Software Engineering Group 11

SE\_11\_TS\_01

Android Test Specification

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# Introduction

## Purpose of Document

The purpose of this document is to give a comprehensive guide to the tests we will carry out on our android application once we reach the testing phase.

## Scope

This document aims to be a brief but detailed document listing our test specifications for the android application.

## Objectives

This document covers:

* Recording and Species Module
* Funcionality
* UI
* Databse

## Documents Included

This Test Specification has been derived from the following documents

* SE.QA.RS – Requirement Specification[1]
* SE\_11\_PP – Project Plan[2]

# Android Test Specification

## 2.1 Recordings and Species Module testing

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test ref** | **Req. being tested** | **Test content** | **Input** | **Output** | **Pass criteria** |
| SE-F-001 | FR2 | Test a valid phone number for a recorder. | 01234564854 | Phone number is accepted when sent to the database. | No errors or warnings are produced. |
| SE-F-002 | FR2 | Test a phone number that contains characters. | 01a23d65845 | Phone number is rejected when the user attempts to submit the data. | An error is displayed to the user alerting them that the phone number is invalid due to characters. |
| SE-F-003 | FR2 | Test a phone number that contains special characters. | 215!254@\*90 | Phone number is rejected when the user attempts to submit the data. | An error is displayed to the user alerting them that the phone number is invalid due to special characters. |
| SE-F-004 | FR2 | Test a valid date. | 06/11/2014 | The date is accepted and sent to the database. | No warnings or errors are produced. |
| SE-F-005 | FR2 | Test a historic date. | 06/11/1900 | The date is rejected when the user attempts to submit the data. | An error is displayed to the user alerting them that the date is too far in the past. |
| SE-F-006 | FR2 | Test a date in the future. | A date further in the future of the current date | The date is rejected when the user attempts to submit the data. | An error is displayed to the user alerting them that the date cannot be in the future. |
| SE-F-007 | FR3 | Test a valid species from the list. | Search for a valid species that exists within the database. | The species is accepted when the user submits the data. | No warnings or errors are produced. |
| SE-F-008 | FR3 | Search for a species that does not exist. | Search for ‘$FS465bth’ | No results will be returned. | A message will alert the user that no matching results were obtained. A prompt to add a new species will appear. |
| SE-F-009 | FR3 | Test a valid unique species can be added. | Attempt to add a new valid species. | The new species will be added to the database when submitted. | No warning or error message will be displayed to the user as the data is valid. |
| SE-F-010 | FR3 | Test that a repeat of a species cannot be entered. | Attempt to add a new valid species that already exists in the database. | The new species will not be added to the database. | An error will be displayed to the user alerting them to the fact a duplicate of this species already exists. |
| SE-F-011 | FR4 | Test a valid abundance character. | ‘A’ | The character is accepted as valid on submission and sent to the database. | No error message or warning is produced for the valid character. |
| SE-F-012 | FR4 | Test an invalid abundance character. | ‘Z’ | The character will be rejected when the user attempts to submit data. | An error is displayed to the user alerting them that the abundance character is invalid. |
| SE-F-013 | FR4 | Test multiple characters in the abundance field. | ‘FA’ | The character will be rejected when the user attempts to submit the data. | An error is displayed to the user alerting them that only one character can be entered into the abundance field. |
| SE-F-014 | FR4 | Test no entry in the free text comment area. | Enter no data to the free text area. | On submission the data will be sent to the database. | No warning or error messages will be displayed for the valid entry. |
| SE-F-015 | FR4 | Test a valid entry in the free text comment area. | Enter more than 0 and less than 256 characters. | On submission the data will be sent to the database. | No warning or error message will be displayed for the valid entry. |
| SE-F-016 | FR4 | Test a comment that is more than the maximum number of valid characters in the free text comment field. | Enter more than 256 characters in the free text comment field. | The data will be rejected when the user attempts to submit the data. | An error message will alert the user to the fact that the free comment box is only able to take a comment of 256 characters or less. |
| SE-F-017 | FR4 | Testing the camera is loaded when the scene camera icon is pressed. | Press the scene camera icon. | The screen is switched to camera output. | The user can take a picture with the camera which is then saved. |
| SE-F-018 | FR4 | Testing the camera is loaded when the plant camera icon is pressed. | Press the plant camera icon. | The screen is switched to camera output. | The user can take a picture with the camera which is then saved. |
| SE-F-019 | FR5 | Testing a recording can be deleted. | Select a recording and press delete. | The recording will no longer be displayed in the list. | The database will no longer contain the recording that was deleted. |
| SE-F-020 | FR5 | Test a whole species can be deleted. | Select a pre-existing species and press delete. | The recording will no longer be displayed in the list. | The database will no longer contain the recording that was deleted. |
| SE-F-021 | FR5 | Change the abundance of a species. | Select a pre-existing species and change the abundance to a valid abundance. | The species will now be updated with the new abundance. | The database will be updated to match the new information given on submission. |
| SE-F-022 | FR5 | Change the abundance of a species to a non-valid abundance. | Select a pre-existing species and change the abundance to a non-valid abundance. | When the user submits the change the change is rejected. | An error message is produced alerting the user that the input for abundance is not valid. |
| SE-F-023 | FR5 | Change the typical location for a species. | Select a pre-existing species and change the pre-existing location to a new valid location. | The species record will be updated with the new value for typical location. | No errors or warning messages are produced as the data is valid. |
| SE-F-024 | FR5 | Change the image of a species (plant). | Select a pre-existing species and change the plant image to a valid image. | The species plant image will be updated with the new image. | The database will be updated to match the new information given on submission. |
| SE-F-025 | FR5 | Change the image of a species (scene). | Select a pre-existing species and change the scene input to a valid image. | The species scene image will be updated with the new image. | The database will be updated to match the new information given on submission. |

## 

## 2.2 Functionality

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test ref** | **Req. being tested** | **Test content** | **Input** | **Output** | **Pass criteria** |
| SE-F-026 | FR3 | Search for a certain plant in the database | Enter a plant name that is in the database | A drop down list containing plant searched for | If plant appears in drop down list |
| SE-F-027 | FR3 | Search for a plant alphabetically | Enter the first letter or couple of letters | A drop down list populated with plants that match letter(s) going from common to rare | If first letter(s) match those of first letter(s) of plants in drop down list |
| SE-F-028 | FR3 | Search for a plant not in the database | Enter a plant name that is not in the database | A drop down list with option to add new plant | If add new plant option appears in drop down |
| SE-F-029 | FR5 | Display entries according to date | Test database of entries. Two with same day & month, two with same month & year, two with same day & year and two completely same dates | Display entries going from closest date then progressing back to oldest recorded record | If entries are grouped by year and month |
| SE-F-030 | PR1 | GPS is turned off when app is closed/goes inactive (If GPS is only to be active when app is) | App is closed/goes inactive | Phone GPS is deactivated | If phone settings show GPS is off after app use |
| SE-F-031 | FR4 | Search for a certain reserve in the database | Enter a reserve name that is in the database | A drop down list containing reserve searched for | If reserve appears in drop down list |
| SE-F-032 | FR4 | Search for a reserve alphabetically | Enter the first letter or couple of letters | A drop down list populated with reserves that match letter(s) | If first letter(s) match those of first letter(s) of reserves in drop down list |
| SE-F-033 | FR4 | Search for a reserve not in the database | Enter a reserve that is not in the database | A drop down list stating unable to locate reserve | If unable to find reserve appears for the user |
| SE-F-034 | FR4 | When a picture is taken that the GPS coordinates are recorded | Take a picture | GPS coordinates are entered into field to be sent | If record contains GPS coordinates |
| SE-F-035 | FR2, FR8, FR9 | Test logon id validation with one in user database | Enter e-mail of member on system | Proceed to password validation | Logon id is confirmed to be a user in database |
| SE-F-036 | FR2, FR8, FR9 | Test logon id validation with one not in user database | Enter e-mail of a non-member | Display ‘unable to recognize logon/ password’ | Logon id is confirmed as not in user database |
| SE-F-037 | FR2, FR8, FR9 | Test if correct password is entered | Enter correct password for logon id | Proceed to next screen | Password matches password linked to Logon id |
| SE-F-038 | FR2, FR8, FR9 | Test if an incorrect password is detected | Enter incorrect password for logon id | Display ‘unable to recognize logon/ password’ | If password is confirmed as not matching password linked to Logon id |
| SE-F-039 | FR2, FR8, FR9 | Test access level which is valid | Member’s access level | Proceed to next screen | If access level is recognized as being greater than or equal to required level |
| SE-F-040 | FR2, FR8, FR9 | Test access level which is not valid | Member’s access level | Display ‘Access denied’ | If access level is recognized as being less than required level |
| SE-F-041 | FR5 | Test if any entries are on your phone | Request list of previous entries with no entries | Display ‘Not previous entries currently stored’ | If displays message for user as no entries to display |
| SE-F-042 | PR1 | Test if user notified they can upload with WiFi connection made (only if that is their upload option) | Phone connects to WiFi while app is active | Upload icon lights up | If Icon changes and setting is for WiFi |
| SE-F-043 | PR1 | Test if user notified they can upload with signal at a good strength to ensure transition (only if that is their upload option) | Phone signal is at or above a certain strength while app is active | Upload icon lights up | If Icon changes and setting is for using phone’s signal |
| SE-F-044 | PR1 | Test if user notified they can upload with WiFi when no connection is made (only for WiFi upload option) | Phone signal is at or above a certain strength while app is active | Upload icon does not light up | If Icon does not change and setting is for WiFi |

## 2.3 UI

| Test Ref | Req. being tested | Test content | Input | Output | Pass criteria |
| --- | --- | --- | --- | --- | --- |
| SE-F-045 | EIR1 | Main Menu - The upload viewers change based on the record state | The record is in the local Database | Button should be red | Has to be red, |
| SE-F-044 | EIR1 | Main Menu -The upload viewers change based on the record state | The record is being uploaded | Button should change to orange | Needs to change to orange. |
| SE-F-045 | EIR1 | Main Menu -The upload viewers change based on the record state | The record has uploaded, stays for 5 minutes | The button changed to green, and disappears after 5 minutes | Needs to change and disappear in that time provided. |
| SE-F-046 | EIR1 | Record screen - Image select screen | Swipe right on the image select | Image swipe option correctly switches between image modes | The state is switched. |
| SE-F-047 | EIR1 | Record Screen - Reset button works correctly | The button is pressed | The data entry forms are cleared | They are cleared correctly |
| SE-F-048 | EIR1, PR2 | Main menu -Scaling to different screen sizes works correctly | Application is tested on larger screen | The buttons and icons scale correctly and the positions are relative to screen size | The buttons looks correctly scaled. |
| SE-F-049 | EIR1, PR2 | Main menu -Scaled to tablet size | Opened on tablet | All controls are scaled up for tablets and works correctly | Application must have all controls scale up appropriately |
| SE-F-050 | EIR1, PR2 | Record Screen -Scaled to tablet size | Opened on a tablet | The buttons and image size are scaled correctly | Needs to be scaled correctly without any errors with resolution or position |
| SE-F-051 | EIR1 | Main menu - Rotate to landscape | Rotated the device to landscape. | The elements rotate and resize to fit the screen more appropriately | Needs to resize and reposition elements correctly |
| SE-F-052 | EIR1 | Record Screen -Rotate to landscape | Rotated the device to landscape. | The elements of the screen rotate and resize to fit the screen, this includes the image selector. | Needs to resize correctly and the image has to resize |
| SE-F-053 | EIR1 | Main Menu - four navigation buttons must be in the correct location | Opened the application | The buttons are spaced evenly and are the same size | Have to be spaced evenly and are the same size |
| SE-F-054 | EIR1 | Main menu -Upload button checks | Opened the application | The upload buttons are spaced and positioned evenly | They’re spaced evenly and are the same size |
| SE-F-055 | EIR1 | Main menu -Added recording to upload button | Added a recording to be displayed on the button display | The recording button is added to the end of the stack | Has to be added correctly to the display |
| SE-F-056 | EIR1 | Record Screen - GPS Screen disability | Turn off GPS | The GPS automatic entry should be disabled | Has to disable the controls once GPS is turned off |

# REFERENCES

[1] – SE.QA.RS – Requirement Specification – N.W.Hardy

[2] – SE\_11\_PP – Project Plan – Group 11

# DOCUMENT HISTORY

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| --- | --- | --- | --- | --- |
| Version | CCF No. | Date | Changes made to document | Changed by |
| 1.0 | N/A | 13/11/14 | Document Created and Structured | Add20 |