



## Assignment Declaration Cover Sheet

**Coursework Title** Team Design Proposal  
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Please confirm each statement by ticking the boxes before signing the bottom. Please note that if a team member does not agree and doesn't sign off on the final submission of the assignment, they must attach a statement explaining their reasons.

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# Evergreen Designs

## PLANTR

### Your Indoor Plant Companion

DECO2500 Team Design Proposal

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## Acknowledgements

### Thank You to All Participants

Thank you to all of the volunteer participants who completed our online survey or participated in the in-person interviews for the Contextual Inquiry section of this proposal. Your data, stories and experiences were invaluable in the design of **Plantr**.

### Attributes

The Interaction Flow Diagram and Software Prototype App Screens have been designed using common licence icons from Flaticon.com (see Figure 1 for example icons used). It is intended that these icons will be replaced with custom icons in the final design stage.

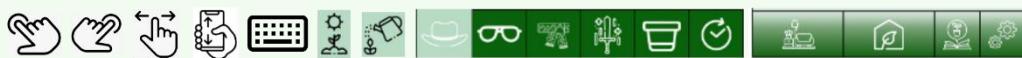


Figure 1: Icons. Free icons sourced from Flaticon.com were used as placeholders in the software prototypes and diagrams.

The cover photo was sourced from a free to use photograph at Pexels.com (Boltneva, 2018)

Bar and pie charts were created from our data using online graph tools from MaxTable.

Microsoft Forms and Google Forms were used to collect interview and survey data.

### Generative AI Tools

Microsoft Designer's Image Creator was used to create images of the cartoon plant avatars and rooms for the software prototype and proposal document (see Figure 2).

All generated images are referenced in References: Image Attributions at the end of this proposal document.

No other generative AI was used in the creation or writing of this proposal.



Figure 2: Plant Avatar. A fun, customisable avatar of a user's plant.

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## Introduction

This proposal document sets out the design for Plantr, a proposed plant care mobile application within the behaviour change domain.

The Plantr app is designed to make it easier for people to care for indoor plants. It aims to do this by providing the user with relevant information and an engaging and easy interface with which to monitor their indoor plants' needs.

This proposal document sets out the process through which our team at Evergreen Designs identified relevant issues and needs for a potential mobile application to fulfill, and the design of the mobile application Plantr. This proposal also discusses how interactive design elements have been incorporated into Plantr's features.

It is divided into four sections for the contextual inquiry, conceptual design, prototypes, and future direction considerations.

The contextual inquiry section examines why the behavioural change domain, and the topic of plant care has been chosen. It explores two relevant applications that already exist in this domain. It specifies our target audience, and describes the data gathered through interviews and surveys to define our user's wants and needs.

The conceptual design section sets out Plantr's design at a high level. Users' functional requirements have been extracted from the contextual inquiry to identify the initial requirements of the app.

The contextual inquiry and conceptual design then informed low-fidelity and software prototypes which were used to gather further user feedback on the practical design.

Improvements to the current design of the Plantr application are then identified in the Future Directions section.

Each of these design stages are now explored in more detail.

## Contextual Inquiry

An application is successful when it addresses a clear purpose and prioritises the needs and values of its users. (Salazar, 2020) In order to achieve these goals, a contextual inquiry was undertaken.

During the contextual inquiry stage, research was conducted into the behavioural change domain to choose a target audience and to better understand the issues they face. This research led us to propose a mobile application to achieve two main goals: to assist users to care for indoor plants by making it fun and easy to perform necessary plant care tasks, and to provide the user with specific information for their plant according to its species and geographic location.

Research of existing systems was then conducted to examine and compare what applications were already available on the market. The goal here was to discover whether these applications were appropriate for our target audience, or whether there was room for an alternative application.

Interviews and surveys were also conducted with participants from the target audience to understand their needs and values, so that core features could be incorporated into our design.

A detailed quantitative and qualitative analysis of the interview and survey data was then conducted to form relevant conclusions about the core needs and values of prospective users.

## Domain: Behaviour Change

Current smartphone ownership in Australia as of 2019 reached 99% for 18-24 and 25-29-year-olds (Christopher, 2023), indicating phones have become an integral part of daily lives for young adults. It is inferred from this that young adults would be comfortable using technology to achieve positive behavioural change.

A significant proportion of young adults also reported experiencing stress. According to a 2021/22 New Zealand Health Survey, “23.6% of those aged 15-24 years reporting high or very high levels of psychological distress” (Kristopher, 2023).

Caring for plants has been suggested as a solution to achieve stress reduction and mindfulness. Research has shown that “people who spent five to 10 minutes in a room with a few houseplants felt happier than those in a plant-free room” (Jun, Chanjuan, Xin, Hanbing, & Zhiwei, 2013). Living with plants can also afford positive health and academic benefits. A 2022 study found that plant care significantly lowered systolic

blood pressure and correlated with increased academic results (Ke-Tsung, Li-Wen, & Li-Shih, 2022).

Our research sought to discover whether a mobile application in the behaviour change domain that focused on plant care could be a viable product that could provide positive benefits for young adults.

Aside from the huge abundance of existing mobile applications that provide entertainment and convenience, behaviour management applications are a rapidly growing domain with more than 60% of American phone users tracking their health using such apps (Dan, 2022).

The main goal of a behaviour changing app is to influence positive change and help users adopt a healthier and more positive habit. The most difficult part with most behavioural change apps is they provide extrinsic motivations such as in-app validations, but to sustain a habit people need intrinsic motivations (Sams, n.d.).

An example of an existing behavioural change app is Forest. (Forest, 2024) This app encourages productivity by getting the user to grow virtual trees while being focused. However, these rewards lack a personal connection or practical user benefit and fails to address the reasons for the lack of productivity in the first place.

Specific research was therefore conducted in relation to existing applications in the plant care space.

## Existing Systems

Currently, there are several ways that someone could use software to assist in plant care, such as using calendar apps, to-do lists, phone reminders or specific plant care applications.

The first three can leverage existing solutions already provided in the users' phone operating system (or can download alternative apps for other functionality), however, as people aged 18-24 are spending the most time on mobile apps (Kataria, 2021), we will focus on Plant Care apps. There are a number of these on the major app stores (Google Play/Apple App Store). We reviewed two of these: Planta (see Figure 3) and Plant Parent (see Figure 4). Both are available on both app stores and have very large download numbers (~1 million and ~5 million respectively). Multiple screenshots showing the interfaces of these applications are set out in Appendix 3.



Figure 3 - Screenshot of Planta App Getting Started Page. Example of existing app in the plant care space.



*Figure 4 - Screenshot of Plant Parent app showing a key feature of the app. An example of an existing app with features not available in free apps.*

existing knowledge (if any).

In our opinion, there is a gap in the market for a plant care mobile application that can be both useful and fun. An app that appeals to a younger audience and is easy and fun to use but is robust enough to provide accurate information to assist users with their plant care needs, can effect behavioural change.

## Users' Needs and Values

### Gathering Information

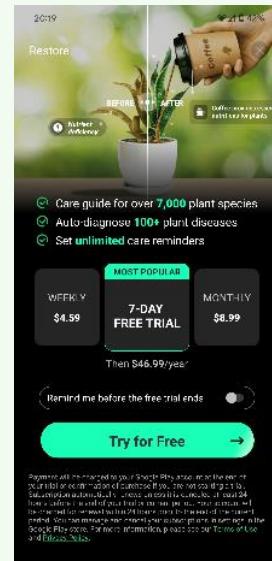
Initial research into the behaviour change domain and existing applications suggests there is a likely market opportunity for an app designed to assist users in plant care. However to ensure that such an app would be considered useful, it is also important to identify potential users' needs and values, and how they will use it. (Soegaard, 2023) To accomplish this, an online survey and in-person interviews were conducted with participants in the target age range of 18 to 35 years. This age range includes our target audience of younger users in their 20s, but also extends to users in the next age range. This was considered important because the desire to effect long-term behavioural change requires our application to remain relevant to younger users for several years.

The questions in the survey and user interviews were the same. However, it was anticipated that more detailed answers would be received from the in-person

Both apps look very similar to each other, leaning into the green theme. They also have a minimalistic design, plant and room customisation, and expensive premium subscriptions to unlock additional features like reminders, disease database, and fertilisation schedules (see Figure 5).

Both these apps appear to be targeting an older audience and display information in a serious, professional manner. Using them can cost quite a bit in the long term as (assuming they survive) plant lifespans can be measured in decades. With the most important features locked behind a paywall, the free tier for both apps is quite limiting.

Free options like the calendar apps and phone reminders are adequate to provide notifications but do not incorporate any specific plant or location features (like geographic location, weather, how much sun the plant gets, how much it needs, etc). For this information, they rely on the user's



*Figure 5 - Screenshot of Planta app showing their expensive premium pricing options.*

interviews rather than from the online survey. The interviewer could develop a rapport with the participant and prompt for more information when required, whereas an online participant may provide shorter answers and spend less time completing the survey. Although an online survey might therefore provide limited data for our research, it was considered a valuable data gathering exercise because it had the potential to reach a wider audience and thereby produce a wider variety of responses than the in-person interviews.

The user interviews were semi-structured, involving both open-ended questions in order to obtain detailed qualitative data for the conceptual design stage, and multiple-choice questions which enabled a quantitative analysis of those responses. (Soegaard, 2023)

The survey and interview questions employed branching to use different questions depending on whether the participant currently cared for plants or not. There was a maximum of 11 questions on the topic of plant care, with two further questions to determine each participant's age group and gender identity for data comparison. Each participant's confidentiality and anonymity were also maintained throughout the data collection process. (Hartson & Pardha, 2019, p. 120)

## Data Comparison

Twelve potential users (participants P01 to P12) participated in separate in-person interviews with a team member from Evergreen Designs. Their raw data is appended to Appendix 4. A further 10 potential users (participants S01 to S10) completed an online survey form. Their raw data is appended to Appendix 5. The unabridged qualitative analysis of all users' data is presented in Appendix 6.

### Participants Demographics

All participants fell within the target age range for potential users, which was under 35 years old, with 72 percent of participants being in the younger age range of 18 to 24 years. (See Figure 6)

The participants who completed the survey online identified as more gender diverse than those participating in person, indicating our online survey was able to reach a broader audience of potential users. (See Figure 7)

Age Range	In-Person Interview	Online Survey
Under 18	0	0
18-24	8	8
25-34	4	2
35+	0	0

Figure 6: Age comparison of Interview and Survey Participants. Both methods of data collection proved effective in gathering insights from our target demographic of 18 to 35 year olds.

Gender Identity	In-Person Interview	Online Survey
Female	5	3
Male	7	5
Non-Binary	0	2
Prefer Not To Say	0	0

Figure 6: Gender identity of Participants. There was more gender diversity from online survey participants than those participating in person.

## Current Plant Care Experience and Responsibilities

Seventy-two percent of all participants considered themselves novices in relation to their ability to care for indoor plants, and no participant identified as an expert. (see Figure 8)

Sixty-eight percent of all participants did not currently own or care for an indoor plant. Amongst indoor plant owners, it was almost evenly distributed as to whether they had between 1 to 3 plants, 4 to 10 plants, or 10 to 20 plants. (see Figure 8)

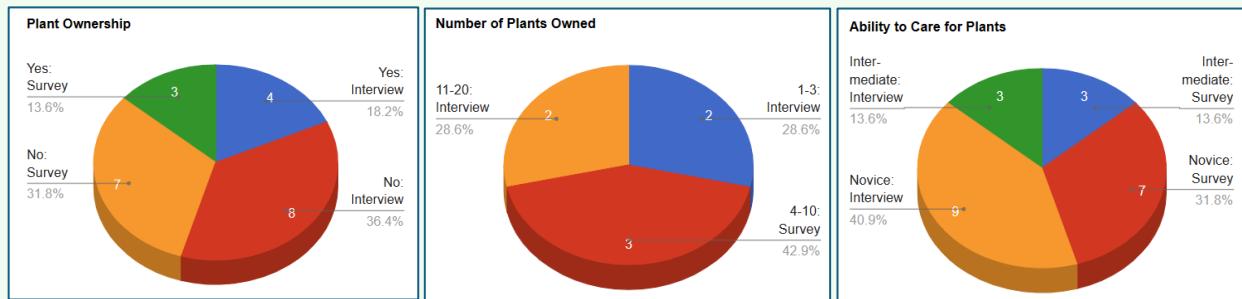


Figure 7: Plant Ownership statistics. These statistics revealed that the majority of our participants considered themselves novices who did not currently own or care for indoor plants.

## Current and Perceived Difficulties in Plant Care

It was a common theme amongst interview and survey participants who owned indoor plants that they relied on a plant's physical appearance to determine whether the plant needed care. Only two participants informed us that their plant care involved a regular routine. (see Figure 9)

All but one indoor plant-owning participant did not rely on any digital application or reminders to assist them with plant care. (see Figure 10)

Themes	Number of Responses	Examples
Observation or Intuition	5	"Plant looks droopy, then I panic" "When thy start to die" "They're cacti, so it's vibes based on when I'm emptying a water bottle out"
Routine Care	2	"Routine (time of the week)" "Every week I water them"

Figure 9: Knowledge of plant care needs. Most participants who owned indoor plants relied on observation or intuition to conduct plant care. (unabridged: Table 3, Appendix 6)

Themes	Number of Responses	Examples
No	6	"No" "Nothing at all"
Yes	1	"Calendar reminders"

Figure 10: Use of existing systems. Most participant do not currently use any Applications to assist with plant care. (unabridged: Table 4, Appendix 6)

Common reasons why participants did not currently own or care for an indoor plant included the perceived difficulty or lack of interest in plant care. (see Figure 11)

Themes	Number of Responses	Examples
Perceived Difficulty	5	<i>"There are a lot of factors to consider"</i> <i>"Too much work"</i>
Lack of Interest	5	<i>"Not interested"</i> <i>"Never thought about it"</i> <i>"I have enough plants outside"</i>
Negative Past Experiences	3	<i>"I end up killing them"</i> <i>"I had one before, and it died."</i>
Limited Space	2	<i>"There's no space at my place for them"</i>
Time Constraints	1	<i>"Too busy to look after"</i>
Environmental Factors	1	<i>"Sunlight doesn't get into my room"</i>

Figure 11: Reasons for non-ownership of indoor plants. Perceived difficulty and lack of interest were popular reasons as to why some participants did not currently own or care for indoor plants.  
(unabridged: Table 1, Appendix 6)

Participants also advised that they thought they did not have the correct environment to consider growing plants or that they were too busy. Some participants had attempted to keep plants in the past but no longer did after those plants died. Participant S07 (see Appendix 5) informed us:

*"I took care of a bonsai that I was gifted once. The person spent two years taking care of it before giving it to me. I promptly killed it in six months.*

*I was told that my bonsai just 'needed to be watered once in a while'. Do you have any idea how hard it is to kill one?! I tried following the simplest instructions and I couldn't even do that. I wasn't sure how much water to give it and it died."*

### App Interest and Potential Usage

Over 90 percent of participants said they would definitely use (or would consider using) an app for plant care information and advice. (see Figure 12)

App Usage	In-Person Interview	Online Survey
Yes	7	4
Maybe	5	4
No	0	2

Figure 12: Potential App Usage. Participants displayed a lot of interest in using an App for plant advice.

From a list of features specified in an interview and survey question, participants most wanted to receive personalised care tips based on a plant's type and geographic location, followed closely by reminders for watering and fertilizing. A feature that provides pest or disease information based on the plant's type or appearance was also popular. (Figure 13).

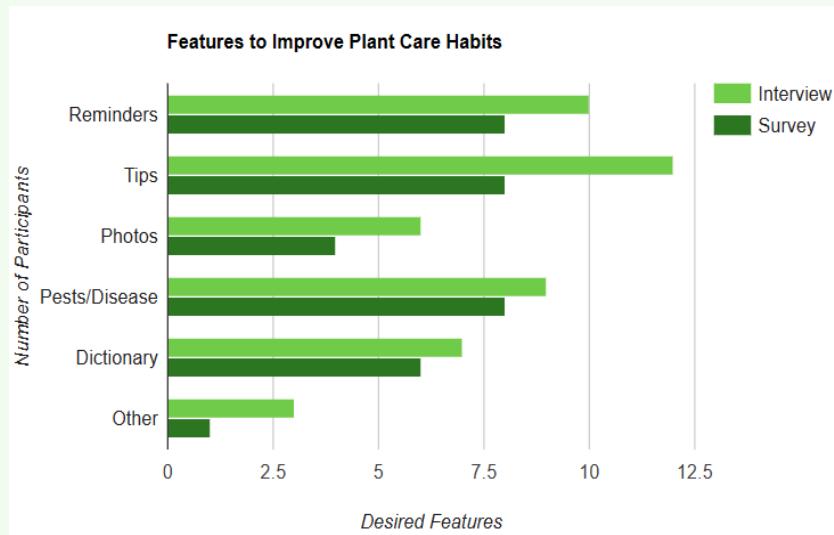


Figure 13: Desired App Features. Participants preferred information and advice rather than a photo timeline or dictionary of terms.

A qualitative analysis of responses to a different question showed that features pre-empted by Evergreen Designs (as set out in Figure 13, namely information regarding watering, fertilising, diseases, and a dictionary feature) correlated closely with the information, advice and features participants told us they want implemented in a plant care app (see Figure 14).

Themes	Number of Responses	Examples
Watering	12	"when to water the plant" "time last watered" "how much water"
Reminders	9	"notifications and updates that plant is viable in particular season" "widget on home screen to list plants needing care" "tells me when to water plants and which ones to water"
Sunlight	7	"how much sun it needs"
Disease/Health	6	"help with identifying issues/diseases" "how the plant should look when healthy"
Plant Dictionary	6	"a dictionary of plants" "information on different types of plants" "can easily look up plant and have list of instructions to follow"
Fertilising	4	"amount of fertiliser"
Soil	3	"soil quality" "soil acidity"
Tutorials	3	"easy step by step guide"
Seasonal or Geographical	3	"it's native environment" "seasonal information about growth"
Fun Facts & Trivia	2	"fun facts eg. this plant was featured in a painting"
Pet Safety	1	"Is plant pet safe?"

Figure 14: Desired Information and Features. Participants informed us they most wanted plant care information regarding watering, sunlight, disease and fertilising, as well as reminders and a dictionary. (unabridged: Table 6, Appendix 6).

## Personalised Avatar Feature

The idea of having a customisable avatar of an indoor plant to personalise the advice and information for that plant was a feature that appealed to over 70 percent of users.

It was noted that this feature was more appealing to the participants being interviewed than to those completing the online survey (see Figure 15). A likely reason for this is that during the interview process, our team members were able to explain in more detail what the avatar might look like and how this feature could be used. (see Figure 16 as an example)

Several participants suggested that changes to the avatar's appearance could be an easy visual indication of the plant's current health. Other users envisaged this feature as a chatbot which could provide answers to their questions or a mechanism through which they could engage in conversation with other App users (see Figure 17).

Personalised Plant Avatar	In-Person Interview	Online Survey
Yes	7	6
Maybe	3	0
No	2	4

Figure 15: Personalised Plant Avatar. This feature was more popular among interviewed participants.



Figure 16: Example Plant Avatar

Themes	Number of Responses	Examples
Plant Care via Chat/Reminders	7	<i>"I want the avatar to give reminders or notifications of things to do."</i> <i>"The avatar could be a chatbot you could ask questions of"</i>
Plant Care via Avatar's Appearance	7	<i>"Wilted/sad appearance when plant needs care"</i> <i>"Show if happy or sad based on watering"</i>
Social Chat with Other Users	1	<i>"Possibly find friends... Get tips from other plant users"</i>
Social Chat with Avatar	1	<i>"As a companion"</i>
Customise Appearance of Avatar	1	<i>"Cute little accessories to unlock and dress them in"</i>
Games or Activities featuring Avatar	1	<i>"Have a 'garden' with your plants, and you can drag a watering can to 'water' that plant"</i>

Figure 17: Plant Avatar interaction. Participants wanted to receive information from the plant avatar via reminders, a chat feature and the avatar's appearance (unabridged: Table 7, Appendix 6)

In summary, after selecting the domain of behaviour change, the issue of improving plant care was chosen. Further research suggested that a mobile application to assist in plant-care would be a viable solution to this issue. An examination of existing solutions found a gap in the market for a highly personalised plant-care app aimed at a younger audience. After detailed analysis of interview data, relevant user needs and values were found. Primarily, users found plant-care difficult and uninteresting, and desired personalised reminders and tips for plant maintenance.

This contextual inquiry provided the initial high-level plan and information needed to develop a conceptual design of the system.

## Conceptual Design

Using research findings and conclusions from the contextual inquiry, the conceptual design formed the basis of the application's core functionality, paradigms & modes, UX goals, and interaction scenarios. Split into two sections, the conceptual design contains the system concept, and the initial system requirements.

### System Concept

The System Concept Design was prepared after considering the identity and needs of our potential users and was informed by the detailed analysis from the contextual inquiry. We have set out the conceptual design within five components (Dr Dobbins, 2024) detailed below:

#### Problem Statement

Design and develop an application to be used on a mobile device that assists the user in maintaining the health of their indoor plants, in a way that is easy, fun, and personalised.

#### High Level Description

The system is a mobile application that tracks the daily upkeep of the user's indoor plants. It provides plant-care recommendations for watering and fertilisation, sent routinely through mobile notifications. Information used to personalise plant-care recommendations include plant type, health, growth, past maintenance, the current temperature, and the current season. In addition, each plant contains its own unique plant-avatar, that provides to the user personalised plant-care recommendations. The appearance of the avatar is resembled by its species, current health status, and its customisable outfit that can be selected by the user. Each avatar turns regular plant-care advice into a highly personalised and engaging interaction for the user. To add new plants, the system contains a search-function, consisting of a large database of plants, including relevant information for each plant. This doubles as a catalogue for the user to browse and find information for new plants they may be interested in purchasing. To help beginner & novice users in understanding in-app plant-care terminology, there exists a dictionary page with a searchable database of these common terms.

## Interaction Paradigm

The application is designed for mobile devices, operating within the framework of mobile computing. This allows the users to interact with the application conveniently from any location at any time, ensuring continuous monitoring of plant-care tasks, and timely notification reminders.

## Interaction Mode

The interaction modes consist of direct user interface manipulation, and conversational interaction. The user manipulates the interface to input information, view plant details, and change settings. Additionally, they can engage in conversational interactions with their personalised-plant avatars, receiving plant-care advice and tips.

## Metaphors

The plant avatar acts as a companion, offering personalised advice, with a dynamically changing appearance. This is akin to a supportive friend, enriching the user experience with a sense of social interaction.

The user interface is structured much like a home, where plants are separated by rooms. This greatly improves user navigation, since it allows intuitive seamless transitions between real-life maintenance, and in-app usage.

Icon usage, such as water droplets and a watering can are metaphors for real-life objects used when caring for house plants. Familiar objects have also been used for the bottom navigation bar icons (such as a house for home, furniture for room screen, book for dictionary screen and cogs for settings, as well as a plus icon to represent the add functionality.) These metaphors link the in-app interface with real-life plant maintenance and familiar icon standards to enhance learnability of the application.

## System Requirements

### Scenarios

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#### Scenario 1

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- Context User has a plant that is currently dying because they do not know how to take care of it.
- Action User opens the app to find instructions on how to take care of the plant.
- Outcomes User's plant becomes healthy.
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#### Scenario 2

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- Context User is a beginner that recently got interested in taking care of a plant, they want to find a plant that is easy to take care of to start with and be provided with detailed instructions.
- Action User opens app to find plants that are easy to take care of and is provided with detailed instructions on how to do so.
- Outcomes User is promoted into the healthy habit of taking care of plants.
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#### Scenario 3

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- Context User has a lot of plants and has difficulty keeping track of all the plants, often forgetting to water or change the soil.
- Action User uses the app to set reminders for each plant they have.
- Outcomes User is given reminders to do specific tasks for each plant.
-

## Storyboards

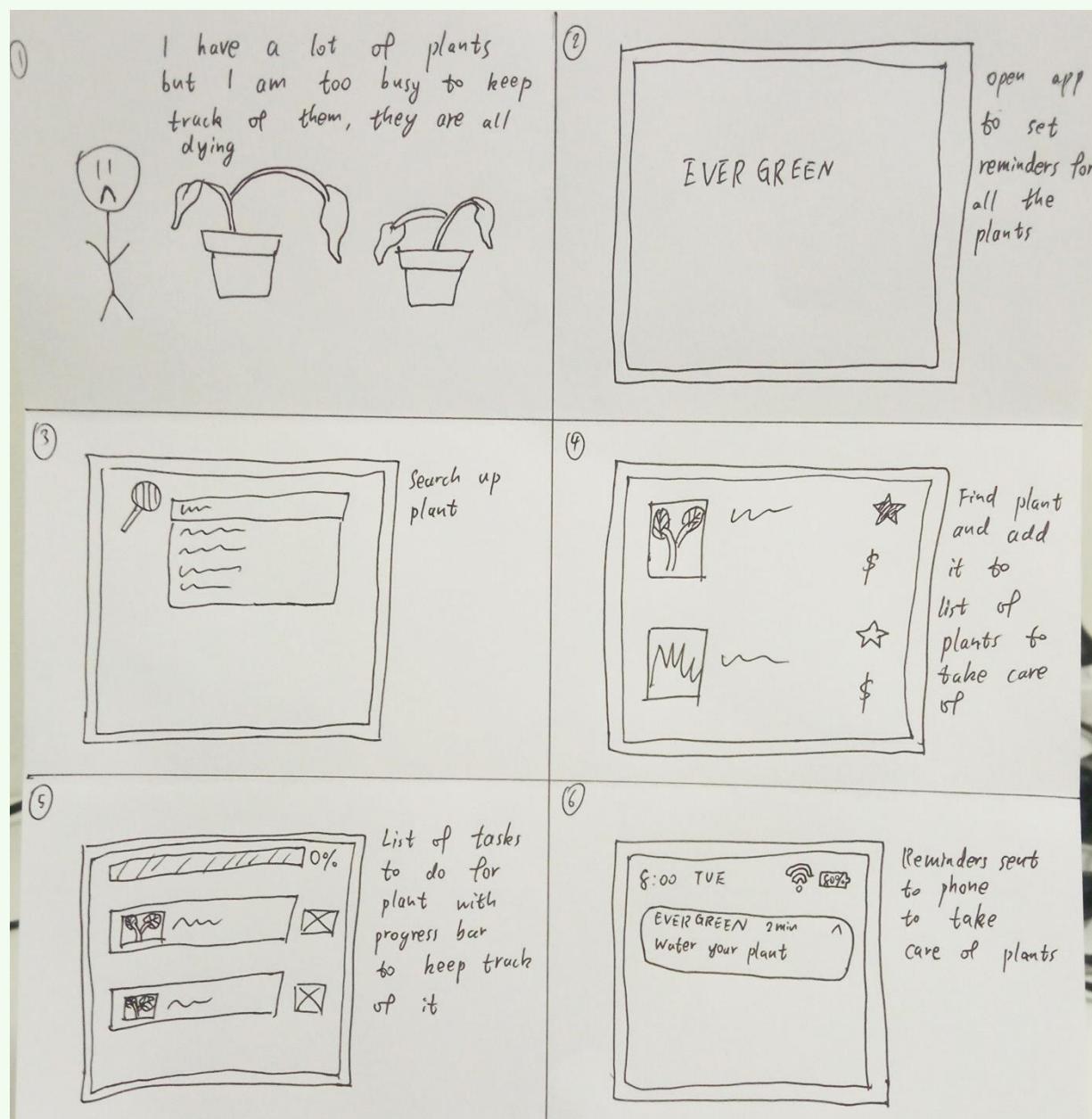


Figure 18: Storyboard depicting indoor plants dying because user has no time to take care of them.

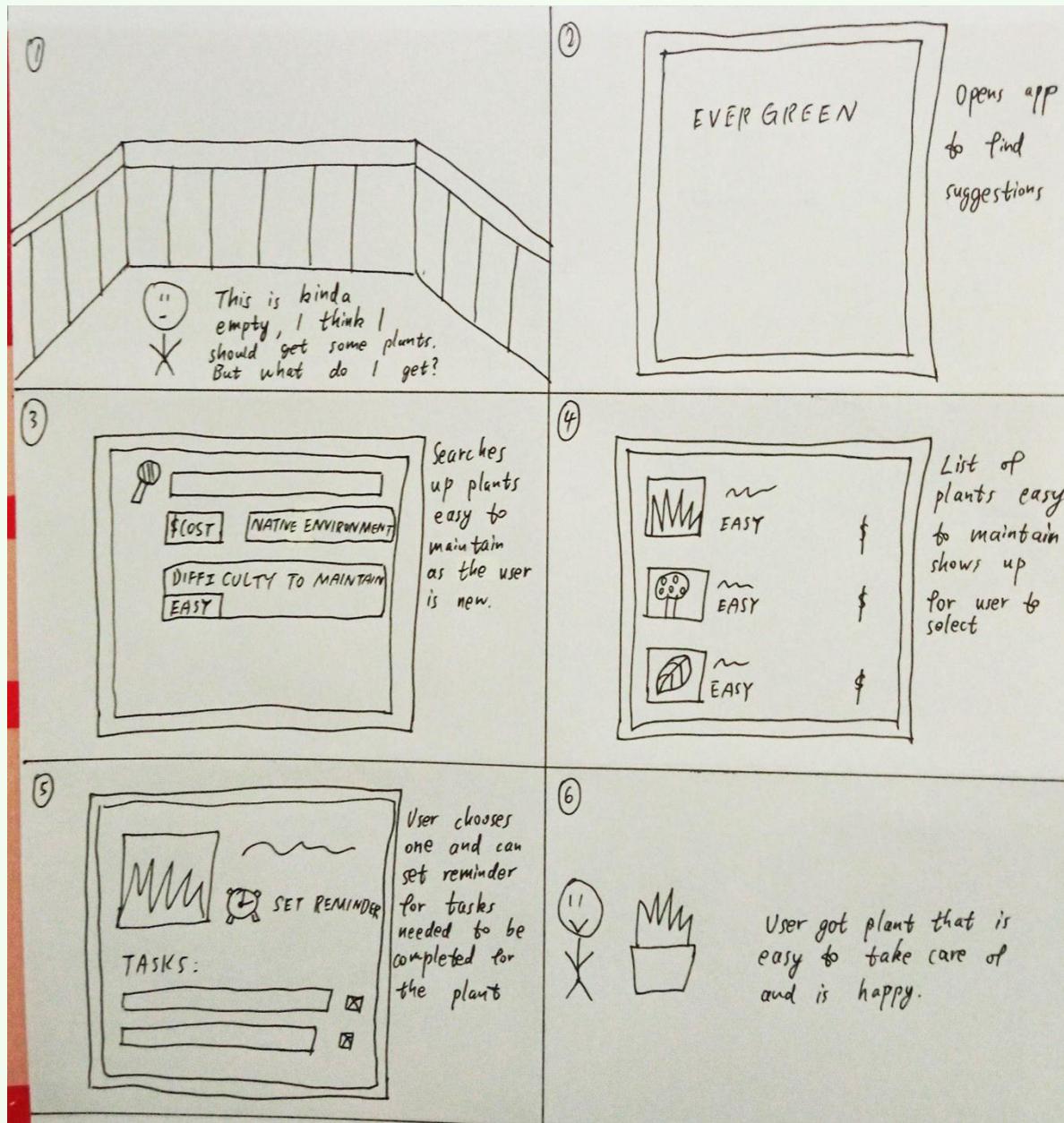


Figure 19: Storyboard depicting user trying to decide what plant to buy.

## UX Goals + Relevant Metrics

<b>Goal 1</b>	
Source	<ul style="list-style-type: none"> <li>- “I would probably forget to water them (plants), or not give them enough sun.” (Participant S10).</li> <li>- “I overwater the plants... sometimes forget to water” (Participant P06).</li> <li>- “(I want to know) watering frequency, (and) how often pruning and trimming is needed and how... (plus) when/how to fertilise.” (Participant P06).</li> </ul>
UX goal	<ul style="list-style-type: none"> <li>- Reminders to take care of each plant.</li> <li>- Easy to follow instructions on how to take care of the plant.</li> </ul>
Measures	<ul style="list-style-type: none"> <li>- Number of clicks to <ul style="list-style-type: none"> <li>o Access the tasks for each plant.</li> </ul> </li> <li>- Conciseness of the instructions for each task.</li> <li>- Reminder is sent each day.</li> <li>- Survey Question <ul style="list-style-type: none"> <li>o Did the tasks list provided all the info you need to take care of the plants.</li> </ul> </li> </ul>
Requirement	<ul style="list-style-type: none"> <li>- List of tasks for each plant with detailed instruction.</li> <li>- Reminder for the tasks for all plants.</li> </ul>

<b>Goal 2</b>	
Source	<ul style="list-style-type: none"> <li>- Questions: In what ways would you want to interact with an avatar of your plant <ul style="list-style-type: none"> <li>o “(The avatar) looks bright and cheerful if taken care of, wilted or tired when forgotten about.” (Participant S01)</li> <li>o “(The avatar has) Cute accessories to unlock and dress them in. Customising their name and pronouns.” (Participant S07)</li> </ul> </li> </ul>
UX goal	<ul style="list-style-type: none"> <li>- Interactive and customisable avatar for each plant to increase user engagement.</li> </ul>
Measures	<ul style="list-style-type: none"> <li>- Number of clicks to <ul style="list-style-type: none"> <li>o Access the avatar for the plant.</li> <li>o Change accessory for the avatar.</li> <li>o Change names &amp; pronouns.</li> </ul> </li> <li>- Survey Question <ul style="list-style-type: none"> <li>o Do you like the avatar?</li> </ul> </li> </ul>
Requirement	<ul style="list-style-type: none"> <li>- Each plant has a customisable avatar with unlockable accessories, names and pronouns.</li> <li>- Appearance of avatar changes based on how frequently the tasks are completed.</li> </ul>

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### Goal 3

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Source	<ul style="list-style-type: none"> <li>- Questions: What kind of information, advice or features would you like a plant care app to provide           <ul style="list-style-type: none"> <li>o “fun facts and trivia. Is (the) plant pet safe.” (Participant P06)</li> <li>o “How the plant should look (when healthy) ... Some sort of system that ranks how difficult it is to maintain... It’s native environment.” (Participant S10)</li> </ul> </li> </ul>
UX goal	<ul style="list-style-type: none"> <li>- Provide useful and engaging information for each plant.</li> </ul>
Measures	<ul style="list-style-type: none"> <li>- Number of clicks to           <ul style="list-style-type: none"> <li>o Access each info of the plant.</li> </ul> </li> <li>- Survey Question</li> <li>- Does the information provided for each plant provide all you need to know about the plant?</li> </ul>
Requirement	<ul style="list-style-type: none"> <li>- Information for each plant:           <ul style="list-style-type: none"> <li>o Name</li> <li>o Images (regular and enlarged view, from multiple angles)</li> <li>o Description (plant origin, benefits, etc)</li> <li>o Fun facts</li> <li>o Difficulty to take care of the plant (Only 3 ratings are needed for easy comparison)</li> <li>o Native environment (A recommendation on whether you should have this plant based on your location)</li> <li>o Potential harm to certain groups due to various reasons (e.g. pet allergies)</li> </ul> </li> </ul>

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### Goal 4

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Source	<ul style="list-style-type: none"> <li>- Questions: What kind of information, advice or features would you like a plant care app to provide           <ul style="list-style-type: none"> <li>o “... an easy search function for adding new plants (that I have bought) to the app.” (Participant S10)</li> <li>o “... use the search function to find new plants that I might be interested in buying – I could filter by various information such as “easy/moderate/hard to maintain”, “native to tropical/dry/cold environments”, “small/medium/large sized”.” (Participant S10)</li> </ul> </li> </ul>
UX goal	<ul style="list-style-type: none"> <li>- Provide search functionality with filters to help user find the plant they want.</li> </ul>

Measures	<ul style="list-style-type: none"><li>- Number of clicks to<ul style="list-style-type: none"><li>o Access the search functionality.</li></ul></li><li>- Number of options on the screen at any one time<ul style="list-style-type: none"><li>o e.g. only have name for each filter (native environment, cost, etc) present, user clicks on it to adjust the specific configurations (big, medium, small, etc).</li></ul></li><li>- Survey Question<ul style="list-style-type: none"><li>o Does the app provide easily accessible search functionality to help you find the plant you want?</li></ul></li></ul>
Requirement	<ul style="list-style-type: none"><li>- Search functionality with filters such as:<ul style="list-style-type: none"><li>o Name (both common and scientific names)</li><li>o Cost (provide ranges instead of numbers for convenience)</li><li>o Native environment (Can use current location as filter)</li><li>o Difficulty to maintain</li></ul></li></ul>

Based on insights found in the contextual inquiry, the system concept statement above details the core system features, interaction paradigms & modes, and metaphors.

The core functionality consists of an application which will assist users in plant-care, with a focus on personalised interactions with plant-avatars. This serves as a foundation to build on, where further interaction scenarios and goals could be developed. These details were fleshed out in the initial system requirements section, where user scenarios, storyboards, and UX goals further expanded the needs, and desired outcomes of the application.

This laid out a clear vision of the application from which a low-fidelity prototype could be developed.

# Prototypes

## Introduction

Our goal for this app is to create positive behaviour change in the realm of plant care. In our journey towards this goal, we interviewed 12 people to find out the most important features needed in a plant care app. The most common theme in their responses had to do with watering, whether it was watering frequency, when they had watered their plants last, or just how much to give their plants. This had to be the feature we would emphasise the most. Also, many participants rated themselves as novice plant carers, but there were also a handful of participants that had some skill, so the app must be able to take these differences into account when displaying information.

In that respect, we started with a low-fidelity prototype draft to make sure we had all the important features, then iterated until we had a high-fidelity prototype that could be used to base the final app design on. The full set of the low-fidelity sketches and software prototypes for each screen is shown in Appendix 7.

## Design

As a whole, we've embraced the green theme on all screens for recognition over recall. This includes green backgrounds, a green navigation bar, and, where possible, plant themed navigation icons. The second goal was for interactive avatars of the plants that changed their look based on their status (e.g. a thirsty plant holding a drinking cup) and could also be customised with accessories to make each one unique.

The home screen (see Figure 20) is designed to be the hub of all the needed information and contains a list of all the plants in a user's "Home" sorted by urgency of care needed. The plant's avatar, along with name, location, and status are here as mainly a summary page so the user can easily see what's needed next and how their home is looking.

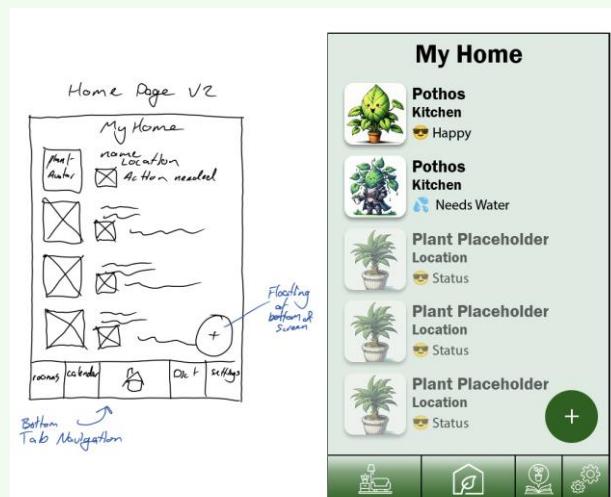


Figure 20: Low-Fidelity prototype and High-Fidelity prototype of the home screen showing consistency of design and UX goals

The top theme our participants responded with had to do with watering frequency and volume, highlighting a need for knowledge about the care a plant will need most often. The Plant screen (see Figure 21) has taken this need and put it front and centre by having drawers that a user can tap on to expand for more information. Keeping the bulk of the information behind a single tap allows for more experienced users to go more directly to the information that they're looking for without having all the information upfront like the existing solutions researched had implemented.

## The Avatars

The core of the app design is our interactive plant avatars. We will have one for each plant with several states for the plant to be in, such as happy, thirsty (needs water, see Figure 22), hungry (needs fertiliser), dying, diseased, dead, and more. This is to help facilitate a two-way interaction between the app and the user, providing a quick way to look at the status of each plant without relying only on text to tell a story, tying into the heuristics of visibility of system status and system match to the real world.

As we have only allowed for one avatar for each plant, these characters will be able to be user customised with accessories and nicknames to easily tell multiple plants of the same species apart from each other, with hats, sunglasses, scarves, and the like. From a default avatar, each plant avatar can be unique, leveraging recognition over recall.

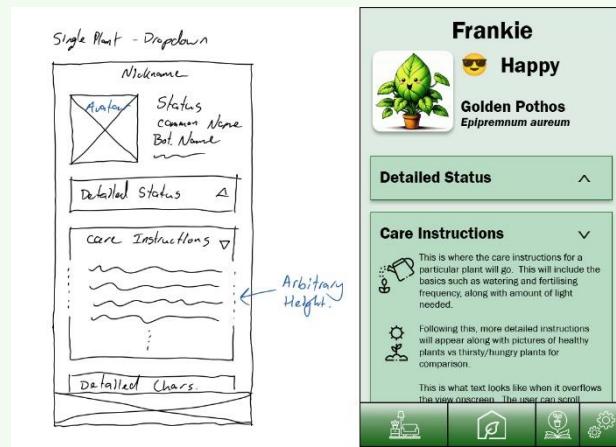


Figure 21: Low-Fidelity and High-Fidelity of Plant Screen in the app. Showing UX goals of useful information for each plant and how we would implement easy to follow instructions.



Figure 22: Thirsty Pothos Avatar used in the High-Fidelity Prototype

## Navigation

There are two main ways the user will navigate through the app: either via the navigation bar at the bottom of every screen, or through tapping on an element displayed elsewhere. Keeping elements large enough for a thumb or finger can be a challenge when mobile screens are typically quite small areas to fill a lot of information into.



Figure 23: The logo bar highlighting the rooms icon (left).

The navigation bar design (see Figure 23) has also leveraged several of Nielsen's Heuristics (Visibility of system status, user control and freedom, and recognition rather than recall) with logos on segmented "tabs". Tapping on one of these takes the user to the relevant screen and stays highlighted to indicate the user's location within the app. This design was chosen as it is a common method of interaction on a vast array of mobile apps, (including the apps mentioned in the Existing Solutions section).

## Interaction

We've aimed to create a seamless flow between screens to keep the app user friendly. We've designed the layout and interactions to be in line with many of the current UX laws/theorems. Every screen has been designed to be uncluttered and minimalist (but not boring) with Fitts Law (speed of pointing to objects as a relation of size) and Millers Law (max of 7 items, give or take 2). This also gives a nod to one of Nielsen's heuristics (Minimalist and Aesthetic Design). As the user will be likely using a thumb (or

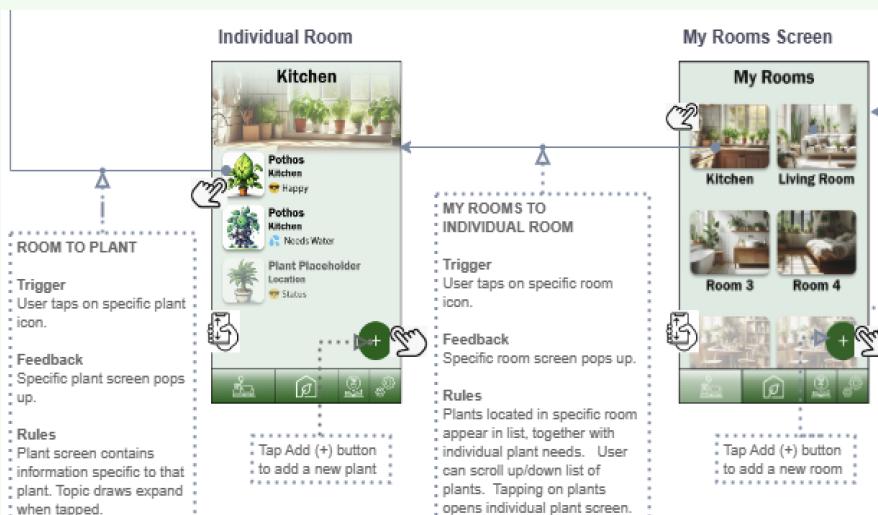


Figure 24: Section of The Interaction Flow Diagram showing examples of grouping.  
(See Figure 25 for the complete Interaction Flow Diagram.)

other finger) to navigate through the app, making the elements small would make for a far more frustrating experience.

Gestalts Principles of proximity and similarity has also significantly influenced the design process with elements grouped together based on usage (see Figure 24). This allows for a lower cognitive load on the user and for more of a “recognition rather than recall” feel.

After completing the software prototypes for each screen, the Interaction Flow Diagram (see Figure 25) was compiled. This shows the user interactions for each screen and how users can move between different components of the application.

The Interaction Flow Diagram also proved useful in obtaining further feedback on the interactive elements of the Plantr application, which informed the basis of our future directions recommendations.

## Interaction Flow Diagram of Plantr app

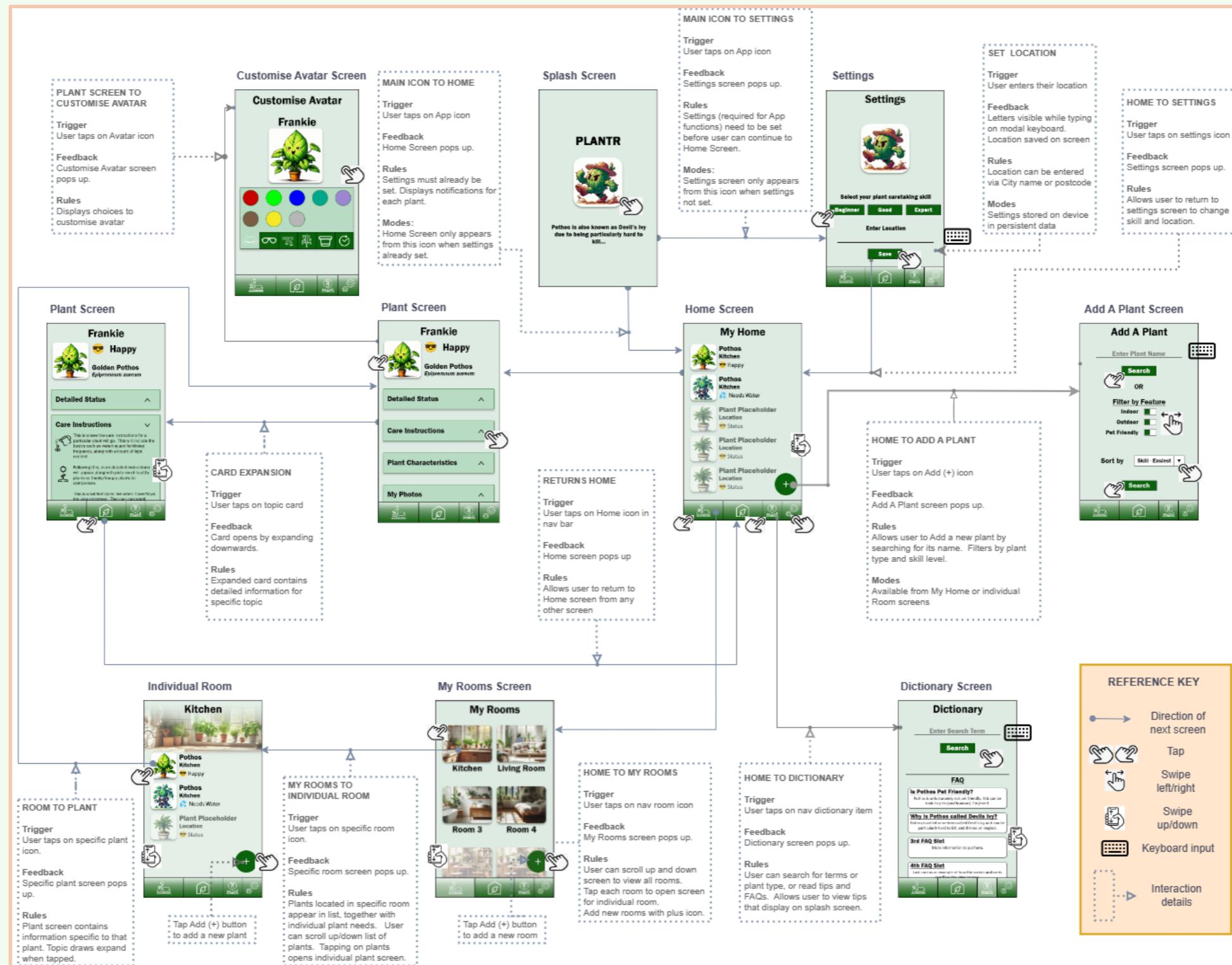


Figure 25: Interaction Flow Diagram of Plantr App. This diagram shows the flow between different App screens and components. It also describes the relationship between different App triggers, the feedback generated and the rules in which they operate in. (Appearance and headings inspired by: (Nguyen, 2017). Icons sourced at Flaticon (see Reference). Avatars and Images created by Microsoft Designer Image Creator (see Reference))

## Future Directions

Feedback was sought from three potential users during a user-based evaluation of the Software Prototype. These participants were asked to move from screen to screen on the Interaction Flow Diagram as if they were using different features of the App and to talk aloud about the design. Comments by individual participants are documented in Appendix 8 and the qualitative analysis results of that data are contained in Appendix 9.

Future design ideas from the contextual inquiry interviews and surveys that was not initially implemented also informs the future direction of this application, so we have also considered some of these suggestions, although their implementation is not as high a priority at this time.

Nielsen's 10 general principles for interaction design (Nielsen, 1994) were also considered when assessing design amendments.

### Future Directions informed from Software Protocol Evaluation

Several themes arose from the qualitative analysis of the users' feedback (see Figure 26), and some of those are examined in this section.

Themes	Number of Responses	Examples
Add A Plant Search Feature	3	"It is unclear what top search button is for"
Dictionary Search Feature	3	"I don't know if the search function here is App specific or internet wide"
Location	3	"Why does the app need the location?"
The Add (+) Button	2	"I'm not sure what [the add button] actually does"
Plant Avatar Interaction	2	'Nothing to indicate you can customise the avatar'
Avatar Customising Options	2	"I don't know which options have been selected or not. Don't see any button to save or cancel my selections"
Information Cards	2	"Drop down drawers are a good idea. Add a birthday status" "I would like to see past maintenance actions I have taken like watering... expected lifespan, and other info calculated from the plant size and health."
List/Tiles Display	1	"Have an option to swap between a list and a tile display"
Back Feature	1	"I would prefer a back button on every screen"
Display Personal Plant Name on Home Screen	1	"I would like to see the personalised name of the plant displayed [on the Home screen]"
Room Information	1	"Room needs a database/customisation... amount of sun, temperature"

Figure 26: Themes from qualitative feedback of Software Prototype. Users requested more features and clearer instructions.

## Reducing Cognitive Load

Our participants told us that our features were not as intuitive as we had attempted to implement and that individual components needed more specific instructions to indicate their state or purpose. For example, participants T01 and T02 did not understand whether the dictionary search feature would provide them with information from an internal database or whether it allowed an external search of the internet generally. All three participants were also unsure whether they could search for plant information in the Add A Plant search feature or whether this feature would only create or search plant avatars within the app.

Our intention is to have the Dictionary be an internal database of search terms, rather than allow an external internet search, so that useful information for the user's query can be provided. We will add placeholder text to say "search our database" to inform users of this purpose.

In relation to the current user confusion with the Add A Plant component, we will redirect the user to two options: naming a plant, or searching for a plant to add. These changes will likely require an immediate redesign of the Add A Plant screen.

Further, the Add button on the My Home, My Rooms and Individual Rooms screens needs to communicate more information about the maximum number of rooms or plants a user can have in the app. Participants considered knowing the app's capacity for storage of individual plants and rooms important when planning how to set up information for their home and plants within the app. Participant T01 suggested the add button could count down from the maximum number (depending on the screen) so that the user could see how many plants or rooms remained available to add.

As a result of this feedback, we are going to reduce our users' cognitive load by communicating the total room or plants remaining to add in small text under the add button. We will also add information in the FAQ section advising users of the total number of rooms, plants per room and total plants they can add to the app.

## Addressing Privacy Concerns

All participants were concerned about why the app required their location to be provided in the Setting screen before they could use the app. A user's general location information (such as their city or postcode) is incorporated into our design to provide accurate information regarding local plants and their seasonal care, considering the user's geographic area.

This could be better communicated to users on the Settings screen and before downloading the app, so that users can understand why their general city or postcode information is being requested. If users opt out from providing this information, we intend to implement a default location (e.g. the capital city of the user's country) from

which plant care advice would be based, with a gentle warning that the users may not receive information for their specific geographical area if they proceed in using the default setting.

### Displaying Avatar Interactions

Participants T01 and T02 were not aware that the plant avatar on the Plant screen could be customised. From within the Customise Avatar screen, the participants wanted more visual indication in relation to which options had been selected for their avatar, and also a save or reset button to reverse their changes.

A small pencil icon will be added to a corner of the plant avatar picture to provide a visual metaphor to the user that the avatar can be edited.

### Alternative Navigation Option

Participant T01 suggested that there should be a back button on every screen, to allow the user to return to the previous screen. :

*“If you are doing something on the Plant screen, you have to go back to the general Rooms screen, instead of say the Kitchen screen. This would be annoying if you wanted to do something with all of your plants in the one room.”*

Implementing a back button or arrow on each screen would be appropriate, and recognises at least three of Nielsen's Design Heuristics (Nielsen, 1994):

- #3: User Control and Freedom – by giving the user the choice to navigate back to a previous screen, instead of being directed through a specific path of screens via the limited navigation bar options.
- #4: Consistency and Standards –by satisfying the user's expectations that they could return to a previous screen once they have moved onto the next one; and
- #7: Flexibility and Efficiency of Use – by allowing the user to quickly go back to a previous screen instead of getting there by a longer route, as described by participant T01 above.

### Other Future Directions

During the first iteration of the low-fidelity and software prototypes, a number of features recommended in the contextual inquiry interviews and survey responses were not able to be implemented at that time.

Since the initial inception of our application, our designers have also considered other useful features which could be incorporated into future iterations of this mobile application.

A list and description of these features are collated in the following table (see Figure 27).

<b>Future Features</b>	
<b>Feature</b>	<b>Description</b>
Health diagnosis from photo	Diagnoses plant's current health or disease from a photo, avoiding the need to find information via in-app or online search (Participant P01)
Social Interaction of App Users	Avatar can provide a mechanism for app users to communicate with each other via an in-app forum or virtual garden, sharing knowledge and experience. (Participant P01)
Chatbot Avatar	Incorporate AI chat abilities into the Avatar to allow direct two-way verbal or text communication with the user. Conversation topics could range from plant care information though to unrelated social topics. (Participant P07)
Beginner's Tutorial	For each plant, provide a specific tutorial with a step-by-step guide to care for that species of plant. This will enable beginners to immediately care for plants without any prior experience. (Participants P01, S09)
Progress Bar	Implement a clearer display of the number of tasks that have been completed and are still to be completed.
Reminders on Phone's Home Screen	Provide reminders that show up as notifications on the user's phone screen without needing to open the app to read them.
E-commerce	Incorporate an e-commerce API to enable a user to directly purchase plants via the Plantr app
Calendar reminders	Integration of reminders with existing calendar applications such as Google Calendar or Outlook Calendar, so that daily or infrequent tasks or planting recommendations can be exported to the user's calendar. (Participants P12 and P10)
Weather	Import weather data e.g. temperature for the user's current geographic area to further influence specific plant care advice. (Participant P10)

*Figure 27: Future Features. Where these were informed by the Contextual Inquiry, the relevant participants have been referenced in the description.*

There are many design ideas which can influence the future directions of the Plantr application. Some of these have been suggested by software prototype user evaluation and contextual inquiry participants.

After a qualitative analysis of the software prototype user evaluations, four areas for future improvement have been highlighted for implementation. These concern the reduction of cognitive load, addressing privacy concerns, displaying avatar interactions, and implementing an alternative navigation option.

Further design suggestions from the contextual inquiry and other sources have also been noted. It is our recommendation that further research, in-person user evaluations and prototyping would need to be conducted before these features could be considered for incorporation into the application's design.

## Conclusion

Contained within this proposal is the journey with which the Plantr mobile application has undergone to arrive at this iteration.

Our initial research showed that caring for plants can have a positive effect on the health and wellbeing of young people. However, a number of study participants told us that it can be difficult to care for plants successfully. Therefore a solution that assists people to care for plants would have a positive impact in the behaviour change domain.

During the contextual inquiry stage we examined existing applications but deemed them not suitable or engaging for young adults. We interviewed and surveyed potential users to obtain their needs and values. They informed us that they desired more information and assistance in relation to plant care, and would welcome a fun and interactive experience.

During the conceptual design, a high level overview of the Plantr application, together with user stories, goals and metrics was prepared to better understand users' needs. Low-fidelity and software prototypes were then developed to design the interactive interface and features.

Feedback obtained from interviews during the contextual inquiry and prototype stages proved encouraging, but also contained changes to be included in the next iteration of this application.

We are confident that the Plantr application will have a positive influence in the behaviour change domain, and provide a fun and easy solution to address the difficulty young people experience in caring for plants.

## Appendix 1 - Individual Reflections

### Christina Russo

During our team project I volunteered to be the team leader. This was both personally challenging and also presented me with many opportunities for personal growth.

I felt responsible for ensuring that our team collaborated well together and completed the proposal on time. In weeks 5 and 6, I created a number of shared documents for this purpose, including shared templates for the Progress Logs, a Task List and an Admin & Planning Document in which to set out shared ideas.

The Task List grouped project tasks into topics and ordered them based on their proposed completion week. This document was a useful road map that assisted us in remaining aware of the tasks that needed to be completed and ensured that we did not fall behind with the huge workload.

I also prepared a Proposal Document template which incorporated requirements for each section that I collated from the Assessment Brief, the course supplied Proposal Template and the Marking Rubric. This document was useful to remind us about the information that needed to be contained within each section of the proposal.

On an ongoing weekly basis, I organised and chaired weekly meetings in person or over Discord audio, taking into account scheduling conflicts when they occurred due to team members' study and work commitments. During the meetings I encouraged team members to share their weekly progress and provide feedback to other team members. I took meeting notes from which I wrote the Progress Logs to record individual responsibilities and outcomes. I regularly communicated with my team members through our Discord channel to remind them about tasks or to encourage general discussion and feedback about project ideas.

During the Mid-Semester break I undertook research and drafted survey and interview questions that were finalised by our team shortly afterwards. I conducted three of the twelve in-person interviews and posted the online survey on Discord.

Week 7 presented an unexpected change with the addition of a new team member. I prepared a detailed email to the new team member and proactively reached out to included him in the team and bring him up to speed with our progress to that point. Being organised and prepared assisted with being able to be flexible when unexpected changes or challenges arise.

In week 8 I completed the data comparison and quantitative analysis of the interview and survey results. Setting out the data in the proposal document required a significant

time investment, and I learned some Word skills in relation to preparing image captions.

In week 9 I prepared the Interaction Flow Diagram, collaborating with Stuart who was completing the low-fidelity and software prototypes for our App's design. This activity also took a long amount of time and required learning new drafting skills in draw.io to group and link graphical components together. I learned that preparing this diagram proved very useful in working out what icons or screens were missing from our App design, so there was constant collaboration and iteration of the design between Stuart and I during this phase.

I also prepared the qualitative analysis of the interview and survey results after viewing qualitative research suggestions in week 9's lecture material. This proved useful because quotes and themes could be more readily identified and incorporated by other team members in their respective contributions.

In weeks 10 and 11 I obtained feedback from one user regarding the software prototype which influenced future direction considerations for the re-design of our app, and completed the qualitative analysis of this data. I also assisted the team in finalising our proposal document for submission.

I attempted to adopt a strategy of encouraging frequent communication and collaboration throughout this project. On a couple of occasions I discussed minor communication issues with my team members, and encouraged them to provide feedback or seek assistance. I also had to remind some team members when they had not signed the weekly progress log, but these were not significant problems.

One thing that I might do differently in this role again would be to not stress so much about the outcome and to understand that other people have different priorities and complete tasks in a different time frame. I was sometimes concerned when updates to the proposal document did not appear until just before the team meeting, but I learned to factor this in when setting completion dates for tasks.

Overall, our team worked very well together, even with the addition of a new team member part way through. I brought some communication and organisational skills to the team, but all team members had a lot to contribute and worked well to ensure the success of this project, which made my role easier. I hope this was also a positive experience for them.

## Stuart Moyes

For our project, I was the one that came up with the idea of a plant app. After some discussion with Christina and William, we decided to run with it. I then brainstormed a list of potential team names with input from Christina and William, settling on Evergreen Designs. After a quick chat with the others, I volunteered to take charge of the design, as I had the most graphic design and sketching experience. At this point, it was way too early to see if a plant app was actually a good idea, so I took charge of researching existing solutions. There were a couple out there, but definitely room to add a new flavour. That's what gave us the idea for an avatar that changes look based on current status of the plant it's representing.

With the existing systems researched and a survey confirming our thoughts, I brainstormed a list of app names while we onboarded a new team member Will M. I was really happy that we could get him up to speed so quickly and that he was so willing to jump straight in. At the next meeting (only a few days later) we shuffled around the tasks we were doing and found some things for him to contribute to.

Once we got feedback on our surveys, I started designing the low-fidelity prototype. There were a few features that were tricky to design, and so continuously got feedback from the others.

The high-fidelity prototype was the same. With input from the others, I used my skills with Adobe Photoshop to create realistic screenshots that represented the features we were trying to implement. Christina took over the design for the interaction flow diagram as soon as I was done, and we collaborated to confirm we hadn't missed anything.

I found that being in charge of the app visual design quite satisfying because I looked forward to the input from the others. I could read through our notes in the Contextual Inquiry and Conceptual Design sections and see how the visual design could fit into the features we were asked to implement via our research. I really felt like a part of a team when we could leverage each other's strengths to create a project that was greater than the sum of its parts.

I don't feel we had any conflict throughout this project. We were all upfront about any concerns we had, which were mostly about us all being quiet on Discord and how William, Will M, and I were slow to sign the weekly progress logs. I feel like this was a good team to work with and would be more than happy to work with them all again.

## William Sun

The team design proposal provides a great experience working in a semi-professional setting with a team, with work distributed and meetings held weekly through the semester.

I have become a more effective team member by working alongside others in brainstorming ideas, delegating tasks and collaborating on the project together through an extended period. Communication also played a vital role in the process, with regular team meetings providing the chance to practice clear and concise speech, having to succinctly describe what I have completed for my portion of the tasks delegated up to the meeting, alongside receiving and giving feedback to others.

Critical analyse is the other important skill developed, as during meetings we must read over and analyse each other's work to provide constructive feedback and examine much user feedback to extract the important information of use to the project.

The final noteworthy skill developed is feedback incorporation, with consistent feedback given by the team members all thoroughly discussed and discussed, before being incorporated into the work.

For the project itself, I am responsible for writing the introduction, portion of the contextual inquiry, including reason for choosing the behaviour change domain, issue identified to address, and the target audience, and finally the initial system requirements of the conceptual design and the future directions.

The sections are completed in the order of contextual inquiry, conceptual design, future directions then the introduction, fitting with the development of the report. The contextual inquiry's domain selection, issue to address, and target audience are important as they are needed prior to deciding what apps are required before existing systems can be analysed, and surveys conducted for specific groups.

Something to note is the user group is chosen purely based on research, not through survey of the population to find out which group would be more interested in a plant care app. A potential improvement is to survey people before choosing the user group to ensure we are targeting a more suitable group.

Additionally, our project's sample size is limited by the time given and the number of team members we have, while it can provide useful information, a larger sample size in the future will provide a clearer picture of what the user group really want.

The initial system requirements of the conceptual design provided user scenarios with corresponding story boards, detailed UX goals extracted from user surveys with relevant metrics used to measure each goal. They formed the basis of prototype development, ensuring it aligned with user needs and requirements. A potential

improvement is to increase the number of story boards as they provide a visual and interesting way of presenting potential user scenario to the reader of the report.

Future directions included both features from initial user survey not included in the prototype, feedback from user-based evaluations of the software prototype and my original suggestions.

The conflict resolution strategies we agreed on from increasing levels of severity are a private 1 on 1 message, team discussion, and a private Edstem Discussion with the staff. Our team communicated well with each other and are responsible for their completing their tasks, not needing to resort to the conflict resolutions outlined. Most issues encountered are of the type where people forget to sign the Weekly Team Progress logs, not fully completing the weekly tasks due to personal circumstances which everyone are understanding of and finished before next week's meeting.

Overall, the team design proposal is useful in shedding light into the proposal of an app from the initial to the prototype stage and provides great experience into the UX design industry.

## William Mahoney

I found this project to be a great learning experience in teamwork, communication, organisation, writing, and designing. After joining the team late, I had the challenge to integrate into a team with pre-existing project plans and relationships with one another. I needed to adapt to previously arranged agreements, including team communication, project direction, time commitment to the project and goals as a team. While this posed a challenge, it also served as a great learning experience.

I first met the team over the weekly discord meeting in week 7 (although I had previously received a very helpful, informative email from Christina welcoming me to the team and overviewing our project and which documents to read beforehand). I was first tasked with getting 3 in-person interviews for the survey data regarding the contextual inquiry. This was not overly daunting and felt like a comfortable starting point for contributing to the project.

The next week I was tasked with writing the system concept statement - which covered the system's problem statement, a high-level system description, its interaction paradigms & modes, and the system metaphors. While not overly complex, it involved me needing a good enough understanding of the project to write the main description of its functions & interactions. Not just this but I had to do my best to adapt to the teams writing style – which wasn't super easy for me (I'm quite used to science and/or essay writing + I was/am a bit rusty). However, after receiving useful feedback on my system concept statement, I was able to better summarise our collective vision of the functionality of the system and change my wording to flow better and fit in with the rest of the project better.

I was then tasked with writing a skeleton of the main introduction of the project. I constructed a detailed bullet-point list of all talking points to be covered. I sought feedback on this during the meeting so that we could (as a group) decide on which talking points to include/exclude from what I had written. I found we all seemed to share a very similar view for what the introduction would include, so little needed to be changed. William (Sun) then wrote the introduction, using the bullet-points as a general guide.

Since our document was quite developed, but rather disjoint between sections, I was tasked with writing the short introduction and conclusions of the contextual inquiry, and conceptual design. After some alterations by team members, we integrated them into each section and removed signposting, allowing a smooth flow across the sections of the document.

Alongside adjusting anything final for the sections I had written, I was lastly tasked with gathering one sample of in-person feedback of the prototype we had created, to aid our future directions section of the project.

As someone who is not extremely well organised, I often find it challenging to stick to deadlines. However, throughout this project, having team members depend upon my contributions helped me learn to better prioritise my schedule and finish tasks on time (albeit a little on the later side; since I often picked at and edited what I had written up till the last minute). I believe all of us members had varying levels of organisation, and while this made it a little harder for us to be on the same page throughout the week (one member will have completed their section, meanwhile another member hasn't started it), we managed to all get what we needed done by our weekly meetings. These meetings were helpful in reviewing what we had written/contributed, the changes we planned to make, and our designated tasks moving forward. I don't believe there were any serious conflicts - any friction we had between members was mainly from a lack of timely communication throughout the week (I was included in those who did not communicate enough). I learned to better focus on this very issue and made more of an effort to respond timelier – although I will admit I definitely still struggled with this.

One thing I would do differently is be timelier with my work and communication in this project, since the team relies upon it to move forward. I would also try to provide more feedback to my team members, since I was often a little busy caught up in my own tasks, rather than helping the team make decisions and/or improve sections of the project.

Thanks to how accommodating the team members were, joining the project late was not too daunting. I believe we managed to function well as a group, and I found each team member to be a pleasure to work with.

## Appendix 2 – Task List and Progress Logs

Within Appendix 2 are attached the following documents:

**Task List** prepared in Weeks 5 and 6 is a checklist of the tasks needed to complete the proposal document. It is divided into topics and weeks for completion.

**Progress Logs** for the following periods:

- Week 5
- Week 6
- Mid-Semester Break
- Week 7
- Week 8
- Week 9
- Week 10
- Week 11

## Task List

Week	Task	
5	Select a domain: <b>Behaviour Change</b>	✓
	Set up Template documents	✓
	Create list of weekly tasks (to stay on track)	✓
	Decide on referencing styles: Word built-in (APA)	✓
	Submit Team Charter	✓
6	<b>Contextual inquiry stage</b>	
	Identify an issue to address (emerges after conducting a broad range of research into domain) What is the challenge / problem space? Why is it important / what is needed? Come up with potential solutions to investigate further	✓ ✓ ✓ ✓
	<b>Choose user group to investigate</b> Gain a robust understanding about your users. Who will use the system? What are their needs and values? What will they use the system for?	✓ ✓ ✓ ✓
	<b>Research</b> What systems already exist in chosen domain? What are limitations of existing systems?	✓ ✓
	Surveys	✓
	Interviewing / observing people	✓
	Comparing and analysing Data for Contextual Inquiry section of proposal	✓
Break	<b>Conceptual Design</b>	
	<b>System Concept Statement</b> including: <ul style="list-style-type: none"><li>• Problem Statement</li><li>• High Level Description of How the System Works</li><li>• Interaction Paradigm</li><li>• Interaction Mode</li><li>• Metaphors (system, interaction &amp; interface)</li></ul>	✓ ✓ ✓ ✓ ✓
	<b>Initial system requirements:</b> <ul style="list-style-type: none"><li>• Scenarios</li><li>• Storyboards</li><li>• UX goals</li><li>• Relevant metrics</li></ul>	✓ ✓ ✓ ✓
7	<b>Prototype</b>	
	Creating software prototype Incorporate UI design principles. Diagrammatic representations of system's interaction flow. Includes navigation to different interfaces, including main interactions that a person will have with the system.	✓ ✓ ✓ ✓
	Prototype linked to contextual inquiry and conceptual design.	✓

8	<b>User Testing of Prototype</b> (required for Future Directions)	
	Document user feedback (including process and results/outcomes) from using prototype.	<input checked="" type="checkbox"/>
	Document difficulties users encountered interacting with / making sense of the prototype.	<input checked="" type="checkbox"/>
9	<b>Future Directions</b>	
	Informed by user feedback in prototype testing.	<input checked="" type="checkbox"/>
	Possible additional features.	<input checked="" type="checkbox"/>
	Possible integration with external services or data.	<input checked="" type="checkbox"/>
	Formal evaluation of significant aspects or features of the prototype.	<input checked="" type="checkbox"/>
	Future activities - research, design, implementation, evaluation - to be conducted to improve the conceptual design.	<input checked="" type="checkbox"/>
10	<b>Compile Report</b>	
	Catch up Writing Team Design Proposal where needed.	<input checked="" type="checkbox"/>
11	Finish Writing Team Design proposal. Finishing touches.	<input checked="" type="checkbox"/>
12	<b>Team Design Proposal due on Tuesday 14 May 2024 at 2pm (30%)</b>	

## Weekly Progress Logs

### DECO2500 Progress Log

Date: 22/03/2024    Teaching Week: 5    Team Name: (Not yet confirmed)

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#### Team members present:

William Sun, Christina Russo, Stuart Moyes

#### Items discussed and worked on today.

Item	Current State	Team Members(s) Responsible	Notes
Team Name	Started	William, Christina & Stuart	The team's name "Plant Parenthood" was put forward by Stuart. We should decide on a team name in this first week.
Team Charter	Completed	William, Christina & Stuart	Team Charter completed during in person studio session today.
Spreadsheet of Team Members' Non-Availability	Completed	Stuart, with input from William and Christina	Schedule of Team Members' Non-Availability created to indicate when team members are not available due to in person course attendance, work commitments or otherwise. A useful resource when planning future meetings, task completion and discord conversations.
Week 5 Progress Log	Not started	Christina to create a template. William & Stuart for review and amendments.	Progress Log template difficult to work with. Header interfering with subsequent pages, and difficult to input data into and modify table. Christina offered to implement a custom Progress Log template and task list. William and Stuart to review and amend as needed.
Task List	Not started	Christina, William & Stuart	Creation of a task list based on expected tasks, project scope and weeks to completion.

Issues That Arose (if applicable) No issues arose.

## Actions Required

Christina:

- Create template for Weekly Progress Logs
- Complete Progress Log for today
- Draft task list based on potential weekly tasks.
- Suggestions for possible Team Name, if any

Stuart:

- Review and amend Week 5 Progress Log
- Review and amend Task List
- Further suggestions for possible Team Name, if any

William:

- Review and amend Week 5 Progress Log
- Review and amend Task List
- Suggestions for possible Team Name, if any

## Deliverables to be completed by the next week, including plan for the next week.

Item	Due Date	Team Members(s) Responsible	Notes
Team Name	28/03/24	Everyone	Team names to be collated and a unanimous decision made by 28 March 2024.
Progress Log Template	22/03/24	Christina	Create Template for Weekly Progress Logs
Week 5 Progress Log	24/03/24	Christina	Complete Week 5 Progress Log for review/amendment by other team members.
	28/03/24	William, Stuart	Review and Amendment of Week 5 Progress Log
Task list	24/03/24	Christina	Draft task list based on project scope, number of weeks, and potential tasks to create proposed completion guide.
	28/03/24	William, Stuart	Amendment of task list to include more tasks as necessary.
Team Charter	28/03/24	Everyone	Confirm submission to Blackboard. Confirm any updates to team charter prior to submission?

**Signed, Dated, and accepted:**

Christina Russo, dated 22/03/2024

William Sun, dated 23/03/2024

Stuart Moyes, dated 24/03/2024

## DECO2500 Progress Log

Date: 26/03/2024    Teaching Week: 6    Team Name: Evergreen Designs

**Team members present:** William Sun, Christina Russo, Stuart Moyes

### Items discussed and worked on today.

Item	Current State	Team Members(s) Responsible	Notes
Team Name	Completed	Everyone	Team name is Evergreen Designs
Team Charter	Completed	Everyone	Completed and submitted on Blackboard at end of meeting.
Progress Log Template	Completed	Christina	Template for Weekly Progress Logs has been completed and is working well
Week 5 Progress Log	Completed	Everyone	Week 5 Progress Log has been reviewed, amended, and signed by everyone.
Task List	Completed	Christina	Draft Tasks List prepared based on project scope, number of weeks and potential tasks. Document to be amended each week as tasks require more detail.
Document tracking	Started	Everyone	Decision regarding document tracking / identification of work so that we can acknowledge but also not interfere with another team member's contributions. Keep tracking / use colours / use comments / use names in brackets.
Tasks for Week 6 and Mid-Semester Break	Completed	Everyone	Confirm list of tasks for Weeks 6 and Mid-Semester break are adequately detailed and include all the proposed tasks for those weeks.
User Groups	Completed	Everyone	Discussion re: user group to interview. Decided on students or young adults.
Research: Behaviour Change domain	Not started	William	Research in the Behaviour Change domain to identify a challenge or problem (i.e. that our App will address). Also consider why it is important that the challenge/problem be solved, and what is needed to solve it.
Research: pre-existing solutions	Not started	Stuart	What systems already exist in the chosen domain? What are the limitations of existing systems?
Plan User Survey / Interview Questions and Procedures	Not started	Christina	Create survey questions / forms (for consistency) - consider Microsoft forms. Create interview questions / format (for consistency) Consider questions/forms that can be delivered in person and over the phone or via internet to reach potential users.

			Purpose: Gain a robust understanding about your users. Who will use the system? What are their needs and values? What will they use the system for?
Research: User Group	Not started	Everyone	Actual surveying / interviews of potential users. This task will be started after the previous research and survey question tasks are completed. Will revisit next meeting.
Next meeting	Not started	Everyone	Next meeting is on Wednesday on Discord at 8pm.

**Issues That Arose (if applicable):** Nil

## Actions Required

Christina:

- Complete Week 6 Progress Log, and prepare template for Mid-Semester Break Progress Log
- Turn off tracking in all documents.
- Create survey / interview questions for potential users to get understanding of their needs and values,
- and what they will use the system for.

William:

- Research in the Behaviour Change domain to identify a challenge or problem (i.e. that our App will address).
- Also consider why it is important that the challenge/problem be solved, and what is needed to solve it.

Stuart:

- Research what systems already exist in the chosen domain, and what are their limitations?

## Deliverables to be completed by the next week, including plan for the next week.

Item	Due Date	Team Members(s) Responsible	Notes
Team Charter Submission	26/03/24	Christina	Submit Team Charter on Blackboard after meeting on 26/03/24.
Document tracking	26/03/24	Christina	Turn off tracking in documents.
Tracking changes	03/04/24	Everyone	Use different colours, <name></name> or (name) tags, and comments to track who does what in documents.

Survey questions / Interview Questions	03/04/24	Christina	Prepare draft of potential survey / interview questions / script to use when interviewing potential users to understand their needs and values.
Research / draft text	03/04/24	William	Present research in the Behaviour Change domain to identify a challenge or problem (i.e. that our App will address). Also consider why it is important that the challenge/problem be solved, and what is needed to solve it.
Research / draft text/snapshots	03/04/24	Stuart	Present research in relation to the systems/apps that already exist in the chosen domain? What are the limitations of these existing systems?

## Other Comments

Stuart is away during Easter holiday period between Friday and Sunday.

## Signed, Dated and accepted:

Christina Russo, 26/03/24

Stuart Moyes, 04/04/2024

William Sun, 04/04/2024

## DECO2500 Progress Log

Date: 04/04/2024    Teaching Week: Mid-Sem Break    Team Name: Evergreen Designs

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**Team members present:** William Sun, Christina Russo, Stuart Moyes

### Items discussed and worked on today.

Item	Current State	Team Members(s) Responsible	Notes
Progress Log 6	Completed	Everyone	Checked that everyone is happy with the contents of Progress Log 6 and have signed off on it.
Research: Behaviour Change domain	Completed	William	Discuss research / draft that William has done in relation to identifying a problem or challenge in the Behaviour Change domain that our app will address, why that challenge/problem should be solved, and what is needed to solve it.
Research: pre-existing solutions	Completed	Stuart	Discuss research / draft that Stuart has done in relation to what systems already exist in this domain, and what are their limitations.
Draft User Survey / Interview Questions and Procedures	Completed	Christina	Discuss research / draft of survey questions / forms and interview questions for potential users.
Research: User Group	Started	Everyone	Organise the actual surveying / interviewing of potential users.
Next meeting	Not started	Everyone	Next meeting on Discord is on Wednesday 10 April 2024 at 3pm, followed by a meeting in person at the DECO2500 Studio on Friday 12 April 2024 at 8am.

### Issues That Arose (if applicable):

Original meeting time of 8pm was brought forward to 2pm as a result of a clash with a team member's work commitments. The clash was raised early by the affected team member, and the meeting time was changed after seeking updated availability from all team members.

The day and time for the meeting was changed a second time due to another calendar clash that arose. The issue was raised early, and agreement was reached to a new meeting time.

## Actions Required

Christina

- Write a draft for the Contextual Inquiry section of the proposal relating to the user interview preparation.
- Finalise the Microsoft Form and Google Form version of the interview/survey questions.
- Once survey/interview questions are finalised, conduct interviews.
- Post a question on Ed Discussion asking whether it is okay to publicly publish a survey of our interview questions.
- online. Hold off on posting any survey online until this is approved by course staff.

Stuart

- In the Contextual Inquiry section of the proposal, write a few paragraphs based on the research he has undertaken, relating to these topics:
- What systems already exist in the chosen domain.
- What are the limitations of the existing systems. (i.e. existing Apps don't cater to our target group of young people / students, too expensive, not engaging etc)
- The context for what we are wanting to develop, and what that is compared to.
- Once survey/interview questions are finalised, conduct interviews.

William

- Expand on the initial draft he prepared for the Contextual Inquiry section to include more information regarding:
- How an App for plant care might be relevant / useful for young people / students.
- Why is plant care important? What is needed?
- Add something about why we have chosen young people and students as our target audience for this App (and for changing the behaviour e.g. caring for plants can benefit students / young people because...).
- Once survey/interview questions are finalised, conduct interviews.

## Deliverables to be completed by the next week, including plan for the next week.

Item	Due Date	Team Members(s) Responsible	Notes
Ed Discussion query	04/04/24	Christina	Post question on Ed Discussion for course staff response, relating to whether our user interview questions can be posted as a public survey. If no response on Monday, follow up.

Amendments to Interview Questions	06/04/24	Stuart, William	Stuart and William to provide any amendment by Saturday, so that interview questions and the relevant Forms are ready to be used by everyone on Monday.
Microsoft /Google Forms	07/04/24	Christina	Finalise Microsoft Form and Google Form version of interview / survey questions.
User interviews	10/04/24	Everyone	Do several user interviews each (aim for about 10 in total).
Discord Meeting	10/04/24	Everyone	At 3pm to discuss how user interviews are going and prepare for Studio meeting
Written drafts for Contextual Inquiry	12/04/24	Everyone	Write drafts or expand on current draft within the Contextual Inquiry section of the proposal as described in the Actions Required section above.
Studio Session	12/04/24	Everyone	Attend Studio session to prepare Conceptual Design elements.

## Other Comments

Stuart informed us of an exam he has on Friday that will impact the time he can spend working on the Conceptual Design outside studio hours.

## Signed, Dated and accepted:

Christina Russo, 04/04/24

Stuart Moyes, 07/04/2024

William Sun 10/04/2024

## DECO2500 Progress Log

Date: 10/04/2024    Teaching Week: Week 7    Team Name: Evergreen Designs

**Team members present:** Stuart Moyes, Christina Russo, William Sun, William Mahoney

**Items discussed and worked on today.**

Item	Current State	Team Members(s) Responsible	Notes
Welcome our newest team member	Completed	Everyone	Welcome William Mahoney to Evergreen Designs. William has viewed the Discord chat and team documents.
Progress Log: Mid-Semester Break	In Progress	Everyone	Checked that everyone is happy with the contents of Progress Log: Mid-Semester Break and have signed off on it. (William S. is still to sign this)
Update Non-availability Timetable	In Progress	Everyone	Everyone to update their unavailability times on the Timetable, within the Admin folder in the Team OneDrive folders.
Drafts for Contextual Inquiry section of Proposal	Completed	Everyone	Everyone has contributed initial drafts for their respective sections of the Contextual Inquiry section of the Proposal.
Ed Discussion query	Completed	Christina	Ed Discussion query posted, and response received, facilitating publishing of survey (Google Form) on 3 UQ channels.
Surveys / Interviews	In Progress	Everyone  Everyone Christina Stuart William S. William M.	Discuss responses received in relation to online surveys / in-person interviews, and the need for further in-person interviews.  Online survey (Google Form) - 8 responses received so far. In-person interviews - 3 responses (approached unknown students at Uni). In-person interviews - 1 response received so far. Will do another 2. In-person interviews - Has done 3, but hasn't inputted the data yet. In-person interviews - Can do 3 interviews
Survey / Interviews Data Analysis and Comparison	Not Started	Christina	To be undertaken once in-person interviews completed.  Data Comparison and analysis of survey and in-person interviews needs to be undertaken for context inquiry section of proposal.
Conceptual Design : System Concept	Not Started	William M.	Preparation of System Concept Statement, including problem statement, high level description of how the system works, interaction paradigm,

			interaction mode and metaphors (system, interaction & interface). (See Week 4 Studio activities)
Conceptual Design: System Requirements	Not Started	William S.	Preparation of Initial System Requirements (including UX requirements) including Scenarios, Storyboards, UX goals, Relevant metrics, Interaction Scenarios. (See Week 4 and Week 7 Studio activities)
Prototyping	Not Started	Stuart	Preparation of Prototype including user interface design and interactivity, integration flow and navigation to different interfaces, explanation of prototype and how design has been informed by conceptual design and data.
Next meeting	Not started	Everyone	Next meeting is on <b>Wednesday 17 April 2024 at 3.30pm</b> for approx. 1 hour.

**Issues That Arose (if applicable):** N/A

## Actions Required

Christina

- Complete and sign Week 7 Progress Log by 7pm tonight
- Update Timetable in OneDrive > Admin folder with your updated unavailability.
- Responsible for data comparison and analysis re: survey and in-person interviews, including written analysis in Contextual Inquiry section of proposal document.
- Also help with written elements in Prototype section.

Stuart

- Sign Week 7 Progress Log tonight
- Update Timetable in OneDrive > Admin folder with your updated unavailability.
- Complete two more In-person interviews
- Responsible for Prototyping section of proposal, including Low-Fidelity design, software prototype, including user interface design and interactivity, system interaction flow, navigation to different interfaces, visualisation of the conceptual design.

William Sun

- Sign Week 7 Progress Log tonight
- Update Timetable in OneDrive > Admin folder with your updated unavailability.

- Input data from three In-person interviews into Microsoft Forms.
- Responsible for Conceptual Design: Initial System Requirements section of the proposal, including Scenarios, Storyboards, UX goals, relevant metrics, interaction scenarios.

#### William Mahoney

- Sign Week 7 Progress Log tonight
- Update Timetable in OneDrive > Admin folder with your updated unavailability.
- Complete three in-person interviews and input data into Microsoft Forms.
- Responsible for Conceptual Design: System Concepts to be completed and included in proposal document, including problem statement, high level description of how the system works, interaction paradigm, interaction mode, metaphors (system, interaction & interface)

### Deliverables to be completed.

Item	Due Date	Team Members(s) Responsible	Notes
Sign Week 7 Progress Log	10/04/24	Everyone	Final progress log should be completed by 7pm. Can everyone please log in and sign this document tonight please. (This also ensures you know what to do and when to do it by in the upcoming days.)
Update Unavailability Timetable	10/04/24	Everyone	Everyone to note their unavailability on the Timetable within the team OneDrive > Admin folder. (William M to pick a colour not already taken and not purple)
Week 7 Studio	12/04/24	Everyone	Prepare for and attend Week 7 Studio, as this is important for the Conceptual Design tasks. If you have not already, review Week 7's lecture and any earlier content.
In-person Interviews	13/04/24	Stuart, William S William M	In-person interviews to be completed, and data inputted to Microsoft Forms.
Data comparison and analysis	17/04/24	Christina	Data comparison and analysis of survey and in-person interviews to be included in proposal document.
Conceptual Design: system concepts	17/04/24	William M.	Draft of the Conceptual Design: system concepts section of the proposal document. This includes the problem statement, high level description of how the system works, interaction paradigm, interaction mode, metaphors (system, interaction & interface).

Conceptual Design: system requirements	17/04/24	William S.	Draft of the Conceptual Design: initial system requirements section of the proposal document. This includes scenarios, storyboards, UX goals, relevant metrics and interaction scenarios.
Prototyping	17/04/24	Stuart	Complete a low-fidelity prototype. Commence draft of the user interface design and interactivity, system interaction flow, navigation to different interfaces, visualisation of the conceptual design (dependant on Conceptual Design elements).

## Other Comments

Course staff informed us Sunday night that William Mahoney would be joining our team. Welcome email sent late Sunday night requesting William's contact details and providing a summary of the documents he should read when he received access. On Monday, team members arranged for William to access Discord chat, OneDrive shared folders/documents, Microsoft Form interview and Google Form survey.

If anyone needs assistance to understand a task, or to complete a task for whatever reason (e.g. waiting on another team member's contribution first, or need skills of another team member), please communicate this straight away via Discord chat. DO NOT WAIT until the next meeting to raise these issues.

Reminder to everyone to regularly check Discord (twice a day) and Email (once a day), and that response times should be within 4 hours, as per our Team Charter. Also to read and sign the Progress Log and amend the Unavailable Timesheet tonight.

## Signed, Dated and accepted:

Christina Russo 10/04/24

William Mahoney 10/04/2024

William Sun 10/04/2024

Stuart Moyes 11/04/2024

## DECO2500 Progress Log

Date: 17/04/2024    Teaching Week: Week 8    Team Name: Evergreen Designs

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**Team members present:** Stuart Moyes, Christina Russo, William Sun, William Mahoney

**Items discussed and worked on today.**

Item	Current State	Team Members(s) Responsible	Notes
Progress Log: Week 7	Completed	Everyone	Everyone has signed the Week 7 Progress Log.
Non-availability Timetable	Completed	Everyone	Everyone has updated their unavailability times on the Timetable.
Surveys / Interviews	Completed	Everyone	<p>Everyone has completed in-person interviews with three people and collated the results in the Microsoft Forms questionnaire.</p> <p>Total of 12 in-person interviews were completed.</p> <p>Total of 10 online surveys were received.</p>
Data Analysis and Comparison	Completed	Christina	The interview/survey data comparison and analysis were completed and has been included in the proposal document, awaiting amendment/suggestions from team members. Raw data is included in Appendix 4 (Interviews) and Appendix 5 (Online Surveys)
Conceptual Design : System Concept	In Progress	William M.	William updated the team on the System Concept Statement, including problem statement, high level description of how the system works, interaction paradigm, interaction mode and metaphors (system, interaction & interface). Some amendment suggestions were made during the meeting in relation to the high-level description to tie in with the previous and next sections of the proposal, which William will amend in the following week.
Conceptual Design: System Requirements	Completed	William S.	William updated the team on the Initial System Requirements (including UX requirements) including Scenarios, Storyboards, UX goals, Relevant metrics. Interaction scenarios appear to already be covered by the detailed information in the UX goals.
Prototyping	In Progress	Stuart	Stuart updated the team on the low-fi Prototype he has been working on and received feedback to create a couple of more screens to tie in with the UX goals

			and storyboards. After feedback at the meeting, he will include a couple of more low-fi screens. He will also work on the software prototype that will include the interface design and interactivity, integration flow and navigation to different interfaces.
Next meeting	Not started	Everyone	Next meeting is on <b>Wednesday 24 April 2024 at 7.30pm</b> for approx. 1 hour. Stuart and Christina to also meet at <b>10am on Friday 19 April 2024</b> to plan/write the text for the interaction flow diagram.

**Issues That Arose (if applicable):** N/A

## Actions Required

Christina

- Sign Week 8 Progress Log tonight
- Write text elements of the interactivity and navigation in the software prototype.
- Help write the prototype explanation and how the design has been informed by the conceptual design and data.

Stuart

- Sign Week 8 Progress Log tonight
- Finish Low-Fi screens.
- Prepare the graphical components of the software prototype (including interface design and interactivity, integration flow and navigation to different interfaces).

William Sun

- Sign Week 8 Progress Log tonight
- Write draft on the Future Directions section of the proposal.

William Mahoney

- Sign Week 8 Progress Log tonight
- Complete the high-level description in the Conceptual Design section after receiving feedback on current drafts.
- Write draft Introduction section of the proposal document setting out the purpose of the report and the topics listed in the introduction section. This might also overlap with the Behavioural Change domain section of the Contextual Inquiry.

## Deliverables to be completed.

Item	Due Date	Team Members(s) Responsible	Notes
Sign Week 8 Progress Log	17/04/24	Everyone	Final progress log to be completed and ready for signing by 7pm. Everyone to sign Week 8 Progress Log
Text elements of software prototype interaction flow diagram.	24/04/24	Christina	Christina will help Stuart with the text elements of the software prototype interactivity and navigation. She can also contribute to the prototype explanation and how the design has been informed by the conceptual design and data.
Future Directions	24/04/24	William S.	Prepare draft for the Future Directions section of the proposal document. This might not be able to be finished, given that this section also includes future directions by users after viewing the prototype. However, first draft can include ideas for future features that have already been provided by users in the interviews/surveys.
Introduction		William M.	Prepare draft for Introduction section of proposal document, setting out the purpose and other topics set out in the introduction section. This might overlap with some information regarding the Behaviour Change domain in the Contextual Inquiry.
Complete Low-Fi Prototype Software Prototype and interactive flow diagram	24/04/24	Stuart	Complete remaining couple of screens for low-fi prototype. Prepare software prototype that will include the interface design and interactivity, integration flow and navigation to different interfaces. (Receiving assistance from Christina in relation to text elements of design)

## Other Comments

William M. said that he could not make an afternoon meeting next week due to work commitments. Stuart did not have any work commitments next week, so the meeting was organised for the evening.

## Signed, Dated and accepted:

Christina Russo 17/04/24

William Mahoney 17/04/24

William Sun 17/04/24

Stuart Moyes 18/04/2024

## DECO2500 Progress Log

Date: 24/04/2024    Teaching Week: Week 9    Team Name: Evergreen Designs

**Team members present:** Stuart Moyes, Christina Russo, William Sun, William Mahoney

**Items discussed and worked on today.**

Item	Current State	Team Members(s) Responsible	Notes
Progress Log: Week 7	Completed	Everyone	Everyone has signed the Week 8 Progress Log.
Discord Communication	Completed	Everyone	<p>Reminder that everyone should be regularly checking Discord and participating in providing feedback, asking/answering questions, responding to polls or otherwise proactively engaging in team communication concerning this project.</p> <p>Team members didn't vote for three names on the App name poll (some only voted for one or two names), and without further communication by team members on Discord, it was thought that not everyone had participated in the vote. This delayed the production of the software prototypes whilst waiting on confirmation of the App's name.</p> <p>All team members were encouraged to regularly check Discord and participate in conversation and providing feedback, especially in these last couple of weeks.</p>
Conceptual Design : System Concept	Completed	William M.	William updated the team in relation to the amendment suggestions to the high-level description to tie in with the previous and next sections of the proposal. There was amendment to some wording and layout.
Low-Fidelity Prototype	Completed	Stuart	Stuart updated the team on the completion of the remaining low-fidelity screens.
Prototyping	In Progress	Stuart and Christina	Stuart and Christina updated the team on the software prototyping including the App screens, integration flow and navigation. Stuart completed the last software prototype screen tonight, and Christina can integrate that into the interactive flow diagram.

Future Directions	In Progress	William S.	William updated the team in relation to the draft of the Future Directions section of the proposal document. The text is currently in dot points. User feedback on the Software Prototype needs to also be incorporated.
Introduction	In Progress	William M	William updated the team in relation to the draft of the Introduction Section of the proposal document, setting out the purpose etc.
Qualitative Analysis of Open Question Data	In Progress	Christina	Christina advised she was working on qualitative analysis of open questions data, to incorporate specific quotes or theme tables in the data analysis or Contextual Inquiry section. This will be helpful to incorporate user quotes and data into other sections as well.
Existing Systems and Appendix 3	In Progress	Stuart	Stuart to finalise wording and images of the Existing Systems section, and also finalise the layout of images in Appendix 3.
User Input on Software Prototype	Not Started	Stuart, Christina	Speak to Users to get their feedback in relation to the Software Prototype for the Future Directions section.
Introduction	In Progress	William S	William S to write the introduction to the proposal.
Introduction and Conclusion for Sections	In Progress	William M	William M to write the introduction and conclusion to sections so that there is flow throughout the document.
Next meeting	Not started	Everyone	Next meeting is on <b>Tuesday 30 April 2024 at 7.30pm</b> for approx. 1 hour.

## Issues That Arose (if applicable):

Reminder about the importance of regular, proactive communication and feedback in Discord. Team members encouraged to input their drafts into the proposal document prior to the next meeting in order to receive feedback and new ideas from other team members on an ongoing basis.

## Actions Required

### Christina

- Sign Week 9 Progress Log before the Studio session this week.
- Qualitative Data Analysis of Open Questions and incorporate into Contextual Inquiry.

### Stuart

- Sign Week 9 Progress Log before the Studio session this week.
- Finalise the Existing Systems section (with a couple of screenshots as appropriate) and the Appendix 3 text and images.
- Write the prototype explanation and how the design has been informed by the conceptual design and data.

## William Sun

- Sign Week 9 Progress Log before the Studio session this week.
- Write the introduction to the proposal.

## William Mahoney

- Sign Week 9 Progress Log before the Studio session this week.
- Write the introduction and conclusion to sections so that there is flow through the document.

**Deliverables to be completed.**

<b>Item</b>	<b>Due Date</b>	<b>Team Members(s) Responsible</b>	<b>Notes</b>
Sign Week 9 Progress Log	26/04/24 at 8am	Everyone	Everyone to sign Week 9 Progress Log before Studio this week.
Qualitative Analysis of Open Question Responses	26/04/24	Christina	Collate interview and survey responses into qualitative tables for analysis, and referral by other sections of the proposal
Existing Systems and Appendix 3 Contents	30/04/24	Stuart	Finalise wording and images in the Existing Systems section of the proposal, and in Appendix 3.
Prototype explanation	30/04/24	Stuart	Write the prototype explanation and how the App's design has been informed by the conceptual design and data.
User Feedback on Prototype	30/04/24	Stuart, Christina	Obtain user feedback in relation to the software prototype that will inform future directions.
Introduction	30/04/24	William S	Write the introduction to the proposal
Introduction and Conclusion to Proposal sections	30/04/24	William M	Write the introduction and conclusion paragraphs to proposal sections so that the document flows together.

**Other Comments**

Stuart is not available on Wednesday or Thursday next week to work on the proposal or to attend meetings because of a family commitment.

**Signed, Dated and accepted:**

Christina Russo 24/04/24

William Mahoney 29/04/24

William Sun 25/04/2024

Stuart Moyes 26/04/2024

## DECO2500 Progress Log

Date: 30/04/2024    Teaching Week: Week 10    Team Name: Evergreen Designs

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**Team members present:** Stuart Moyes, Christina Russo, William Sun, William Mahoney

**Items discussed and worked on today.**

Item	Current State	Team Members(s) Responsible	Notes
Progress Log: Week 9	Completed	Everyone	Everyone has signed the Week 9 Progress Log.
Acknowledgements	In Progress	Christina	Discussed addition of Flaticon icons and plant icons to acknowledge use of icons, photo and pictures from sources.
Introduction	In Progress	William S	William discussed the draft he prepared of the Introduction section. It contains a good summary of the App. The team read through the section and offered amendments.
Contextual Inquiry: Introduction	In Progress	William M	William discussed the Contextual Inquiry introduction section he had drafted.
Contextual Inquiry: Behaviour Change Domain	In Progress	William S	There was some discussion as to whether some of this information was duplicated in the introduction. The duplicate information was removed from the introduction.
Contextual Inquiry: Existing Systems	In Progress	Stuart	Stuart discussed the Existing Systems section he had written. He would like to add a couple of more items to this section.
Contextual Inquiry: User Needs and Values	Completed	Christina	A paragraph has been removed from this section which is no longer required as this information is now in the qualitative analysis and introduction. The qualitative analysis has been added.
Conceptual Design: System Concept	In Progress	William M	This section is mostly completed, apart from some final drafting required in the metaphor section.
Conceptual Design: Scenarios	Completed	William S	Stuart assisted William S to finalise the table layout for the scenarios to better present the information.
Conceptual Design: Storyboards	Completed	William S	Stuart assisted William by using photoshop to improve the image quality of the storyboards.

UX Goals & Metrics	Completed	William S	Stuart assisted William S to finalise the table layout for the UX Goals and Relevant Metrics to better present the information.
Conceptual Design Summary	Completed	William M	William discussed his draft of this section.
Prototype	In Progress	Stuart	Stuart discussed his partly completed draft of the prototype section, including an examination of the low-fidelity and software prototypes. The prototypes will also need to be included in an appendix.
Future Directions	In Progress	William S	This section needs to be amended once the user feedback on the interactive flow diagram is obtained. Christina has obtained feedback from one user on the interactive flow diagram. Stuart and William M will obtain feedback from one user each by Friday.
Next meeting	Not started	Everyone	Next meeting is on <b>Tuesday 7 May 2024</b> at 7.30pm for approx. 1 hour.

**Issues That Arose (if applicable):** N/A

## Actions Required

Christina

- Sign Week 10 Progress Log before the Studio session this week.
- Do qualitative analysis of data from user feedback of interactive flow diagram once interviews completed.

Stuart

- Sign Week 10 Progress Log before the Studio session this week.
- Finalise the text and images (including captions) for the Contextual Inquiry: Existing Systems Section and Appendix 3.
- User feedback on the interactive flow diagram and software prototype.
- Separate references for the Flaticon and Microsoft Designer Image Creator images.

William Sun

- Sign Week 10 Progress Log before the Studio session this week.
- Finalise text in the Introduction and Behavioural Change sections.

### William Mahoney

- Sign Week 10 Progress Log before the Studio session this week.
- User feedback on the interactive flow diagram and software prototype.
- Finalise text in the Conceptual Design metaphors section.

### Deliverables to be completed.

<b>Item</b>	<b>Due Date</b>	<b>Team Members(s) Responsible</b>	<b>Notes</b>
Sign Week 10 Progress Log	03/05/24 at 8am	Everyone	Everyone to sign Week 10 Progress Log before Studio this week.
Future Directions	03/05/24	Stuart, William M.	Stuart and William M to obtain feedback from one user each regarding the software prototype and interactive flow diagram.
Future Directions	04/05/24	Christina	Do a qualitative analysis on the user feedback of the software prototype.
Future Directions	07/05/24	William S	Incorporate themes and suggestions from the user feedback into the future directions.
Existing Systems	07/05/24	Stuart	Finalise text and images in Existing Systems section and Appendix
References for Flaticon icons and Microsoft Designer images	07/05/24	Stuart	Add separate reference table for Flaticon icons and Microsoft Designer images.
Conceptual Design: Metaphors	07/05/24	William M	Finalise text in the metaphors section.
All sections	07/05/24	Everyone	Finalise text for all sections overall

### Other Comments

These items need to be completed in the final week:

- Table of Figures to be updated (once captions, layout and page numbers finalised).
- Individual reflections to be completed by everyone.

**Signed, Dated and accepted:**

Christina Russo 30/04/24

William Mahoney 30/04/24

William Sun 01/05/24

Stuart Moyes 03/05/2024

## DECO2500 Progress Log

Date: 07/05/24 Teaching Week: Week 11 Team Name: Evergreen Designs

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Team members present: Stuart Moyes, Christina Russo, William Sun, William Mahoney

### Items discussed and worked on today

Item	Current State	Team Members(s) Responsible	Notes
Progress Log: Week 10	Completed	Everyone	Everyone has signed the Week 10 Progress Log.
Proposal Document	In Progress	Everyone	Discussed proposal document, which is almost complete (apart from conclusion). Amendments have occurred to all sections. Discussed proposal, section by section, requesting feedback/amendments. Everyone okay with changes. Request for any ideas to include in conclusion of document.
Turnitin	Completed	Christina	Incomplete draft document submitted on Turnitin - 3% mark.
Individual Reflections	Not Started	Stuart William M. William S.	Christina has completed her personal reflection and it is contained in the proposal. Need to write and include their personal reflections in the proposal by studio on Friday. Limit to 2 pages. Use the progress logs to remind yourself what you have done. Talk about any conflicts and what you have learned.
Week 11 Progress Log	Not started	Everyone	Everyone to sign the Week 11 Progress Log before Week 11 Friday's studio
Next meeting	Not started	Everyone	No formal meeting. Everyone must attend studio on <b>Friday Week 11</b> to sign the form to be attached.

Issues That Arose (if applicable): N/A

## Actions Required

Christina

- Sign Week 11 Progress Log before the Studio session this week.
- Submit document on Turnitin when it becomes available.
- Write conclusion to proposal

Stuart

- Sign Week 11 Progress Log before the Studio session this week.
- Bring electronic pen to studio with which we can sign the document.
- Write personal reflection

William Sun

- Sign Week 11 Progress Log before the Studio session this week.
- Write personal reflection

William Mahoney

- Sign Week 11 Progress Log before the Studio session this week.
- Write personal reflection

## Deliverables to be completed

Item	Due Date	Team Members(s) Responsible	Notes
Sign Week 11 Progress Log	10/05/24 at 8am	Everyone	Everyone to sign Week 11 Progress Log before Studio this week.
Conclusion	10/05/24	Christina	Write conclusion to proposal
Update page numbers in Table of Figures	10/05/24	Christina	Update all page numbers in the Table of Figures. Spell check the document.
Turnitin	10/05/24	Christina	Submit document to turnitin as soon as possible. Advise other team members on Discord of result and any issues.
Electronic Pen	10/05/24	Stuart	Stuart to bring his electronic pen to the studio session with which we can sign the proposal document.

Personal Reflections	10/05/24	Stuart, William S, William M	Write personal reflection and include it in the proposal before studio on Friday.
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## Other Comments

### Signed, Dated and accepted:

Christina Russo 07/05/24

Stuart Moyes 10/05/2024

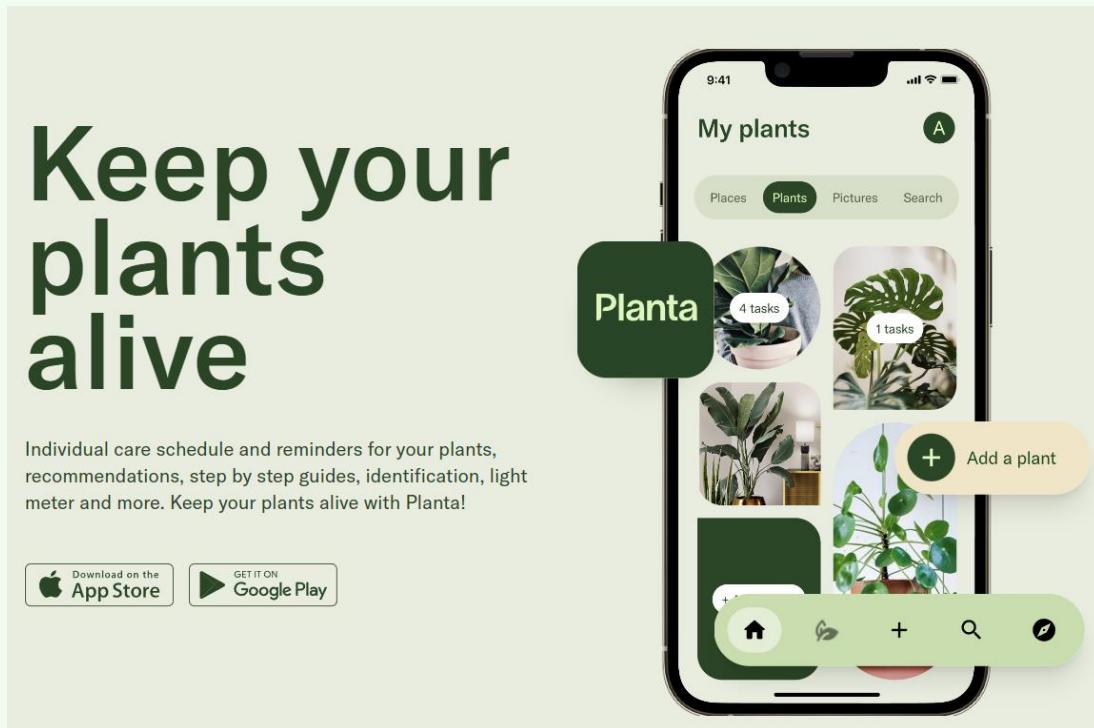
William Sun 08/05/24

William Mahoney 09/05/24

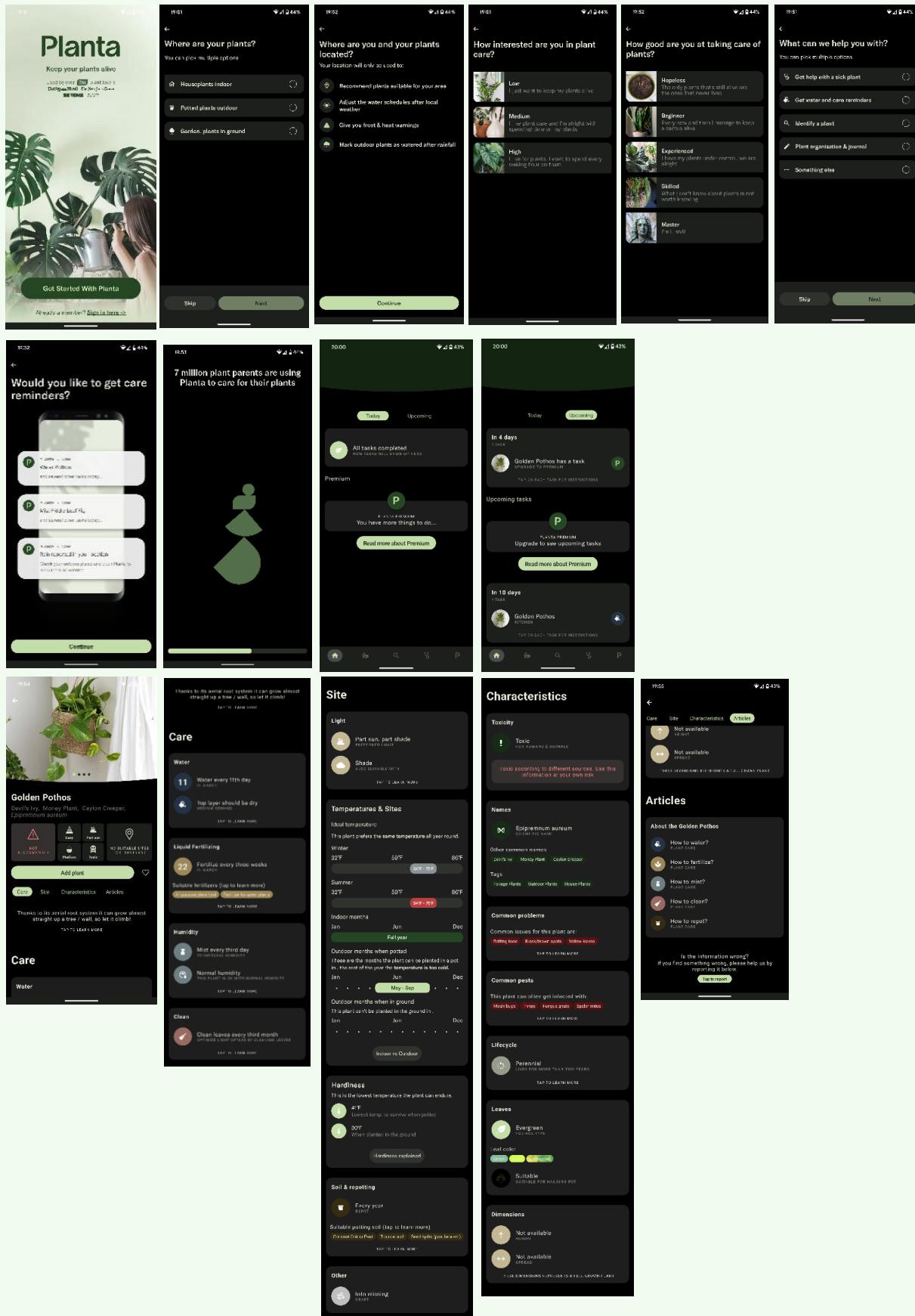
## Appendix 3 – Existing Systems

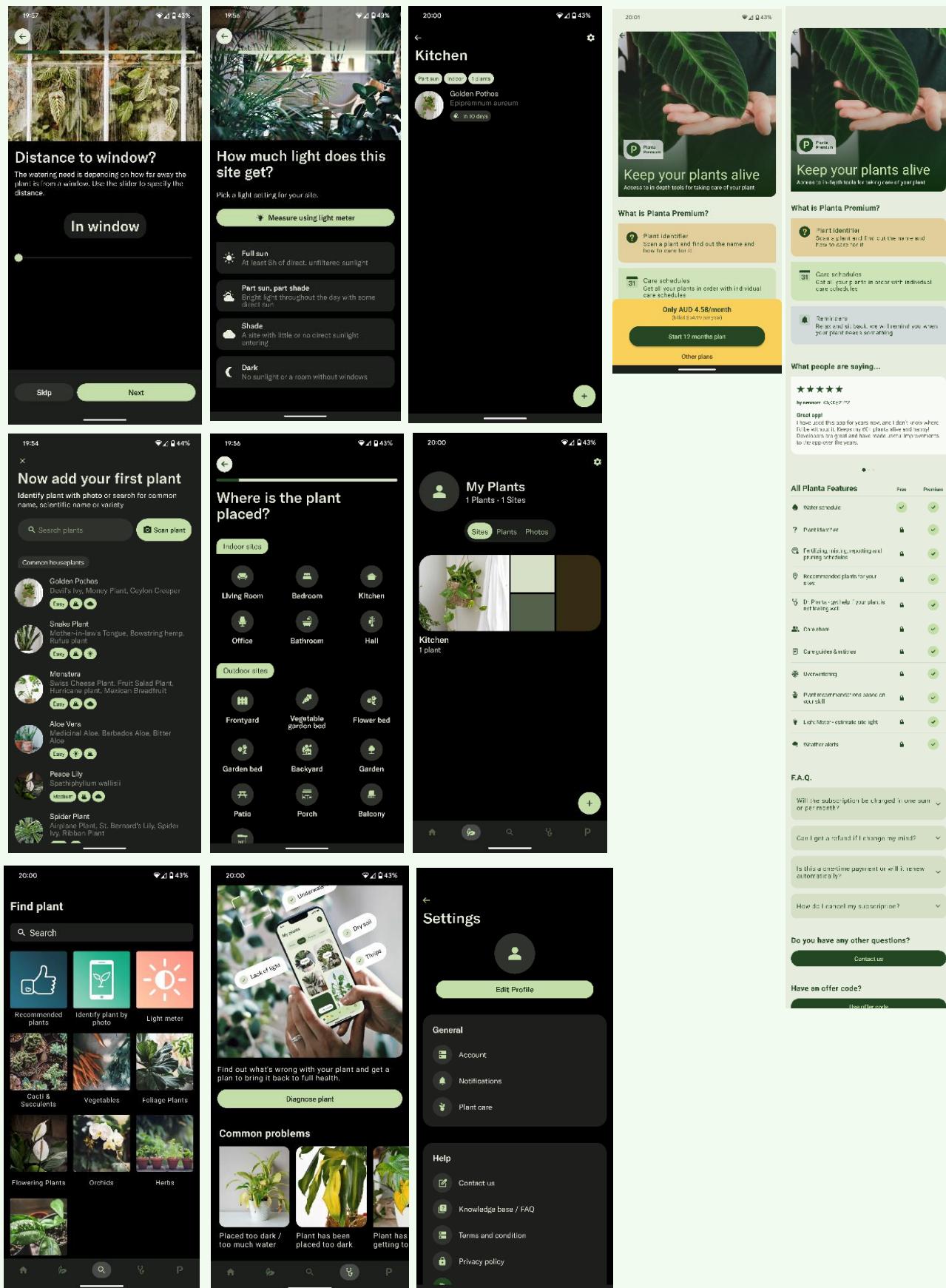
### Planta App

Available on the Apple (4.8 stars) and Google Play (4.3 stars) stores (Planta, n.d.)



## Planta Screenshots

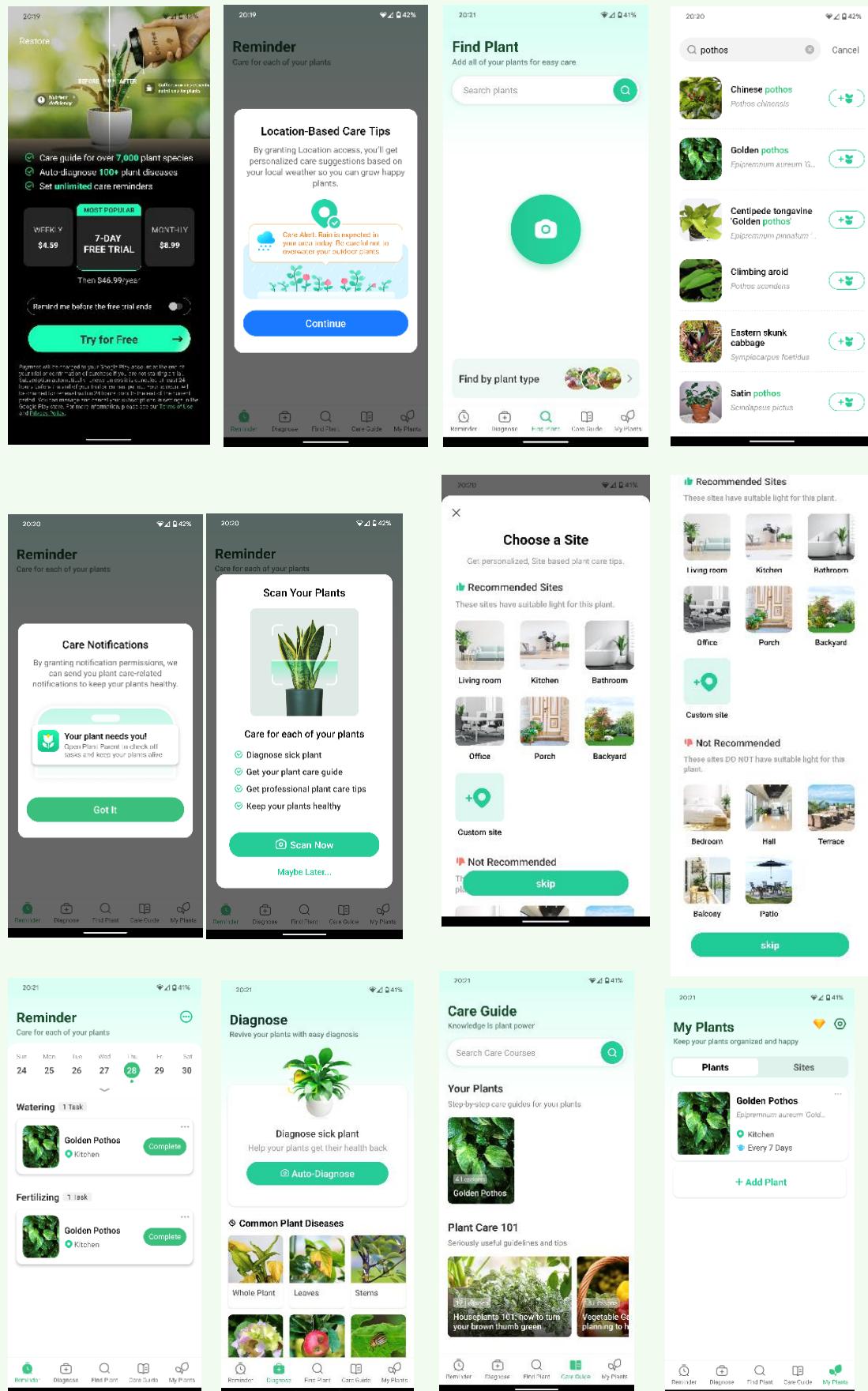




## Plant Parent

Available on Google Play (4.2 stars) (Plant Parent, n.d.)

The screenshot shows the landing page for the Plant Parent app. At the top left is the app's logo, a green square with a white flower icon. To the right are three navigation links: "Application", "Download", and "FAQ". Below the header is a large circular graphic featuring a hand holding a smartphone displaying a yellow lily flower. The phone is surrounded by various plants and icons representing sunlight, water, and a smiley face. To the left of the graphic, the app's name "Plant Parent" is displayed in a green font, followed by the tagline "Keep your plants happy and thriving". Below this text is a brief description: "Meet Plant Parent – the app that offers solid plant care solutions. With Plant Parent, you can become an instant green thumb and keep your plants not just happy, but thriving!" Further down are download links for the App Store and Google Play, each accompanied by a QR code. A small note below the QR codes says "Scan QR code to download".



The collage consists of six screenshots from the PLANTR app, arranged in two columns of three. Each screenshot shows a different aspect of plant care:

- Reminder:** A calendar reminder for watering and fertilizing the Golden Pothos.
- Care:** A "Plant Care Course" section with a "Learn how to care for Golden Pothos step-by-step" button and a "Get precise watering schedule for your location" button.
- Water:** A section showing a "Watering Schedule" for "Every week" in March, with a "Get precise watering schedule for your location" button.
- Fertilizing:** A section showing "Fertilizing Every 2 weeks" and "Every 2 months", with a "Get precise watering schedule for your location" button.
- Site:** A "Temperature" section showing "Hardiness zone 10-13" and "Ideal temperature 15 - 25 °C".
- Characteristics:** A "Type" section showing "Herb, Vine" and "Perennial Lifecycle".
- Pests & Diseases:** A "Leaf" section showing "Evergreen Foliage type" and "Leaf Color Yellow, Green, Cream".
- Plant Info:** A "Common Name" section listing "Epipremnum aureum 'Golden Pothos'" and "Scientific name".
- Plant Health:** A "Having a plant emergency?" section with a "Report Now" button.
- Care Plan Is Based On:** A "Temperature" section showing "Hardiness zone 10-13" and a "Location" section showing "Allow".

## Appendix 4 – Raw Data from In-Person Interviews

### Participant: P01

**1. Do you currently own or care for indoor plants? \***

- Yes  
 No

**Section: Does not currently own/care for indoor plants****2. Why do you not currently own or care for indoor plants?**

They seem like they are a lot of work. There are a lot of factors to consider like fertilizers, growth, and what happens when you go away.

**3. If you owned indoor plants, how would you determine they needed water or other care?**

There are already apps. You can scan with your phone to determine the treatments. I don't remember the name of the app. A friend uses an app.

**Section: All participants****4. How would you rate your ability to care for indoor plants? \***

- Novice  
 Intermediate  
 Expert

**5. What difficulties (if any) have you experienced caring for indoor plants in the past?**

My only experience is with cacti. Difficulty was checking they are okay but trying to avoid not getting hurt and pricked by them. They look flimsy but the thorns are very sharp.

**6. Would you use an app that gives you information or advice about caring for indoor plants? \***

- Yes  
 No  
 Maybe

**7. What kind of information, advice or features would you like a plant care app to provide?**

Seasonal information about growth. Information about water needs, fertilizer. The main thing would be a calendar with notifications and updates that the plant is most viable in a particular season.

**8. Would you find any of these features helpful to improve your plant care habits? (Select any/all that apply)**

- Reminders for watering and fertilizing
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information for plant's type or appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Other

**9. If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**10. In what ways would you want to interact with an avatar of your indoor plant?**

Make the experience more personable. Possibly find friends. Make it a social event and get tips from other plant users.

**11. What is your age?**

- Under 18
- 18-24
- 25-34
- 35+

**12. With which gender do you identify?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: P02

**1. Do you currently own or care for indoor plants? \***

- Yes  
 No

**Section: Does not currently own/care for indoor plants****2. Why do you not currently own or care for indoor plants?**

The sunlight doesn't get into my room. I think if I got a plant it would die. I would really like to though.

**3. If you owned indoor plants, how would you determine they needed water or other care?**

I would just water it regularly, regardless of how it looked. If it started dying I would put it outside.

**Section: All participants****4. How would you rate your ability to care for indoor plants? \***

- Novice  
 Intermediate  
 Expert

**5. What difficulties (if any) have you experienced caring for indoor plants in the past?**

I haven't actually cared for plants in the past.

**6. Would you use an app that gives you information or advice about caring for indoor plants? \***

- Yes  
 No  
 Maybe

**7. What kind of information, advice or features would you like a plant care app to provide?**

A dictionary of plants. For each plant, watering and sun advice.

**8. Would you find any of these features helpful to improve your plant care habits? (Select any/all that apply)**

- Reminders for watering and fertilizing
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information for plant's type or appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Other

**9. If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**10. In what ways would you want to interact with an avatar of your indoor plant?**

The avatar could be a chatbot that you could ask questions of.

**11. What is your age?**

- Under 18
- 18-24
- 25-34
- 35+

**12. With which gender do you identify?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: P03

1. Do you currently own or care for indoor plants? \*

Yes

No

### Section: Does not currently own/care for indoor plants

2. Why do you not currently own or care for indoor plants?

I end up killing them.

3. If you owned indoor plants, how would you determine they needed water or other care?

I would guess.

### Section: All participants

4. How would you rate your ability to care for indoor plants? \*

Novice

Intermediate

Expert

5. What difficulties (if any) have you experienced caring for indoor plants in the past?

I don't know why they died. Probably overwatered or underwatered. Comes down to lack of knowledge and experience.

6. Would you use an app that gives you information or advice about caring for indoor plants? \*

Yes

No

Maybe

7. What kind of information, advice or features would you like a plant care app to provide?

When to water the plant. What conditions to put the plant in eg. sunlight.

**8. Would you find any of these features helpful to improve your plant care habits? (Select any/all that apply)**

- Reminders for watering and fertilizing
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information for plant's type or appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Other

**9. If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**10. In what ways would you want to interact with an avatar of your indoor plant?**

I want the avatar to give reminders or notifications of things to do.

**11. What is your age?**

- Under 18
- 18-24
- 25-34
- 35+

**12. With which gender do you identify?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: P04

1. Do you currently own or care for indoor plants? \*

- Yes  
 No

### Section: Does not currently own/care for indoor plants

2. Why do you not currently own or care for indoor plants?

There is no space in my place for them.

3. If you owned indoor plants, how would you determine they needed water or other care?

Not sure. I would probably look up specific information for different plants, based on what type of plant and how they look eg. wilting.  
I have also absorbed a lot of information from my Mum who cares for plants.

### Section: All participants

4. How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

5. What difficulties (if any) have you experienced caring for indoor plants in the past?

I have never cared for indoor plants.

6. Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

7. What kind of information, advice or features would you like a plant care app to provide?

Time last watered. Type of plant. Soil quality - general soil levels. Sunlight exposure.

**8. Would you find any of these features helpful to improve your plant care habits? (Select any/all that apply)**

- Reminders for watering and fertilizing
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information for plant's type or appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Soil needs of each plant.

**9. If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**10. In what ways would you want to interact with an avatar of your indoor plant?**

Simple reminder would be the best thing. Different facial expressions for different states of plant health.

**11. What is your age?**

- Under 18
- 18-24
- 25-34
- 35+

**12. With which gender do you identify?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: P05

1. Do you currently own or care for indoor plants? \*

- Yes  
 No

### Section: Does not currently own/care for indoor plants

2. Why do you not currently own or care for indoor plants?

Taking care of indoor plants seems like a big hassle.

3. If you owned indoor plants, how would you determine they needed water or other care?

Probably google how to take care of the plant.

### Section: All participants

4. How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

5. What difficulties (if any) have you experienced caring for indoor plants in the past?

Never had any experiences.

6. Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

7. What kind of information, advice or features would you like a plant care app to provide?

Easy step by step guide.

**8. Would you find any of these features helpful to improve your plant care habits? (Select any/all that apply)**

- Reminders for watering and fertilizing
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information for plant's type or appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Other

**9. If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**10. In what ways would you want to interact with an avatar of your indoor plant?**

N/A

**11. What is your age?**

- Under 18
- 18-24
- 25-34
- 35+

**12. With which gender do you identify?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: P06

1. Do you currently own or care for indoor plants? \*

- Yes  
 No

### Section: Currently owns/cares for indoor plants

2. How many indoor plants do you currently have? \*

- 1 - 3  
 4 - 10  
 11 - 20  
 21+

3. How do you determine if your plants need water or other care?

Leaves look sad.

4. Do you currently use any apps to assist you in plant care?

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

Nothing at all

### Section: All participants

5. How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

6. What difficulties (if any) have you experienced caring for indoor plants in the past?

I over water the plants, and removing pests (fungus gnats), sometimes forget to water.

7. Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

**8. What kind of information, advice or features would you like a plant care app to provide?**

Widget on home screen to list plants needing care. Watering frequency, how often pruning/trimming is needed and how. When/how to fertilise, fun facts and trivia (this plant was featured in a painting). Is plant pet safe?

**9. Would you find any of these features helpful to improve your plant care habits? (Select any/all that apply)**

- Reminders for watering and fertilizing
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information for plant's type or appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Widget on home screen to list plants needing care

**10. If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**11. In what ways would you want to interact with an avatar of your indoor plant?**

Wilting/sad appearance when plant needs care. Have a "garden" with your plants, and you can drag a watering can to "water" that plant

**12. What is your age?**

- Under 18
- 18-24
- 25-34
- 35+

**13. With which gender do you identify?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: P07

1. Do you currently own or care for indoor plants? \*

- Yes  
 No

### Section: Currently owns/cares for indoor plants

2. How many indoor plants do you currently have? \*

- 1 - 3  
 4 - 10  
 11 - 20  
 21+

3. How do you determine if your plants need water or other care?

When they start to die

4. Do you currently use any apps to assist you in plant care?

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

No

### Section: All participants

5. How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

6. What difficulties (if any) have you experienced caring for indoor plants in the past?

Remembering to water the plants

7. Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

8. What kind of information, advice or features would you like a plant care app to provide?

Amount of fertilizer, soil acidity, watering frequency etc.

**9. Would you find any of these features helpful to improve your plant care habits? (Select any/all that apply)**

- Reminders for watering and fertilizing
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information for plant's type or appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Other

**10. If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**11. In what ways would you want to interact with an avatar of your indoor plant?**

As a companion

**12. What is your age?**

- Under 18
- 18-24
- 25-34
- 35+

**13. With which gender do you identify?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: P08

1. Do you currently own or care for indoor plants? \*

- Yes  
 No

### Section: Does not currently own/care for indoor plants

2. Why do you not currently own or care for indoor plants?

I don't have indoor plants, only outdoor.

3. If you owned indoor plants, how would you determine they needed water or other care?

They will need some sunlight and water to grow duh.

### Section: All participants

4. How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

5. What difficulties (if any) have you experienced caring for indoor plants in the past?

None of the above.

6. Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

7. What kind of information, advice or features would you like a plant care app to provide?

How it grows, what you need to grow and ingredients.

**8. Would you find any of these features helpful to improve your plant care habits? (Select any/all that apply)**

- Reminders for watering and fertilizing
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information for plant's type or appearance.
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Other

**9. If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**10. In what ways would you want to interact with an avatar of your indoor plant?**

Can't think of any

**11. What is your age?**

- Under 18
- 18-24
- 25-34
- 35+

**12. With which gender do you identify?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: P09

1. Do you currently own or care for indoor plants? \*

Yes

No

### Section: Currently owns/cares for indoor plants

2. How many indoor plants do you currently have? \*

1 - 3

4 - 10

11 - 20

21+

3. How do you determine if your plants need water or other care?

Plant looks droopy, then I panic

4. Do you currently use any apps to assist you in plant care?

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

No

### Section: All participants

5. How would you rate your ability to care for indoor plants? \*

Novice

Intermediate

Expert

6. What difficulties (if any) have you experienced caring for indoor plants in the past?

Keeping them alive.  
Over or under watering, too much fertiliser

7. Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes
- No
- Maybe

8. What kind of information, advice or features would you like a plant care app to provide?

Sunlight to no light placement instructions, general watering schedule

9. Would you find any of these features helpful to improve your plant care habits? (Select any/all that apply)

- Reminders for watering and fertilizing
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information for plant's type or appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Information about plants that go well together

10. If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \*

- Yes
- No
- Maybe

11. In what ways would you want to interact with an avatar of your indoor plant?

Showing if happy or sad based on watering. Changes appearance based on season (sunnies in summer, scarf in winter)

12. What is your age?

- Under 18
- 18-24
- 25-34
- 35+

13. With which gender do you identify?

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: P10

**1. Do you currently own or care for indoor plants? \***

- Yes  
 No

**Section: Does not currently own/care for indoor plants****2. Why do you not currently own or care for indoor plants?**

Too busy to look after. Not a huge fan of plants. Parents have enough indoor plants already.

**3. If you owned indoor plants, how would you determine they needed water or other care?**

I would just water them every now and then and hope they survive. If it looks like its dying give it more water.

**Section: All participants****4. How would you rate your ability to care for indoor plants? \***

- Novice  
 Intermediate  
 Expert

**5. What difficulties (if any) have you experienced caring for indoor plants in the past?**

Had to water parents plants when they were away and it was difficult to keep track of which one's had been watered/not been watered and how much they needed, etc.

**6. Would you use an app that gives you information or advice about caring for indoor plants? \***

- Yes  
 No  
 Maybe

**7. What kind of information, advice or features would you like a plant care app to provide?**

Tells me when to water the plants and which ones to water.

**8. Would you find any of these features helpful to improve your plant care habits? (Select any/all that apply)**

- Reminders for watering and fertilizing
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information for plant's type or appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Other

**9. If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**10. In what ways would you want to interact with an avatar of your indoor plant?**

To tell me if the plant is dying or healthy

**11. What is your age?**

- Under 18
- 18-24
- 25-34
- 35+

**12. With which gender do you identify?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: P11

1. Do you currently own or care for indoor plants? \*

- Yes  
 No

### Section: Currently owns/cares for indoor plants

2. How many indoor plants do you currently have? \*

- 1 - 3  
 4 - 10  
 11 - 20  
 21+

3. How do you determine if your plants need water or other care?

Routine (time of the week). How the soil feels.

4. Do you currently use any apps to assist you in plant care?

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

No

### Section: All participants

5. How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

6. What difficulties (if any) have you experienced caring for indoor plants in the past?

They die for no reason and I'm never quite sure why.

7. Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

8. What kind of information, advice or features would you like a plant care app to provide?

Disease/health identification through pictures.

**9. Would you find any of these features helpful to improve your plant care habits? (Select any/all that apply)**

- Reminders for watering and fertilizing
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information for plant's type or appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Other

**10. If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**11. In what ways would you want to interact with an avatar of your indoor plant?****12. What is your age?**

- Under 18
- 18-24
- 25-34
- 35+

**13. With which gender do you identify?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: P12

**1. Do you currently own or care for indoor plants? \***

- Yes  
 No

**Section: Does not currently own/care for indoor plants****2. Why do you not currently own or care for indoor plants?**

Won't be able to take care of it. It will probably die. I won't want one if I will kill it. I am moving out soon.

**3. If you owned indoor plants, how would you determine they needed water or other care?**

I'd eyeball it. See how the plant looks.

**Section: All participants****4. How would you rate your ability to care for indoor plants? \***

- Novice  
 Intermediate  
 Expert

**5. What difficulties (if any) have you experienced caring for indoor plants in the past?**

Was given one by parents and it died cause I didn't do a good job looking after it.

**6. Would you use an app that gives you information or advice about caring for indoor plants? \***

- Yes  
 No  
 Maybe

**7. What kind of information, advice or features would you like a plant care app to provide?**

Reminds me when to water. Helps me know if it is gonna die.

**8. Would you find any of these features helpful to improve your plant care habits? (Select any/all that apply)**

- Reminders for watering and fertilizing
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information for plant's type or appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Other

**9. If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**10. In what ways would you want to interact with an avatar of your indoor plant?**

Reminders to water and how to not kill it.

**11. What is your age?**

- Under 18
- 18-24
- 25-34
- 35+

**12. With which gender do you identify?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Appendix 5 – Raw Data from Online Surveys

### Blank Survey Form

The following is a copy of the online survey form showing the information and questions provided to participants.

Section 1 of 5

### Evergreen Designs Contextual Inquiry Interview

B I U ↲ ↳

Thank you for participating in the design process for our UQ DECO2500 Human-Computer Interaction Team Design Project. Your answers will help us create an exciting new App!

The confidentiality and anonymity of your information is important to us, so we do not need to know your name. At the end of the survey we will kindly request your age range and gender as they are important for us to analyse data effectively and tailor design decisions to meet the diverse needs of various user groups.

**Do you currently own or care for indoor plants? \***

Yes

No

## Section 2 of 5

**Questions for indoor plant owners**

Description (optional)

**How many indoor plants do you currently have? \***

- 1 - 3
- 4 - 10
- 11 - 20
- 21+

**How do you determine if your plants need water or other care?**

Long-answer text

**Do you currently use any apps to assist you in plant care?**

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

Long-answer text

## Section 3 of 5

**Questions for non-indoor plant owners**

Description (optional)

**Why do you not currently own or care for indoor plants?**

Long-answer text

**If you owned indoor plants, how would you determine if they needed water or other care?**

Long-answer text

## Section 4 of 5

**All participants**

Description (optional)

**How would you rate your ability to care for indoor plants? \***

\*\*\*

- Novice
- Intermediate
- Expert

**What difficulties (if any) have you experienced caring for indoor plants in the past?**

Long-answer text

Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes
- No
- Maybe

What kind of information, advice or features would you like a plant care app to provide?

Long-answer text

Would you find any of these features helpful to improve your plant care habits?

(Select any / all that apply)

- Reminders for watering and fertilising
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information based on plant's type and appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indire...
- Other...

If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \*

- Yes
- No
- Maybe

**In what ways would you want to interact with an avatar of your indoor plant?**

Long-answer text

Section 5 of 5

**Your Details**



The confidentiality and anonymity of your information is important to us, so we do not need to know your name. Information regarding your age and gender is used to inform design decisions based on the preferences of potential users of different age ranges and genders.

...

**What is your age?**

- Under 18
- 18 - 24
- 25 - 34
- 35+

...

**To which gender do you most identify as?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: S01

Do you currently own or care for indoor plants? \*

- Yes  
 No

Questions for indoor plant owners

How many indoor plants do you currently have? \*

- 1 - 3  
 4 - 10  
 11 - 20  
 21+

How do you determine if your plants need water or other care?

Droopy Leaves, dry soil

Do you currently use any apps to assist you in plant care?

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

Calendar reminders

Questions for non-indoor plant owners

Why do you not currently own or care for indoor plants?

All participants

How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

What difficulties (if any) have you experienced caring for indoor plants in the past?

Forgetting to water

Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

**What kind of information, advice or features would you like a plant care app to provide?**

Plant specific info like how much sun/water it needs

**Would you find any of these features helpful to improve your plant care habits?**

(Select any / all that apply)

- Reminders for watering and fertilising
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information based on plant's type and appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"

 Other:**If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**In what ways would you want to interact with an avatar of your indoor plant?**

Looks bright and cheerful if taken care of, wilted or tired when forgotten about

**What is your age?**

- Under 18
- 18 - 24
- 25 - 34
- 35+

**To which gender do you most identify as?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: S02

Do you currently own or care for indoor plants? \*

- Yes  
 No

Questions for indoor plant owners

How many indoor plants do you currently have? \*

- 1 - 3  
 4 - 10  
 11 - 20  
 21+

How do you determine if your plants need water or other care?

---

Do you currently use any apps to assist you in plant care?

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

---

Questions for non-indoor plant owners

Why do you not currently own or care for indoor plants?

Never thought about doing it.

If you owned indoor plants, how would you determine if they needed water or other care?

I would search up a tutorial before owning the plant and follow the advice there

All participants

How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

What difficulties (if any) have you experienced caring for indoor plants in the past?

Never done it before

Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

**What kind of information, advice or features would you like a plant care app to provide?**

Can easily look up the plant and have a detailed list of instructions to follow. The app should also be minimalistic.

**Would you find any of these features helpful to improve your plant care habits?**

(Select any / all that apply)

- Reminders for watering and fertilising
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information based on plant's type and appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"

Other: .....

**If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**In what ways would you want to interact with an avatar of your indoor plant?****What is your age?**

- Under 18
- 18 - 24
- 25 - 34
- 35+

**To which gender do you most identify as?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: S03

Do you currently own or care for indoor plants? \*

- Yes  
 No

Questions for indoor plant owners

How many indoor plants do you currently have? \*

- 1 - 3  
 4 - 10  
 11 - 20  
 21+

How do you determine if your plants need water or other care?

Every week I water them

Do you currently use any apps to assist you in plant care?

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

No

Questions for non-indoor plant owners

Why do you not currently own or care for indoor plants?

If you owned indoor plants, how would you determine if they needed water or other care?

All participants

How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

What difficulties (if any) have you experienced caring for indoor plants in the past?

They've died

Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

**What kind of information, advice or features would you like a plant care app to provide?**

Information on different types of plants

**Would you find any of these features helpful to improve your plant care habits?**  
(Select any / all that apply)

Reminders for watering and fertilising  
 Personalised care tips based on plant type and geographic location  
 Photo timeline to track plant growth and health  
 Access to pest and disease information based on plant's type and appearance  
 A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"  
 Other: .....

If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \*

Yes  
 No  
 Maybe

In what ways would you want to interact with an avatar of your indoor plant?

Idk this idea sounds a little weird

**What is your age?**

Under 18  
 18 - 24  
 25 - 34  
 35+

**To which gender do you most identify as?**

Woman  
 Man  
 Non-binary  
 Prefer not to say

## Participant: S04

Do you currently own or care for indoor plants? \*

- Yes  
 No

Questions for indoor plant owners

How many indoor plants do you currently have? \*

- 1 - 3  
 4 - 10  
 11 - 20  
 21+

How do you determine if your plants need water or other care?

They're cacti so it's vibes based or when I'm emptying a water bottle out

Do you currently use any apps to assist you in plant care?

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

Nope

Questions for non-indoor plant owners

Why do you not currently own or care for indoor plants?

If you owned indoor plants, how would you determine if they needed water or other care?

All participants

How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

What difficulties (if any) have you experienced caring for indoor plants in the past?

I have a cat who tries to eat any indoor plants. I have to yell at him to leave my large cactus alone

Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

**What kind of information, advice or features would you like a plant care app to provide?**

Something that's integrated with an app I already use or something that's in my home. I forget apps exist and the amount of notifications I receive per day means another one adding to it won't help me. What would help is something I stick in the plant or like an integration with my friend groups life360 group so they can remind me to water my plants like they remind me to charge my phone.

**Would you find any of these features helpful to improve your plant care habits?**

(Select any / all that apply)

- Reminders for watering and fertilising
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information based on plant's type and appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Other: What's pet friendly, I'm worried I'll make my cat sick

**If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**In what ways would you want to interact with an avatar of your indoor plant?****What is your age?**

- Under 18
- 18 - 24
- 25 - 34
- 35+

**To which gender do you most identify as?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: S05

Do you currently own or care for indoor plants? \*

- Yes  
 No

Questions for indoor plant owners

How many indoor plants do you currently have? \*

- 1 - 3  
 4 - 10  
 11 - 20  
 21+

How do you determine if your plants need water or other care?

Do you currently use any apps to assist you in plant care?

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

Questions for non-indoor plant owners

Why do you not currently own or care for indoor plants?

I live with my parents

If you owned indoor plants, how would you determine if they needed water or other care?

touch the soil to see if it's dry yet

All participants

How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

What difficulties (if any) have you experienced caring for indoor plants in the past?

Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

What kind of information, advice or features would you like a plant care app to provide?

Would you find any of these features helpful to improve your plant care habits?

(Select any / all that apply)

- Reminders for watering and fertilising
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information based on plant's type and appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Other: \_\_\_\_\_

If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \*

Yes

No

Maybe

In what ways would you want to interact with an avatar of your indoor plant?

What is your age?

- Under 18
- 18 - 24
- 25 - 34
- 35+

To which gender do you most identify as?

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: S06

Do you currently own or care for indoor plants? \*

- Yes  
 No

Questions for indoor plant owners

How many indoor plants do you currently have? \*

- 1 - 3  
 4 - 10  
 11 - 20  
 21+

How do you determine if your plants need water or other care?

---

Do you currently use any apps to assist you in plant care?

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

---

Questions for non-indoor plant owners

Why do you not currently own or care for indoor plants?

Not interested in raising indoor plants

---

If you owned indoor plants, how would you determine if they needed water or other care?

Googling it

---

All participants

How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

What difficulties (if any) have you experienced caring for indoor plants in the past?

---

Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

**What kind of information, advice or features would you like a plant care app to provide?**

Help with identifying issues/diseases

**Would you find any of these features helpful to improve your plant care habits?**

(Select any / all that apply)

- Reminders for watering and fertilising
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information based on plant's type and appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"
- Other: .....

**If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**In what ways would you want to interact with an avatar of your indoor plant?**

**What is your age?**

- Under 18
- 18 - 24
- 25 - 34
- 35+

**To which gender do you most identify as?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: S07

Do you currently own or care for indoor plants? \*

- Yes  
 No

Questions for indoor plant owners

How many indoor plants do you currently have? \*

- 1 - 3  
 4 - 10  
 11 - 20  
 21+

How do you determine if your plants need water or other care?

Do you currently use any apps to assist you in plant care?

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

Questions for non-indoor plant owners

Why do you not currently own or care for indoor plants?

I took care of a bonsai that I was gifted once. The person spent two years taking care of it before giving it to me. I promptly killed it in six months.

If you owned indoor plants, how would you determine if they needed water or other care?

Lots and lots of research. Opinions from experienced plant owners or other friends.

All participants

How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

What difficulties (if any) have you experienced caring for indoor plants in the past?

I was told that my bonsai just 'needed to be watered once in a while' do you have any idea how hard it is to kill one?! I tried following the simplest instructions and I couldn't even do that

Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

**What kind of information, advice or features would you like a plant care app to provide?**

How often to water it + how much water + a reminder system for it. How often it should be in sunlight. Plants that you can buy locally. Little facts about the plant. Maybe stuff that says "if you see this happening to your plant, don't worry/you should worry".

**Would you find any of these features helpful to improve your plant care habits?**

(Select any / all that apply)

- Reminders for watering and fertilising
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information based on plant's type and appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"

Other: .....

**If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**In what ways would you want to interact with an avatar of your indoor plant?**

Cute little accessories to unlock and dress them in. Customising their name and pronouns. I use an app called Finch that has features like this.

**What is your age?**

- Under 18
- 18 - 24
- 25 - 34
- 35+

**To which gender do you most identify as?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: S08

Do you currently own or care for indoor plants? \*

- Yes  
 No

Questions for indoor plant owners

How many indoor plants do you currently have? \*

- 1 - 3  
 4 - 10  
 11 - 20  
 21+

How do you determine if your plants need water or other care?

Questions for non-indoor plant owners

Why do you not currently own or care for indoor plants?

I have enough plants outside

If you owned indoor plants, how would you determine if they needed water or other care?

I would follow recommendations for that genus and species.

All participants

How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

What difficulties (if any) have you experienced caring for indoor plants in the past?

Forgetting care for that plant

Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

**What kind of information, advice or features would you like a plant care app to provide?**

Reminders, milestones of the plant's growth, things to look for in the plant.

**Would you find any of these features helpful to improve your plant care habits?**

(Select any / all that apply)

- Reminders for watering and fertilising
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information based on plant's type and appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"

 Other: \_\_\_\_\_**If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \*** Yes No Maybe**In what ways would you want to interact with an avatar of your indoor plant?**

Simulate care and growth of the plant

**What is your age?**

- Under 18
- 18 - 24
- 25 - 34
- 35+

**To which gender do you most identify as?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Participant: S09

Do you currently own or care for indoor plants? \*

- Yes  
 No

Questions for indoor plant owners

How many indoor plants do you currently have? \*

- 1 - 3  
 4 - 10  
 11 - 20  
 21+

How do you determine if your plants need water or other care?

Do you currently use any apps to assist you in plant care?

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

Questions for non-indoor plant owners

Why do you not currently own or care for indoor plants?

Too much work, I had one before and it died

If you owned indoor plants, how would you determine if they needed water or other care?

The internet

All participants

How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

What difficulties (if any) have you experienced caring for indoor plants in the past?

I wasn't sure how much water to give it and it died

Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

**What kind of information, advice or features would you like a plant care app to provide?**

How much water to give each plant

**Would you find any of these features helpful to improve your plant care habits?**  
(Select any / all that apply)

Reminders for watering and fertilising  
 Personalised care tips based on plant type and geographic location  
 Photo timeline to track plant growth and health  
 Access to pest and disease information based on plant's type and appearance  
 A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"  
 Other: \_\_\_\_\_

If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \*

Yes  
 No  
 Maybe

In what ways would you want to interact with an avatar of your indoor plant?

I would want it to remind me to water

**What is your age?**

Under 18  
 18 - 24  
 25 - 34  
 35+

**To which gender do you most identify as?**

Woman  
 Man  
 Non-binary  
 Prefer not to say

## Participant: S10

Do you currently own or care for indoor plants? \*

- Yes  
 No

Questions for indoor plant owners

How many indoor plants do you currently have? \*

- 1 - 3  
 4 - 10  
 11 - 20  
 21+

How do you determine if your plants need water or other care?

Do you currently use any apps to assist you in plant care?

(If yes, please specify which ones eg. calendar apps, to-do lists, phone reminders, existing plant care apps)

Questions for non-indoor plant owners

Why do you not currently own or care for indoor plants?

Maintenance - I would probably forget to water them, or not give them enough sun. Feels like too much effort. Also I worry about indoor bugs/pests.

If you owned indoor plants, how would you determine if they needed water or other care?

I would google how much water/sun the plant typically needs, and try to follow that as a guide. I would also go by how the plant looks

All participants

How would you rate your ability to care for indoor plants? \*

- Novice  
 Intermediate  
 Expert

What difficulties (if any) have you experienced caring for indoor plants in the past?

Would you use an app that gives you information or advice about caring for indoor plants? \*

- Yes  
 No  
 Maybe

**What kind of information, advice or features would you like a plant care app to provide?****Info:**

How the plant should look (when healthy).  
How much water and sun it typically needs (general maintenance info).  
How to tell if it is getting too much or too little water, sun, etc.  
Some sort of system that ranks how difficult it is to maintain (difficult, easy, etc.).  
It's native environment (tropical, dry, cold, etc.).

**Features:**

Tracks how much I have watered/fertilised the plant (manually inputted by user, then stored by system).  
It then reminds me to water/fertilise them, and when I open the app it has recommended actions that tell me which plants should be watered.  
Allows me to store multiple plants, each of the same or different varieties, and track each of them individually.  
I would like to be able to have notes for each plant, and I can store the health status of each plant (e.g. plant 1 is healthy, plant 2 is struggling, etc.).  
Also an easy search function for adding new plants (that I have bought) to the app.  
It would also be nice if I could use the search function to find new plants that I might be interested in buying - I could filter by various information such as "easy/moderate/hard to maintain", "native to tropical/dry/cold environments", "small/medium/large sized".

**Would you find any of these features helpful to improve your plant care habits?**

(Select any / all that apply)

- Reminders for watering and fertilising
- Personalised care tips based on plant type and geographic location
- Photo timeline to track plant growth and health
- Access to pest and disease information based on plant's type and appearance
- A dictionary to explain specific terms eg. relating to watering frequency or phrases such as "bright indirect light"

Other: .....

**If the App had a customisable avatar of your indoor plant that personalises the advice and information for your plant, does this feature sound appealing to use? \***

- Yes
- No
- Maybe

**In what ways would you want to interact with an avatar of your indoor plant?**

It reminds me when to water/fertilise it. It can tell me info about the plant. It looks different depending on the health status of the plant that I choose (e.g. healthy, struggling, etc.).

**What is your age?**

- Under 18
- 18 - 24
- 25 - 34
- 35+

**To which gender do you most identify as?**

- Woman
- Man
- Non-binary
- Prefer not to say

## Appendix 6 – Qualitative Analysis of Interviews and Survey Data

### Responses Grouped by Question

**Table 1**

**Non-Plant Owners' Responses to Question: Why do you not currently own or care for indoor plants?**

Perceived Difficulty	
P01	<i>They seem like they are a lot of work. There are a lot of factors to consider like fertilizers, growth and what happens when you go away.</i>
P05	<i>Taking care of indoor plants seems like a big hassle.</i>
P12	<i>Won't be able to take care of it. It will probably die. I won't want one if I will kill it. I am moving out soon.</i>
S09	<i>Too much work, I had one before and it died.</i>
S10	<i>Maintenance - I would probably forget to water them, or not give them enough sun. Feels like too much effort. Also I worry about indoor bugs/pests.</i>
Limited Space	
P04	<i>There is no space in my place for them.</i>
S05	<i>I live with my parents.</i>
Time Constraints	
P10	<i>Too busy to look after. Not a huge fan of plants. Parents have enough indoor plants already.</i>
Environmental Factors	
P02	<i>The sunlight doesn't get into my room. I think if I got a plant it would die. I would really like to though.</i>
Negative Past Experiences	
P03	<i>I end up killing them.</i>
S07	<i>I took care of a bonsai that I was gifted once. The person spent two years taking care of it before giving it to me. I promptly killed it in six months.</i>
S09	<i>Too much work, I had one before and it died.</i>
Lack of Interest	
P08	<i>I don't have indoor plants, only outdoor.</i>
P10	<i>Too busy to look after. Not a huge fan of plants. Parents have enough indoor plants already.</i>
S02	<i>Never thought about doing it.</i>
S06	<i>Not interested in raising indoor plants.</i>
S08	<i>I have enough plants outside.</i>

**Table 2**

**Non-Plant Owners' Responses to Question: If you owned indoor plants, how would you determine they needed water or other care?**

<b>Internet Search</b>	
P04	<i>Not sure. I would probably look up specific information for different plants, based on what type of plant and how they look e.g. Wilting. I have also absorbed a lot of information from my Mum who cares for plants.</i>
P05	<i>Probably google how to take care of the plant.</i>
S02	<i>I would search up a tutorial before owning the plant and follow the advice there.</i>
S06	<i>Googling it</i>
S07	<i>Lots and lots of research. Opinions from experienced plant owners or other friends.</i>
S08	<i>I would follow recommendations for that genus and species.</i>
S09	<i>The internet.</i>
S10	<i>I would google how much water/sun the plant typically needs, and try to follow that as a guide. I would also go by how the plant looks.</i>
<b>Existing Applications</b>	
P01	<i>There are already apps. You can scan with your phone to determine the treatments. I don't remember the name of the app. A friend uses an app.</i>
<b>Routine Care</b>	
P02	<i>I would just water it regularly, regardless of how it looked. If it started dying I would put it outside.</i>
P10	<i>I would just water them every now and then and hope they survive. If it looks like its dying give it more water.</i>
<b>Observation or Intuition</b>	
P03	<i>I would guess.</i>
P08	<i>They will need sunlight and water to grow duh.</i>
P12	<i>I'd eyeball it. See how the plant looks.</i>
S05	<i>Touch the soil to see if it's dry yet</i>
<b>Advice from Other People</b>	
P04	<i>Not sure. I would probably look up specific information for different plants, based on what type of plant and how they look e.g. Wilting. I have also absorbed a lot of information from my Mum who cares for plants.</i>
S07	<i>Lots and lots of research. Opinions from experienced plant owners or other friends.</i>

**Table 3**

**Plant Owners' Responses to Question: How do you determine if your plants need water or other care?**

<b>Routine Care</b>	
P11	<i>Routine (time of the week). How the soil feels.</i>
S03	<i>Every week I water them</i>
<b>Observation or Intuition</b>	
P06	<i>Leaves look sad</i>
P07	<i>When they start to die.</i>
P09	<i>Plant looks droopy, then I panic</i>
S01	<i>Droopy leaves, dry soil</i>
S04	<i>They're cacti so it's vibes based on when I'm emptying a water bottle out</i>

**Table 4**

**Plant Owners' Responses to Question: Do you currently use any apps to assist you in plant care?**

<b>Yes</b>	
S01	<i>Calendar reminders.</i>
<b>No</b>	
P04	<i>Nothing at all</i>
P08	<i>No</i>
P09	<i>No</i>
P11	<i>No.</i>
S03	<i>No</i>
S04	<i>Nope</i>

**Table 5**

**All Participants' Responses to Question: What difficulties (if any) have you experienced caring for indoor plants in the past?**

<b>Lack of Knowledge or Experience</b>	
P03	<i>I don't know why they died. Probably overwatered or underwaterd. Comes down to lack of knowledge and experience.</i>
P09	<i>Keeping them alive. Over or under watering, too much fertilizer.</i>
P10	<i>Had to water parent's plants when they were away and it was difficult to keep track of which one's had been watered / not been watered and how much they needed etc.</i>
P11	<i>They die for no reason and I'm never quite sure why.</i>
S03	<i>They've died</i>
S07	<i>I was told that my bonsai just "needed to be watered once in a while" Do you have any idea how hard it is to kill one?! I tried following the simplest instructions and I couldn't even do that</i>
S09	<i>I wasn't sure how much water to give it and it died.</i>
<b>Forgetfulness</b>	
P07	<i>Remembering to water the plants.</i>
P06	<i>I over water the plants, and removing pests (fungus, gnats), sometimes forget to water</i>
P10	<i>Had to water parent's plants when they were away and it was difficult to keep track of which one's had been watered / not been watered and how much they needed etc.</i>
P12	<i>Was given one by parents and it died cause I didn't do a good job looking after it.</i>
S01	<i>Forgetting to water</i>
S08	<i>Forgetting care for that plant</i>
<b>Lack of Equipment</b>	
P01	<i>My only experience is with cacti. Difficulty was checking they are okay but trying to avoid not getting hurt and pricked by them. They look flimsy but the thorns are very sharp.</i>
<b>Pets</b>	
S04	<i>I have a cat who tries to eat any indoor plants. I have to yell at him to leave my large cactus alone.</i>

**Table 6**

**All Participants' Responses to Question: What kind of information, advice or features would you like a plant care app to provide?**

<b>Information about Watering</b>	
P01	<i>Seasonal information about growth. Information about water needs, fertilizer. The main thing would be a calendar with notifications and updates that the plant is most viable in a particular season.</i>
P02	<i>A dictionary of plants. For each plant, watering and sun advice.</i>
P03	<i>When to water the plant. What conditions to put the plant in e.g. Sunlight.</i>
P04	<i>Time last watered. Type of plant. Soil quality - general soil levels. Sunlight exposure.</i>
P07	<i>Amount of fertilizer, soil acidity, watering frequency etc</i>
P09	<i>Sunlight to no light placement instructions, general watering schedule.</i>
P10	<i>Tells me when to water the plants and which ones to water.</i>
P12	<i>Reminds me when to water. Helps me know if it is gonna die.</i>
S01	<i>Plant specific info like how much sun/water it needs</i>
S07	<i>How often to water it + how much water + a reminder system for it. How often it should be in sunlight. Plants that you can buy locally. Little facts about the plant. Maybe stuff that says "if you see this happening to your plant, don't worry/you should worry"</i>
S09	<i>How much water to give each plant.</i>
S10	<i>Info: How much water and sun it typically needs (general maintenance info). How to tell if it is getting too much or too little water, sun, etc. Features: Tracks how much I have watered/fertilised the plant (manually inputted by user, then stored by system.) It then reminds me to water/fertilise them, and when I open the app it has recommended actions that tell me which plants should be watered.</i>
<b>Information about Fertilising</b>	
P01	<i>Seasonal information about growth. Information about water needs, fertilizer. The main thing would be a calendar with notifications and updates that the plant is most viable in a particular season.</i>
P07	<i>Amount of fertilizer, soil acidity, watering frequency etc</i>
P08	<i>How it grows, what you need to grow and ingredients.</i>
S10	<i>Info: How much water and sun it typically needs (general maintenance info). How to tell if it is getting too much or too little water, sun, etc. Features: Tracks how much I have watered/fertilised the plant (manually inputted by user, then stored by system.) It then reminds me to water/fertilise them, and when I open the app it has recommended actions that tell me which plants should be watered.</i>
<b>Information about Soil</b>	
P04	<i>Time last watered. Type of plant. Soil quality - general soil levels. Sunlight exposure.</i>
P07	<i>Amount of fertilizer, soil acidity, watering frequency etc</i>
P08	<i>How it grows, what you need to grow and ingredients.</i>
<b>Information about Sunlight</b>	
P02	<i>A dictionary of plants. For each plant, watering and sun advice.</i>
P03	<i>When to water the plant. What conditions to put the plant in e.g. Sunlight.</i>
P04	<i>Time last watered. Type of plant. Soil quality - general soil levels. Sunlight exposure.</i>
P09	<i>Sunlight to no light placement instructions, general watering schedule.</i>
S01	<i>Plant specific info like how much sun/water it needs</i>
S07	<i>How often to water it + how much water + a reminder system for it. How often it should be in sunlight. Plants that you can buy locally. Little facts about the plant. Maybe stuff that says "if you see this happening to your plant, don't worry/you should worry"</i>
S10	<i>Info: How much water and sun it typically needs (general maintenance info). How to tell if it is getting too much or too little water, sun, etc.</i>

<b>Disease / Health Information</b>	
P11	<i>Disease/health identification through pictures.</i>
P12	<i>Reminds me when to water. Helps me know if it is gonna die.</i>
S06	<i>Help with identifying issues/diseases</i>
S07	<i>How often to water it + how much water + a reminder system for it. How often it should be in sunlight. Plants that you can buy locally. Little facts about the plant. Maybe stuff that says "if you see this happening to your plant, don't worry/you should worry"</i>
S08	<i>Reminders, milestones of the plant's growth, things to look for in the plant.</i>
S10	<i>Info: How the plant should look (when healthy). Features: I would like to be able to have notes for each plant, and I can store the health status of each plant (e.g. Plant 1 is healthy, plant 2 is struggling etc.)</i>
<b>Pet Safety</b>	
P06	<i>Widget on home screen to list plants needing care. Watering frequency, how often pruning/trimming is needed and how. When/how to fertilise, fun facts and trivia (this plant was featured in a painting). Is plant pet safe?</i>
<b>Seasonal / Geographical Information</b>	
P01	<i>Seasonal information about growth. Information about water needs, fertilizer. The main thing would be a calendar with notifications and updates that the plant is most viable in a particular season.</i>
S07	<i>How often to water it + how much water + a reminder system for it. How often it should be in sunlight. Plants that you can buy locally. Little facts about the plant. Maybe stuff that says "if you see this happening to your plant, don't worry/you should worry"</i>
S10	<i>Info: It's native environment (tropical, dry, cold, etc). Features: It would also be nice if I could use the search function to find new plants that I might be interested in buying - I could filter by various information such as "easy/moderate/hard to maintain", "native to tropical/dry/cold environments", "small/medium/large sized"</i>
<b>Plant Dictionary</b>	
P02	<i>A dictionary of plants. For each plant, watering and sun advice.</i>
P04	<i>Time last watered. Type of plant. Soil quality - general soil levels. Sunlight exposure.</i>
P08	<i>How it grows, what you need to grow and ingredients.</i>
S02	<i>Can easily look up the plant and have a detailed list of instructions to follow. The app should also be minimalistic.</i>
S03	<i>Information on different types of plants</i>
S10	<i>Info: How the plant should look (when healthy). Some sort of system that ranks how difficult it is to maintain (difficult, easy, etc) It's native environment (tropical, dry, cold, etc). Features: Also an easy search function for adding new plants (that I have bought) to the app. It would also be nice if I could use the search function to find new plants that I might be interested in buying - I could filter by various information such as "easy/moderate/hard to maintain", "native to tropical/dry/cold environments", "small/medium/large sized"</i>
<b>Tutorials</b>	
P05	<i>Easy step by step guide.</i>
S02	<i>Can easily look up the plant and have a detailed list of instructions to follow. The app should also be minimalistic.</i>

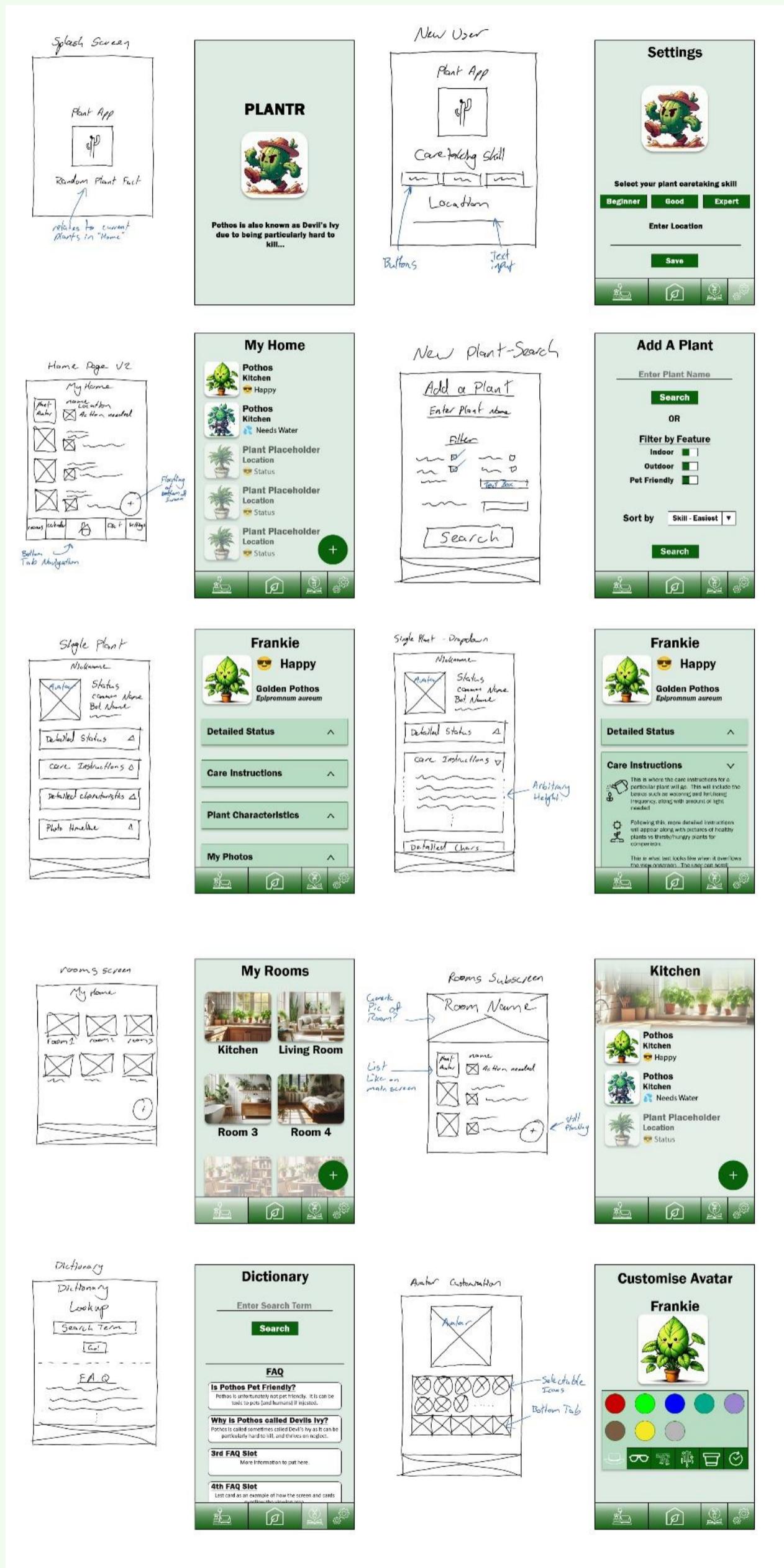
<b>Fun Facts and Trivia</b>	
P06	<i>Widget on home screen to list plants needing care. Watering frequency, how often pruning/trimming is needed and how. When/how to fertilise, fun facts and trivia (this plant was featured in a painting). Is plant pet safe?</i>
S07	<i>How often to water it + how much water + a reminder system for it. How often it should be in sunlight. Plants that you can buy locally. Little facts about the plant. Maybe stuff that says "if you see this happening to your plant, don't worry/you should worry"</i>
<b>Reminders / Calendar / Schedule</b>	
P01	<i>Seasonal information about growth. Information about water needs, fertilizer. The main thing would be a calendar with notifications and updates that the plant is most viable in a particular season.</i>
P06	<i>Widget on home screen to list plants needing care. Watering frequency, how often pruning/trimming is needed and how. When/how to fertilise, fun facts and trivia (this plant was featured in a painting). Is plant pet safe?</i>
P09	<i>Sunlight to no light placement instructions, general watering schedule.</i>
P10	<i>Tells me when to water the plants and which ones to water.</i>
P12	<i>Reminds me when to water. Helps me know if it is gonna die.</i>
S04	<i>Something that's integrated with an app I already use or something that's in my home. I forget apps exist and the amount of notifications I receive per day means another one adding to it won't help me. What would help is something I stick in the plant or like an integration with my friend groups life360 group so they can remind me to water my plants like they remind me to charge my phone.</i>
S07	<i>How often to water it + how much water + a reminder system for it. How often it should be in sunlight. Plants that you can buy locally. Little facts about the plant. Maybe stuff that says "if you see this happening to your plant, don't worry/you should worry"</i>
S08	<i>Reminders, milestones of the plant's growth, things to look for in the plant.</i>
S10	<i>Features: Tracks how much I have watered/fertilised the plant (manually inputted by user, then stored by system.) It then reminds me to water/fertilise them, and when I open the app it has recommended actions that tell me which plants should be watered. Allows me to store multiple plants, each of the same or different varieties, and track each of them individually.</i>

**Table 7**

**Participants' Responses to Question: In what ways would you want to interact with an avatar of your indoor plant?**

<b>Plant Care Information via Chat / Reminders</b>	
P02	<i>The avatar could be a chatbot that you could ask questions of.</i>
P03	<i>I want the avatar to give reminders or notifications of things to do.</i>
P04	<i>Simple reminder would be the best thing. Different facial expressions for different states of plant health.</i>
P10	<i>To tell me if the plant is dying or healthy</i>
P12	<i>Reminders to water and how to not kill it.</i>
S09	<i>I would want it to remind me to water</i>
S10	<i>It reminds me when to water/fertilise it. It can tell me info about the plant. It looks different depending on the health status of the plant that I choose (e.g. Healthy, struggling etc)</i>
<b>Plant Care Information via Avatar's Appearance</b>	
P04	<i>Simple reminder would be the best thing. Different facial expressions for different states of plant health.</i>
P06	<i>Wilted/sad appearance when plant needs care. Have a "garden" with your plants, and you can drag a watering can to "water" that plant.</i>
P09	<i>Showing if happy or sad based on watering. Changes appearance based on season (sunnies in summer, scarf in winter)</i>
P10	<i>To tell me if the plant is dying or healthy</i>
S01	<i>Looks bright and cheerful if taken care of, wilted or tired when forgotten about.</i>
S08	<i>Simulate care and growth of the plant</i>
S10	<i>It reminds me when to water/fertilise it. It can tell me info about the plant. It looks different depending on the health status of the plant that I choose (e.g. Healthy, struggling etc)</i>
<b>Social Chat with Other Users</b>	
P01	<i>Make the experience more personable. Possibly find friends. Make it a social event and get tips from other plant users.</i>
<b>Social Chat with Avatar</b>	
P07	<i>As a companion</i>
<b>Customise Appearance of Avatar</b>	
S07	<i>Cute little accessories to unlock and dress them in. Customising their name and pronouns. I use an app called Finch that has features like this.</i>
<b>Games/Activities featuring Avatar</b>	
P06	<i>Wilted/sad appearance when plant needs care. Have a "garden" with your plants, and you can drag a watering can to "water" that plant.</i>

## Appendix 7 – Low-Fidelity and High-Fidelity Prototypes



The Low-Fidelity to High-Fidelity Prototype transition

## Appendix 8 - Feedback to Software Prototype

Each participant walked through the Software Prototype on the Interaction Flow Diagram from screen to screen as if they were using different features of the App. They were asked to talk aloud about the app features and design.

### Participant T01

Screen / Interaction Flow	User comments
Settings screen	<i>There should be some information visible on the screen telling me what type of location information is required e.g. town/postcode.</i>
My Home screen	<i>The (+) button should say “Add Plant” or “Add Room” where needed, otherwise I’m not sure what it actually does or adds. I would also like to see the personalised name of the plant displayed.</i>
Add a Plant screen	<i>It is unclear what the top Search button is searching for e.g. a plant variety, your plant name etc. It’s uncertain where you would be able to add a name for your plant. If a plant is added, what is its default status? (e.g. happy, needing water etc.). Does the user input this in initially or at other times?) Is there a default status?</i>
Plant screen	<i>I don’t know that the avatar can be changed without clicking on the picture. It would be good to have something to indicate the avatar can be changed. Maybe a pop-up tutorial walkthrough of the app with a default plant?</i>
Customise Avatar screen	<i>At the moment I don’t know which options have been selected or not. I also don’t see any button to save or cancel my selections. You might need some instructions here.</i>
My Rooms screen	<i>Is there a limit to the number of rooms you can have on this App? If so, please make that clear so I know when I’m setting up the App with my plants that I might be limited to a number of rooms. The (+) button could visibly count down to the limit so you know how many to go.</i>
Individual Room screen	<i>Is there a limit to the number of individual plants in a room, or in the App generally? It would also be good to have a count down to the limit or some other message.</i>
All screens	<i>I would prefer a back button on every screen. If you are doing something on the Plant screen, you have to go back to the general Rooms screen, instead of say the Kitchen screen. This would be annoying if you wanted to do something with all of your plants in the one room.</i>
Dictionary	<i>I don’t know if the search function here is only App specific or internet wide.</i>
Settings button	<i>The settings button is missing an arrow returning to the settings screen.</i>
Generally	<i>I would like to know more easily what some of the buttons do, as there is no visual descriptions. (This could be as a result of the clarity of the software prototype.) Overall though the App looks very good!</i>

## Participant T02

Screen / Interaction Flow	User comments
Settings screen	Why does the app need the location?
My Home screen	Have an option to swap between a list and a tile display
Add a Plant screen	Unclear if the enter plant name is for what to call the plant or for entering the search term. Needs a question like “what did you recently buy?” Add a plant feels like “something I have already that I want to add into the system, and filter feels like I want a plant to put in my bathroom but I don’t know which one”
Plant screen	Nothing to indicate that you can customise the avatar. Drop down draws are a good idea. Add a “birthday” status?
Customise Avatar screen	Clock icon looks like “reset” not “history”. No save icon.
My Rooms screen	Maybe change the “add” icons position/colour/symbol to be more specific to “adding a room”. Placeholder rooms work because there’s a visual indicator that you can add more rooms.
Individual Room screen	Room needs data based on room location (like room is east facing so gets more sun, therefore these plants need more watering). Need to customise the room (amount of sun, temperature, etc)
Splash screen	Should say welcome, tap to begin/continue
Dictionary	What is the dictionary based off? Does it link to google search?
Generally	Have some way to recommend plants based on current “garden” Overall, it looks good.

## Participant T03

Screen / Interaction Flow	User comments
Settings screen	Why does the app mandate location access? What does it use location for?
My Home screen	Why is plant who needs water dripping wet?
Add a Plant screen	I would like to use this as a search function to look for plants rather than just add them [must be confused about purpose of this screen]. When I add plants I would like to choose plant size.
Plant screen	I would like to see past maintenance actions I have taken like watering, etc. I would like to see expected lifespan, and other info calculated from the plant size and health.
My Rooms screen	I like the room layout usage 😊 .
Dictionary	I would like a list of common plant terms on top of the FAQ.

## Appendix 9 –Qualitative Analysis of Software Prototype Feedback

**Table 1**  
**Participants' Responses to Software Prototype**

<b>Add a Plant Screen / Dictionary: Search button</b>	
T01	<p><i>Add a Plant Screen: It is unclear what the top Search button is searching for e.g. a plant variety, your plant name etc.</i></p> <p><i>Dictionary: I don't know if the search function here is only App specific or internet wide.</i></p>
T02	<p><i>Add a Plant Screen: Unclear if the enter plant name is for what to call the plant or for entering the search term. Needs a question like "What did you recently buy?" Add a plant feels like "something I have already that I want to add into the system., and filter feels like I want a plant to put in my bathroom but I don't know which one." Have some way to recommend plants based on current "garden".</i></p> <p><i>Dictionary: What is the dictionary based off? Does it link to Google search?</i></p>
T03	<p><i>Add a Plant Screen: I would like to use this as a search function to look for plants rather than just add them [must be confused about purpose of this screen]. When I add plants I would like to choose plant size.</i></p> <p><i>Dictionary: I would like a list of common plant terms on top of the FAQ.</i></p>
<b>Add (+) Button in My Home / My Rooms / Individual Rooms</b>	
T01	<p><i>The (+) button should say "Add Plant" or "Add Room" where needed, otherwise I'm not sure what it actually does or adds. Is there a limit to the number of rooms you can have on this App? If so, please make that clear so I know when I'm setting up the App with my plants that I might be limited to a number of rooms. The (+) button could visibly count down to the limit so you know how many to go.</i></p> <p><i>Is there a limit to the number of individual plants in a room, or in the App generally? It would also be good to have a count down to the limit or some other message.</i></p>
T02	<p><i>Maybe change the "add" icons position/colour/symbol to be more specific to "adding a room". Placeholder rooms work because there's a visual indicator that you can add more rooms.</i></p>
<b>Settings Screen: Location</b>	
T01	<p><i>There should be some information visible on the screen telling me what type of location information is required e.g. town/postcode. (Unclear what location information needed)</i></p>
T02	<p><i>Why does the app need the location?</i></p>
T03	<p><i>Why does the app mandate location access? What does it use location for?</i></p>
<b>Home Screen: List/Tile Display</b>	
T02	<p><i>Have an option to swap between a list and a tile display.</i></p>
T03	<p><i>Why is plant who needs water dripping wet?</i></p>
<b>Plant Screen: Plant Avatar Interaction</b>	
T01	<p><i>I don't know that the avatar can be changed without clicking on the picture. It would be good to have something to indicate the avatar can be changed. Maybe a popup tutorial walkthrough of the app with a default plant?</i></p>
T02	<p><i>Nothing to indicate you can customise the avatar.</i></p>
<b>Plant Screen: Information Cards</b>	
T02	<p><i>Drop down drawers are a good idea. Add a "birthday" status?</i></p>
T03	<p><i>I would like to see past maintenance actions I have taken like watering, etc. I would like to see expected lifespan, and other info calculated from the plant size and health.</i></p>

<b>Avatar Customising Options</b>	
T01	<i>I don't know which options have been selected or not. I also don't see any button to save or cancel my selections. You might need some instructions here.</i>
T02	<i>Clock icon looks like "reset" not "history". No save icon</i>
<b>Back Feature</b>	
T01	<i>I would prefer a back button on every screen. If you are doing something on the Plant screen, you have to go back to the general Rooms screen, instead of say the Kitchen screen. This would be annoying if you wanted to do something with all of your plants in the one room.</i>
<b>Home Screen: Display personal name of plant (not just plant variety name)</b>	
T01	<i>I would also like to see the personalised name of the plant displayed (on the home screen).</i>
<b>Add a Plant Screen: Naming the Plant</b>	
T01	<i>It's uncertain where you would be able to add a name for your plant. If a plant is added, what is its default status? (e.g. happy, needing water etc). Does the user input this in initially or at other times. Is there a default status?</i>
<b>My Rooms / Individual Room</b>	
T02	<i>Room needs a database on room location (like room is east facing so gets more sun, therefore these plants need more watering). Need to customise the room (amount of sun, temperature etc).</i>
T03	<i>I like the room layout usage 😊.</i>
<b>Splash Screen</b>	
T02	<i>Should say "welcome, tap to begin/continue"</i>

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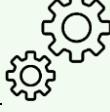
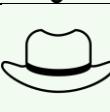
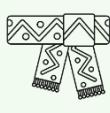
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