On the Exam Line

Design Inspection, Code Inspection and Unit Tests Defects Log

Arka Acharya, Joyce Kao, Shivaganesh Balasundaram, Gunjan Gauri

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Design Inspection Defect Log:

Product : On the Exam Line Design Inspection
Date: 10th October, 2017

Defect #	Description	Severity	Correction	Author | Moderator	Inspector | Recorder
1	Admin unable to view multiple choice grades of users.	1	The query only fetched the final percentage. We changed it to get all the individual scores of the multiple choice questions, the essay questions, and the final percentage.	Joyce Kao | Shivaganesh Balasundaram	Arka Acharya | Gunjan Gauri
2	If the timer ran out while taking an exam, the entered answers were not stored in the database.	1	Instead of using PHP code for running the timer, we used JavaScript to submit the form. This stored the answers and displayed the correct result.	Joyce Kao | Shivaganesh Balasundaram	Arka Acharya | Gunjan Gauri
3	If a new user tried to take an exam, it showed the error page irrespective of whether or not an exam had been taken.	1	The statement used to redirect to the error page was outside the condition block which is why it was being executed before checking the condition. When the statement was moved to the correct block, the bug was no more.	Gunjan Gauri | Shivangesh Balasundram	Joyce Kao | Arka Acharya
4	The link on the admin page for the admin to grade essay questions were not visible.	1	The grade essay question functionality was added, but the radio button option was not there. When the radio button was added and the correct redirect statement was included, It started to work.	Gunjan Gauri | Shivangesh Balasundram	Joyce Kao | Arka Acharya
5	While viewing test statistics, if an exam has not been taken by	3	We checked if the exam has been taken in the useranswers table and if no entries were	Joyce Kao | Gunjan Gauri	Arka Acharya | Shivangesh Balasundram

	Description	Severity	Correction	Author | Moderator	Inspector | Recorder
	anyone, it shows min, max and average as 0.		found, the min, max, and average to "N/A"		
6	If a user takes an incorrectly cloned exam, they automatically get a full score.	2	We fixed the cloning functionality to also include the answer key, so this is fixed. Now, the user will be accurately graded.	Gunjan Gauri | Shivangesh Balasundram	Arka Acharya | Joyce Kao
7	If the admin changes the answer key, the user's grades are still calculated by the previous key, but their tests are marked by the new key while reviewing.	2	We kicked off a function to re-calculate grades based on the new answer key every time the admin changes it.	Gunjan Gauri | Arka Acharya	Joyce Kao | Shivangesh Balasundram

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Code Inspection Defect Log:

Product : On the Exam Line Code Inspection
Date: 11th October, 2017

Defect #	Description	Severity	Correction	Author | Moderator	Inspector | Recorder
1	The clone exam feature wasn't working. The exam was being created in the form table, but the questions and answers were not there.	1	The two queries used to make the new table and put entries into that table were missing. The create and insert queries were inserted and the bug was fixed.	Joyce Kao | Shivangesh Balasundram	Arka Acharya | Gunjan Gauri
2	The student was able to use the back button to redirect from the test page.	1	We disabled the back button by overriding the pushstate event listener and disabling the functionality.	Joyce Kao | Shivangesh Balasundram	Gunjan Gauri | Arka Acharya
3	Incorrect number of questions were being	2	While grading questions, the number of places was displayed according to the number of answer columns	Arka Acharya | Gunjan Gauri	Joyce Kao |

	displayed while grading essay questions.		in the useranswers table. As different exams have a different number of essay questions, this turned out to be a bug. This was fixed by using the predefined number of essay questions for each exam.		Shivangesh Balasundram
4	The final percentage displayed was incorrect.	2	As the essay questions have a total defined by the admin, the formula for calculating the final grade was giving the wrong result. We changed this to just add up all the scores and give a result instead of trying to develop another convoluted procedure for giving results.	Arka Acharya | Joyce Kao	Shivaganesh Balasundaram | Gunjan Gauri
5	The user can refresh the page while taking the exam and that will reset the timer.	1	Instead of keeping track of remaining time (which would reset when the page is refreshed), we instead store the timestamp that the user first opens the test and calculate the remaining time based on that. If the user tries to load the page again, we would first check if the current time is within the time limit of the initial test opening.	Arka Acharya | Joyce Kao	Shivangesh Balasundram | Gunjan Gauri
6	The user can close the test tab or window and retake the test.	1	Instead of keeping track of remaining time (which would reset when the page is refreshed), we instead store the timestamp that the user first opens the test and calculate the remaining time based on that. If the user tries to load the page again, we would first check if the current time is within the time limit of the initial test opening.	Shivaganesh Balasundaram | Gunjan Gauri	Joyce Kao | Arka Acharya
7	The answers of users could be graded multiple times.	3	We added a flag value in the database to indicate that an exam had already been	Joyce Kao | Arka Acharya	Shivaganesh Balasundaram | Gunjan Gauri

			graded and checked this flag to prevent regrading.		
8	When the chapter name is changed to an existing chapter name, tests have similar names and returns an error.	2	We checked for existing chapter names and did not allow the admin to change to those names. By doing so we prevented the overlap and no errors were returned.	Shivaganesh Balasundaram | Joyce Kao	Gunjan Gauri | Arka Acharya

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Unit Testing Defect Log:

Date: 13th October, 2017

Author: Arka Acharya , Gunjan Gauri
Moderator: Joyce Kao, Shivaganesh Balasundaram

A) Product : On the Exam Line unit testing – CHANGE CHAPTER NAME

Defect #	Description	Severity	Correction
1	**Input:** The new name entered will be the same as an existing chapter. **Expected Output:** Redirected to the error page. No changes made in the database **Test Result:** The change was made at certain places in the database, but an error message was sent.	1	The error message was due to a conflict in primary key. We performed a check to make sure there wasn't a duplicate chapter name. If a duplicate was found, the change was not performed and the error was avoided.

B) Product : On the Exam Line unit testing – TAKE EXAM

Defect #	Description	Severity	Correction

1	**Input:** Selecting the exam. **Expected Output:** If the exam has been completed, redirected to error page. If the exam hasn't been taken, redirect to exam page. **Test Result:** Redirected to the error page irrespective of whether or not the exam has been taken.	1	The statement used to redirect to the error page was outside the condition block which is why it was being executed before checking the condition. When the statement was moved to the correct block, the bug was no more.
2	**Input:** Letting the timer run out while taking the exam. **Expected Output:** The entered answers should be saved and appropriate grade should be displayed. **Test Result:** The answers were not stored and the correct grade was not displayed.	1	Instead of using PHP code for running the timer, we used JavaScript to submit the form. This stored the answers and displayed the correct result.

C) Product : On the Exam Line unit testing – GRADE ESSAY QUESTIONS

Defect #	Description	Severity	Correction
1	**Input:** Select test to grade. **Expected Output:** The essay questions, reference key, and user's answer should be displayed with space for achieved grade and maximum possible. **Test Result:** The essay questions, reference key, and user's answer should be displayed with space for achieved grade and maximum possible, but there were additional blank spaces.	2	While grading questions, the number of places was displayed according to the number of answer columns in the user answers table. As different exams have a different number of essay questions, this turned out to be a bug. This was fixed by using the predefined number of essay questions for each exam.

D) Product : On the Exam Line unit testing – CLONE EXAM

Defect #	Description	Severity	Correction
1	**Input:** Select the exam to be cloned and put the name of the new exam. **Expected Output:** The new exam is created and it is stored in the database. **Test Result:** The new exam was created, but the questions, options and answers were not stored in the database.	1	The two queries used to make the new table and put entries into that table were missing. The create and insert queries were inserted and the bug was fixed.