected System Response
1	User clicks on "Class".	System display class leaderboard of the first world
2	User clicks on "World1 – Introduction to Software Engineering".	System display class leaderboard of World1 and current ranking of the student logged in.
2-1	User clicks on "Refresh".	System refreshes the class leaderboard of World1 ranking
2-2	User clicks on "World2 – Project Management".	System display class leaderboard of World2 and current ranking of the student logged in.
2-2-1	User clicks on "Refresh"	System refreshes the class leaderboard of World2 ranking
2-3	User clicks on "World3 – Requirements Elicitation".	System display class leaderboard of World3 and current ranking of the student logged in.
2-3-1	User clicks on "Refresh"	System refreshes the class leaderboard of World3 ranking
2-4	User clicks on "World4 – Requirements Analysis".	System display class leaderboard of World4 and current ranking of the student logged in.
2-4-1	User clicks on "Refresh"	System refreshes the class leaderboard of World4 ranking
2-5	User clicks on "World5 – Software Requirements Specification".	System display class leaderboard of World5 and current ranking of the student logged in.
2-5-1	User clicks on "Refresh"	System refreshes the class leaderboard of World5 ranking

2-6	User clicks on "World6 – System Design and Object Design".	System display class leaderboard of World6 and current ranking of the student logged in.
2-6-1	User clicks on "Refresh"	System refreshes the class leaderboard of World6 ranking

Post-Conditions	
1	User views the leaderboard for class ranking successfully.

1.6   User View Global Leaderboard Test Case

Test Case ID: #06	**Test Case Name:** User View Global Leaderboard
Subsystem: Leaderboard	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 28 October 2019
Test Executed By: Ong Wei Hua	**Execution Date:** 29 October 2019
Description: User views the global leaderboard ranking.	

	Pre-Conditions
1	User is logged in to the system.
2	User is in the Leaderboard page.

Steps	Action	Expected System Response
1	User clicks on "Global".	System display global leaderboard of the first world
2-1	User clicks on "World1 – Introduction to Software Engineering".	System display global leaderboard of World1 and current ranking of the student logged in.
2-1-1	User clicks on "Refresh"	System refreshes the global leaderboard of World1 ranking
2-2	User clicks on "World2 – Project Management	System display global leaderboard of World2 and current ranking of the student logged in.
2-2-1	User clicks on "Refresh"	System refreshes the global leaderboard of World2 ranking
2-3	User clicks on "World3 – Requirements Elicitation".	System display global leaderboard of World3 and current ranking of the student logged in.
2-3-1	User clicks on "Refresh"	System refreshes the global leaderboard of World3 ranking
2-4	User clicks on "World4 – Requirements Analysis".	System display global leaderboard of World4 and current ranking of the student logged in.
2-4-1	User clicks on "Refresh"	System refreshes the global leaderboard of World4 ranking
2-5	User clicks on "World5 – Software Requirements Specification".	System display global leaderboard of World5 and current ranking of the student logged in.
2-5-1	User clicks on "Refresh"	System refreshes the global leaderboard of World5 ranking

2-6	User clicks on "World6 – System Design and Object Design".	System display global leaderboard of World6 and current ranking of the student logged in.
2-6-1	User clicks on "Refresh"	System refreshes the global leaderboard of World6 ranking

Post-Conditions	
1	User views the leaderboard for global ranking successfully.

1.6 User View Discussion Board Test Case

Test Case ID: #07	**Test Case Name:** User View Discussion Board
Subsystem: Discussion Board	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 28 October 2019
Test Executed By: Ong Wei Hua	**Execution Date:** 29 October 2019
Description: User views discussion board.	

Pre-Conditions	
1	User is logged in to the system.

Steps	Action	Expected System Response
1	User clicks on "Discussion Board".	System display discussion board.
1-1	User clicks on "Refresh".	System refresh discussion board and retrieve the latest discussion board updated.
2	User clicks on "Right arrow".	System display the next page of the discussion board.
2-1	User clicks on "Refresh".	System refresh discussion board and retrieve the latest discussion board updated.
3	User clicks on "Left arrow".	System display the previous page of the discussion board.
3-1	User clicks on "Refresh".	System refresh discussion board and retrieve the latest discussion board updated.

Post-Conditions	
1	User views the discussion board successfully.

1.7 User Post Discussion Test Case

Test Case ID: #08	**Test Case Name:** User Post Discussion
Subsystem: Discussion Board	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 28 October 2019
Test Executed By: Ong Wei Hua	**Execution Date:** 29 October 2019
Description: User posts new discussion on discussion board.	

	Pre-Conditions
1	User is logged in to the system.
2	User is in the discussion board page.

Steps	Action	Expected System Response
1	User clicks on "New Discussion".	System display post discussion page.
2	User enter his/her discussion title.	
3	User enter his/her discussion details.	
4	User clicks on "Post".	System posts the discussion into the discussion board and displayed a popup message "Your discussion has been posted successfully!". System saves the newly posted discussion into database.
5	User clicks on "Done" on popup message.	System display the discussion board.

Test Value			Description	Expected Result	Actual Result
#	Discussion Title	Discussion Details			
1			Empty fields.	Fail	Fail
2	What is Software Engineering		Empty "Discussion Details" field.	Fail	Fail
3		Software Engineering is	Empty "Discussion Title" field.	Fail	Fail

4	What is Software Engineering	Software Engineering is	Both fields are filled up.	Pass	Pass

Post-Conditions	
1	User posts the discussion successfully.

1.9   User View Detailed Discussion Test Case

Test Case ID: #09	Test Case Name: User View Detailed Discussion
Subsystem: Discussion Board	Test Priority: High
Test Designed By: Team Eight	Design Date: 28 October 2019
Test Executed By: Ong Wei Hua	Execution Date: 29 October 2019
Description: User view detailed discussion thread on discussion board.	

Pre-Conditions	
1	User is logged in to the system.
2	User is in the discussion board page.

Steps	Action	Expected System Response
1	User clicks on "View More" on a discussion thread.	System display detailed discussion page of the selected discussion thread.
1-1	User clicks on "Refresh"	System refresh the page of comments and retrieve the latest comments on the page
2	User clicks on "Down Arrow" on the comment section.	System display next page of comments on the selected discussion thread.
2-1	User clicks on "Refresh".	System refresh the page of comments and retrieve the latest comments on the page
3	User clicks on "Up Arrow" on the comment section.	System display previous page of comments on the selected discussion thread.
3-1	User clicks on "Refresh"	System refresh the page of comments and retrieve the latest comments on the page

Post-Conditions	
1	User view the detailed discussion thread successfully.

1.10 User Post Comment Test Case

Test Case ID: #10	**Test Case Name:** User Post Comment
Subsystem: Discussion Board	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 28 October 2019
Test Executed By: Ong Wei Hua	**Execution Date:** 29 October 2019
Description: User post comment on the discussion thread.	

Pre-Conditions	
1	User is logged in to the system.
2	User is in one of the detailed discussion thread pages.

Steps	**Action**	**Expected System Response**
1	User click on "New Comment" on a discussion thread.	System display create new comment page.
2	User write new comment.	
3	User click on "Post".	System display a popup message "Your comment has been posted successfully!" and stores the new comments into database.
3-1	User click on "Done" on the popup message.	System redirect user to view detailed discussion thread page of the selected discussion thread.

Test Value		**Description**	**Expected Result**	**Actual Result**
#	Comment			
1		Empty fields.	Fail	Fail
2	Good question asked!	Comment field is filled up	Pass	Pass

Post-Conditions	
1	User post comment to the selected discussion thread successfully.

2.   Student's Test Cases

2.1   Student Login Test Case

Test Case ID: #11	**Test Case Name:** Student Login
Subsystem: Account Manager	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 17 October 2019
Test Executed By: Chong Yew Heng	**Execution Date:** 18 October 2019
Description: Student logins to his/her account.	

	Pre-Conditions
1	Server is up and running.
2	Database is ready.
3	Student have valid username (Matriculation Number).
4	Student have valid password.

Steps	Action	Expected System Response
1	Student enters his/her credentials (username and password).	Username displayed in input box. Password displayed in input box. Password input is hidden and masked.
2	Student clicks on "Login".	If credentials are valid, system redirect to Student Main Menu page. If credentials are invalid, system prompt error message popup.

Test Value			Description	Expected Result	Actual Result
#	Username	Password			
1			Empty fields.	Fail	Fail
2	U1234567J		Empty "Password" field.	Fail	Fail
3		Password123	Empty "Username" field.	Fail	Fail
4	12345678	Password123	Wrong username.	Fail	Fail

5	U1234567J	Password456	Wrong password.	Fail	Fail
6	U1234567J	Password123	Correct username and password.	Pass	Pass

Post-Conditions	
1	Student logins to his/her account successfully and is redirected to Student Main Menu page.

2.2 Student Gameplay Test Cases

2.2.1 Student Gameplay (Successful Completion)

Test Case ID: #12	Test Case Name: Gameplay (Successful Completion)
Subsystem: Gameplay Manager	Test Priority: High
Test Designed By: Team Eight	Design Date: 28 October 2019
Test Executed By: Marcus Tang	Execution Date: 29 October 2019
Description: Student completes a game successfully by answering all 5 questions before time runs out.	

	Pre-Conditions
1	Server is up and running.
2	Database is ready.
3	User has valid avatar.

Steps	Action	Expected System Response
1	Student enters Game screen through the Level Selection.	Game screen displays. Procedurally generated map displays with five enemies on screen. Player is generated at the top left-hand corner of the screen. Countdown timer initiated.
2	Student inputs movement.	Player's character moves in the desired direction.
3	Student encounters enemies on screen.	Game screen transitions into popup for quiz. Timer continues whilst popup is active.
4-1	Student correctly answers the quiz question.	Game screen returns to maze. Enemy that the player has encountered is removed from the screen. Timer continues. Difficulty of questions increase.
4-2	Student incorrectly answers the quiz question.	Game screen returns to maze. Enemy that the player has encountered is removed from the screen. Timer continues. Difficulty of questions decrease.
5	Student answers all five questions within the time limit. Student answers at least one question correctly.	Game screen exits with completion reward. Player score is updated into database. System output the score and the return button to the island.
6	Student select "Return to Island" button.	System returns Student to the level selection page.

Post-Conditions	
1	Student is directed to the successful completion page.

2.2.2   Student Gameplay (Failure Completion)

Test Case ID: #13	**Test Case Name:** Gameplay (Failure Completion)
Subsystem: Gameplay Manager	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 28 October 2019
Test Executed By: Marcus Tang	**Execution Date:** 29 October 2019
Description: Student fails to complete a game.	

Pre-Conditions	
1	Server is up and running.
2	Database is ready.
3	User has valid avatar.

Steps	Action	Expected System Response
1	Student enters Game screen through the Level Selection	Game screen displays. Procedurally generated map displays with five enemies on screen. Player is generated at the top left-hand corner of the screen. Countdown timer initiated.
2	Student inputs movement.	Player's character moves in the desired direction.
3	Student encounters enemies on screen.	Game screen transitions into popup for quiz. Timer continues whilst popup is active.
4	Student incorrectly answers the quiz question.	Game screen returns to maze. Enemy that the player has encountered is removed from the screen. Timer continues. Difficulty of questions decrease.
5-1	Student times out without answering all five questions.	Game screen exits with failure.
5-2	Student incorrectly answers all five questions.	Game screen exits with failure. Score is not updated into database. System shows the "return to island" button.
6	Student select "Return to Island" button.	System returns Student to the level selection page.

Post-Conditions	
1	Student is directed to the failure page.

2.2.3   Student Gameplay (Successful Use Powerup)

Test Case ID: #14	**Test Case Name:** Gameplay (Successful Use Powerup)
Subsystem: Gameplay Manager	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 28 October 2019
Test Executed By: Marcus Tang	**Execution Date:** 29 October 2019
Description: Student uses a powerup successfully.	

	Pre-Conditions
1	Server is up and running.
2	Database is ready.
3	User is able to use a powerup (has at least one in inventory).

Steps	**Action**	**Expected System Response**
1	Student enters Game screen through the Level Selection.	Game screen displays. Procedurally generated map displays with five enemies on screen. Player is generated at the top left-hand corner of the screen. Countdown timer initiated.
2-1	Student uses 'Increase Time' powerup.	Remaining timer on screen is increased by 20 seconds. Number of 'Increase Time' powerup is decreased by one.
2-2	Student inputs movement.	Player's character moves in the desired direction.
3	Student encounters enemies on screen.	Game screen transitions into popup for quiz. Timer continues whilst popup is active.
4	Student selects '50-50' powerup.	Quiz answer selection is reduced from 4 answers to 2 answers. The number of powerup is updated to database.

	Post-Conditions
1	Corresponding number of powerups in the database is reduced.

2.2.4   Student Gameplay (Failure Use Powerup)

Test Case ID: #15	**Test Case Name:** Gameplay (Failure Use Powerup)
Subsystem: Gameplay Manager	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 28 October 2019
Test Executed By: Marcus Tang	**Execution Date:** 29 October 2019
Description: Student does not have any powerups left in inventory.	

Pre-Conditions	
1	Server is up and running.
2	Database is ready.
3	User is not able to use a powerup (has none in inventory).

Steps	Action	Expected System Response
1	Student enters Game screen through the Level Selection.	Game screen displays. Procedurally generated map displays with five enemies on screen. Player is generated at the top left-hand corner of the screen. Countdown timer initiated.
2-1	Student checks for 'Increase Time' powerup.	Button to activate 'Increase Time' powerup is not displayed.
2-2	Student inputs movement.	Player's character moves in the desired direction.
3	Student encounters enemies on screen.	Game screen transitions into popup for quiz. Timer continues whilst popup is active.
4	Student checks for '50-50' powerup.	Button to activate '50-50' powerup is not displayed.

Post-Conditions	
1	None.

2.3 User Created Levels

2.3.1 UCL Create/View Test Case

Test Case ID: #16	**Test Case Name:** UCL Create/View Test
Subsystem: User Created Levels Manager	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 28 October 2019
Test Executed By: Marcus Tang	**Execution Date:** 29 October 2019
Description: Creation and Uploading of UCLs to database.	

Pre-Conditions	
1	Server is up and running.
2	Database is ready.
3	User have valid account.

Steps	Action	Expected System Response
1	User clicks on User-Created Levels (UCL).	System displays UCL UI showing 6 UCLs per page.
2	User clicks on 'Next' button.	System displays next set of UCLs. If there are no more UCLs to be displayed, 'Next' button will not be displayed.
3	User clicks on 'Back' button.	System displays next set of UCLs. If there are no more UCLs to be displayed, 'Back' button will not be displayed.
4	User clicks on 'New Level' button.	System displays two text boxes for input of UCL name and UCL description respectively.
5	User inputs data for UCL name and UCL description. Refer to Test Values.	System displays data that is typed in.
6	User inputs data for questions.	System ensures that all fields are not empty. System ensures each question has exactly one answer. System will not input data unless above conditions are met.
7	User clicks on 'Create Level'.	System throws a popup indicating completion of update.
8	User clicks on 'Done'.	System returns to main screen.

#	UCL Name	UCL Description	Description	Expected Result	Actual Result
1			Empty fields.	Fail	Fail
2		TestCaseUCL	Empty "UCL Name" field.	Fail	Fail
3	TestCaseUCL		Empty "UCL Description" field.	Fail	Fail
4	TestCaseUCL	TestCaseUCL	Correct UCL Name and UCL Description	Pass	Pass

Post-Conditions
1   UCL Updated in database.

2.3.2 UCL Play Test Case

Test Case ID: #17	Test Case Name: UCL Play Test
Subsystem: User Created Levels Manager	Test Priority: High
Test Designed By: Team Eight	Design Date: 28 October 2019
Test Executed By: Marcus Tang	Execution Date: 29 October 2019
Description: Playing of UCLs in Game.	

	Pre-Conditions
1	Server is up and running.
2	Database is ready.
3	User have valid account.
4	Valid UCL stored in database.

Steps	Action	Expected System Response
1	User clicks on User-Created Levels (UCL).	System displays UCL UI showing 6 UCLs per page.
2	User selects UCL displayed.	System loads into UCL game.
3-1	User completes UCL within time limit.	System displays completion popup and score and links back to UCL selection page.
3-2	User fails to complete UCL within time limit.	System displays failure popup and links back to UCL selection page.
4	User selects 'Back'.	System returns to UCL selection page.

	Post-Conditions
1	None.

2.4 Student View Assignment Test Case

Test Case ID: #18	**Test Case Name:** Student View Assignment
Subsystem: Assignment Manager	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 28 October 2019
Test Executed By: Ong Wei Hua	**Execution Date:** 29 October 2019
Description: Student view assignment for his/her class.	

Pre-Conditions	
1	Student is logged into the system.

Steps	Action	Expected System Response
1	Student clicks on "Assignments".	System displays Assignment page.
2	Student clicks on "'View More".	System open the URL of the assignment in the browser to display the assignment file from database.
3	Student clicks "Next" button.	System displays next assignment on the list. If there are no more assignment to be displayed, 'Back' button will not be displayed.
4	User clicks on "Back" button.	System displays previous assignment on the list.

Post-Conditions	
1	Student view assignment successfully.

3. Teacher's Test Cases

3.1 Teacher Login Test Case

Test Case ID: #19	**Test Case Name:** Teacher Login
Subsystem: Account Manager	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 17 October 2019
Test Executed By: Chong Yew Heng	**Execution Date:** 18 October 2019
Description: Teacher logins to his/her account.	

	Pre-Conditions
1	Server is up and running.
2	Database is ready.
3	Teacher have valid username (Staff ID).
4	Teacher have valid password.

Steps	**Action**	**Expected System Response**
1	Teacher enters his/her credentials (username and password).	
2	Teacher clicks on "Login".	If credentials are valid, system redirect to Teacher Main Menu page. If credentials are invalid, system prompt error message popup.

Test Value			**Description**	**Expected Result**	**Actual Result**
#	Username	Password			
1			Empty fields.	Fail	Fail
2	S7654321J		Empty "Password" field.	Fail	Fail
3		Password123	Empty "Username" field.	Fail	Fail
4	12345678	Password123	Wrong username.	Fail	Fail
5	S7654321J	Password456	Wrong password.	Fail	Fail

6	S7654321J	Password123	Correct username and password.	Pass	Pass

Post-Conditions
1   Teacher logins to his/her account successfully and is redirected to Teacher Main Menu page.

3.2   Teacher Check Class Performance Test Case

Test Case ID: #20	Test Case Name: Teacher Check Class Performance
Subsystem: Performance Analytics	Test Priority: High
Test Designed By: Team Eight	Design Date: 28 October 2019
Test Executed By: Ong Wei Hua	Execution Date: 29 October 2019
Description: Teacher check class performance of his/her class.	

Pre-Conditions	
1	Teacher is logged in to the system.

Steps	Action	Expected System Response
1	Teacher click on "Performance Board".	System displays the class performance of the first class of the teacher is lecturing in and student list of the class.
2	Teacher select another class on class dropdown menu.	System displays the selected class performance of the class and student list of the class.
2-1	Teacher click on "Refresh".	System refreshes the class performance and retrieve the latest results to display.
3	Teacher click on "Generate Report".	System redirects Teacher to the browser and downloads a CSV file for class performance.

Post-Conditions	
1	Teacher views the class performance analytics successfully.
2	Teacher generates report for his/her class where he/she is lecturing successfully.

3.3 Teacher Check Student Performance Test Case

Test Case ID: #21	**Test Case Name:** Teacher Check Student Performance
Subsystem: Performance Analytics	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 28 October 2019
Test Executed By: Ong Wei Hua	**Execution Date:** 29 October 2019
Description: Teacher check selected student's performance of his/her class.	

	Pre-Conditions
1	Teacher is logged in to the system.

Steps	Action	Expected System Response
1	Teacher click on "Performance Board".	System displays the class performance of the first class of the teacher is lecturing in and student list of the class.
2	Teacher select one of the students on the list in class performance.	System retrieves the selected student's performance for his/her first world.
2-1	Teacher click on "Refresh".	System refreshes the selected student's performance and retrieve the latest results to display.
2-2	Teacher select another student on student dropdown menu.	System displays the selected student performance of the class.
2-2-1	Teacher click on "Refresh".	System refreshes the selected student's performance and retrieve the latest results to display.
3	Teacher select another world on world dropdown menu.	System displays the selected student performance of the class for the selected world.
3-1	Teacher click on "Refresh".	System refreshes the selected student performance of the class for the selected world and retrieve the latest results to display.
4	Teacher click on "Generate Report".	System redirects Teacher to the browser and downloads a CSV file for class performance.

	Post-Conditions
1	Teacher views the selected student's performance analytics successfully.

| 2 | Teacher generates report for the selected student successfully. |

3.4 Teacher View Assignment Test Case

Test Case ID: #22	**Test Case Name:** Teacher View Assignment
Subsystem: Assignment Manager	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 28 October 2019
Test Executed By: Ong Wei Hua	**Execution Date:** 29 October 2019
Description: Teacher view assignment for his/her class.	

	Pre-Conditions
1	Teacher is logged in to the system.

Steps	Action	Expected System Response
1	Teacher clicks on "Assignments".	System displays Assignment page.
2	Teacher clicks on '"View More".	System open the URL of the assignment in the browser to display the assignment file from database.
3	Teacher selects a class from the class dropdown menu.	System display the assignment list for the selected class.
4	Teacher clicks "Next" button.	System displays next assignment on the list. If there are no more assignment to be displayed, 'Back' button will not be displayed.
5	Teacher clicks on "Back" button.	System displays previous assignment on the list.

	Post-Conditions
1	Teacher view assignment successfully.

3.5   Teacher Post Assignment Test Case

Test Case ID: #23	**Test Case Name:** Teacher Post Assignment
Subsystem: Assignment Manager	**Test Priority:** High
Test Designed By: Team Eight	**Design Date:** 28 October 2019
Test Executed By: Ong Wei Hua	**Execution Date:** 29 October 2019
Description: Teacher post assignment for his/her class.	

	Pre-Conditions
1	Teacher is logged in to the system.

Steps	Action	Expected System Response
1	Teacher clicks on "Assignments".	System displays Assignment page.
2	Teacher clicks on '"New Assignment".	System redirects to Post Assignment page.
3	Teacher enters assignment title.	
4	Teacher enters assignment details.	
5	Teacher enters assignment due date in each of the respective fields.	
6	Teacher selects class from class dropdown menu.	
7	Teacher select file from the assignment file dropdown menu	
8	Teacher click on "Post"	System display a popup message "Your assignment is posted!" with 2 social media sharing buttons.
8-1	Teacher click on "Share on Facebook".	System open the browser to allow Teacher to post assignment details on Facebook.
8-2	Teacher click on "Share on Twitter".	System open the browser to allow Teacher to post assignment details on Twitter.
9	Teacher click on "Done".	System redirects back to the Assignment page.

Test Value			Description	Expected Result	Actual Result
#	Assignment Title / Assignment Details	Assignment Due Date / Select Group / Select File			
1			Empty fields.	Fail	Fail
2	Software Engineering / OR / Software Engineering		Empty "Assignment Details" OR "Assignment Title", "Assignment Due Date", "Select Group" and "Select File" field.	Fail	Fail
3	Software Engineering / Software Engineering		Empty "Assignment Due Date", "Select Group" and "Select File" field.	Fail	Fail
4	Software Engineering / Software Engineering	12(DD)03(MM) 2001(YYYY)13(HH)15(MM)	Empty "Select Group" and "Select File" field.	Fail	Fail
5	Software Engineering / Software Engineering	12(DD)03(MM) 2001(YYYY)13(HH)15(MM) / SSP1	Empty "Select File" field.	Fail	Fail
6	Software Engineering / Software Engineering	--(DD)--(MM)---(YYYY)--(HH)--(MM) / SSP1/AssignmentFile	Invalid input in the Assignment Due Date.	Fail	Fail
7	Software Engineering / Software Engineering	12(DD)03(MM) 2001(YYYY)13(HH)15(MM) / SSP1/AssignmentFile	Correct inputs for all the fields.	Pass	Pass

Post-Conditions	
1	Teacher post assignment successfully.

4. Requirement Test Coverage Report

Work Pack	LearnEZ Black Box Testing
Planned Date for Testing	18 October 2019
Actual Date for Testing	18 October 2019
Total Test Case Executed	36
Number of Test Case Passed	7
Number of Test Case Failed*	29
Bugs in Progress	0
Bug Waiting Approval	0
Number of Closed Bugs	0
Coverage	100% for all subsystems
Remarks	

*Note: The number of test cases failed was of those cases that were <u>meant</u> to fail.