Test Case #	Test File	Test Description	Input	Expected Output	Actual Output	Pass/Fail
1	index.php	Test redirection to Create Account page	Click on "Create Account" button	Redirect to CreateAccount.php	Same as expected	Pass
2	index.php	Test redirection to Login page	Click on "Log In" button	Redirect to AccountLogin.php	Same as expected	Pass
3	CreateAccount.php	Create new account with empty fields	Click on Create account button	Prompt "Please fill out this field"	Same as expected	Pass
4	CreateAccount.php	Create account with a username that already exists	Enter existing User Name (i.e. prof)	Prompt "Username is unavailable"	Same as expected	Pass
5	CreateAccount.php	Create account with passwords not matching	Enter different password Confirm Password field	Prompt "Passwords do not match"	Same as expected	Pass
6	CreateAccount.php	Create account with Account Type as Student	Enter all required fields and select Account Type as Student	Prompt "Account Created"	Same as expected	Pass
7	CreateAccount.php	Create account with Account Type as Instructor	Enter all required fields and select Account Type as Instructor	Prompt "Account Created"	Same as expected	Pass
8	CreateAccount.php	Create account with Account Type as TA	Enter all required fields and select Account Type as TA	Prompt "Account Created"	Same as expected	Pass
9	AccountLogin.php	Try logging in using SQL injection (ie x OR 1=1)	username: 1 OR 1=1 password: 1 OR 101	Prompt "Account does not exist"	Same as expected	Pass
10	AccountLogin.php	Try logging in using SQL injection (ie " or ""=")	username: " or ""=" password: " or ""="	Prompt "Account does not exist"	Same as expected	Pass
11	AccountLogin.php	Try logging in using SQL injection (ie ;drop table)	username: ;drop table droptest password: ;drop table droptest	Prompt "Account does not exist", no change in database	Same as expected	Pass
12	AccountLogin.php	Login with non-existant account	Enter non-existant username	Prompt "Account does not exist"	Same as expected	Pass
13	AccountLogin.php	After login (Instructor): Create new assignment	Click "Create a New Assignment" button	Redirect to "NewAssignmentPage.php"	Same as expected	Pass
14	NewAssignmentPage.php	Create assignment with valid start and end time	Select Start time > End time, then click Create Assignment button	Redirect to "EditAssignmentPage.php"	Same as expected	Pass
15	NewAssignmentPage.php	Create assignment with invalid start and end time	Select Start time < End time (or leave it empty), then click Create Assignment button	Prompt "Invalid start/end time"	Redirect to EditAssignmentPage.php	Fail
16	NewAssignmentPage.php	Create assignment with tags	Select valid time and input "Test Tag", then click Create Assignment button	Redirect to "EditAssignmentPage.php"	Same as expected	Pass
17	EditAssignmentPage.php	Create New Question	Click Create New Question button	Redirect to 'CreateQuestion.php'	Same as expected	Pass
18	CreateQuestion.php	Create question with empty fields	Click Create button with empty fields	Prompt "Please fill out this field."	Same as expected	Pass
19	CreateQuestion.php	Create a normal text question with hardcoded Question Formula	Enter inputs in Question Text, Question Formula area and click Create	Redirect to "PreviewQuestion.php" with correct question and formula showing	Same as expected	Pass
20	CreateQuestion.php	Create question with random variables	Set the max and min values for the random varaible and click Add. Then fill in the remaining fields for question and formula	Redirect to "PreviewQuestion.php" with correct question and formula showing	Same as expected	Pass
21	CreateQuestion.php	Create question with Question Tag(s)	Fill in question text and question tags before saving question	Redirect to "PreviewQuestion.php" with correct question and formula showing	Same as expected	Pass
22	CreateQuestion.php	Select Question Type (only multiple choice for now)	Click on Select Question Type button	Land on page with buttons for different question types	Same as expected	Pass
23	CreateMultipleChoice.php	Create Multiple Choice Question with empty Question field	Click on Create Multiple Choice Question button with empty question and number of options field	Prompt "Please fill out this field." in the Question field	Same as expected	Pass
24	CreateMultipleChoice.php	Set Number of Options with < 2	Click on Create Multiple Choice Question button after setting the question and number of options field with number of option set to 1	Prompt "Value must be greater than or equal to 2." in the Number of Options field	Same as expected	Pass
25	CreateMultipleChoice.php	Open up options fields by clicking Create Mulitple Choice Question with number of options field set to >= 2	Click on Create Multiple Choice Question button after setting the question and number of options field	Textboxes equal to the number of options are displayed. A summary secion containing the question and number of options are visible with a submit button.	Same as expected	Pass
26	CreateMultipleChoice.php	Create mutliple choice questions with options and missing option input	Click on Create Multiple Choice Question button after setting the question and number of options field and fill all but one text option. Click submit button.	Prompt "Please fill out this field" for the empty option text box.	Same as expected	Pass
27	CreateMultipleChoice.php	Create mutliple choice questions with options and all options fields are set correctly.	Fill in all options fields and select the correct option field then click on Submit	Redirect to "PreviewQuestion.php" with correct question and formula showing	Same as expected	Pass
28	PreviewQuestion.php	Check if question and formula is set correctly from CreateQuestion	Continue from the end state of test case 19.	Page displaying the question and formula that was inputted.	Same as expected	Pass
29	PreviewQuestion.php	Check if question and formula is set correctly from CreateMultipleChoiceQuestion	Continue from the end state of test case 27.	Page displaying the question and the answer.	Question is displayed, but the answer does not match the correct option answer.	Fail
30	PreviewQuestion.php	Click back button to return to last question creation page (multiple choice/ create question page)	Continue from the result of test case 28 and 29.	Display the previous state before submission of "CreateQuestion.php" if coming from test 28 or "CreateMultipleChoice.php" if coming from test 29.	Same as expected	Pass
31	PreviewQuestion.php	Click Save to save the question	Continue from the end state of test case 28 or 29.	"Question have been saved" text message, and buttons for "Create more questions", "Back"	Extra text "Previewing question: Formula.", and "Save" button	Fail
32	PreviewQuestion.php	Click Save to save the question	Continue from the end state of test case 28 or 29.	The new question shows up in the database	Question is not being created in the database	Fail
33	PreviewQuestion.php	Click Create more questions to return to question creation page	Continue from the end state of test 31.	Redirected to "CreateQuestion.php" page.	Same as expected	Pass
34	EditAssignmentPage.php	Add random question	On Edit Assignment page > input 1 in the number of random questions field, Then click 'Add Questions'. Click 'Ok' after confirmation.	Redirect to "AddRandomQuestions.php", Tells user that 1 question was added to the assignment. After clicking "OK" a new question should be added	Same as expected	Pass
35	EditAssignmentPage.php	Add mutiple random questions	On Edit Assignment page > input 5 in the number of random questions field, Then click 'Add Questions'. Click 'Ok' after confirmation.	Redirect to "AddRandomQuestions.php", Tells user that 5 questions were added to the assignment. After clicking "OK" 5 questions should be added	Same as expected	Pass
36	EditAssignmentPage.php	Add random question with tag	On Edit Assignment page > input 1 in the number of random questions field, Fill in the tag field with "Test Tag" Then click 'Add Questions'. Click 'Ok' after confirmation.	Redirect to "AddRandomQuestions.php", Tells user that 1 question was added to the assignment. After clicking "OK" a new question created with the "Test Tag" should be added	Same as expected	Pass

Test Case #	Test File	Test Description	Input	Expected Output	Actual Output	Pass/Fail
37	EditAssignmentPage.php	Add multiple random questions with tag	On Edit Assignment page > input 5 in the number of random questions field, Fill in the tag field with "Test Tag" Then click 'Add Questions'. Click 'Ok' after confirmation.	Redirect to "AddRandomQuestions.php", Tells user that 5 questions were added to the assignment. After clicking "OK" 5 questions created with the "Test Tag" should be added	Same as expected	Pass
38	EditAssignmentPage.php	Click on Select Question to go to "SelectQuestionPage.php"	Click the Select Question button.	Display "SelectQuestionPage.php"	Same as expected	Pass
39	SelectQuestionPage.php	Select a question	Click the Select Question button below any question.	Returns to "EditAssignmentPage.php" with the question listed in the Assignment. The question has a Remove Question button below it.	Same as expected	Pass
39	EditAssignmentPage.php	Remove an existing question.	Click Remove Question button.	The question is removed from the list of questions.	Same as expected	Pass
41	SelectQuestionPage.php	Click Cancel to return to EditAssignmentPage	Following the steps from test case 37, click the Cancel button on "SelectQuestionPage.php"	The contents in "EditAssignmentPage.php" should not be altered.	Same as expected	Pass
42	EditAssignmentPage.php	Test "ConfirmCreateAssignmentPage.php" contents	Click Submit Assignment	Redirected to "ConfirmCreateAssignmentPage.php" with text confirming the id of the assignment has been successfully added. Buttons for Create New Assignment and View All Assignments.	Same as expected	Pass
43	ConfirmCreateAssignmentPage.php	Test redirection to NewAssignmentPage	Click on Create New Assignment button	Redirect to "NewAsssignmentPage.php"	Same as expected	Pass
44	ConfirmCreateAssignmentPage.php	Test redirection to "AllCreatedAssignmentsPage.php"	Click on View All Assignments	Redirected to "AllCreatedAssignmentsPage.php"	Same as expected	Pass
45	AllCreatedAssignmentsPage.php	Enter the page as student	Enter the url path after signing in as student	Block user from viewing page	Anyone can enter the page, even without logging in	Fail
46	AllCreatedAssignmentsPage.php	Enter the page as instructor	Enter the url path after signing in as instructor	Get a list of all the created assignments within the database	Same as expected	Pass
47	AllCreatedAssignmentsPage.php	Set visibility to each assignment	Click on multiple checkboxes multiple times	Asynchronous updates in the database matching the visibility selection in the checkbox	Same as expected	Pass
48	AllCreatedAssignmentsPage.php	Button redirection test	Click on Create New Assignment to return to Create Assignment page	Redirect to create assignment page	Same as expected	Pass
49	AssignmentMarkingFeedback.php	View marks/feedbacks for each assignment	Post student_id to "AssignmentMarkingFeedback.php"	List all marks for all assignments and feedback	Same as expected	Pass
50	AssignmentMarkingFeedback.php	Edit Mark for an assignment	Input 50 as new mark for assignment 1, click "Submit Update"	List all marks for all assignments and feedback, with assignment 1 mark updated to 50.	Same as expected	Pass
51	AssignmentMarkingFeedback.php	Edit feedback for an assignment	Input "good." as new feedback for assignment 1, click "Submit Update"	List all marks for all assignments and feedback, with assignment 1 feedback updated to "good.".	Same as expected	Pass
52	AccountLogin.php	After login (Instructor): Assignment Overview	Click button Assignment Overview	Redirect to "AssignmentOverview.php"	Same as expected	Pass
53	AssignmentOverview.php	View marks/feedbacks for each assignment	Post student_id to "AssignmentOverview.php"	List student marks, number of attempts, and instructor feedback for each assignment assigned to the student.	Same as expected	Pass
54	AssignmentOverview.php	Search for specific assignment tag	Input valid tag into search bar	List student marks, number of attempts, and instructor feedback for every assignment that has be taged with the input tag string.	Same as expected	Pass
55	ChooseAssignment.php	Enter page and view the results, compare with database	Enter page	List the assignments from the database which are within the start and end date on the page	Same as expected	Pass
56	ChooseAssignment.php	Search for specific assignment tag	Enter a tag that mutltiple assignments has been created with before searching	Filter all the active assignments which have the substring in their tags	Same as expected	Pass
57	ChooseAssignment.php	Select an assignment to write listed in "ChooseAssignment.php"	Click on the Write Submission button	Redirect to "WriteAssignment.php" with the correct set of questions	Same as expected	Pass
58	WriteAssignment.php	View question	Post student_id and assignment_id to "WriteAssignment.php"	Display first questions on the assignment, and prompt user for solution.	Same as expected	Pass
59	WriteAssignment.php	Write an answer inside the answer textbox, submit your answer with Next Question button	Input answer into textbox, click on next question button	Display next question in the assignment and prompt the user for a solution.	For some questions the next question button and answer textbox disappear	Fail
60	WriteAssignment.php	Click on submit assignment button	Input answer of last question into textbox, click on submit assignment button	Redirect to "ConfirmSubmission.php" and display mark for the assignment.	Cannot reach last question due to Test Case #61	Fail
61	ConfirmSubmission.php	Test retrying of assignments after completing them	Click on Try Again button	Redirect to "WriteAssignment.php" and display the first question of the assignment	Cannot reach last question due to Test Case #61	Fail
62	ConfirmSubmission.php	Test resubmission of assignments after completing them	Click on confirm button	A button to confirm submission of the assignment	Cannot reach last question due to Test Case #61	Fail
63	DisplayAssignment.php	Submit assignment ID and display quetions in the assignment	Enter various assignment id, check that the file the questions referenced by that assignment have the same info as displayed	List of questions pulled from the server files which correspond to the assignment	Same as expected	Pass
64	DisplayAssignment.php	Button tests	Click on Return Home button to return login page;	Return to login page	Same as expected	Pass
65	AssignmentAnswer.php	Submit assignment ID and display quetions in the assignment	Enter various assignment id, check that the file the questions referenced by that assignment have the same info as displayed	List of questions pulled from the server files which correspond to the assignment	Same as expected	Pass
66	AssignmentAnswer.php	Button tests	Click on Return Home button to return login page;	Return to login page	Same as expected	Pass
67	ViewStatistic.php	Test display of all assignments and their corresponding average	Select All Assignment and display Assignment number and average.	Display a column view for all assignments and their averages	Same as expected	Pass
68	ViewStatistic.php	Test display of a single assignment and their corresponding statistics	Select specific assignment and diplay their statistics	Display information about assignment name, number of students, total number of attempts for this assignment, average attempts, assignment average, and number of students who completed the assignment	Same as expected	Pass
69	AccountLogin.php	After login (Student): Verify they can only view the buttons they have access to	Login as a student	Display buttons for "Assignment Overview", "Select Assignment", "View Full Assignment", "View Assignment Answer", "View Assignment Statistics"	Same as expected	Pass
70	AccountLogin.php	After login (TA): Verify they can only view the buttons they have access to	Login as a TA	Display buttons for "Create a New Assignment", "Create a New Question", "Update marking/feedback", "Assignment Overview", "Select Assignment", "View Full Assignment", View Assignment Answer", "View Assignment Statistics"	Same as expected	Pass

Test Case #	Test File	Test Description	Input	Expected Output	Actual Output	Pass/Fail
71	AccountLogin.php	After login (Instructor): button present for instructor	Use credentials for an instructor in the database to sign in, click on available buttons in main menu	Post back the page with more working buttons (on top student's buttons) for the following pages: AllCreatedAssignmentsPage.php, AssignmentMarkingFeedback.php, EditCourses.php, CreateQuestion.php, NewAssignmentPage.php, ViewStatistics.php	Missing button(s) for: AllCreatedAssignmentsPage.php	Fail