CS221 Group Project
Test Specification

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1 Introduction

1.1 Purpose of this Document

This document describes the test specification and procedure for the Reserve Plant Species Recording project (RPSR). The document will give a guide on the main stages of testing.Team members are to read this document and confirm that the test specification is understood, and sets out sufficient testing requirements.This document will give a guide to what the expected outputs of each stage in the project are.

1.2 Scope

This test specification aims to provide information about what in the project needs to be tested for the RPSR. As well as the expected results from the tests.

1.3 Objectives

The objectives of this document are:

- To provide all the developers a document that can be looked up to make sure they understand what is needed

- To make sure that all the developers can expect the same goals

- To make sure that once a task has been completed it matches with the expected result

- To make sure that the project is kept to the requirements stated in the brief

- To make sure we know what we will need to check when we finish the project

2 TestPlan

2.1 Android User

Individual Module Testing will be left to the coder, and tests should be written before the coding is done.

Test Ref Req Being Tested Test Content Input Output Pass Criteria

Test Ref	Req Test	Test Content	Input	Output	Pass
SE-F-001	FR1	Startup of Software	Touch App logo	Botany App should open	Android app opens without error.
SE-F-002	FR2	Valid username allows user to login	Enter valid username of size 3¿UN¿10	App should confirm successful login and proceed to App.	Splash screen showing correct Username is showing.
SE-F-003	FR2	Invalid username does not allow user to login	Enter username that is outside of the required length	App should display an error	An error message in a box should pop up saying that the username has to be between 3 and 10 characters long.
SE-F-004	FR2	Valid Location name storage	When prompted, enter a Location Name that is ¿50	App should proceeed to record selection	Record selection screen is showing
SE-F-004	FR3	User allowed to add a plant name to the database.	Enter plant name to the database via android app.	States that plant details are successfully added to the database.	Plant details successfully added to the database.
SE-F-005	FR4	User allowed to add Species Details.	Enter Species Details to the database via android app.	States that plant details are successfully added to the database.	Plant details successfully added to the database.
SE-F-006	FR4	User not allowed to enter invalid Species Details to the database.	Enter invalid Species Details to the database via android app.	App states that the details entered are invalid.	Does not enter to database. Returns to input page.
SE-F-007	FR4	User allowed to add a picture of a plant to the database.	Enter a plant picture to the database via android app.	States that plant picture is successfully added to the database.	Plant picture successfully added to the database.
SE-F-008	FR4	User not allowed to add a non-image file when prompted for a picture of a plant.	Attempt to enter a non-image file to the database.	Message states that the file is not an image file.	Does not enter to database. Returns to input page.

ID	FR	Description	Action	Expected	Result
SE-F-009	FR4	User not allowed to add a picture of a plant to the database if over a certain size (to be discussed with group.)	Attempt to enter an absurdly large image file to the database (e.g 10MB).	States that the file exceeds filesize limits.	Does not enter to database. Returns to input page.
SE-F-010	FR4	User allowed to record the level of abundance of the plant within the area.	Record level of abundance of plant within the area. Enter a valid input.	States that abundance of plant is successfully added to the database.	Level of abundance successfully added to the database.
SE-F-011	FR4	User not allowed to enter an invalid input for abundance of plant.	Attempt to enter an invalid input for abundance of plant.	Pop up sttates that the input is invalid.	Does not enter to database, returns to input page.
SE-F-012	FR6	Application should know whether it is connected to the internet, and that it is able to send records to the database. If not, the data is stored in local storage.	Attempt to do SE-F-004/5/7/10 whilst connected to the internet.	Pop-up states that records successfully sent to the database.	Successfully sends records to the database.
SE-F-013	FR6	Application should know whether it is connected to the internet, and that it is able to send records to the database. If not, the data is stored in local storage.	Attempt to SE-F-004/5/7/10 whilst not connected to the internet.	Pop-up states that the app is not connected to the internet and that the records were stored in local storage.	Stores the records on local storage.

2.2   Website User

Individual Module Testing will be left to the coder, and tests should be written before the coding is done.

Test Ref	Req Being Tested	Test Content	Input	Output	Pass Criteria
SE-F-014	FR2	Valid Username allows user to login.	Login with valid Username.		
SE-F-015	FR2	Invalid Username does not allow user to login.	Login with invalid Username.		
SE-F-016	FR3	User allowed to add a plant name to the database.	Enter valid plant name using the website.	States that plant details are successfully added to the database.	Plant details successfully added to the database. It returns an error if not added to database.
SE-F-017	FR3	User not allowed to add an invalid plant name to the database.	Enter invalid plant name using the website.	Returns error stating that the plant name is invalid.	Plant details not added to database, error returned, returns to input page.
SE-F-018	FR4	User allowed to add Species Details.	Enter valid Species Details using the website.	States that plant details are successfully added to the database.	Plant details successfully added to database, returns to input page, no error returned.
SE-F-019	FR4	User not allowed to add invalid Species Details.	Enter invalid Species Details using the website.	States that plant details are invalid.	Plant details not added to database, returns error, returns to input page.
SE-F-020	FR4	User allowed to add a picture of a plant to the database.	Enter a valid image file to the database using the website.	States that plant image is successfully added to the database.	Plant image successfully added to the database.
SE-F-021	FR4	User not allowed to add a picture of a plant to the database if over a certain size (to be discussed with group.)	Attempt to enter an absurdly large image file to the database (e.g 10MB).	Returns error stating that the file exceeds file-size limits.	Does not enter to database, returns error message. Returns to input page.

ID	FR	Requirement	Test	Expected Result	Result
SE-F-022	FR4	User allowed to record the level of abundance of the plant within the area.	Enter level of abundance of the plant using the website.	States that plant abundance is successfully added to the database.	Plant abundance successfully added to the database, returns to input page.
SE-F-023	FR4	User not allowed to enter an invalid abundance level	Enter an invalid level of abundance (something outside the range of 1-5)	Error message states that invalid plant abundance has been entered	Does not enter to database, with error message returned stating that it is an invalid input. Returns to input page
SE-F-024	FR5	User able to make changes to any record that they have added to the database.	Attempt to change Plant Name of a user inputted plant.	States that change was successfully made.	Change successfully made to the database.
SE-F-025	FR5	User able to make changes to any record that they have added to the database.	Attempt to change Species Details of a user inputted plant.	States that change was successfully made.	Change successfully made to the database.
SE-F-026	FR5	User able to make changes to any record that they have added to the database.	Attempt to change plant picture of a user inputted plant.	States that change was successfully made.	Change successfully made to the database.
SE-F-027	FR5	User able to make changes to any record that they have added to the database.	Attempt to change abundance details of a user inputted plant.	States that change was successfully made.	Change successfully made to the database.
SE-F-028	FR5	User able to remove any record that they have added to the database.	Attempt to remove a user-added record from the database.	States that record was successfully removed.	Record successfully removed from the database.

2.3   Server

Individual Module Testing will be left to the coder, and tests should be written before the coding is done.

Test Ref	Req Being Tested	Test Content	Input	Output	Pass Criteria
SE-F-029	FR7	Server allows an addition of a valid record via a POST request)	Valid JSON-formatted record via POST	Returns status code 200 OK and ID of the record	Status code 200 OK and record present in the database
SE-F-030	FR7	Server does not allow an addition of an invalid record via a POST request)	Invalid JSON-formatted record via POST	Returns status code 400	Status code 400 and record not present in the database
SE-F-031	FR7	Server allows an addition of a file resource via a POST request	A binary file via POST	Returns status code 200 OK and ID of the resource	Status code 200 OK and file present on server
SE-F-032	FR7	Server allows client to get a specimen with a specified specimen ID that does exist	A POST request with the desired ID specified	Returns status code 200 OK and a JSON-formatted specimen	Status code 200 OK and a valid JSON-formatted specimen
SE-F-033	FR7	Server does not allow the client to get a specimen with a specified specimen ID that does not exist	A POST request with the desired ID specified	Returns status code 400	Status code 400, nothing returned
SE-F-034	FR7	Server allows client to get a file resource with a specified resource ID that exists	A POST request with the desired ID specified	Returns status code 200 OK and a file	Status code 200 OK and the desired file
SE-F-035	FR7	Server does not allow the client to get a file resource with a specified resource ID that does not exist	A POST request with the desired ID specified	Returns status code 400	Status code 400 no file returned

SE-F-036	FR7	Server allows client to get a number of specimens, filtered by record location name	A POST request with the desired location name specified	Returns status code 200 OK and a JSON-formatted array of relevant records found	Status code 200 OK and an array of valid relevant records with same or similar location name
SE-F-037	FR7	Server allows client to remove a specified specimen with a specified valid specimen ID	A POST request with the desired specimen ID to be deleted	Returns status code 200 OK	Status code 200 OK and the specimen is removed from the database
SE-F-038	FR7	Server does not allow client to remove a specified specimen with a specified specimen ID that is invalid	A POST request with the desired specimen ID to be deleted	Returns status code 400	Status code 400 and the specimen is not removed from the database
SE-F-039	FR7	Server allows client to edit a specified specimen with a specified valid ID	A post request with the desired ID and a JSON-formatted specimen	Returns status code 200 OK	Status code 200 OK and specimen is changed in the database
SE-F-040	FR7	Server does not allow client to edit a specified specimen with a specified invalid ID	A post request with the desired ID and a JSON-formatted specimen	Returns status code 400	Status code 400 OK and specimen is not changed in the database

3 Test Result Reporting

subsectionReport Details of test results are to be maintained in the group github, under TestReports. Module tests are to be maintained in the ModuleTests folder, and System tests in the SystemTests folder.

4   Refrences

4.1   Refrence

- General Documentation Standards : C. J. Price, N.W.Hardy & B.P.Tiddeman (2014-09-23) SE.QA.03 1.7

- Test Procedure Standards : C. J. Price, N.W.Hardy and B.P.Tiddeman (2014-09-23) SE.QA.06 1.8

5   Document History

Version	Edit	Date	Persons
0.1	Initial Version	November 10 2014	nid21
0.2	Review and moving inline with template	November 28 2014	nid21
0.3	Updated spec for changed API methods	January 22 2015	msh4