**Group 3**

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Testing Specification

CS22120 Group Project

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Contents

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[Cursor appears 8](#_Toc403481014)

[Cursor appears 8](#_Toc403481015)

[Cursor appears 8](#_Toc403481016)

# Introduction

## Purpose of this document

The purpose of this document is to define each of the tests required for the implementation of the system. These tests have all be created to the requirement specification standard and are to be executed as part of the group project.

## Scope

The scope of these tests covers a list of tests with pass and fail criteria for each test. The tests have been created to the requirements specification, keeping the functionality requirements in mind, This series of tests do not, however, cover module tests as that has been left to the implementation team as they create the application and discover issues.

## Objectives

The objective of this specification is to ensure that all the functionality requirements stated in the requirements specification are met by the created system. This specification will also aim to ensure that all areas of the system are testing to the proper standard, such as Graphic interfaces and database systems, this will make sure that all the parts of the system developed meet the requirements.

# Testing

## 2.1 UI testing

### Web and Database

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Ref. | Req. being tested | Test Content | Input | Output | Pass Criteria |
| UI-W-001 | FR8 | Information about the visit is added to the server correctly. | (Enter valid data) | Data uploaded should be stored correctly (eg in the expected table) | Data is stored correctly. |
| UI-W-002 | FR8 | Species recordings are added to the server correctly. | (Enter valid data) | Data uploaded should be stored correctly (eg in the expected table) | Data is stored correctly. |
| UI-W-003 | FR8 | Additions of new recordings don’t cause crashes. | (Enter valid data) | New recordings shouldn’t cause any issues with the database | New data doesn’t cause any issues with the database |
| UI-W-004 | FR8 | Test server database size restraints. | Enter valid data that is within size restraints | The data will be added to the database with no issues. | Data is stored correctly. |
| UI-W-005 | FR8 | Test server database size restraints. | Enter valid data that is outside of size restraints. | An error message will be displayed | The record is not added, and a suitable error message is displayed |
| UI-W-006 | FR8 | The user is able to upload new reserve records to the website. | (Enter valid data) | The data will be added to the website (and visible) | The new data will have been added to the database correctly |
| UI-W-007 | FR8 | The user can delete reserve records without causing issues. | Delete the newly added record from test 6 | The record will be successfully deleted | The record is successfully deleted |
| UI-W-008 | FR8 | Enter a correctly formatted OS grip map reference | Make a new record, and enter the grid reference “SN 59732 82286" | The record will be added successfully | The record is successfully added to the database |
| UI-W-009 | FR8 | Enter an incorrectly formatted OS grid map reference | Make a new record, and enter the grid reference “12346578910" | An error message will be displayed | The record is not added, and a suitable error message is displayed |
| UI-W-010 | FR8 | Character limits of textual descriptions of reserves. | Enter valid data that is the exact length allowed. | The data will be added to the database with no issues. | The data has been added to the database successfully. |
| UI-W-011 | FR8 | Character limits of textual descriptions of reserves. | Enter data that is one character too long. | An error message will be displayed. | The record is not added, and a suitable error message is . |
| UI-W-012 | FR9 | Users can view a reserve including all species recordings at that reserve. | Search for a known existing reserve, “ParcNaturPenglais" | The website will display all species recordings at that reserve | The website successfully displays all species recordings at the given reserve |
| UI-W-013 | FR9 | List is actually in alphabetical order (of latin names). | Load the website | Check if the list is in correct order | The list is in correct alphabetical order. |
| UI-W-014 | FR9 | Option to order by date. | Load the website | Check if option given to order by date | The option to sort by date is given |
| UI-W-015 | FR9 | List is actually in date order. | Load the website, and select the option to sort by date | The list is now sorted by date | The list is in correct date order |

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| --- | --- | --- | --- | --- | --- |
| Test Ref. | Req. Tested | Test Content | Input | Output | Pass Criteria |
| UI-A-001 | FR1/FR6 | Check that when the user clicks the “add” button the record will be saved in the database. | Species: “Sunflower”  DAFOR scale abundance: “O”  Species Coordinates: “SN585815”  Typical location: “Crop field”  Additional information: “A tall, yellow plant ” | The user will be taken to the record page with the newly filled out record on display. | The data collected will be stored into the database. |
| UI-A-002 | FR1/FR4 | Check that when the user clicks the “add” button the button will add multiple records to the database | Species: “Ivy”  DAFOR scale abundance: “R”  Species Coordinates: “SN585815”  Typical location: “Growing up tree”  Additional information: “” | The user will be taken to the record page with the newly filled out record on display. | Adds multiple records to the database. |
| UI-A-003 | FR2 | Allowing the user to input data about the site they are currently in. | Species: “Ivy”  DAFOR scale abundance: “R”  Species Coordinates: “SN585815”  Typical location: “growing up tree”  Additional information: “” | The input data will be written into text boxes within the page | The data will appear in the correct text boxes. |
| UI-A-004 | FR2 | On the user data page the user will be able to prompted to enter their logon details | Name: “John Heynes”  Email:”john.h\_1991@hotmail.co.uk”  Phone Number:”07599129221” | The “Blank Record Page” will appear on the screen. | If the logon is correct then pressing “Start” will bring up the “Blank Record Page” |
| UI-A-005 | FR3 | Being able to select a species from a list | Species: “Ivy”  Attained from drop-down menu | The dropdown menu will appear and be able to click on an element. | On click, the desired element will appear in the box and the drop down will be removed. |
| UI-A-006 | FR3 | Being able to select a species not on the list. Entering a new species. | Species “Alpine catchfly” | Add button within the drop-down menu which allows for a new spices to be entered. | The users input will appear in a text box. |
| UI-A-007 | FR5 | Editing the users existing recordings within the “Edit” section. | (editing the sunflower record)  Was:  DAFOR scale abundance: “O”  Now:  DAFOR scale abundance: “R” | The user will be taken to the record page with the edited data on display. | By clicking the Add button the data will be updated within the record. |
| UI-A-008 | UI Local Storage | If the user is not currently connected to the internet, then they will able to store their records on local storage. | Species: “Autumn Crocus”  DAFOR scale abundance: “A”  Species Coorindates: “SN585815”  Typical location: “within a field”  Additional information: “a delicate purple flower” | A pop-up box message informing the user that their entry has been stored for later. | Record has been stored in the devices local storage. |

## 2.2 Android app UI

## App Functionality Testing

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| --- | --- | --- | --- | --- | --- |
| Test Ref | Req. Tested | Test Content | Input | Output | Pass criteria |
| UI-A-1 | FR1 | Click a button, check the interaction | Home Page Record Button | Goes to User Data Page | Goes to appropriate  screen |
| UI-A-2 |  | Click a button, check the interaction | Home Page Explore Button | Goes to Explore Page | Goes to appropriate  screen |
| UI-A-3 | FR2 | Test that title of Name can not exceed 50 characters in length | User Data  Page  Name Field | Cursor appears | Cursor appears when Name length equals 50 characters and a new character is attempted to be added |
| UI-A-4 | FR2 | Test that title of  Email can not exceed 75 characters in length | User Data  Page  Email Field | Cursor appears | Cursor appears when Name length equals 75 characters and a new character is attempted to be added |
| UI-A-5 | FR2 | Test that title of Phone Number can not exceed 25 characters in length | User Data  Phone Number Field | Cursor appears | Cursor appears when Name length equals 25 characters and a new character is attempted to be added |
| UI-A-6 | FR1 | Click a button, check the interaction | Blank Record Page  Add Button | Takes the user to the Add Record Page | Goes to appropriate screen |
| UI-A-7 | FR4 | Test that Species Field can not be empty when Add is pressed | Add Record Page  Species Field | Message “Species field can not be empty” will pop up | Message popped up successfully |
| UI-A-8 | FR4 | Test that title of Species Field can not exceed 30 characters in length | Add Record Page  Species Field | Cursor appears | Cursor appears when Name length equals 30 characters and a new character is attempted to be added |
| UI-A-9 | FR4 | Test that DAFOR scale abundance field can not exceed 2 characters in length | Add Record Page  DAFOR scale abundance field | Cursor appears | Cursor appears when Name length equals 2 characters and a new character is attempted to be added |
| UI-A-10 | FR4 | Test that Species X Coordinates field exceed 10  characters in length | Add Record Page  Species Coordinates  X Field | Cursor appears | Cursor appears when Name length equals 10 characters and a new character is attempted to be added |
| UI-A-11 | FR4 | Test that Species Y Coordinates field exceed 10  characters in length | Add Record Page  Species Coordinates  Y Field | Cursor appears | Cursor appears when Name length equals 10 characters and a new character is attempted to be added |
| UI-A-12 | FR4 | Test that title of Species Field can not exceed 30 characters in length | Add Record Page  Typical Location Field | Cursor appears | Cursor appears when Name length equals 30 characters and a new character is attempted to be added |
| UI-A-13 | FR4 | Test that title of Species Field can not exceed 60 characters in length | Add Record  Additional Information Field | Cursor appears | Cursor appears when Name length equals 60 characters and a new character is attempted to be added |
| UI-A-14 | FR4 | Check if Camera button is function correctly | Add Record Page/Add Species  Image/Camera Button | Camera screen popped out | Check if Camera screen is successfully popped out |
| UI-A-15 | FR4 | Check if Camera button is function correctly | Add Record Page/Add Location  Image/Camera Button | Camera screen popped out | Check if Camera screen is successfully popped out |
| UI-A-16 | FR1 | Check if goes to appropriate page after clicking the button | Add Record Page  Add Button | Takes the user to the Record Page | Go to Record page |
| UI-A-17 | None | Check if goes to appropriate page after clicking the button | Record Page  + Button | Takes the user to the New Record Page | Go to a new Record page |
| UI-A-18 | None | Check if the previous photo of the current record is shown | Record Page  < button | Previous  photo appears | Shows previous  photo |
| UI-A-19 | None | Check if the next photo of the current record is shown | Record Page  > button | Next photo appears | Shows next photo |
| UI-A-20 | None | Test if the list of items in menu pops up correctly | Record Page  Hamburger Button | Side menu popped up | Side menu popped up “showing Send, Edit, Delete, Back” |
| UI-A-21 | None | Check if the previous photo of the Image Viewing page is shown | Image Viewing page  < Button | Previous  photo appears | Shows previous  photo |
| UI-A-22 | None | Check if the next photo of the Image Viewing page is shown | Image Viewing page  > Button | Next photo appears | Shows next photo |
| UI-A-23 | FR6 | Test if records are all sent to server when button is pressed | Side Menu  Send Button | Message popped up “” | All new records sent to server |
| UI-A-24 | FR6 | Test if records are all stored into device when button is pressed | Side Menu  Send Button | Message popped up ”No internet connection, data is stored” | All new records are stored temporarily |
| UI-A-25 | FR5 | Check if goes to appropriate page after clicking the button | Side Menu  Edit Button | Goes to a previous Record page | Goes to a previous Record page |
| UI-A-26 | FR5 | Check if goes to appropriate page after clicking the button | Side Menu  Delete Button | The current record is discarded and jump back to Home page | The current Record will be deleted and goes back to the Home page |
| UI-A-27 | None | Check if goes to appropriate page after clicking the button | Side Menu Back Button | Goes to a previous page | Back to previous page |

# Document History

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| --- | --- | --- | --- |
| Version | Date | Changes made | Changed by |
| 1.0 | 04/11/14 | First version created |  |
| 1.1 | 05/11/14 | Add tests | yta,cac, |
| 1.2 | 06/11/14 |  | yta, |
|  | 07/11/14 | Categorise testes |  |
|  | 07/11/14 |  |  |
| 2.0 | 08/11/14 | Lots improvement, finalise | yta |
| 2.1 | 11/11/14 | Formatting improvement | kpf |