CS-M14 Industrial Project
Testing Document

Matthew Lewis

523015@swansea.ac.uk

25th May 2012

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1 Outline

After completion of the project it was important to ensure that the completed applications satisfied their requirements and the resultant specifications that were set out initially at the beginning of the project. This was achieved by undertaking acceptance testing. This document's aim is to describe the test suite that I produced in order to test that each requirement was met. For each of the test cases I have provided:

- The specifications that the the test refers to.

- A description of what the test case is testing.

- The acceptance criterion for the test

- Whether the test passed or failed. For any failed tests a reason has been provided.

2 Testing Results

2.1 Submitter Tests

Asserts Specification(s): SUB-SPEC1
Description: Tests whether the list of submitters for a given user is displayed.
Acceptance Criterion: • The list of submitters is displayed by the application.
Result: PASS

Asserts Specification(s): SUB-SPEC2
Description: Tests whether the user is able to create a new submitter by entering the submitter code, name, email and telephone number.
Acceptance Criterion: • The application displays a form allowing the user to add a new submitter • The user can enter the code, name, email and telephone number of the submitter. • The system checks if the submitter code is unique for that user. • The system saves the new submitter and displays the list of all current submitters including the new submitter.
Result: PASS

Asserts Specification(s): SUB-SPEC1, SUB-SPEC3
Description: Checks that the user can select a submitter from the list, taking them to a form where they can edit and save any changes to the submitters details.
Acceptance Criterion: • The list of all submitters is shown. • The name of each submitter can be clicked. • The user is shown a form where they can alter the submitters details. • Any changes are saved and reflected in the submitter list.
Result: PASS

Asserts Specification(s): SUB-SPEC1, SUB-SPEC4
Description: Tests that the user can remove a submitter from the system by using a delete button next to their name of the submitter list.
Acceptance Criterion: • The list of all submitters is shown. • Each submitter has a 'Delete' button. • Once clicked, the submitter is removed from the system. • The submitter list is redisplayed to reflect the deletion.
Result: PASS

Asserts Specification(s): SUB-SPEC5
Description: Tests that the user can choose which submitter they will be submitting a sample for.
Acceptance Criterion: • A selection box of all submitters is displayed. • User can select a submitter. • System notifies user who the currently selected submitter is. • When a sample is submitted, the selected submitter is used.
Result: PASS

2.2 Sample Submission Tests

Asserts Specification(s): SUBMIT-SPEC1
Description: Tests whether the system checks that the user has entered a unique sample reference while attempting to save or submit a new sample.
Acceptance Criterion: • System checks database for uniqueness of sample reference • If not unique, user is prompted to enter unique reference.
Result: PASS

Asserts Specification(s): SUBMIT-SPEC2
Description: Tests whether the submitter is able to provide various data about the sample such as chemical formula, molecular weight etc.
Acceptance Criterion: • Form is displayed to the submitter • Form contains various text entry boxes for the entry of sample data
Result: PASS

Asserts Specification(s): SUBMIT-SPEC3
Description: Tests whether the user is able to select which services they require by using relevant checkboxes.
Acceptance Criterion: • Sample entry form contains checkboxes for various services • User can check or uncheck services they require.
Result: PASS

Asserts Specification(s): SUBMIT-SPEC4
Description: Checks that the user can provide details about the sample COSHH level (Control of Substances Hazardous to Health).
Acceptance Criterion: • User can select the COSSH level from a list • User can provide specific details about the COSSH level
Result: PASS

Asserts Specification(s): SUBMIT-SPEC5, SUBMIT-SPEC6

Description: Tests whether the user is able to upload a chemical structure file to the system while entering the sample details. All uploaded files must be uploaded and stored in the correct folder in a set hierarchy on the server.

Acceptance Criterion:

- File selection dialog is displayed allowing user to select the structure file

- File is uploaded to server

- File is stored in correct directory on the server

- Contents of structure file are showed graphically on the sample submission form.

Result: PASS

Asserts Specification(s): SUBMIT-SPEC7, SUBMIT-SPEC6

Description: Ensures that the user is also able to draw their own chemical structure using a built-in tool while entering details about their sample. The drawn structure must be saved into the correct folder on the server.

Acceptance Criterion:

- Option is provided for user to draw their own chemical structure

- User is taken to drawing tool

- When saved, structure is saved onto the server

- User is returned to the sample submission page

- Structure is displayed on the sample submission page

Result: PASS

Asserts Specification(s): SUBMIT-SPEC8

Description: Checks that the user can save the details of a new sample and then resume the process at a later point in time.

Acceptance Criterion:

- Sample details are saved to the database

- Sample submission page is re-populated using the data from the database when user returns.

Result: PASS

2.3 Sample List Tests

Asserts Specification(s): LIST-SPEC1
Description: Tests that samples are organised and displayed in five separate lists based on the stage each sample is at.
Acceptance Criterion: • Five lists are displayed to the user • Samples are displayed in the relevant list based on the current stage the sample is at
Result: PASS

Asserts Specification(s): LIST-SPEC1, LIST-SPEC2
Description: Checks that the user can move between each list of samples.
Acceptance Criterion: • Each list is on a separate tab page • User can use tabs to move between each tab page
Result: PASS

Asserts Specification(s): LIST-SPEC3
Description: Tests that each sample, regardless of the stage it is at, allows the user to view the details of the sample.
Acceptance Criterion: • All samples can be clicked • User is taken to the sample details page
Result: PASS

Asserts Specification(s): LIST-SPEC4
Description: Tests that the sample lists are paginated correctly and that the user can choose how many samples they wish to view per page.
Acceptance Criterion: • User can choose how many samples per page to view • If number of samples exceeds the samples per page, samples are split across multiple pages • Links to each page are provided underneath the sample lists.
Result: PASS

Asserts Specification(s): LIST-SPEC5
Description: Checks that the samples can be filtered by a specific time period.
Acceptance Criterion: • User can enter a start and end date or select from a predefined range. • Only samples from the date range are displayed. • Samples are filtered on different columns based on what stage the sample is at.
Result: PASS

Asserts Specification(s): LIST-SPEC6
Description: Tests that the search functionality for locating specific samples works correctly.
Acceptance Criterion: • User can enter a specific sample reference. • User is taken directly to the sample if it exists • User is warned that sample does not exist otherwise.
Result: PASS

Asserts Specification(s): LIST-SPEC7
Description: Ensures that the lists of samples can be re-ordered using the various columns.
Acceptance Criterion: • User can re-order the list based by clicking the column title • Samples are displayed in ascending or descending order.
Result: PASS

Asserts Specification(s): LIST-SPEC8
Description: Tests that the user can access the sample results of a completed sample by clicking a link on the sample row in the list.
Acceptance Criterion: • If sample has been completed and results provided, a link next to the sample is displayed allowing the user to download results. • User is prompted to download the file.
Result: PASS

2.4   Administration Area Tests

Asserts Specification(s): ADMIN-SPEC1, ADMIN-SPEC12
Description: Tests that the member of staff can begin a new year code or view previous year codes.
Acceptance Criterion: • User can change the year code by entering it into a text field • Samples are filtered by year code • If previous year code is entered, old samples are displayed • If new year code is entered, only samples that have not been booked in will be displayed.
Result: PASS

Asserts Specification(s): ADMIN-SPEC2
Description: Tests that the the samples can be filtered by a specific user code.
Acceptance Criterion: • User can enter a specific user code • All samples are filtered to display only those submitter by the user code. • Filter can be cleared and all samples are displayed again.
Result: PASS

Asserts Specification(s): ADMIN-SPEC3
Description: Tests that any data about what machines/techniques have been used on the sample can be entered and saved.
Acceptance Criterion: • Data entry form is displayed when the sample is 'in progress' stage. • Data is saved to the database • Data is redisplayed when viewing the sample page at any time
Result: PASS

Asserts Specification(s): ADMIN-SPEC4
Description: Tests that samples are booked in correctly following the conventions used by the lab.
Acceptance Criterion: • Samples are assigned a sample code following the conventions used by the lab. • Sample is moved from 'submitted' to 'received'
Result: PASS

Asserts Specification(s): ADMIN-SPEC4, ADMIN-SPEC5, ADMIN-SPEC7, ADMIN-SPEC8
Description: Checks that samples are moved through each stage correctly.
Acceptance Criterion: • Sample stage is updated in the database • Sample is displayed in the correct list
Result: PASS

Asserts Specification(s): ADMIN-SPEC6, ADMIN-SPEC13
Description: Tests that the user is able to unsubmit or delete samples.
Acceptance Criterion: • If unsubmitting a sample the sample is moved back to the 'unsubmitted' stage • If deleting a sample, the details are removed from the database and any associated files are deleted
Result: PASS

Asserts Specification(s): ADMIN-SPEC9, ADMIN-SPEC10
Description: Checks the functionality for attaching result files to a sample.
Acceptance Criterion: • Database is updated to track location of sample results file • Results are uploaded to the server • Results can be downloaded by the user
Result: PASS

Asserts Specification(s): ADMIN-SPEC10
Description: Tests that all result files are stored in the correct location on the server.
Acceptance Criterion: • Result files are stored in correct directory associated with the sample • Result files are not directly accessible via URLs.
Result: PASS

2.5 Sample Page Tests

Asserts Specification(s): SAMPLE-SPEC1
Description: Checks that a progress bar is displayed to indicate which stage a sample is currently at. The progress bar must 'fill up' as the sample progresses through each stage.
Acceptance Criterion: • The progress bar is displayed at the top of the sample page. • As each stage is reached more of the bar is filled in.
Result: PASS

Asserts Specification(s): SAMPLE-SPEC2
Description: Tests that the application displays the sample structure if one was specified. Otherwise, the application should notify the user.
Acceptance Criterion: • Structure is displayed graphically on the sample page. • If no structure file is provided the user is notified.
Result: PASS

Asserts Specification(s): **SAMPLE-SPEC3**
Description: Tests that all data that was entered about the sample is displayed on the sample page.
Acceptance Criterion: • All data is displayed on the sample page.
Result: PASS

Asserts Specification(s): **SAMPLE-SPEC4**
Description: Tests that the sample page displays data about what machines/techniques have been used on the sample if the sample is currently being analysed.
Acceptance Criterion: • Table containing the data about what machines/techniques have been used on the sample is displayed.
Result: PASS