

Software Engineering Group 11

SE_11_PP_04

Project Plan – User Interface Design

Author:	Gavin Reynolds (gar18), Kieran Dunbar (kid10), Jack Skitt (jas78)
Configuration Ref:	SE_11_PP_04
Date:	2014-10-28
Version:	1.1
Status:	In Review

Department of Computer Science

Aberystwyth University

Aberystwyth

Ceredigion

SY23 3DB

Copyright © Aberystwyth University 2014

Table of Contents

1. Introduction	4
1.1. Purpose of Document	4
1.2. Scope	4
1.3. Objectives	4
2. Colour Swatches	5
3. Website Basic Concepts	6
3.1. Page Structure	6
3.2. Link Styles	6
3.3. Footer Links	7
3.4. Navigation Links	7
4. Web User Interface Designs	7
4.1. Index Login Page	7
4.2. Registration Page	9
4.3. You Page – Account	11
4.4. View Page - Database	12
4.5. New Page – Database Entry	12
4.6. Logout – You Page	13
4.7. About Page	13
5. Database Schema	14
5.1. Schema Diagram	14
5.2. Description	14
5.2.1. Species Tables	14
5.2.2. Reserves Table	14
5.2.3. Recordings Table	15
5.2.4. Species Occurrence Table	15
5.2.5. Users Table	15
6. Android User Interface Design	16
6.2. Main Screen	16
6.2.1. Section A/B	16
6.2.2. Section C	16

6.2.3. Section D 16

6.3. Login Screen 17

6.4. Recording Screen..... 18

7. REFERENCES 19

8. DOCUMENT HISTORY 19

1. Introduction

1.1. Purpose of Document

The purpose of this document is to be an individual part of the final project plan, this is being kept as a separate document to allow for version control and drafting of this particular section.

1.2. Scope

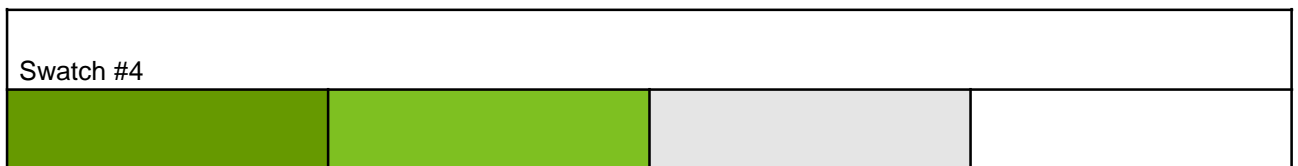
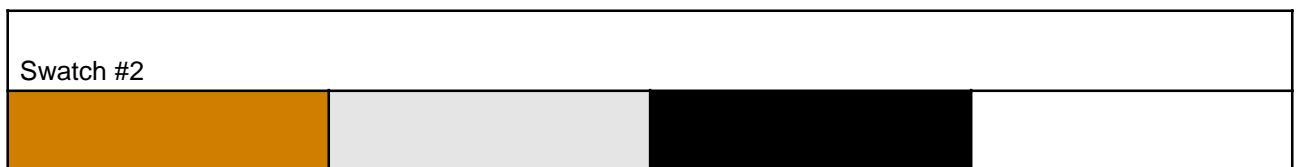
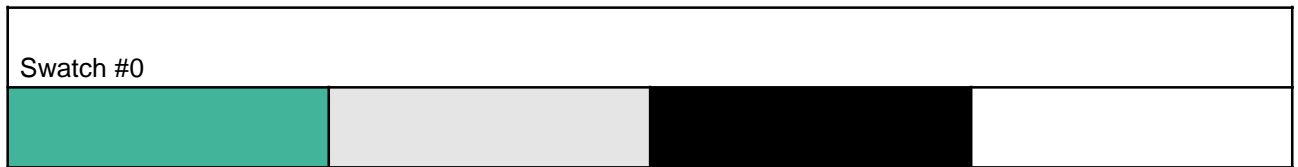
This document aims to be an overview of the User Interface Designs for the Website, Database and Android Application

1.3. Objectives

This document covers:

- Colour (Theme) choices
- Website User Interface Designs
- Database Schema and Explanation
- Android Application User Interface Designs

2. Colour Swatches



Hex References

References in order as to how the swatch is organised (left to right)

Swatch #0

#42B49A #E5E5E5 #000000 #FFFFFF

Swatch #1

#BD4030 #E5E5E5 #000000 #FFFFFF

Swatch #2

#D17F00 #E5E5E5 #000000 #FFFFFF

Swatch #3

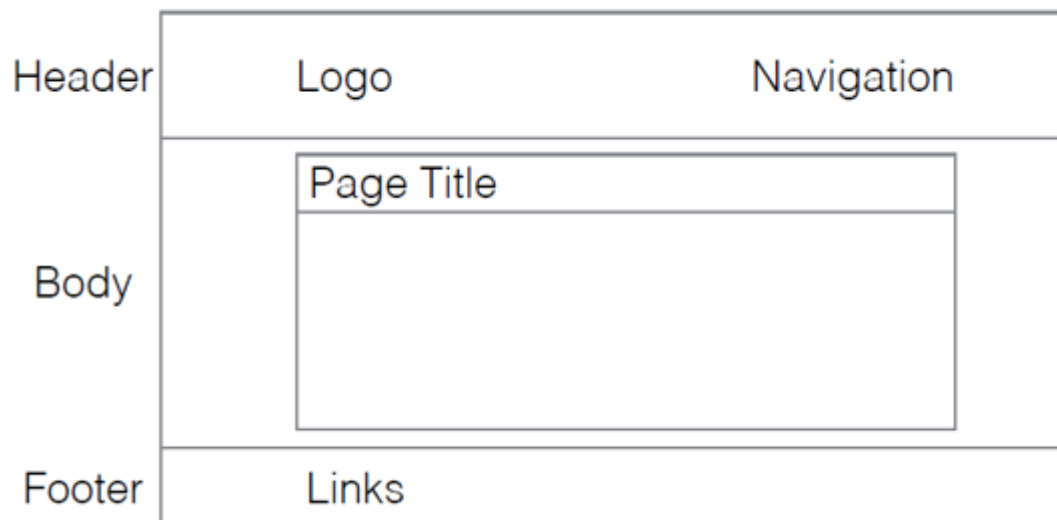
#545454 #E5E5E5 #000000 #FFFFFF

Swatch #4

#669900 #7FC123 #E5E5E5 #FFFFFF

3. Website Basic Concepts

3.1. Page Structure



3.2. Link Styles

- a:link (white)
- a:visited (white)
- a:hover (white)
- a:active (grey)
- Standard link (white)
- When on Page (grey)

3.3. Footer Links

- About links to the About page
- GitHub links to the GitHub Repository
- Support will link direct to an email address



3.4. Navigation Links

- You
- View
- New



4. Web User Interface Designs

4.1. Index Login Page

The design shows a web page for a "Plant Database". At the top is a green header bar with the text "Plant Database" in white. The main content area has a light gray background. In the center is a white login/register form with a gray border. The form has two tabs at the top: "Log In" (selected) and "Register". Below the tabs are two input fields: "email:" and "password:". At the bottom of the form is a green "Submit" button. At the bottom of the page is a black footer bar containing the links "About", "GitHub", and "Support" in white on the left, and the text "Plant Database" in white on the right.

Index

The screenshot shows a web interface for a 'Plant Database'. At the top is a green header with the text 'Plant Database'. Below this is a light gray main area containing a login/register form. The form has two tabs: 'Log In' (selected) and 'Register'. Under the 'Log In' tab, there are two input fields: 'email:' with the value 'gar18@aber.ac.uk' and 'password:' which is empty. Below these fields is a green 'Login' button. At the bottom of the page is a black footer with the links 'About', 'GitHub', and 'Support' on the left, and 'Plant Database' on the right.

The user has entered their email address

This screenshot is identical to the previous one, showing the 'Plant Database' login form. The 'email:' field still contains 'gar18@aber.ac.uk'. The 'password:' field now contains a series of asterisks (*****), indicating that a password has been entered. The 'Login' button remains green and visible. The header, footer, and overall layout are consistent with the previous screenshot.

The user has entered their password
Log In form is now complete and the user clicks the sign up button

4.2. Registration Page

Plant Database

Log InRegister

name:

email:

password:

Sign Up

AboutGitHubSupport

Plant Database

User has clicked 'Register'

Plant Database

Log InRegister

name:

Gavin Reynolds

email:

password:

Sign Up

AboutGitHubSupport

Plant Database

User has entered their name

Plant Database

Log In

Register

name:

Gavin Reynolds

email:

gar18@aber.ac.uk

password:

Sign Up

About

GitHub

Support

Plant Database

User has entered their email

Plant Database

Log In

Register

name:

Gavin Reynolds

email:

gar18@aber.ac.uk

password:

Sign Up

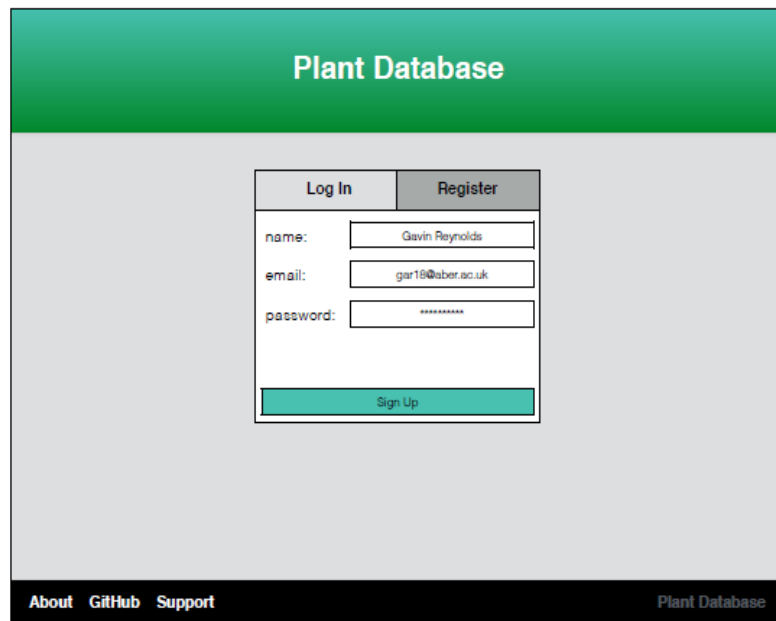
About

GitHub

Support

Plant Database

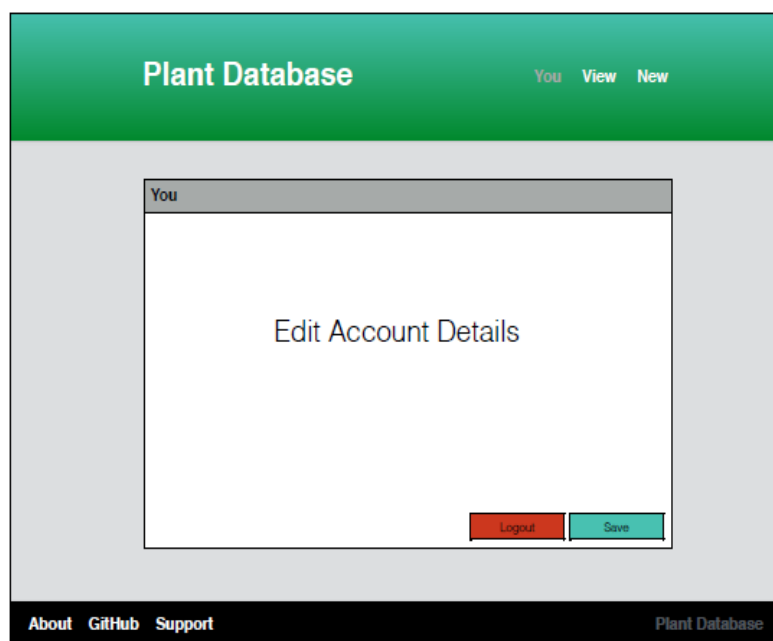
User has entered their password



The image shows a web interface for a 'Plant Database'. At the top is a green header with the text 'Plant Database'. Below this is a light gray main area containing a registration form. The form has two tabs: 'Log In' and 'Register'. The 'Register' tab is active. It contains three input fields: 'name:' with the value 'Gavin Reynolds', 'email:' with the value 'gar18@aber.ac.uk', and 'password:' with a masked value '*****'. Below these fields is a green 'Sign Up' button. At the bottom of the page is a black footer with links 'About', 'GitHub', and 'Support' on the left, and 'Plant Database' on the right.

Registration form is now complete and the user clicks the sign up button

4.3. You Page – Account

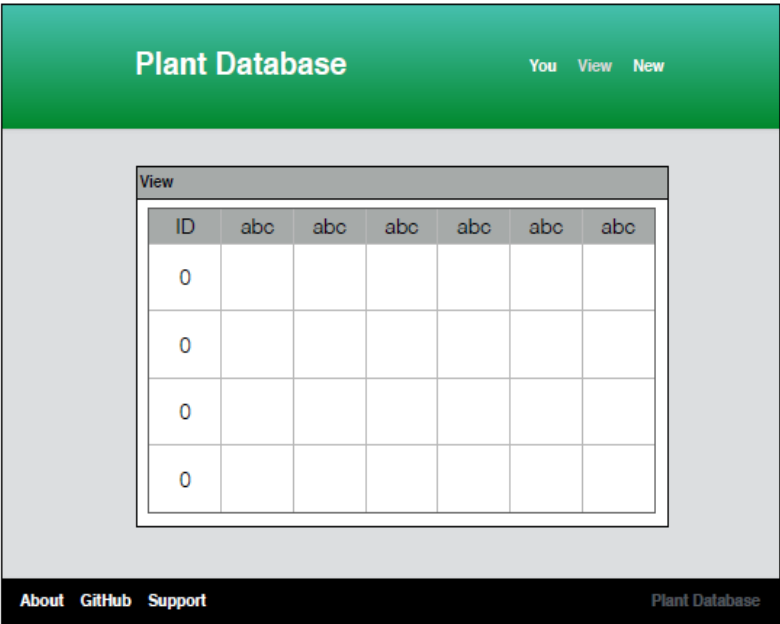


The image shows the 'You' page of the 'Plant Database' web interface. The green header contains 'Plant Database' on the left and navigation links 'You', 'View', and 'New' on the right. The main area is light gray and contains a white box with a gray header 'You'. Inside this box, the text 'Edit Account Details' is centered. At the bottom right of the white box are two buttons: a red 'Logout' button and a green 'Save' button. The black footer at the bottom contains links 'About', 'GitHub', and 'Support' on the left, and 'Plant Database' on the right.

The user is brought to the You page by default. The user can edit their name, email and password here

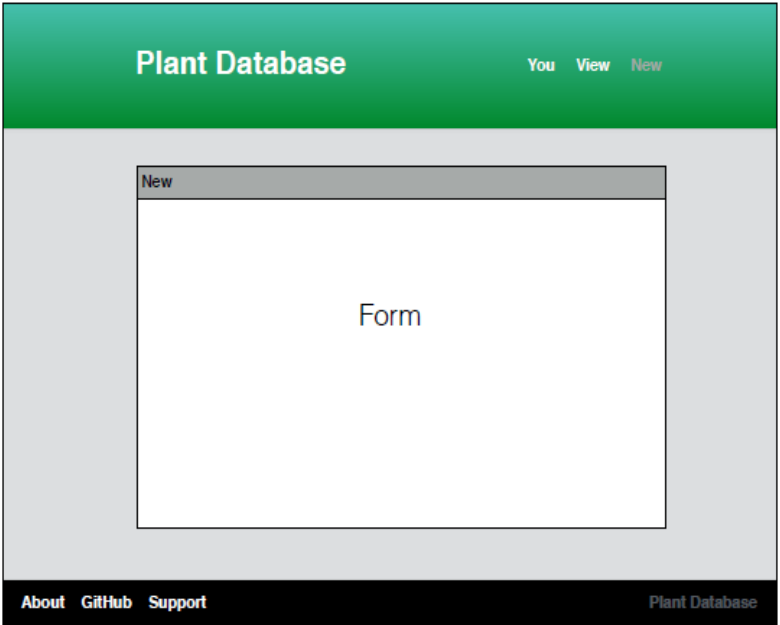
They can save their details here once edits have been made

4.4. View Page - Database



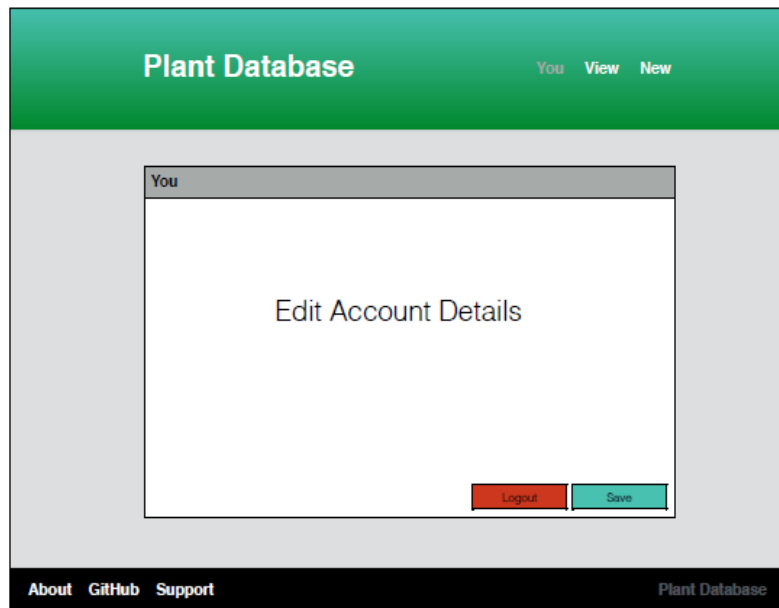
The View page allows the user to view the database records

4.5. New Page – Database Entry



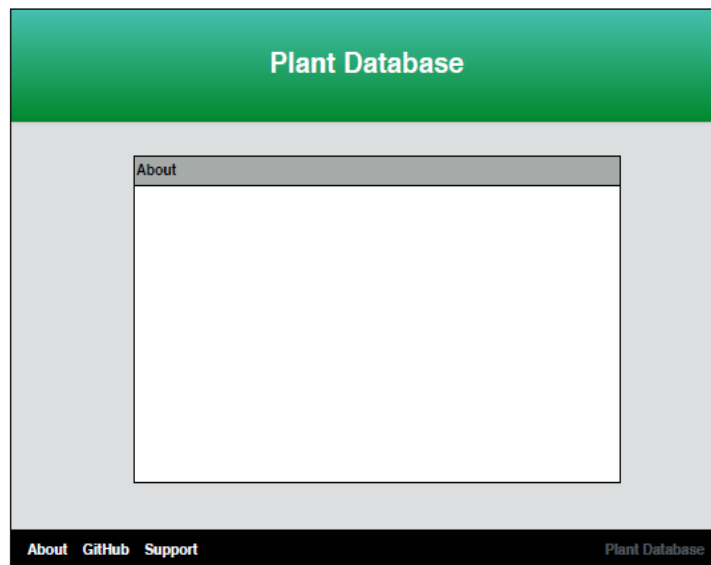
The New page allows the user to create a new record

4.6. Logout – You Page



Back to the You page now and the user can click Logout to logout when they are ready

4.7. About Page



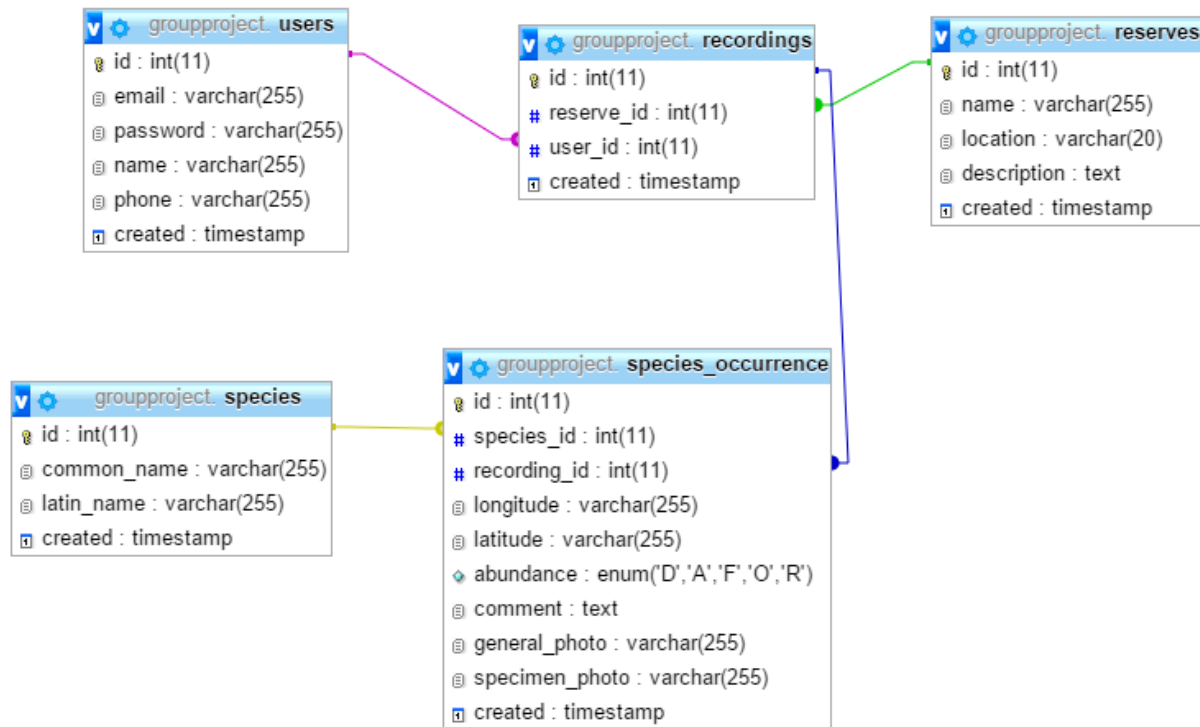
The footer has links on too!

They are present both when logged in and logged out. This is shown as if the user is logged out and wanting to read about the Plant Database application.

5. Database Schema

5.1. Schema Diagram

Below is a graphical view the DB schema along with any relations. This was created using a MySQL database.



5.2. Description

5.2.1. Species Tables

So this table would contain both the common and Latin names for the species, which we can obtain from the BSBI list. These would be stored as varchar. It also contains the ID as a primary key and a created timestamp.

5.2.2. Reserves Table

The reserves table would contain the name, location (OS grid ref as per spec) and description of the reserve. The name and location would be stored as varchar and the description would be stored as text. As before it would contain the ID as the primary key and a created timestamp.

5.2.3. Recordings Table

The recordings table would contain a reserve ID which would be related to the primary key of the reserves table. It also contains the user's ID which would be related to the primary key of the users table. As before it also contains its own ID as the primary key and a created timestamp.

5.2.4. Species Occurrence Table

The species_occurrence table contains both the species ID and the recording ID which are both related to the relevant tables. This would contain each individual occurrence of a species on a per recording basis. This way we would be able to get all the different species recorded on a particular recording and/or on a particular reserve. This table also contains the longitude and latitude of where the species was found, the abundance, a comment, and URLs (?) to both the general and specimen photos. The longitude, latitude and photos will be stored as varchars whereas the comment will be stored as text. In the case of abundance I have used enum as we're choosing from a specific range of options. As before it also contains ID as its primary key and a created timestamp.

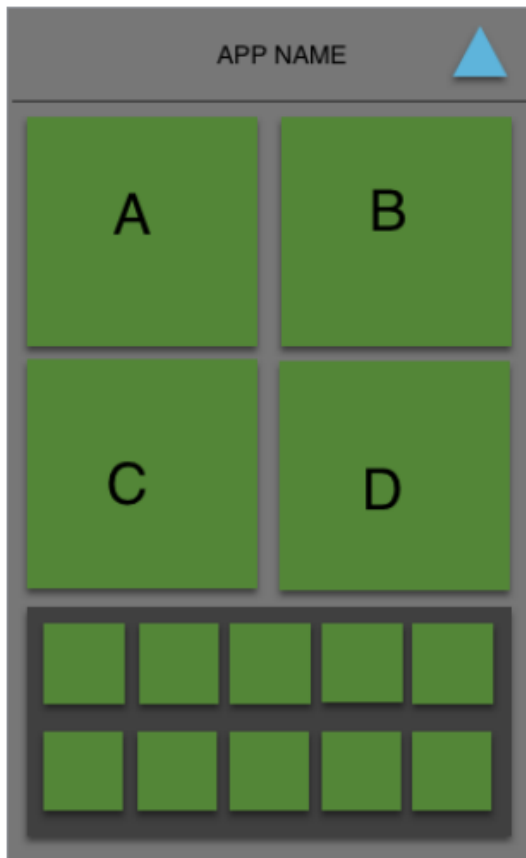
5.2.5. Users Table

The users table contains the email, phone number and name of the user along with his/her encrypted password. All of these fields are stored as varchar (including phone number due to the fact that it starts with a 0). As before this table also contains ID as its primary key and a created timestamp.

6. Android User Interface Design

6.2. Main Screen

This is the main title screen it holds the various control buttons for the outline, this allows the users to see all the options available to them. It can also be used for the management of data and a visual representation of currently stored local data. There's a login button at the top to allow a user to quickly load their application data.



6.2.1. Section A/B

Upload button/create new plant recording. Section b is used to manage previous records

6.2.2. Section C

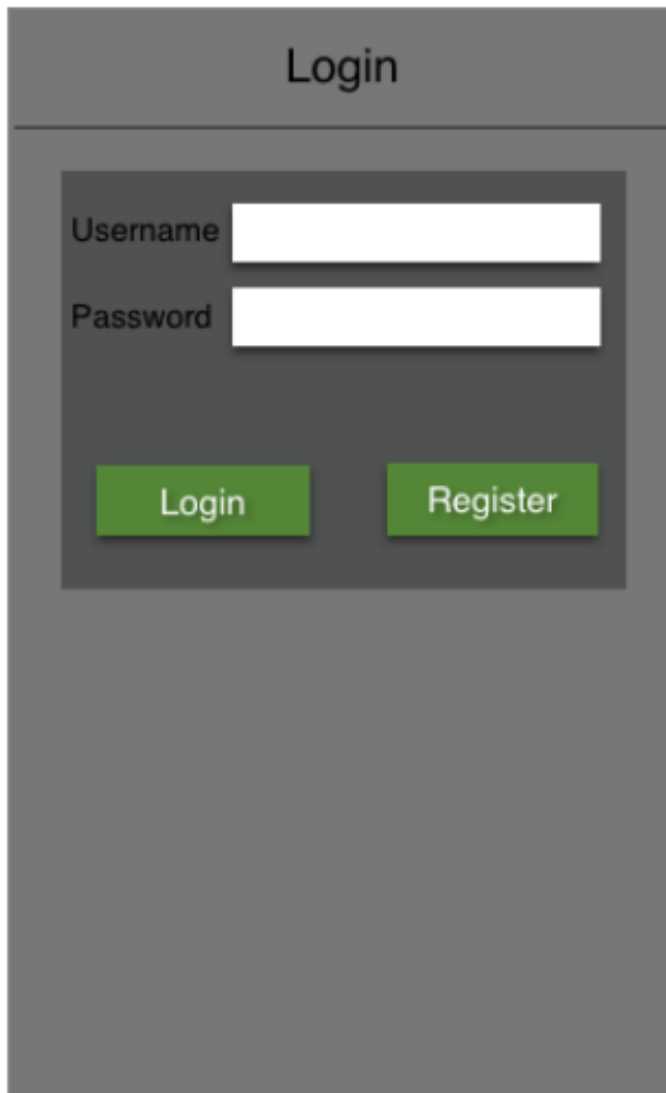
Used for Plant Creation

6.2.3. Section D

Plant Data Management

6.3. Login Screen

Standard login screen allows for the registration or login of accounts.



A mockup of a login screen. The screen has a dark gray background. At the top, the word "Login" is centered in a white sans-serif font. Below this, there is a lighter gray rectangular area containing the login fields. Inside this area, the labels "Username" and "Password" are in a dark gray font, each followed by a white rectangular input field. At the bottom of this lighter area, there are two green rectangular buttons with white text: "Login" on the left and "Register" on the right.

6.4. Recording Screen

This allows for the recording and submission of plant data. The image moves left and right in order to switch between close up images and area images, for multiple images you can wipe down on the category.

The plant and reserve boxes allow you to search the relevant databases for the best result, the search screens should be a standard list menu with a search box at the top.

The name box allows the user to enter a name for the record they are adding.

The location box has two options a GPS location pulled from the phones sensors or a manual location entering, this is needed for recordings added offsite and for devices that do not have a GPS sensor.

The notes box allows the botanist to add any extra details that they feel is relevant to the location

The image shows a mobile application interface for recording plant data. The layout is as follows:

- Login**: A header bar at the top.
- IMG**: A large dark gray rectangular area for displaying an image.
- Name**: A light gray input field.
- Reserve**: A light gray input field.
- Plant**: A light gray input field.
- Long** and **Lat**: Two adjacent light gray input fields for coordinates.
- Notes**: A larger light gray input field for additional details.
- Login** and **Reset**: Two buttons on a green bar at the bottom.

7. REFERENCES

N/A

8. DOCUMENT HISTORY

Version	CCF No.	Date	Changes made to document	Changed by
1.0	N/A	21/10/14	Document Created and Structured	Add20
1.2	N/A	28/10/14	Touched up on QA sections to fit specification on QA requirements. Restructured Into new Template Supplied by als48. Database Schema and Descriptions Added. Document put into 'In Review' Status	Tcg2