Test Documentation

Digitising RANZCO Advanced Clinical Examination

CITS3200 Group A

Spring 2014
University of Western Australia
Perth, WA 6009

Table of Contents

Test Case Specification

Test A - User Management

Components
The following aspects of the system will be tested by the User Management Test:
- Creation of Users
- Modification of Users
- Deletion of Users

Input and Output Specifications

Create User
- Start Logged in as an Administrator
- Start from Browse list of users
1. Click Add a new user
2. Input Username, New password, First Name, Surname and Email address
3. Click Create user
- Finish on Browse list of users
- New entry in database reflects created user

Modify User
- Start Logged in as an Administrator
- Start from Browse list of users
1. Using First name/Surname find user matching specified input data
2. Click the edit gear of respective user
3. Input new Username, New password, First Name, Surname or Email address
4. Click Update Profile
- Finish on Browse list of users
- Entry in database reflects updated user

Delete User
- Start Logged in as an Administrator
- Start from Browse list of users
1. Using First name/Surname find user matching specified input data
2. Click the delete cross of respective user
3. Click Continue
- Finish on Browse list of users
- Database reflects user list without removed user

Hardware and Software Requirements

- Software Requirements
  - Moodle version   2.7.1
  - PHP version   5.5.14
  - mySQL version   5.6.20
  - Apache version   2.4.9
  - Modern Web Browser (Internet Explorer, Firefox, Chrome)
- Hardware
  - Server Minimum Requirements
    - 1 GB RAM
    - 5 GB Storage Space
    - Network Access
  - Client Minimum Requirements
    - 512 MB RAM
    - 200 MB Storage Space
    - Network connection to Server

Constraints

- Operator intervention: Tests cannot be automatically run and an operator must perform tasks and validate results of those tasks

Dependencies

There are no dependencies on other tests.

Test B - Question and Exam Management

Components

The following items of the system will be tested by the Question and Exam Management Test:

- Create Course
- Assigning Students to an Exam
- Assigning Markers to an Exam
- Creation of Essay Question
- Creation of Multi-part Essay Question
- Creation of Image or Video Question
- Removal of a Question
- Creation of Exam

Create Course
- ● Start Logged in as an Administrator
- ● Start from Manage courses and categories
1. Click a category or create a new category if none exists.
2. Click Create new course
3. Input Course full name, Course short name
4. Click Course format
5. Change Format to Single activity format and Type of activity to Quiz
6. Click Appearance
7. Change Show gradebook to students to No
8. Click Save changes
- ● Finish on Course users
- ● Course is created under corresponding category

Assign Students
- ● Start Logged in as an Administrator
- ● Start from Course index
1. Click Users
2. Click Enrolled users
3. Click Enrol users
4. Click Enrol for Students corresponding to input
5. Click Finish enrolling users
- ● Finish on Course users
- ● Course user list now contain enrolled students

Assign Markers
- ● Start Logged in as an Administrator
- ● Start from Course index
1. Click Users
2. Click Enrolled users
3. Click Enrol users
4. Change Assign roles to Non-editing teacher
5. Click Enrol for Markers corresponding to input
6. Click Finish enrolling users
- ● Finish on Course users
- ● Course user list now contain enrolled Markers

Create Exam
- Start Logged in as an Administrator
- Start from Course index
1. Input Name
2. Click Grade and change Attempts allowed to 1
3. Click Review options and uncheck all boxes under Immediately after the attempt, Later, while the quiz is still open and After the quiz is closed
4. Click Save and display
- Finish on Course index
- Course now has quiz that can be edited

Create Essay Question
- Start Logged in as an Administrator
- Start from Course index
1. Click Edit quiz
2. Click Add a question
3. Click Essay and then Add
4. Input Question name, Question text, Default mark
5. Click Grader Information and input model answer into Information for graders
6. Click Save changes
- Finish on Editing quiz
- Quiz will now have an additional essay question

Create Multi-part Essay Question
- Start Logged in as an Administrator
- Start from Course index
1. Click Edit quiz
2. Click Add a question
3. Click Essay Uneditable and then Add
4. Input Question name, Question text, Default mark
5. Click Grader Information and input model answer into Information for grader
6. Click Save changes
7. Click Add a question
8. Click Essay Staged and then Add
9. Input Question name, Question text, Default mark
10. Click Grader Information and input model answer into Information for grader
11. Click Save changes
12. Repeat step 7-11 for each future part
13. Click Order and paging
14. Click checkbox on all except last part
15. Click Add new page after selected questions
- Finish on Editing quiz
- Quiz now has a multipart question separated into pages for correct behaviour

Create Essay Question With Image or Video
- Start Logged in as an Administrator
- Start from Course index
1. Click Edit quiz
2. Click Add a question
3. Click Essay or Essay no edit or Essay Staged and then Add
4. Input Question name, Default mark
5. Click Image or Media in Question text
6. Input URL of multimedia into Enter URL
7. Click Save image or Insert media
8. Input Question text
9. Click Grader Information and input model answer into Information for grader
10. Click Save changes
- Finish on Editing quiz
- Quiz will now have an additional essay question including an image or video

Remove Question
- Start Logged in as an Administrator
- Start from Course index
1. Click Edit quiz
2. Using Question name find question matching input data
3. Click cross of respective question
- Finish on Editing quiz
- Quiz will now reflect question list without respective question

Hardware and Software Requirements
- Software Requirements
  - Moodle version   2.7.1
  - PHP version   5.5.14
  - mySQL version   5.6.20
  - Apache version   2.4.9
  - Modern Web Browser (Internet Explorer, Firefox, Chrome)
- Hardware
  - Server Minimum Requirements
    - 1 GB RAM
    - 5 GB Storage Space
    - Network Access
  - Client Minimum Requirements
    - 512 MB RAM
    - 200 MB Storage Space
    - Network connection to Server

Constraints
- Operator intervention: Tests cannot be automatically run and an operator must perform tasks and validate results of those tasks

Dependencies
Test B is dependant on the successful completion of Test A due to it requiring users to assign.

Test C - Exam Taking
Components
The following functions of the system will be tested by the Exam Taking Test:
- Beginning Exam
- Navigating Exam
- Answering Essay Questions
- Answering Multi-Part Essay Questions
- Images and Video can be Viewed
- Submit Exam

Input and Output Specifications
Begin Exam
- Start Logged in as a Student Enrolled in Course
- Start from Home
1. Click course matching Course name input
2. Click Attempt quiz now
3. Click Start attempt
- Finish on first page of quiz
- Quiz timer will have begun to countdown

Navigate Exam
- Start Logged in as a Student Enrolled in Course
- Start from a page in an ongoing quiz
1. Click page number to navigate to from input
- Finish on inputted page of quiz
- Quiz timer will continue to countdown

Answer Essay Question
- Start Logged in as a Student Enrolled in Course
- Start from a page in an ongoing quiz
1. Click inside text box
2. Input Answer text
3. Click Next
- Finish on next question in quiz
- Previous question will available for further editing on navigation back to it

Answer Multi-Part Essay Question
- Start Logged in as a Student Enrolled in Course
- Start from a Essay No Edit question
1. Click inside text box
2. Input Answer text
3. Click Next
4. Repeat steps 1 - 3 until finished Essay Staged questions
- Finish on next question in quiz
- Previous question will not be available for further editing on navigation back to it

Submit Exam
- Start Logged in as a Student Enrolled in Course
- Start from a page in an ongoing quiz
1. Click Finish attempt
2. Click Submit all and finish
- Finish on review of quiz
- Quiz will no longer be able to be attempted

Hardware and Software Requirements
- Software Requirements
  - Moodle version   2.7.1
  - PHP version   5.5.14
  - mySQL version   5.6.20
  - Apache version   2.4.9
  - Modern Web Browser (Internet Explorer, Firefox, Chrome)
- Hardware
  - Server Minimum Requirements
    - 1 GB RAM
    - 5 GB Storage Space
    - Network Access
  - Client Minimum Requirements
    - 512 MB RAM
    - 200 MB Storage Space
    - Network connection to Server

Constraints
- Operator intervention: Tests cannot be automatically run and an operator must perform tasks and validate results of those tasks
- System should be tested under an operating load for full system testing

Dependencies
Test C is dependant on the successful completion of Test B because it requires an exam to test.

Test D - Marking Management

Components

The following features of the system will be tested by the Marking Management Test:

- Marking Essay Questions
- Remarking Essay Questions
- Release Delayed Feedback after Marking Completion

Input and Output Specifications

Mark Essay Question

- Start Logged in as a Marker Enrolled in Course
- Start from Course index
1. Click Attempts: #
2. Search for Student name and Question to grade
3. Click respective Requires Grading
4. Click Make comment or override mark
5. Input Comment and Mark
6. Click Save
7. Click Close this window
- Finish on attempt summary for exam
- Question and attempt are now graded

Remark Essay Question

- Start Logged in as a Marker Enrolled in Course
- Start from Course index
1. Click Attempts: #
2. Search for Student name and Question to grade
3. Click respective current mark
4. Click Make comment or override mark
5. Input Comment and Mark
6. Click Save
7. Click Close this window
- Finish on attempt summary for exam
- Question and attempt are now regraded

Release Delayed Feedback
- ● Start Logged in as an Administrator
- ● Start from Course index
1. Click Edit settings
2. Click Review Options
3. Check All checkboxes under Later, while the quiz is still open and After the quiz is closed
4. Click Save and display
- ● Finish on Course index
- ● Grades will now be viewable to students

Hardware and Software Requirements
- ● Software Requirements
  - ○ Moodle version   2.7.1
  - ○ PHP version   5.5.14
  - ○ mySQL version   5.6.20
  - ○ Apache version   2.4.9
  - ○ Modern Web Browser (Internet Explorer, Firefox, Chrome)
- ● Hardware
  - ○ Server Minimum Requirements
    - ■ 1 GB RAM
    - ■ 5 GB Storage Space
    - ■ Network Access
  - ○ Client Minimum Requirements
    - ■ 512 MB RAM
    - ■ 200 MB Storage Space
    - ■ Network connection to Server

Constraints
- ● Operator intervention: Tests cannot be automatically run and an operator must perform tasks and validate results of those tasks

Dependencies
Test D is dependant on the successful completion of Test C to have sample answers to mark.

Test E - Catastrophic Failsafe Tests
Components
The following protective measures of the system will be tested by the Catastrophic Failsafe Test:
- ● Recovery after Client Disconnect
- ● Recovery after Server Disconnect
- ● Recovery after Server Power Down
- ● Answering Questions in Slow Network Environment

Recovery after Client Disconnect
- ● Start Logged in as a Student Enrolled in Course
- ● Start from a page in an ongoing quiz
1. Input text into a question
2. Manually force close web browser
3. Reopen browser and login to moodle
4. Click course corresponding to Course name input
5. Click Continue the last attempt
- ● Finish on a page in an ongoing quiz
- ● Entered text will still be present after restart

Recovery after Server Disconnect
- ● Start Logged in as a Student Enrolled in Course
- ● Start from a page in an ongoing quiz
1. Input text into a question
2. Disable web service on server
- ● Error message results informing of no connection enabling you to save answer locally
3. Enable web service on server
- ● Error message turns green informing it is safe to continue

Recovery after Server Power Down
- ● Start Logged in as a Student Enrolled in Course
- ● Start from a page in an ongoing quiz
1. Input text into a question
2. Shut down server
- ● Error message results informing of no connection enabling you to save answer locally
3. Start up server 10 minutes later
- ● Error message turns green informing it is safe to continue

Hardware and Software Requirements

- Software Requirements
  - Moodle version   2.7.1
  - PHP version   5.5.14
  - mySQL version   5.6.20
  - Apache version   2.4.9
  - Modern Web Browser (Internet Explorer, Firefox, Chrome)
- Hardware
  - Server Minimum Requirements
    - 1 GB RAM
    - 5 GB Storage Space
    - Network Access
  - Client Minimum Requirements
    - 512 MB RAM
    - 200 MB Storage Space
    - Network connection to Server
  - Uninterruptable Power Supply

Constraints

- Operator intervention: Tests cannot be automatically run and an operator must perform tasks and validate results of those tasks. Manual termination of server and client's network or power will be required.

Dependencies

Test E is dependant on the successful completion of Test C to verify that the system can recover during an exam and requires that exams can be successfully completed to not interfere with failsafe testing.

Test Incident Report

Test A - User Management

Task	Search Name	New Username	New Password	New First Name	New Surname	New Email	Results
Create User		studenta	Password1!	Student	A	studentA@test.com	Successful
Create User		studentb	Password1!	Student	B	studentB@test.com	Successful
Create User		studentd	Password1!	Student	D	studentD@test.com	Successful
Modify User	Student D	studentc			C	studentC@test.com	Successful
Create User		markera	Password1!	Marker	A	markerA@test.com	Successful
Create User		markera	Password1!	Marker	B	markerB@test.com	Successful
Delete User	Student C						Successful
Create User		astudent	1!Password	Abraham	Lincoln	abraham@example.com	Successful
Modify User	Lincoln	aformerpresident	Massword!1	Abe	Lincoln Sr.	abraham@example.org	Successful
Delete User	Abe						Successful

Test B - Question and Exam Management

Task	Course Full Name	Course Short Name	User Names	Exam Name	Results
Create Course	RACE 2014 1	RACE20141			Successful
Assign Students			Student A, Student B, Student C		Successful
Assign Markers			Marker A, Marker B		Successful
Create Exam				Exam 2014 Part 1	Successful
	Question name	Question Text	Default Mark	Multimedia URL	
Create Essay Question	1	A 50 year old gentleman is referred to you for consideration of right cataract surgery. He gives a history of blunt trauma to that eye but has no evidence of any ocular	2		Successful

		sequelae other than the cataract. He has no phacodonesis. At surgery, with maximal preoperative dilation, you note that the lens is subluxed inferotemporally with 90 degrees of zonular dialysis superonasally but no vitreous prolapse. Outline in a stepwise fashion how you would modify your surgical approach in such a case.			
Create Essay Question With Image or Video	Image and Video Demonstration	This demonstrates the use of an Image and Video allowing for dynamic question design	2	http://img3.wikia.nocookie.net/__cb20100520131746/logopedia/images/5/5c/Google_logo.png	Successful
				https://www.youtube.com/watch?v=jWvKAYKlnnM&list=UUK8sQmJBp8GCxrOtXWBpyEA	
Create Multi-Part Essay Question	4A	A 32-year-old single mother of three presents with a 10 day history of an irritable red left eye, reduced vision and photophobia. She is amblyopic in her right eye and has a history of recurrent lip ulcers. Her local optometrist prescribed topical Fluorometholone drops 4 days previously. On examination of her left eye she has reduced corneal sensation, a 6mm geographical epithelial defect with stromal opacity and inflammation. Her visual acuities are 6/60 OD and 6/36 OS. **How would you manage this patient? Include a description of your technique for corneal scrape/culture with particular reference to the target organisms.**	2		Successful
	4B	**Six months later, the patient has visual acuities of 6/60 OD, 6/24 OS with a corneal scar, intact epithelium and no ocular inflammation. She requests visual improvement.** **Outline her options and the specific measures that you**	2		

		would undertake to ensure long term success.			
Create Essay Question	Mistake	This question is not supposed to be here	1		Successful
Remove Question	Mistake				Successful
Task	Course Full Name	Course Short Name	User Names	Exam Name	Results
Create Course	Test B Creation of Course	TestBCourse			Successful
Assign Students			Cameron Armstrong, Student B, Admir Hardeepson		Successful
Assign Markers			Marker A, Mark Marker		Successful
Create Exam				Test B Exam	Successful
	Question name	Question Text	Default Mark	Multimedia URL	
Create Essay Question	TestBEssay	This is the text for the test "Create Essay Question" in Test B	1		Successful
Create Multi-Part Essay Question	TestBEssayMultiA	This is the text for the first part of the test "Create Multi-part Essay Question" in Test B	1		Successful
	TestBEssayMultiB	This is the text for the second part of the test "Create Multi-part Essay Question" in Test B	2		
Create Essay Question With Image or Video	TestBEssayImage	Here is an image:	1	http://upload.wikimedia.org/wikipedia/commons/c/c6/Moodle-logo.svg	Successful
Remove Question	TestBEssayImage				Successful

Test C - Exam Taking

Task	Course Name	Page Number	Answer Text	Results
Begin Exam	RACE 2014 1			Successful
Answer Essay Question			This is a test answer to an essay question, since I am not an expert I can't answer this question correctly anyway.	Successful
Navigate Exam		3		Successful
Answer Multi-part Essay Question			This is in answer to Part A	Successful
			And an answer for Part B	
			Lastly some text for Part C	
Navigate Exam		3		Successful
Submit Exam				Successful
Begin Exam	RACE 2014 1			Successful
Navigate Exam		2		Successful
Answer Essay Question			This question appears to be about google	Successful
Navigate Exam		10		Successful
Answer Multi-part Essay Question			The question is split into general information and a specific question	Successful
			The general information reappears in the following part but the specific question is changed	
Submit Exam				Successful
Begin Exam	Test B Exam			Successful
Navigate Exam		3		Successful
Answer Essay Question			Test answer	Successful
Answer Multi-part Essay Question			Part 1 should lock after this	Successful
			This text will also lock	
Submit Exam				Successful

Test D - Marking Management

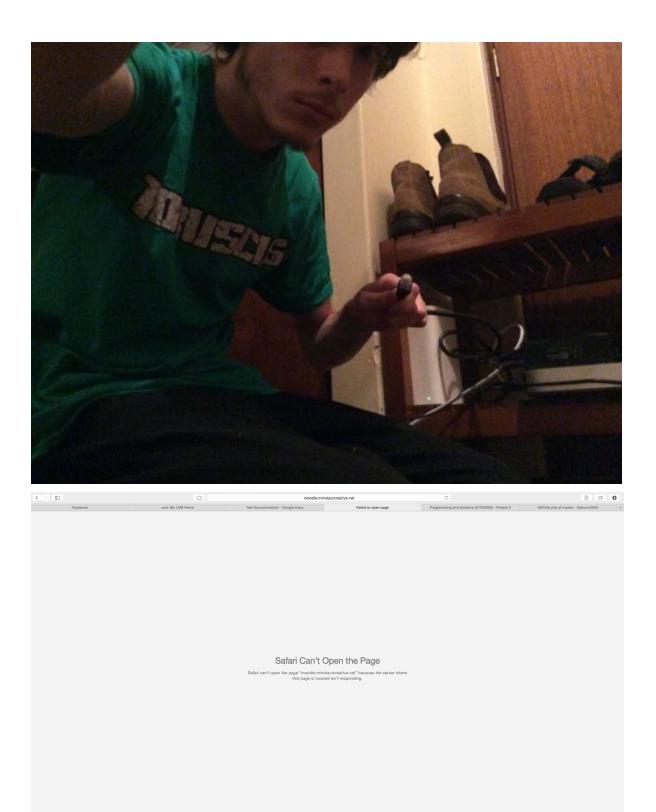| Task	Student Name	Question Number	Comment	Mark	Results
Mark Essay Question	Student A	1	For future reference it doesn't matter. As long as you write a funny response you get full marks.	2	Successful
Mark Essay Question	Student A	3	Boring answer you can do better.	0	Successful
Mark Essay Question	Student A	4	Still pretty bad answering skills are present.	0	Successful
Mark Essay Question	Student A	5	Still no marks for you.	0	Successful
Mark Essay Question	Student B	2	You should be more detailed about explaining Google.	1	Successful
Remark Essay Question	Student A	4	As a new marker I see nothing wrong with this answer.	2	Successful
Mark Essay Question	Student B	10	1. A numbered list 2. I like lists	2	Successful
Mark Essay Question	Student B	10	1. A numbered list 2. I like lists 3. On second thought you didn't answer the question	0	Successful
Mark Essay Question	Student B	1	That's a very good answer!	1	Successful
Remark Essay Question	Student B	1	That's a very bad answer!	0	Successful
Release Delayed Feedback					Failed, caused a change in test to now include ticking boxes

					under "Later, while the quiz is still open"
Release Delayed Feedback					Successful

Test E - Catastrophic Failsafe Tests
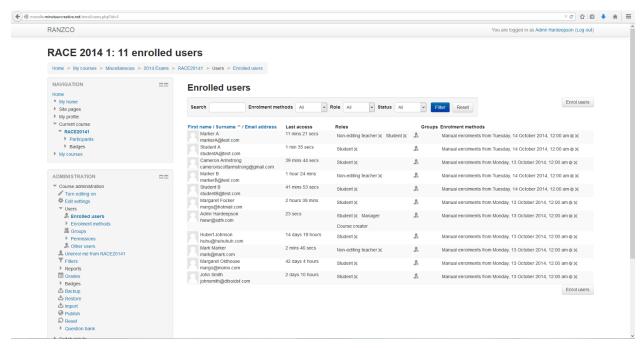
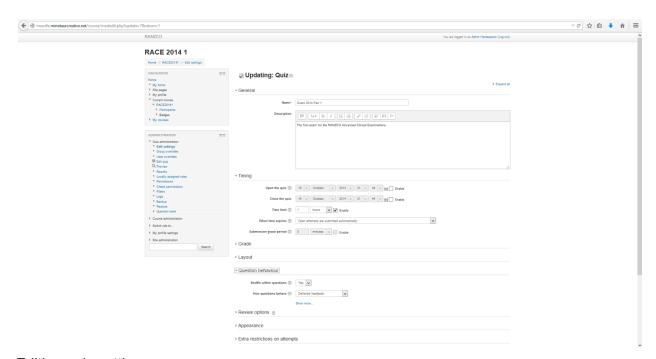| Task	Results
Recovery after client disconnect	Successful
Recovery after server disconnect	Successful
Recovery after server power down	Successful

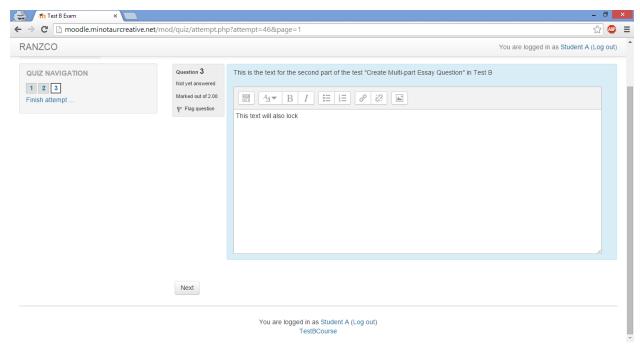Remarking a previously graded attempt

Disconnecting the server resulted in the client getting a timeout but reconnected once the server connection was reestablished

List of users and their roles in the course/exam

Editing quiz settings

RANZCO

QUIZ NAVIGATION

1 2 3

Finish attempt ...

Question 3

Not yet answered

Marked out of 2.00

⚑ Flag question

This is the text for the second part of the test "Create Multi-part Essay Question" in Test B

This text will also lock

Next

Taking the exam