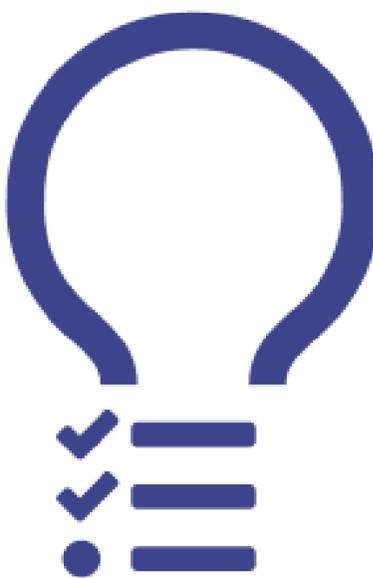
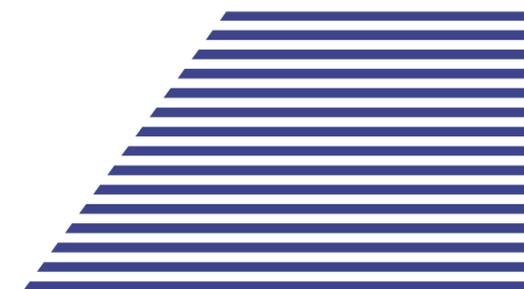




# achievov



Personalised for you

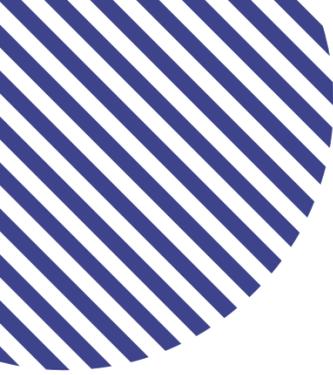


Emily, Yasmine, Emma

DECO2200 A4

**Figma Link for interactive prototypes only:** <https://www.figma.com/file/eCVdA5sAf58z3EE1MpO3V3/DECO2200-Interactive-Prototypes?type=design&mode=design&t=ZBV5aDjeC19718NT-1>

Figma Link for Usability testing + Wireframes + Mockups: <https://www.figma.com/file/TG2hXiKzAW0o8DOBFBOwaY/DECO2200-other?type=design&node-id=1%3A18104&mode=design&t=n7lNZyeYXmHKMXGK-1>



# CONTENTS

1

**Introduction**

*p. 1-3*

2

**Concept  
Development**

*p. 4*

3

**Testing &  
Iterating**

*p. 5 - 34*

4

**Final  
Product**

*p. 35 - 44*

5

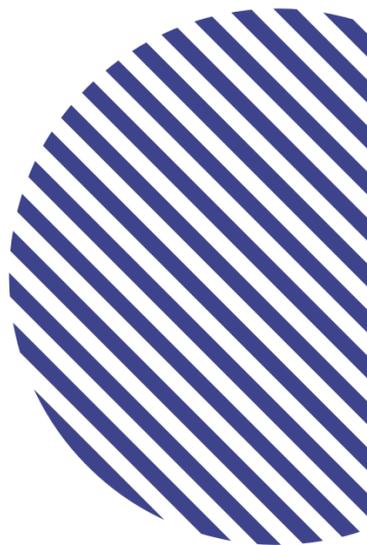
**Reflection**

*p. 45 - 46*

6

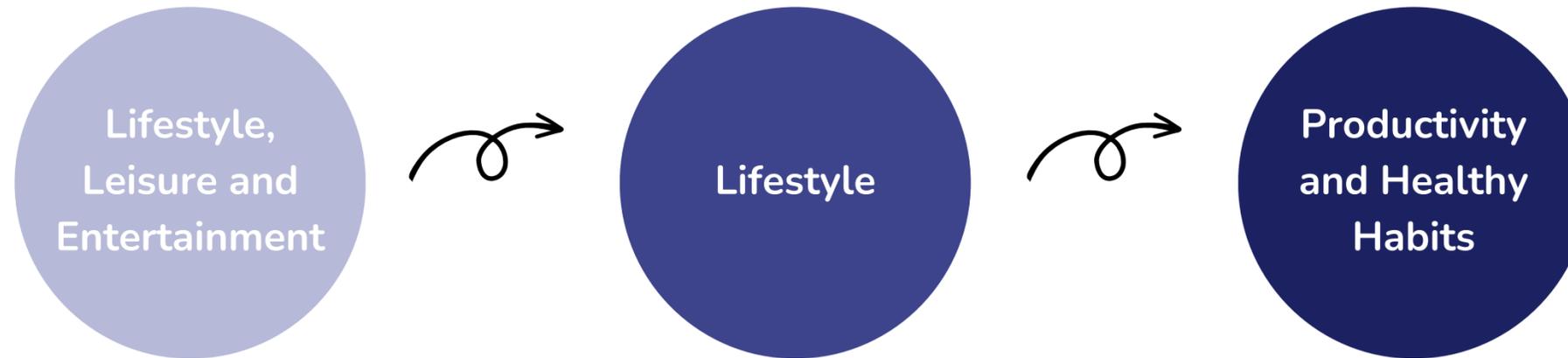
**Appendix**

*p. 47 - 167*



# 1: INTRODUCTION - PROBLEM AREA

We choose **Lifestyle, Leisure and Entertainment** as our problem area for this project. Within that broad area our focus was on Lifestyle. We again shorten the focus to a niche in **productivity and healthy habits**. Through background research we aimed to identify current issues within this space within the young adult and teenager demographic to justify both a need for the application and a gap in existing solutions. .



Within our research, focusing on issues on productivity and healthy habits, we decided to focus on improving habit-tracking for young adult as our problem scenario.

With a **growing trend of low attention spans** (Hayes, 2023), young adults are struggling to establish consistent healthy habits, and remain productive. We have found that this **problem disproportionality affects young adults**, with the cause being largely tied to an **overexposure to social media and smartphone addiction** (Carstens et al, 2018) (Duke & Montag, 2017). By **establishing consistent, productive habits, the cycle of poor productivity can be broken**, as individuals are found to be most productive when faced with consistent challenges – big or small (Simonsen, 2020).

We have identified this to be an important issue to explore over other problem areas, as this is an issue that impacts many of our peers in their daily life. As well as this, social media and smartphone dependency is becoming a more and more prevalent issue, as technology becomes deeper integrated into our day-to-day. We believe that **by exploring this issue deeper, we can uncover the most effective ways consistent productive habit making can be adopted**.

This leads us to our original problem statement and five research questions we developed to aid in the conduction of our primary research. Although we have five research questions, these can be separated into experiences on existing self-tracking solutions and productivity / healthy habits broadly. We wanted to understand what made people productive, what barriers exist making it difficult to build good habits and how best to target our demographic.

**“To understand how self-tracking apps can be better suited for young adults, in order to address the demographic's specific needs regarding productivity.”**



# 1: INTRODUCTION - PRIMARY RESEARCH

01

How do gamified applications improve engagement?

02

How can self-tracking applications be better suited for young adults?

03

What type of features are effective or missing from self-tracking applications

04

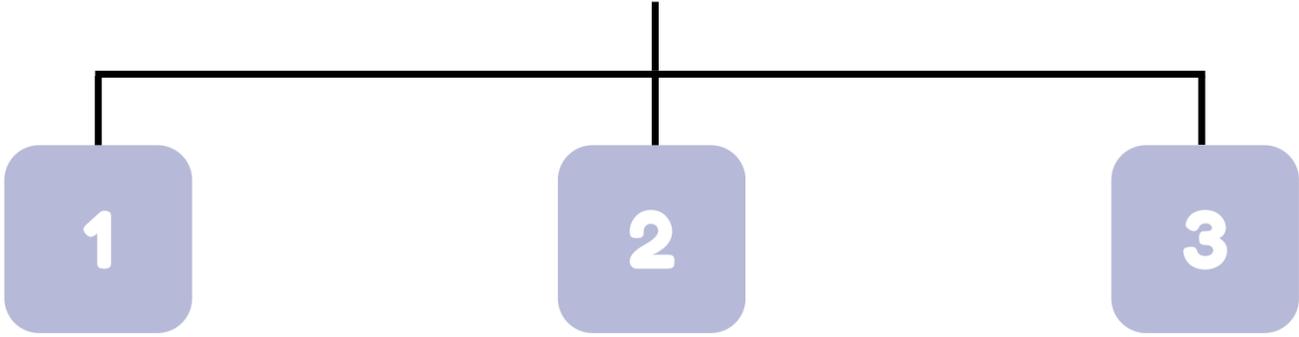
What are the barriers preventing young adults from being productive

05

What motivates people to form and maintain habits and be productive?

For our research protocol we will conduct **interviews**, **online ethnography** and **questionnaires**. This allowed for a range of qualitative / quantitative and lab-based / in-the-wild. As mentioned in the previous slides the data we gained can be separated into experiences with self-tracking and productivity / healthy habits. Therefore for analysis we developed two separate **affinity diagrams** to help display the different types of data. For synthesis we developed three **personas** and two **storyboards**.

## Primary Research



Questionnaire

see Appendix A.1

Interviews

see Appendix A.2

Online Ethnography

see Appendix A.3

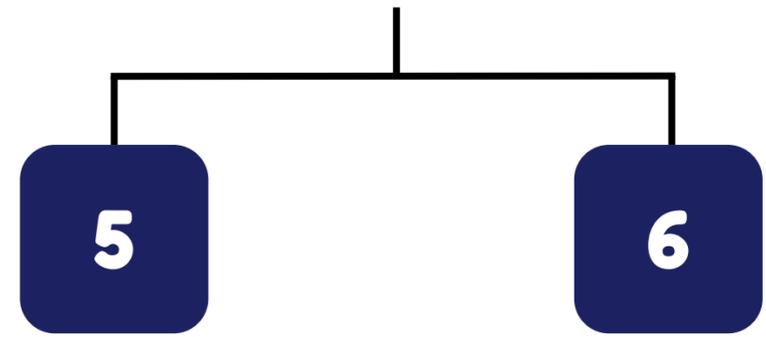
## Analysis



Affinity Diagram

see Appendix A.4

## Synthesis



Personas

see Appendix A.5

Storyboards

see Appendix A.6

# 1: INTRODUCTION - EXISTING SOLUTIONS + RESEARCH SUMMARY

Productivity applications are quite common, there are a variety of different ones out there. For this discussion we will be focusing on two different productivity applications similar to our vision: **Habitica** and **Flora**.



**Habitica**

Habitica is a free habit-building and productivity app that uses retro RPG elements to gamify your tasks and goals. Use Habitica to help with ADHD, self care, New Year's resolutions, household chores, and more! (App Store, n.a.)



**Flora**

Flora blocks distracting apps in a pleasant way to help you focus on what's more important in real life. If you cannot resist the temptation of using your phone and leave the app while growing a tree, the tree will be killed! (App Store, n.a.)

**Both applications are limited, lack customisability and do not have statistics.** Specifically, Habitica is too limited due to how 'gamified' their app is and the application is freemium, and Flora leaves little room for freedom with only the Pomodoro method which no pause or exiting allowed and has no audio to indicate breaks. **Flora is however quite effective with hundreds of 5 star reviews** and is well known. Habitica has a niche target audience which allows them to cater better to their audience's needs and wants.

A lot of our research also revealed the limitations of existing solutions. Overall, participants also supported gamified or a **fun and engaging application** for self-tracking over a regular one. The main complaints about existing solutions were that they were **'tedious,' 'too complication,' 'cost money,' 'ads.'** Having this in a application aimed for self-improvement is counter productive. Users identified what was most important for them in self-tracking apps with the necessity for a **good UI, easy to use, customizability, visibility of progress and motivation.** Visibility of progress was most notable, people wanted to **clearly tick off tasks, view statistics of progress and have audio for completing tasks** (Appendix A.4.3). It was identified that the top 4 motivators for participants are self-improvement, pressure, success and competition which should be considered in our approach.

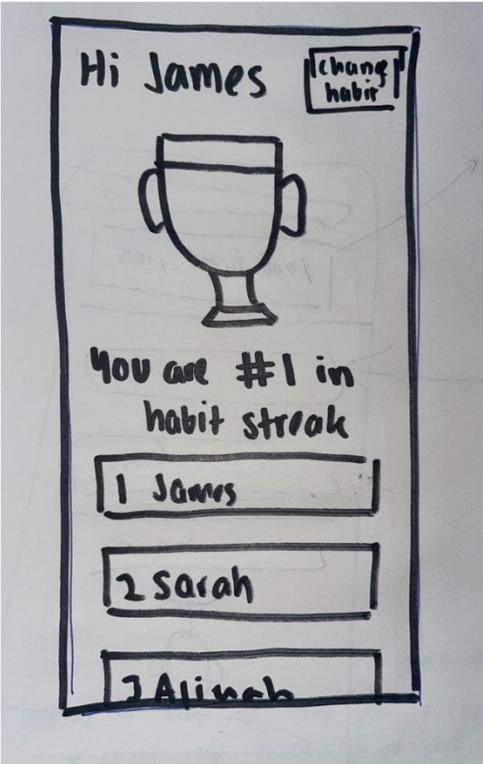
One of the key insights discovered in the primary research was that having **healthy habits often results in higher productivity** (Appendix A.1.2, A.4.2). Therefore we narrowed the scope of our product to focus on building habits rather than overall productivity. Furthermore as mentioned in the existing solutions sections, participants had very clear perceptions of what they liked or wanted and disliked within new applications, leading us to our new problem statement:

Appendix A (all)

**“To discover the most effective ways to implement personalised, engaging and manageable habit tracking solutions through a digital medium”**

# 2: CONCEPT DEVELOPMENT - IDEATION PROCESS

We approach early ideation with rapid methods with **reverse thinking**, **crazy 8's**, **mind mapping** and **storyboarding**. To increase the effectiveness of our ideation we conducted this in a group session (Harley, 2017), allow us to first develop our own ideas briefly and come together to further develop specific concepts. Following this we further developed individual concepts with more detailed sketching and used a **decision matrix** to choose which concept to further develop. Once we formed this foundation we completed an **ethic canvas** before finalised our design concept. The three ideas we narrowed our ideas to were:



Appendix: B.3.2

### Competitive leaderboard based app

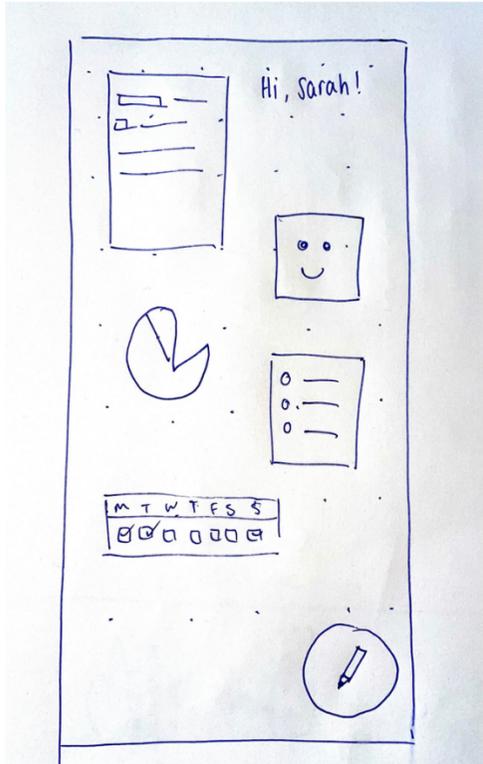
With this concept, we imagined a more competitive experience, where users would have an online leaderboard that promoted having the longest habit streak.



Appendix: B.3.4

### Point system, profile based app

With this concept, we envisioned an app that promoted habit tracking through some kind of point system. We found from our research, that this method of incentive was effective in encouraging young adults to become consistent in other habit tracking apps.



Appendix: B.3.3

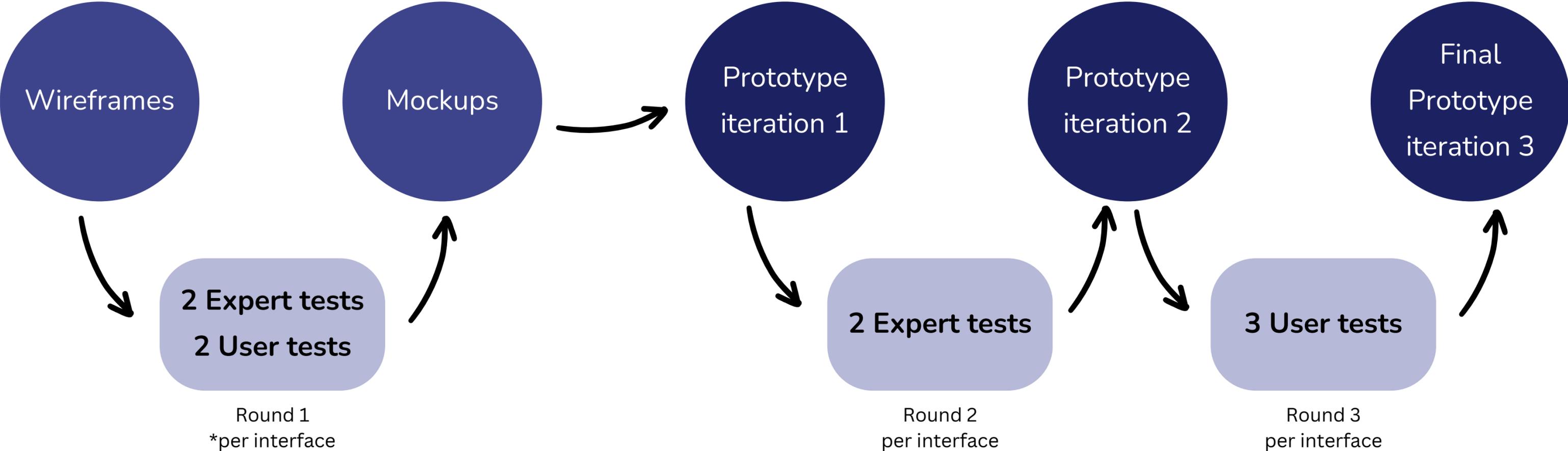
### Freeform "pinboard" based app

With this concept, we imagined an app where users would be given a freeform "pinboard", where they could add a number of widgets provided by the app. This would allow for an extremely customisable experience, however, we worried that this concept may be too user-led and provided little social interaction.

*Ultimately, we decided to move ahead with the 2nd concept, as we felt it combined the customisation of the third concept, and the gamification of the first concept. As well as this, when assessed in our decision matrix, this idea scored the highest.*

# 3: TESTING & ITERATING - PROCESS OVERVIEW

As a brief description of the overall testing and iterating process. In total there were three rounds of usability testing starting on **mid-fidelity wireframes** to **high-fidelity interactive prototypes**. As noted below, the number of experts or users is per interface. In the first round of usability testing we were quite limited as the prototype was not interactive, this therefore required more involvement by the moderator when the participant successfully completes a task, for this two usability testing protocols were developed for experts and users. The experts will complete a cognitive walkthrough while the users will vocalise their thought process with a think aloud. The second round of testing involves an in-depth usability testing session with two experts which complete an heuristic evaluation individually and then a lengthy discussion with the moderator to gain a further qualitative data regarding their perspectives and experience. The third and final round involves three users (per interface) which will involve a Think Aloud, SUS Survey and contextual interview. Between each round of testing iterations are made based off our analysis and insights from the data gathered.



\*As the watch interface doesn't have all features available to test in the first wireframe testing session, extra expert and user testing will be conducted on the mobile wireframe for features NOT in the watch wireframe. This will become more clear in the next page

# 3: TESTING & ITERATING - WIREFRAME TESTING PROTOCOL

To briefly describe the iteration from wireframes to mock-ups, we first started with five features we needed to test and develop. Due to the limited capabilities of a smart watch with a small screen (Ghazarian, 2014), only three features will be tested with extra testing conducted on the smartphone version.

Features	Smartphone	Smart Watch	Desktop
Select and set up a character	✘	✘	✘
Add a new habit	✘	✘	✘
Invite a friend to join a habit	✘	✘	✘
Buy and equip items for the user's character	✘		✘
Edit and customise the homepage	✘		✘

Appendix D.1.1

For both User and Expert testing there are two scenarios covering different tasks for them to complete:

**Scenario 1:** You just downloaded the app and want to start a habit with your friend. Your goal is to set up your profile, then create a new habit with a friend. (Tasks: 1, 2, 3) [Desktop, Mobile, Watch]

**Scenario 2:** After meeting your goal of completing your habit 10 days in a row, you earned some coins! With these coins, buy and equip a hat for your character. Then edit your homepage to set yourself a goal for the week. (Tasks: 4, 5) [Desktop, Mobile]

We established three usability testing goals:

- Our goal is to see if the habit adding / customising features (Task 1,2)
- To see how time the set up efficient (Task 3,4)
- To see how intuitive the user customisation options are (Task 5)

**User Testing Protocol**

Users will only be informed of the scenario and be told to vocalised their thought process with the **Think Aloud** method. Afterwards an interview is conducted.

**Expert Testing Protocol**

Experts will be informed of the scenario but also the specific tasks as they go through a **Cognitive Walkthrough**, requiring them to grade each step within a task as either a success of failure on four categories. Afterwards an interview is conducted.

**Expert + User POST Interview Questions**

- How did the system for setting up a habit and inviting a friend feel? Was it easy
- Did the process for creating a new habit feel too long?
- Would you have liked to customise the environment (habit tracking page) of your character more?

# 3: TESTING & ITERATING - USABILITY TESTING METHODS ROUND 1

- EXPERT**  
Cognitive Walkthrough  
A cognitive walkthrough is used to evaluate the learnability from the perspective of a new user which is highly structured as you walkthrough tasks and assess it. The cognitive walkthrough requires a minimum of two experts, one acting as a facilitator and the other as an evaluator while we will be the moderator (Salazar, 2022).
- USER**  
Think Aloud  
From the words that some would consider the founder of UX, Jakob Neilson supports Think Aloud as the #1 Usability testing tool, "Thinking aloud may be the single most valuable usability engineering method." (Neilson, 1993) This method which is employed in the user testing of the wireframes simply involves prompting users to completes tasks and talk through their thought process to identify how they can work through your application from a user's perspective. (Neilson, 2012)
- EXPERT + USER**  
Post Interview  
Following the usability testing for both Experts and Users, a contextual interview will take place. This allows us to further explore areas we observed them to struggle with to gain further clarification and also further opinions or recommendations we can take into consideration in our data analysis and further iterations (Usability.gov, 2023)

Using data from transcripts, Think Aloud, Cognitive Walkthrough and interviews we analysed our data with a combination of bottom-up and top-down methods and synthesised these into a usability testing insights table. We found three key insights from each interface. More details on establish these insights can be found in Appendix D.1.4

## Smart Phone

- Users were confused on how to create a new habit, and assumed it was accessible in the home page
- Users wanted the avatar shop to be expanded and have the ability to try on an item before you purchase it
- Users did not recognise how to add a widget to their home page and how to make widgets move

## Smart Watch

- Users felt overwhelmed with the amount of buttons when configuring a new habit
- Users did not mind spending extra time configuring a new habit - being if they focus on only one habit
- Users wanted more digital feedback to confirm certain decisions (selecting a character)

## Desktop

- Users felt that some instruction text was unnecessary or distracting.
- Users did not want to spend time navigating to different pages.
- Users wanted a more visible contrast when editing the homescreen.

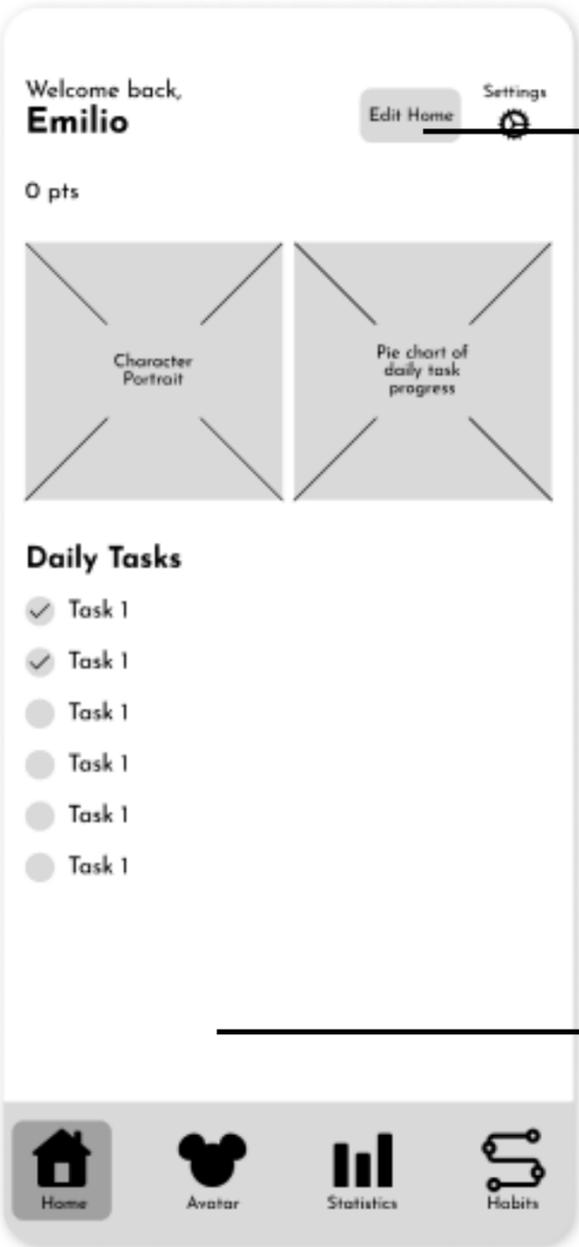
# 3: TESTING & ITERATING - WIREFRAME TO MOCKUPS - MOBILE

Two of the three key insights encompassed the home page in the wireframe usability testing.

Both experts and users **did not recognise how to navigate to the habit page to add a habit**. Therefore we added a CTA and re-arranged the nav bar in terms of importance. It will become evident in round 3 of usability testing that this addition greatly improved the user's ability to navigate to the habit page.

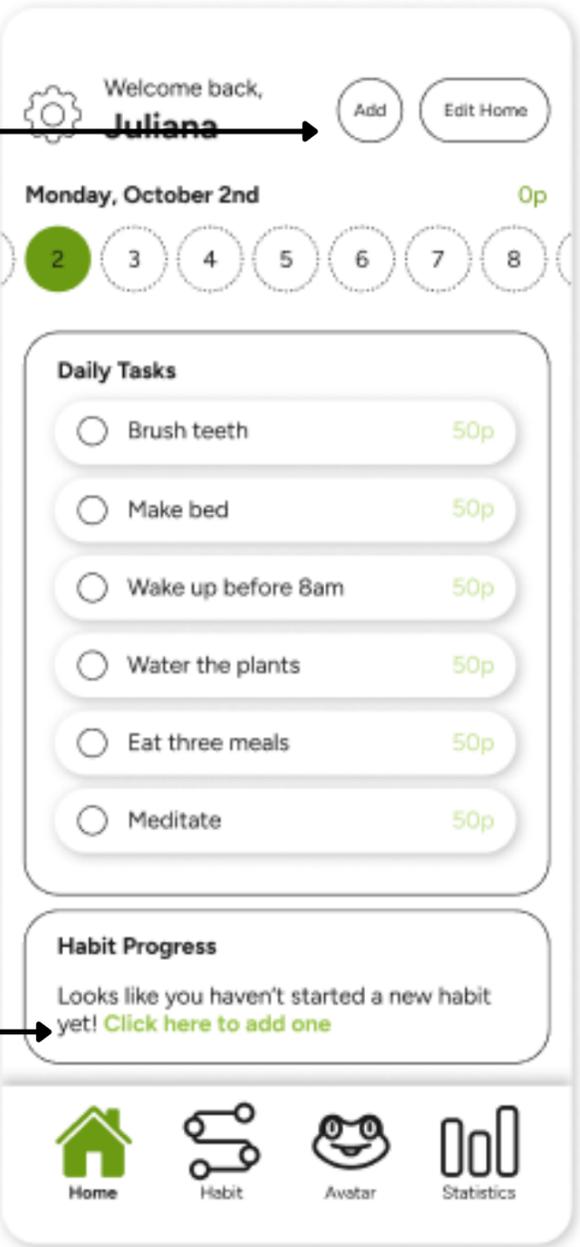
Users were also confused on how to add to home page and move widgets. Previously when the user would click edit home the objects will become 'moveable,' and a large '+' button is placed in the middle right above the navigation bar which is where you go to configure a new habit. We found it necessary then to separate this into it's two functionalities, Edit home or move and Add.

## Home



Appendix C.1.1

## Home



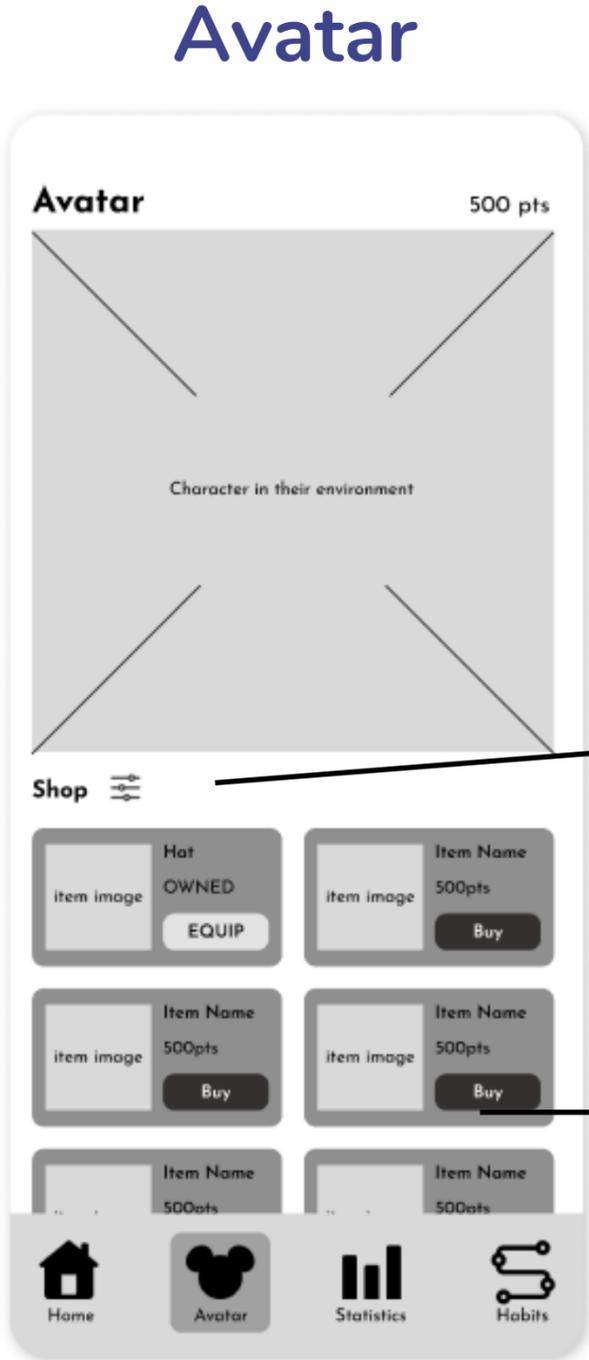
Appendix C.3.1

# 3: TESTING & ITERATING - WIREFRAME TO MOCKUPS - MOBILE

The other key insight regarded the avatar shop, Users and experts indicated it is **valuable for them to try on the accessories before they purchase it**. Furthermore, Experts noted that there was **no way to see purchased items**. We added the ability to try on each item which appears as a pop-up. The layout of accessory items also changed in comparison to the wireframes with a much larger box allowing the user to see the item more clearly.

We also removed the filter button as previously we wanted to include clothing but decided to limit accessories to Hats and Glasses. This was also done to include an inventory button. However, users are able to stack a hat and glasses together.

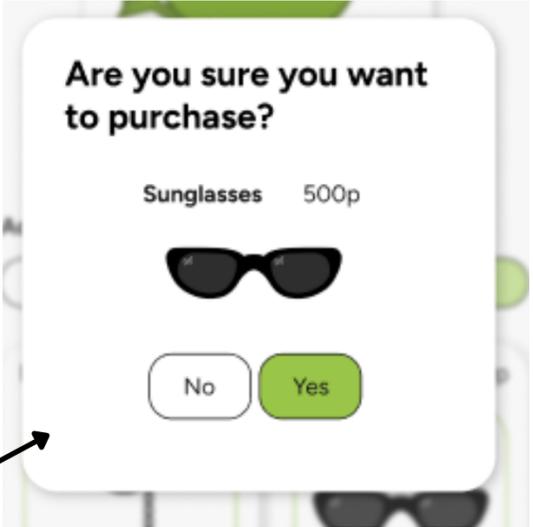
To note there are many more minor changes based off usability testing results made in the progression from mid-fidelity wireframes to high-fidelity mock ups. However the majority of the changes were motivated by the design system in terms of layout and UI. The mock ups will be discussed more in-depth in the Iteration 1 section but to see more of the mobile wireframes see Appendix C.1.1



Appendix C.1.1



Appendix C.3.1



Appendix C.3.1

# 3: TESTING & ITERATING - WIREFRAME TO MOCKUPS - WATCH

The other key insight regarded the avatar shop, Users and experts indicated it is **valuable for them to try on the accessories before they purchase it**. Furthermore, Experts noted that there was **no way to see purchased items**. We added the ability to try on each item which appears as a pop-up. The layout of accessory items also changed in comparison to the wireframes with a much larger box allowing the user to see the item more clearly.

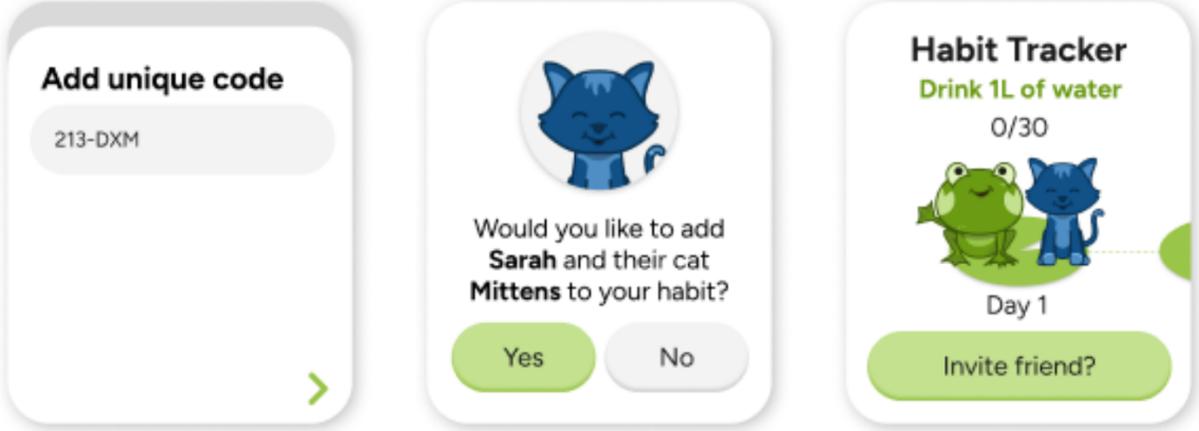
We also removed the filter button as previously we wanted to include clothing but decided to limit accessories to Hats and Glasses. This was also done to include an inventory button. However, users are able to stack a hat and glasses together.

To note there are many more minor changes based off usability testing results made in the progression from mid-fidelity wireframes to high-fidelity mock ups. However the majority of the changes were motivated by the design system in terms of layout and UI. The mock ups will be discussed more in-depth in the Iteration 1 section but to see more of the mobile wireframes see Appendix C.1.1

## Wireframe



## Mockup



# 3: TESTING & ITERATING - WIREFRAME TO MOCKUPS - WATCH

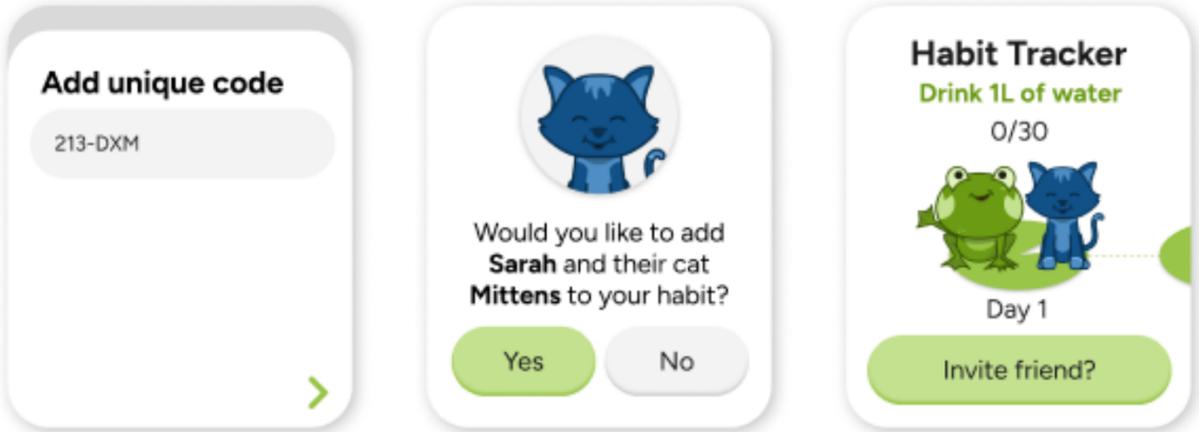
From our testing with the watch, we found that users wanted a **confirmation screen** to provide users with more **system feedback** before committing to a decision. This led us to create an extra frame in the first mockup, confirming with users the identify associated with the code inputted.

As well as this, we made the buttons on the watch bigger, as we found that skinny boxes were a lot harder to use on a watch interface. Because we made these input boxes smaller, we needed to create more pages for users to navigate through. While this may have led to a longer navigation process, we found in our user research that users were happy to take more time to navigate through pages that demanded less input.

## Wireframe



## Mockup



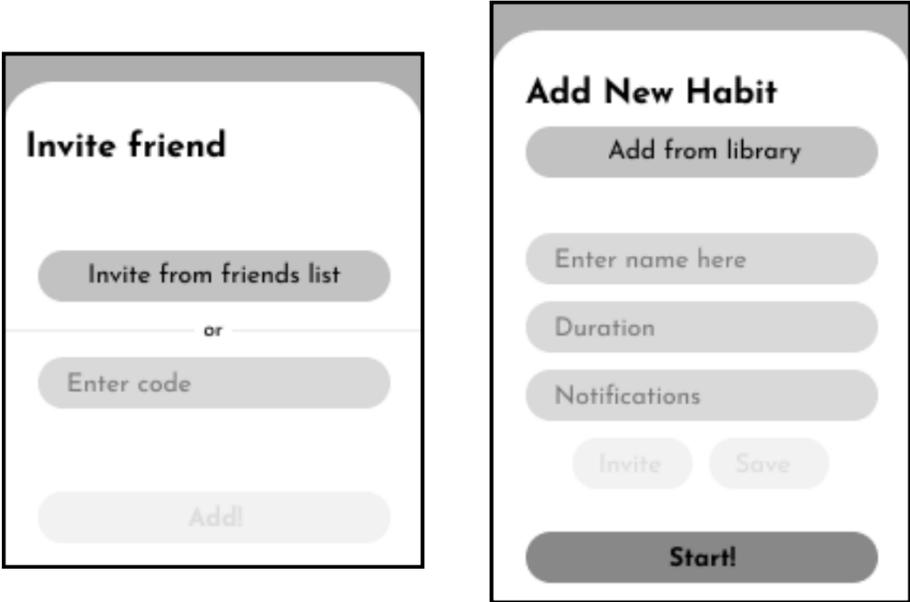
# 3: TESTING & ITERATING - WIREFRAME TO MOCKUPS - WATCH

As mentioned in the previous slide, the **invite friend** and **add new habit** pages were the ones that went through the most obvious iterations in this stage.

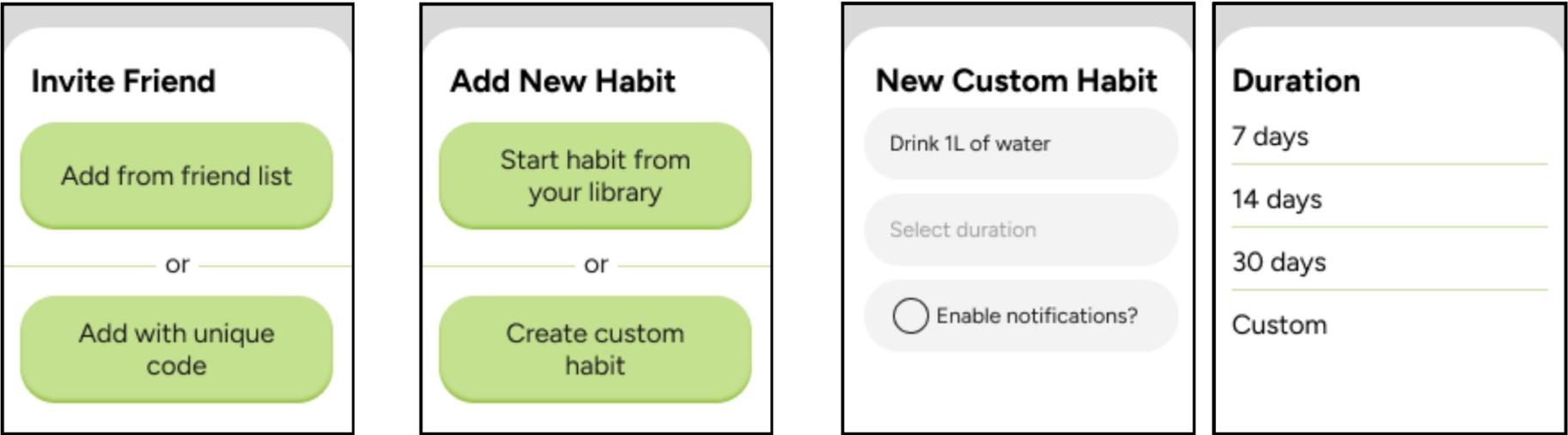
Here in the invite friend page, we made it so that only two buttons were available to click, as took up almost 50% of the space respectively. This meant that users were less likely to miss-click, and was easier for users to understand the path flow they were choosing to go through.

As well as this, in the mockup, we made it so that when creating a custom habit, users would go through a whole new page to set the duration, and that input fields would take up no less than 30% of the page.

## Wireframe



## Mockup



# 3: TESTING & ITERATING - VISUAL DESIGN DECISIONS

Before moving on to the first high-fidelity mock-up iterations and discussing changes from wireframe user testing we will first go over our visual design decisions.

Our group consolidated on our design being a **minimalist aesthetic** with a simple sans-serif font of Figtree, rounded corners and with **monochromatic tones** with drop shadows and strokes applied to create depth. However, for our accent colours we wanted the accents to change depending on which character you have selected. Therefore we developed our accent colours for each character but also accents which will be used in the sign up and log in pages which will also be used in various vector illustrations and the logo. To ensure these colours will be consistent we set them up as variables.

**Colour**

**Primary - Monochromatic**

FFFFFF	F3F3F3	D9D9D9	A1A1A1	1A1A1A
--------	--------	--------	--------	--------

**Main Accent**

1C2261	3D448B	B6B9D7
--------	--------	--------

**Other Accents**

B52423	CE9813	6B9B13	105187
ED6564	F8CA58	99C548	4E8FC5
FD9796	F9DB8F	C4E18F	80BDF1

Below the color swatches are four character illustrations: a red bear, a yellow duck, a green frog, and a blue cat.

From primary research (Appendix A.1.2) it was clear that individuals with learning difficulties were more likely to struggle with productivity and healthy habits, therefore a significant demographic for our target audience. Therefore we ensured all colours passed the WCAG test at AA+

Our high-fidelity mock-ups were developed with the frog character and therefore the green accents. We developed examples of what other versions will look like (see Appendix C.2.4).

The creation of our mock-ups were guided by the HIG by apple to ensure our product is accessible and follows the basic guidelines. This can be seen in our design system with our grids, text and buttons all following the HIG.

achiev 



Appendix C.2.2

Appendix C.2.3

Custom icons were also created for each character which is used in the navigation bar in the Desktop and Mobile interface. In terms of button sizing in the mobile interface all are given 44pt x 44pt or larger spacing, this is evident in all buttons, icons and input boxes (see Appendix C.2.1)

For further clarification on our design system with specifics of sizing, grids and application of buttons, boxes and colours see Appendix C.2.1 to Appendix C.2.4.

# 3: TESTING & ITERATING - ITERATION 1 MOBILE - HOME

Out of all the pages the home page has the most functionalities. Being highly customisable, users are able to add and delete widgets and move widgets to where they like. They are also able to earn points by ticking off tasks

## Home

### Settings quick access

Settings is a design pattern which allows you to edit preferences, the design is a Hamburg menu which also includes the habit library and friends list. (UI-patterns, n.a.)

### Slider for Daily streak of retention.

In order to persuade users to continually use the application a slider bar was added to visualise active and inactive days in the application. This involves praise with the text 'Welcome Back' at the top (UI-patterns, n.a.)

### Clear Visibility of progress

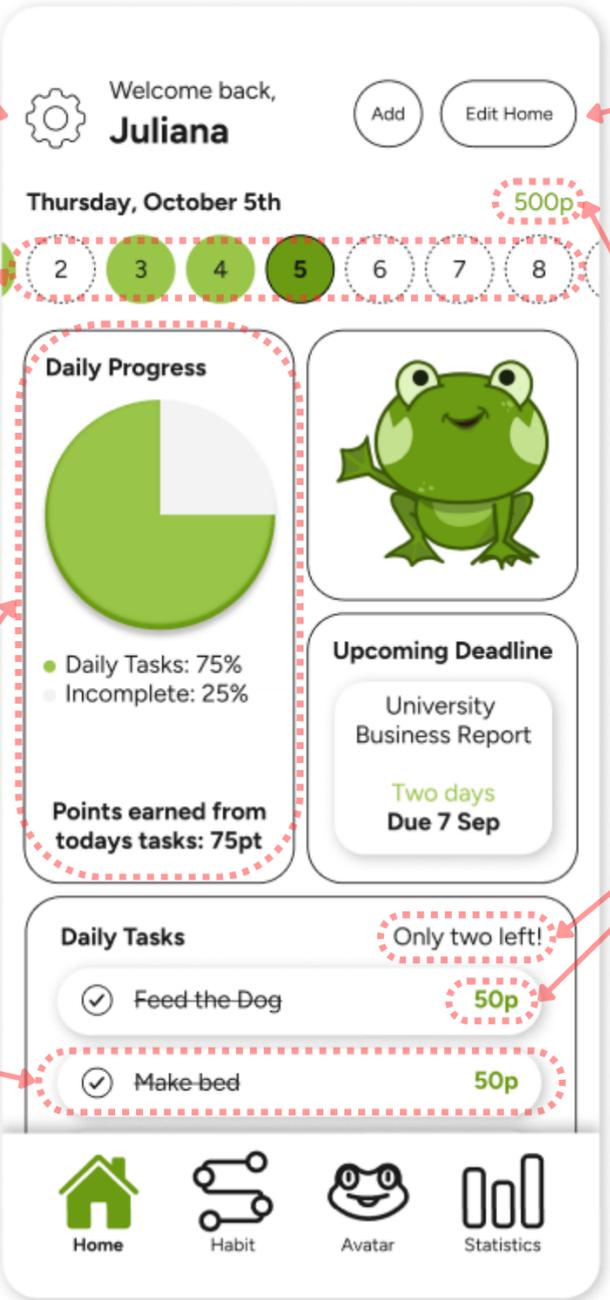
Users are able to clearly see their daily completion with this pie chart as well as a clear tick, stroke through text and bolded points for each task they complete. (UI-patterns, n.a.)

### Personalised and Customisable user experience

The homepage is structured as a dashboard (UI-Patterns, n.a.) Users are able to completely customise the home page through removing, adding and moving widgets around the page. Some examples of additional widgets include reminders, statistics, affirmations and weekly goals. This allows the freedom for users to choose exactly what they want to see.

### Reward Based motivation and visibility

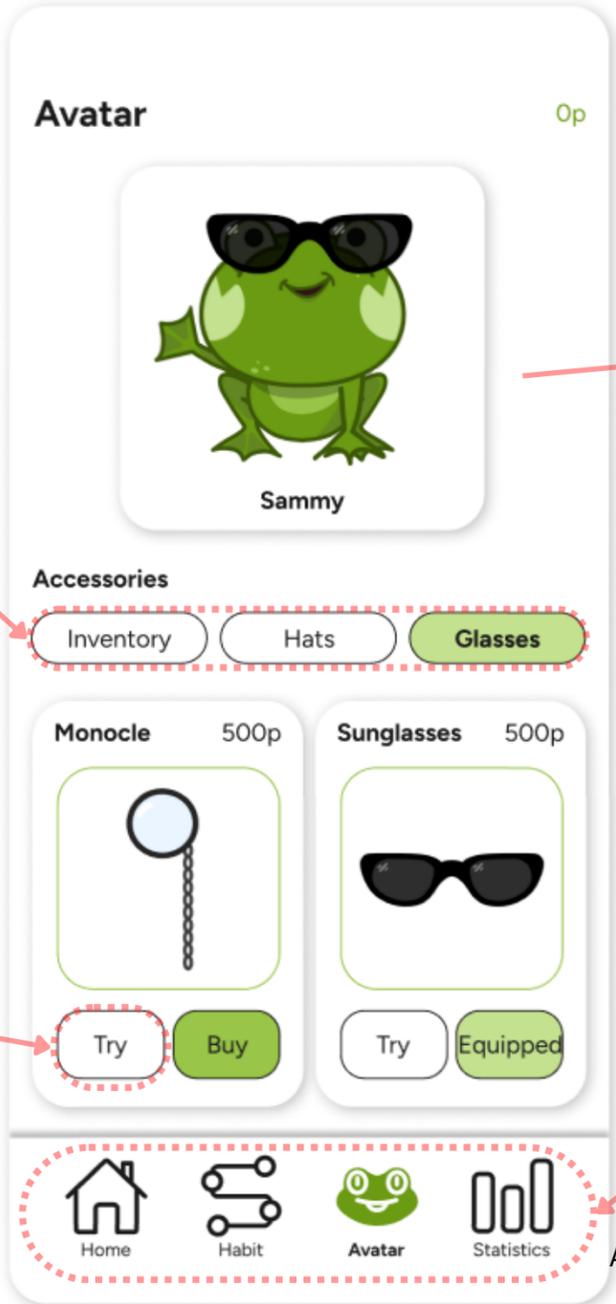
Users earn points to motivate them to complete tasks implementing the Fixed rewards pattern, furthermore from the clear visibility of task completion and reminder text in the top right we use the need for closure, set completion and Zeigarnik Effect patterns to further push users to complete tasks which also links to the incomplete pie chart. (UI-patterns, n.a.)



# 3: TESTING & ITERATING - ITERATION 1 MOBILE - AVATAR

The next round of usability testing will be conducted on the high-fidelity mock-ups to identify necessary changes to the UX and UI to improve the application.

## Avatar



**Filter through options**

The limited choice design pattern here limits the filter options to three with one being for inventory items. This is to reduce complexity and prevent deviations (UI-Patterns, n.a.)

**Character CTA**

The user's character is displayed largely at the top to both show off your avatar but also remind users to buy accessories.

**Try before you buy**

Usability testing indicated this was an important feature of inclusion (Appendix D.1.4). The ability to 'preview' lets users feel more confident in their decisions (UI-Patterns, n.a.)

**Keep navigation visible**

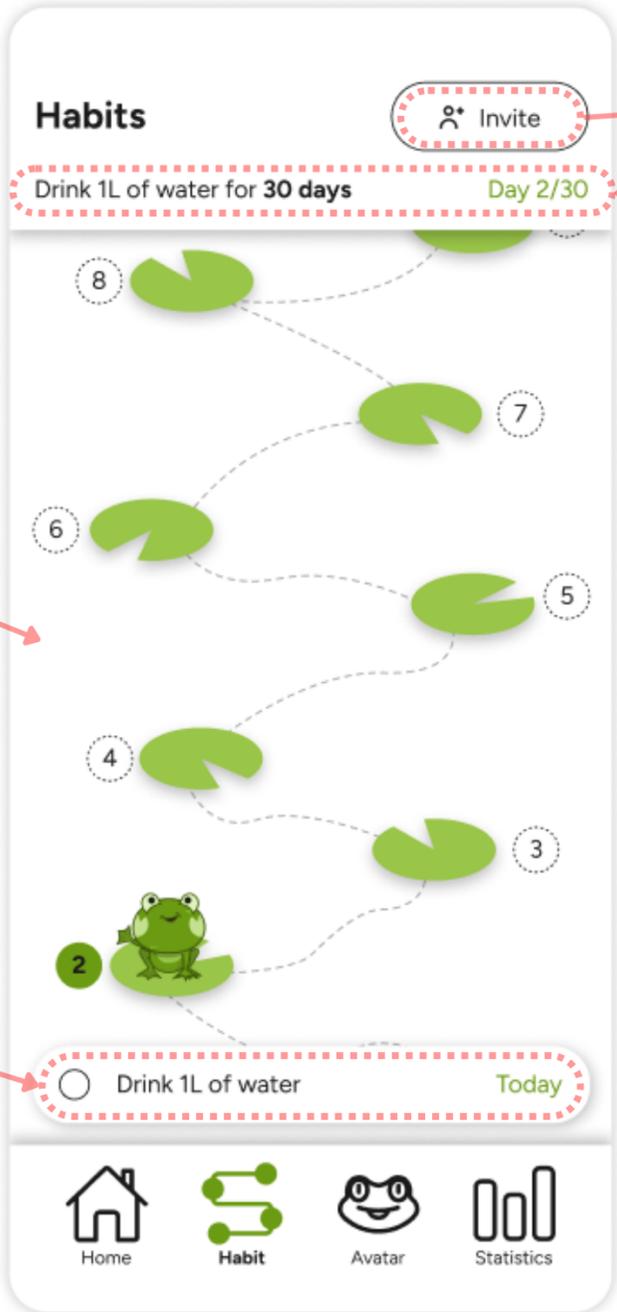
Through keeping this visible at almost all times users feel more confident and have more freedom to navigate

Appendix C.3.1.4

# 3: TESTING & ITERATING - ITERATION 1 MOBILE - HABIT PROGRESS

Although there are many capabilities for this application, we only allow users to complete one habit at a time making it their sole focus to help make it into a long term habit.

## Habit Progress



**Social accountability and competition!**

As a way to keep user's accountable they are able to invite and complete a habit with another person. This allows them to either be motivated from social accountability or friendly competition (UI-Patterns, n.a.)

**Clear visibility of progress and task**

A fixed section is at the top which displays the task, duration and current day of habit progression.

**Fun, engaging, gamification approach!**

To make this section more engaging the frog character progresses daily by hopping onto different lily pads to visualise progress. Each character has a different way for progression, for example ducks hop between ponds.

**Single action**

Limited choice is applied to prevent extra distractions which could prevent the user from making progress. To increase recognition and familiarity these look the same as the Daily Task buttons. (UI-Patterns, n.a.)

The habit page itself utilised the Progressive Disclosure design pattern (UI-Patterns, n.a.) through having a single page dedicated to one action this limits the amount of options and distractions to focus on the primary task at hand.

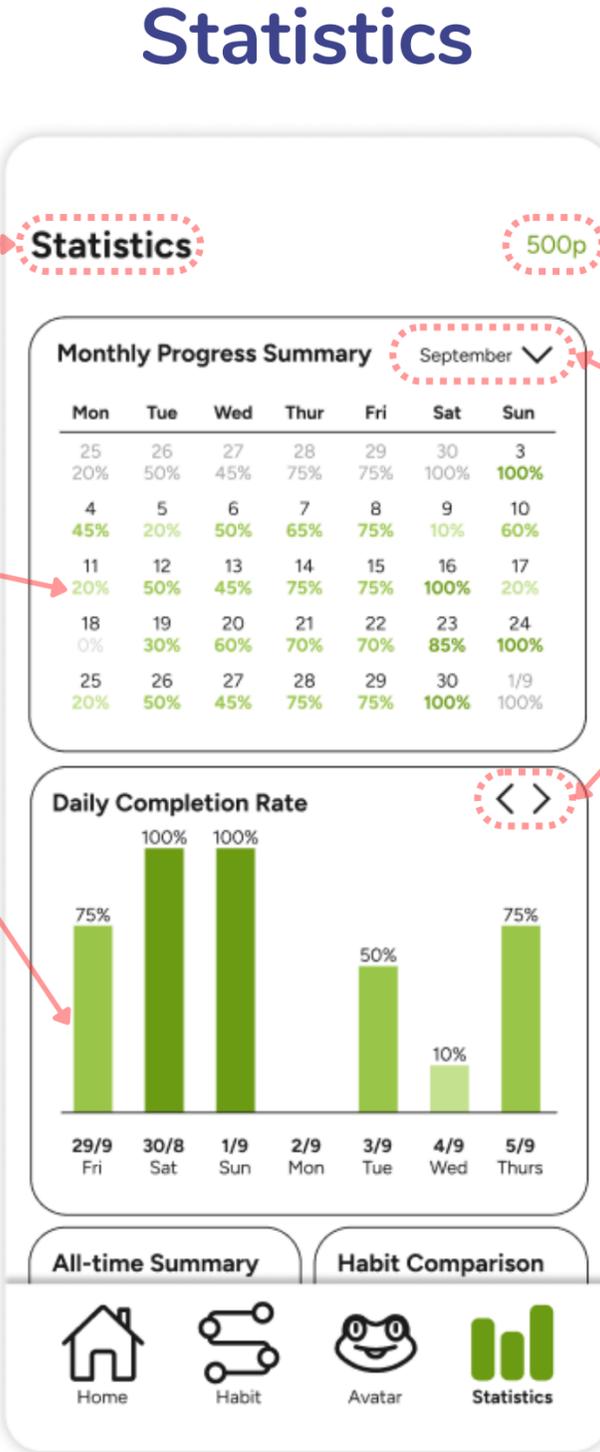
# 3: TESTING & ITERATING - ITERATION 1 MOBILE - STATISTICS

This page was not tested in the wireframe usability testing as there are limited functions other than filtering and viewing various statistics. This was important to include due to primary research insights.

**Clear textual hierarchy**  
Apparent on all pages the titles are much larger in hierarchy

**Colour accent correlating to completion rate**  
Due to how small the text has to be for this section we utilise recognition over recall with the colour accents indicating level of completion, with grey for 0% or inactive days, light accent for 25%+, regular accent for 25%-75% and dark accent for >75%. (UI-Patterns, n.a.)

**Dashboard design**  
Similar to the homepage the statistic page uses the dashboard design pattern. (UI-Patterns, n.a.)



**Visible points on all main pages**  
With reward based incentives as a core aspect of the application it is important for users to be reminded of the amount of points they have.

**Filtering options**  
Allow users to go back in time and see how their progress has changed over weeks / months!

For further screenshots and explanation of the initial high-fidelity mobile prototype see Appendix C.3

# 3: TESTING & ITERATING - ITERATION 1 WATCH - HOMEPAGES

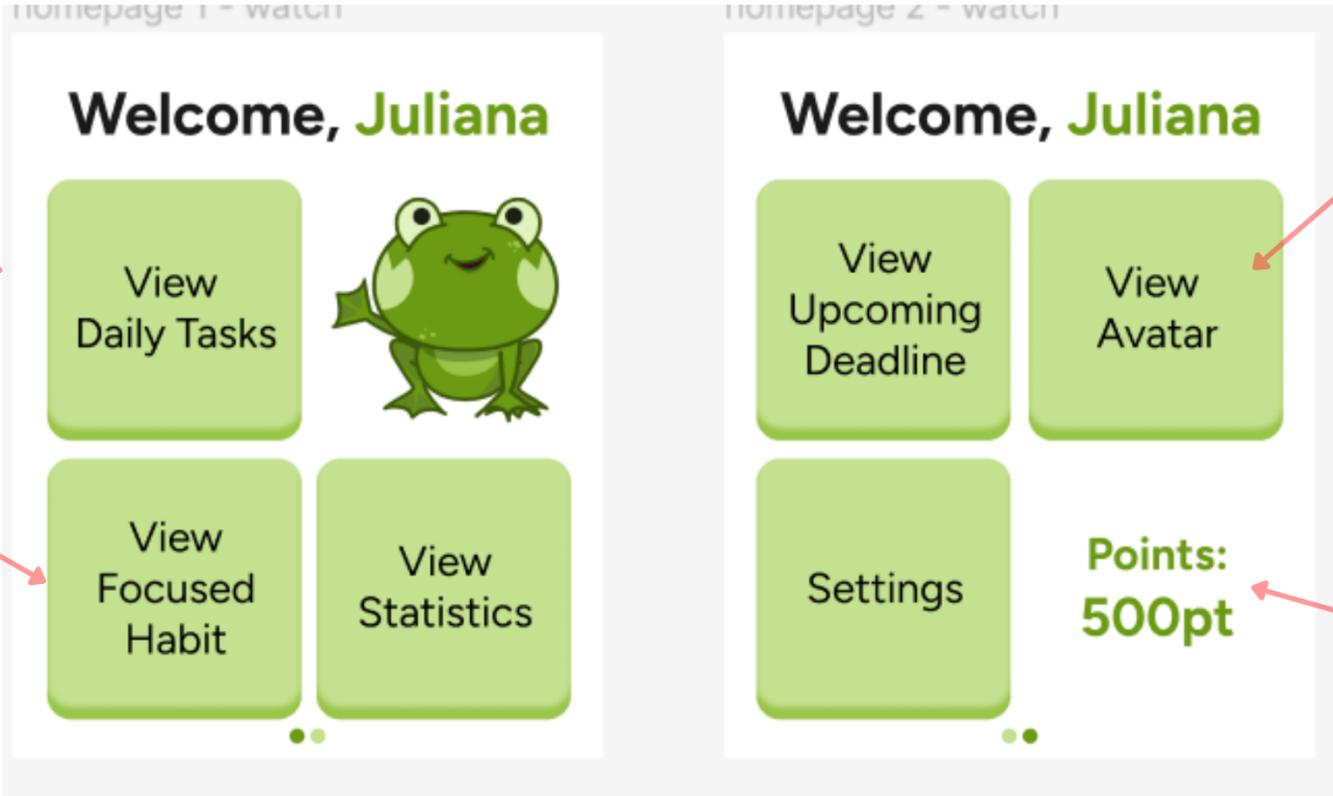
While the homepages are customisable, we decided that it would be best that users could only customise the layout of their homepage from their phone or laptop - which would be synced and reflected in their smartwatch's interface. We ensure that when designing the homepages for the watch, each button was large. This being as smartwatch screens do not have much room to integrate a lot of text and visual features in their designs.

**View daily tasks:**

Allows users to navigate to their daily tasks pages. On this page, users can add and check off tasks - earning them points.

**View focused habit**

This is the app's key purpose, as it is marketed as a habit tracking app. Here, users can see their progress relating to how long they have kept up their habit streak as well as this, users can set up new habits to start or add to their habit library, as well as add friends to complete their habits with - adding a layer of social accountability.



**View avatar**

Here users can view their avatar with all their accessories. On the watch however, they are unable to shop for new accessories - as a tedious feature like trying on and equipping objects is not well suited for a watch interface.

**Points**

Here, users have the ability to look at how many points they've earned by completing tasks and completing habit streaks. With these points, users are able to buy items for their character to wear.

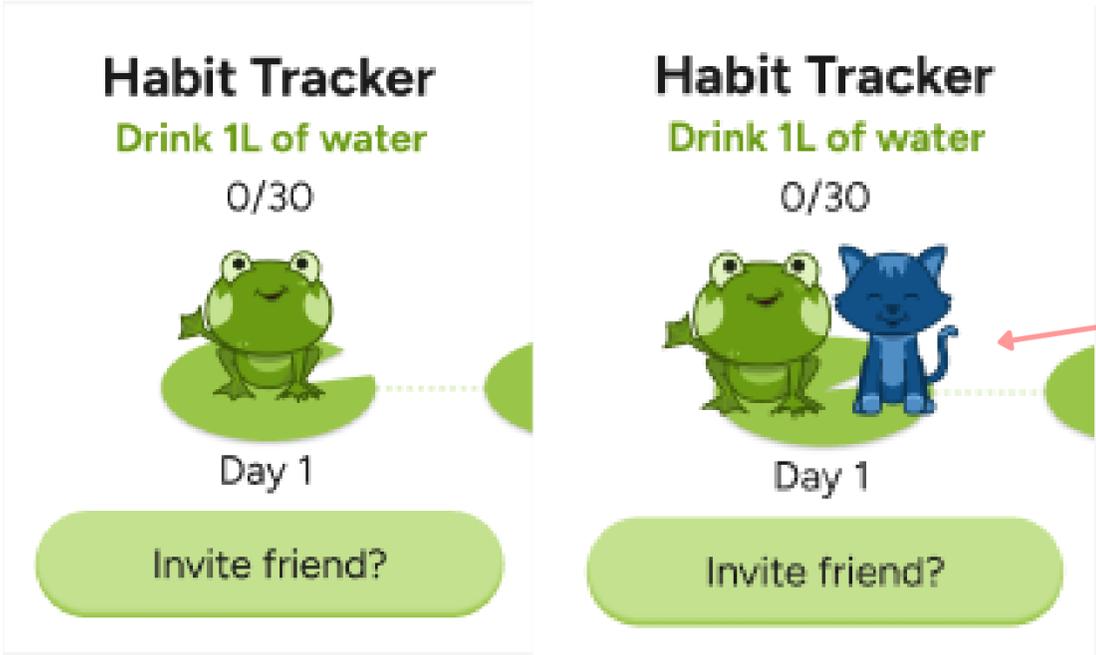
# 3: TESTING & ITERATING - ITERATION 1 WATCH - HABIT TRACKER

### Habit name & chosen streak goal

Habit name is chose by users when configuring their habit. As well as this, they can choose how long they want to maintain their habit streak for. Every feature of the configuration process is customisable, as users can type in any habit, and set a custom number of days for their streak

### Invite friend

Here, users are able to invite their friends either from their friends list, or from a unique friend code that every user is given. The ability to invite friends to a habit is the app's main point of social interactivity. This feature also encourages users to be consistent in their habits, as a layer of social accountability is added.



### Friend's avatar added into user's habit tracker page

Users are able to see the friend that they added in their habit tracking page. Before adding their friend, users are prompted to confirm that they had added the correct code by seeing a preview of the character as well as the user's real name.

Appendix C.3.2.5 & C.3.2.3

*Note; Watch interfaces are lower quality because they were exported with lower resolution - being as they were designed for a small screen*

# 3: TESTING & ITERATING - USABILITY TESTING PROTOCOL ROUND 2

The second round of usability testing will involve two experts for an in-depth evaluation of the usability of the first iteration of the high-fidelity interactive prototype. Once the experts have introduced themselves and everyone is familiar with each other, the moderator of the usability testing expert session will introduce the application with the following script: “The application you will be testing today is called Achievo. It is a gamified habit tracker with a reward incentivised system, you are able to complete tasks to earn points to upgrade your character. It is designed to be highly customisable for users with the home page as the main access point for tracking and completing tasks.” (Appendix D.2.2)

Each interface had slightly different protocols with the specifics of what features they are going to test. For the mobile application the experts are given the following scenario alongside a list of 6 features to test “You have been using Achievo for a few months and want to log in to track your progress!” (Appendix D.2.2) Each expert will then be required to fill out an **heuristic evaluation** individually and be given the freedom to either be an observer or interact with the prototype. Whilst this is happening the moderator must not intervene, however should track quantitative metrics such as first click and success rate. Following the completion of the individual heuristic evaluation a collaborative discussion will commence with the moderator and both experts to gain deeper qualitative data regarding the usability of the application.

EXPERT  
Heuristic Evaluation

An Heuristic Evaluation usability method is conducted by experts using Jakob Nielson’s 10 established usability heuristics - “a set of high-level guidelines based on an understanding of human behaviour, psychology, and information processing.” As noted, this method is especially useful in the early stages of interactive prototype development, hence it’s use following the first high-fidelity iteration. (Moran & Gordon, 2023) Furthermore, the use of 10 usability heuristics allows for more clarity in analysis and insights from usability testing.

Furthermore it should be noted not all features of each application will be tested, and these are not the same across applications, we developed 7 usability goals which related to all usability testing sessions

- Ease of use for the habit page
- Ease of use in the onboarding and sign up progress
- Ease of use of home page
- Learnability of the home page
- Utility in the statistics page
- Learnability of the avatar page
- Memorability of how to use habit page

**Smart Phone features to be tested:**

1. Log in and complete all your daily tasks
2. add some weekly goals to your home page
3. And move the daily progress widget to the top right.
4. Once you complete your daily tasks, complete your daily habit
5. Using the points you earned, buy and equip an accessory for your avatar
6. Go to the statistics page and explore the features

**Watch features to be tested:**

1. Setting up a character
  2. Check off a daily task
  3. Creating a new, custom habit
  4. Invite a friend to join a habit with a unique code
- [TURN OFF DEVICE]
1. Log back on (tick whether or not habit had been completed - landing page ver.)

# 3: TESTING & ITERATING - MOBILE DATA ANALYSIS AND SYNTHESIS

For the analysis of the heuristic evaluation data and information from the discussion a data summary of the heuristics was first created which was used as an overview of the data and to identify the most significant heuristic usability issues.



As visualised, H8, H7 and H1 were the top 3 heuristic usability issues placed sequentially on what is most significant. With H8 having 10 counts, H7 with 7 counts and H1 with 5 counts. It was quite obvious during the discussion that the UI resulted in confusion and clutter throughout the application. To better understand next steps an in-depth usability insights table, structured like the heuristic evaluation by each task with additional information gained from the discussion (see Appendix D.3.2). Overall, from the usability improvements inputted by the experts and the data synthesis it was clear what changes needed to be made. However, it was decided that the issues with the overall UI would not be changed till the final iteration, but smaller changes for sizing for example will be. This was mostly due to time constraints, but also due to the next round of usability testing being on different tasks to what the experts did, which have less complex UI's. To consolidate the main insights from round 2 of usability testing these will be categorised into each heuristic usability issue.

Appendix D.3.2

H8: Aesthetic and minimalist design	H7: Flexibility and efficiency of use	H1: Visibility of system status	Other notable heuristics
<ul style="list-style-type: none"> <li>• Users need to be informed of the amount of steps required in a particular feature or task.</li> <li>• There is not enough text hierarchy as sub-titles and buttons look the same</li> <li>• There is limited separation between areas like the header and the body due to UI</li> <li>• The home page has the most issues with UI or H8, experts did not know where to look</li> </ul>	<ul style="list-style-type: none"> <li>• Experts wanted more options when adding a widget to the home page.</li> <li>• The process of placing the new widget yourself which you have to scroll down to the bottom to see decreases efficiency</li> <li>• Item should automatically be equipped after I purchase it</li> <li>• Having a separate page just for a single task / habit seems unnecessary</li> </ul>	<ul style="list-style-type: none"> <li>• Assumed the weekly goals were automatically added until they strolled down</li> <li>• Do not know how many steps there are in the log-in process</li> <li>• The wording and visualisation of some of the statistics are confusing</li> <li>• The keyboard is good at informing users of the current action in the interactive prototype.</li> </ul>	<ul style="list-style-type: none"> <li>• Use of a dropdown is not necessary if there are only two options (H3)</li> <li>• The weekly completion rate statistics does not make sense as it should start from Monday to Sunday (H2)</li> <li>• Good amount of error prevention (H5) in the log-in with buttons to go to the register page</li> <li>• Good amount of user freedom (H3)</li> </ul>

# 3: TESTING & ITERATING - WATCH DATA ANALYSIS AND SYNTHESIS

From our heuristic testing of the watch interface, we found that these were the heuristics that needed the most improvement

H1: Visibility of system status

H2: Match between system and the real world

H6: Recognition rather than recall

When testing the watch interfaces with experts, we found the **visibility of system status**, **match between system and the real world**, and **recognition rather than recall** were the most prominent issues. After gathering this data and the severity of these heuristic pitfalls in the **heuristic table (Index D.3.2)**. We made an affinity diagram (Index D.3.2) to grasp better insights to understand what needed to change. This affinity diagram also included quotes from the **post heuristic interview (Index D.3.2)** conducted after expert testing.

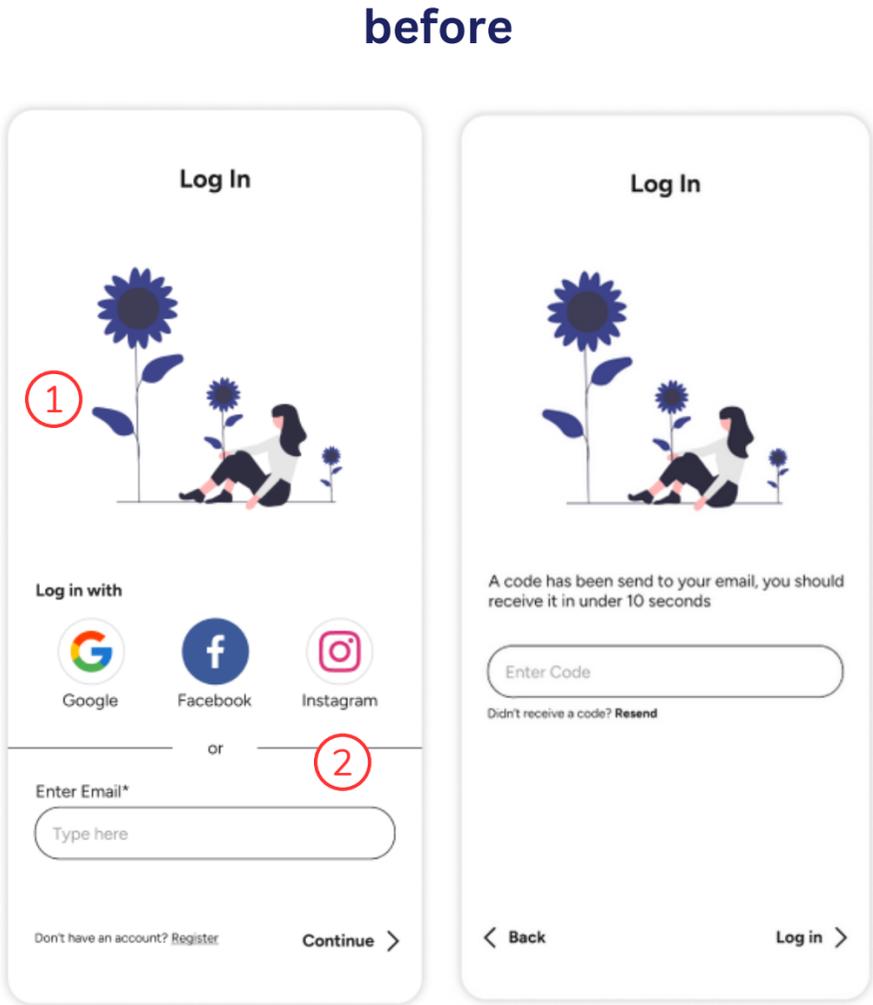
Appendix D.3.2

H1: Visibility of system status	H2: Match between system and the real world	H6: Recognition rather than recall	Other notable heuristics
<ul style="list-style-type: none"> <li>• Scroll required to see “add friend” button” - however, experts noticed that this was a restraint that came with designing on a watch</li> <li>• The most key features of the application should be the most easily accessible, however, this might need to be neglected in some areas due to the hardware constrictions of a smart watch (small screen space)</li> </ul>	<ul style="list-style-type: none"> <li>• Character should move forward a lily pad to show that the user had checked that they had completed the habit</li> <li>• Number should change at the top to indicate however many days the user had completed their task (after ticking)</li> <li>• It’s important to ensure that by the next round of testing, all features are fully functional and responsive to the user inputs</li> </ul>	<ul style="list-style-type: none"> <li>• Include more forms of visual communication - rather than text based communication</li> <li>• UI should include more symbols to indicate the different functions</li> <li>• Button make it clearer that by clicking it, a new habit can be created</li> </ul>	<ul style="list-style-type: none"> <li>• It should be clearer that users can tap anywhere to proceed to the next step. This being in reference to the landing page. (H7)</li> <li>• Was unsure as to where they would find their unique friend code, as well as the code of who they were trying to add. (H10)</li> </ul>

# 3: TESTING & ITERATING - ITERATION 2 MOBILE - LOG IN

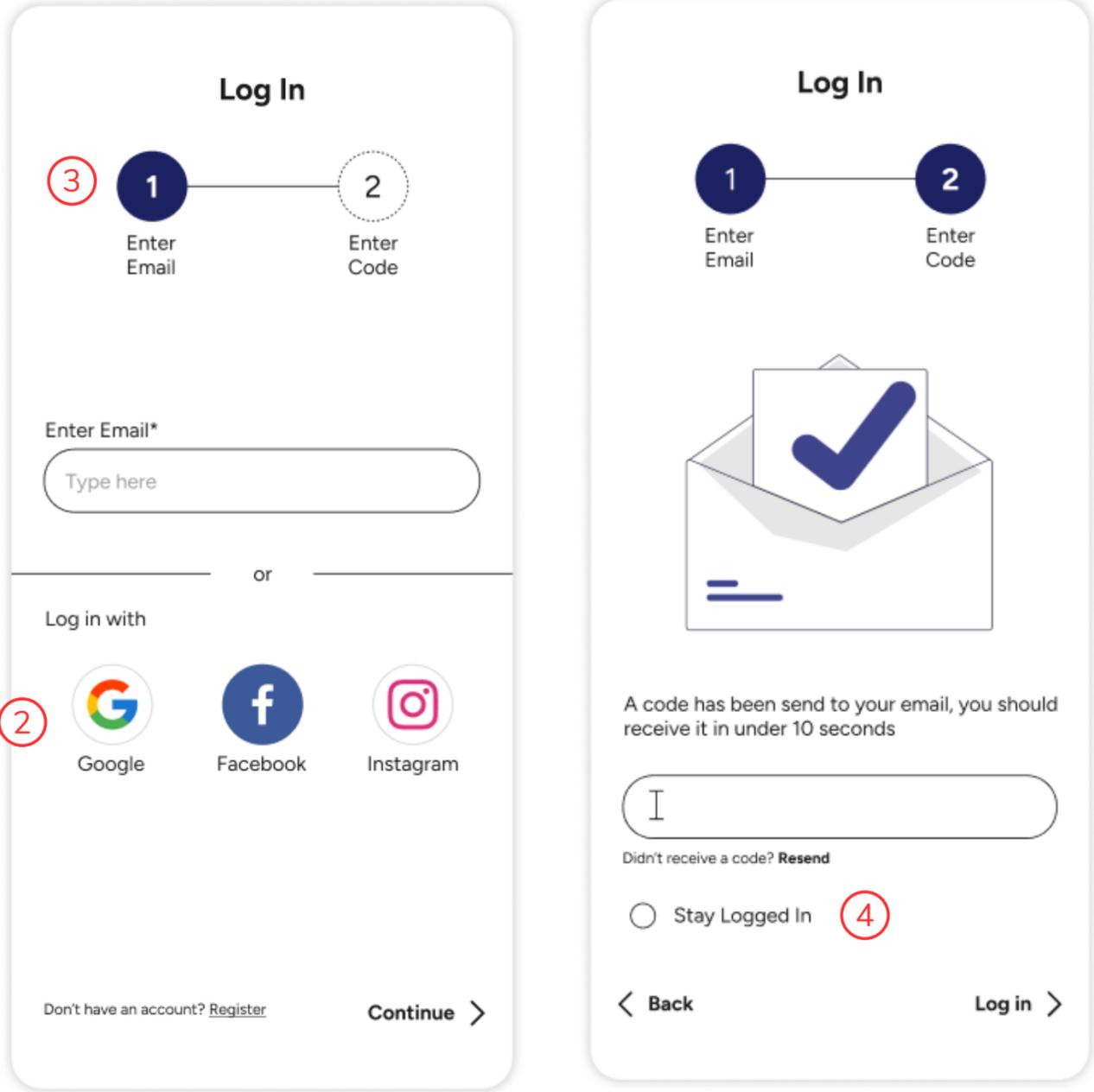
As mentioned previously, there are two scenarios with the mobile prototypes, one requires a new account and one an existing account hence why a Log-in process was developed. Experts noted a few key issues in this.

- 1. **Removed the vector illustration:** Experts indicated this was unnecessary and felt out of place and did not reflect the actions they were tacking.
- 2. **Altered Hierarchy:** Experts communicated that to better communicate the alternative log in options this should be below the enter email input.
- 3. **Enhanced visibility with Progress bar:** Experts assumed the continue button in the before image was final step but afterwards there is an additional page requiring them to enter a code sent to their email, to better inform users a progression bar was added at the top.
- 4. **Improved user control:** In the final stage before logging in, one expert claimed they would not want to do the log-in process again and wanted a stay logged in function. This was added and a different vector was included to better reflect the actions of the user and to eliminate white space.



Appendix C.3.1.11

after



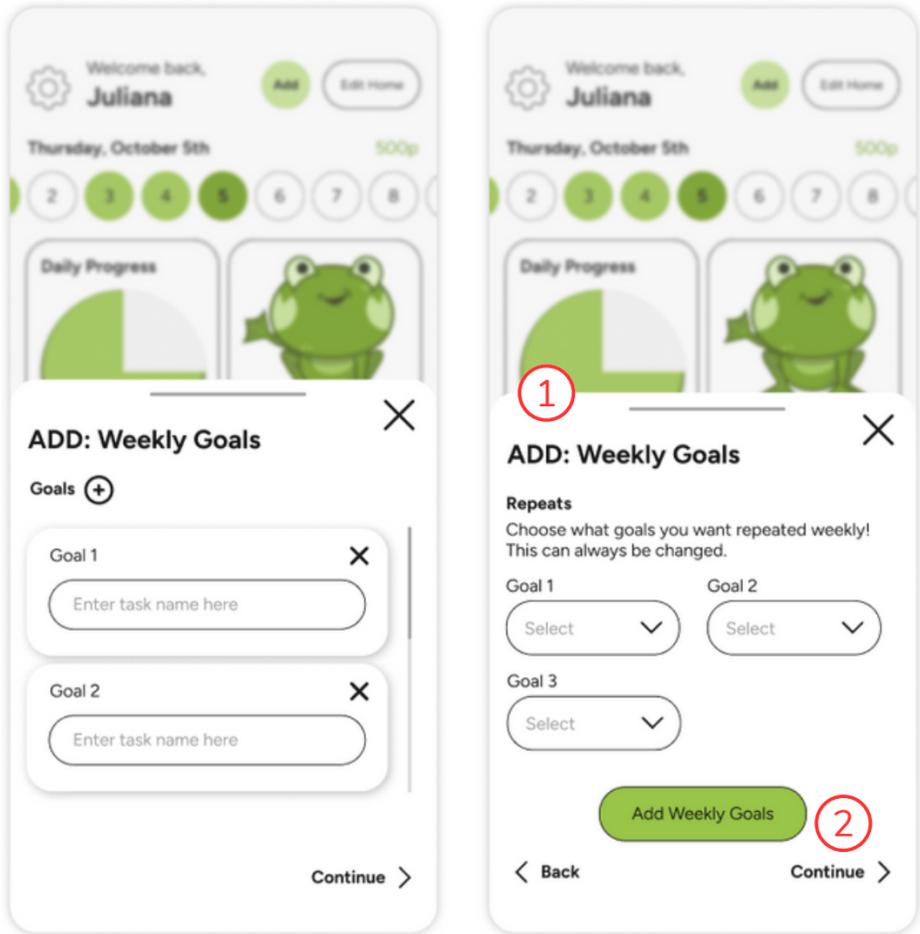
Appendix C.4.1.1

# 3: TESTING & ITERATING - ITERATION 2 MOBILE - ADD TO HOME

During the discussion section of usability testing, experts indicated the process for adding weekly goals had the most UX issues. Both participating experts indicated a severity rating of 2 (minor) or 3 (major). (Appendix D.3.1) The process of adding a weekly goal in the first iteration required you to first set the goals, and on the next page set if they are repeatable and finally manually place the weekly goal. The new process now requires users to set the goals and choose the repetition on one page, and receive a success pop-up that it has been added to home page.

One of the experts explained this “Option for repeating goals doesn’t need a drop down, maybe a slider or toggle button, expecting more option, could maybe add the repeating option on the previous page when adding the goal” (Expert 1, 2 severity rating). (Appendix D.3.2)

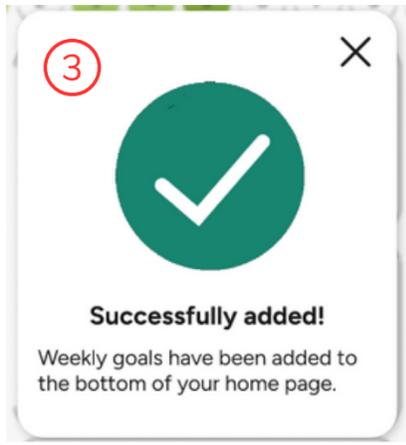
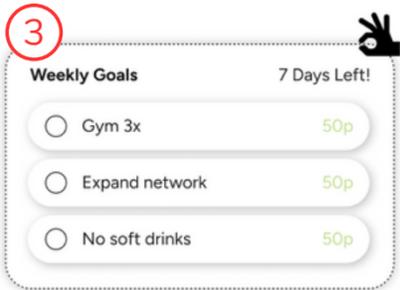
before



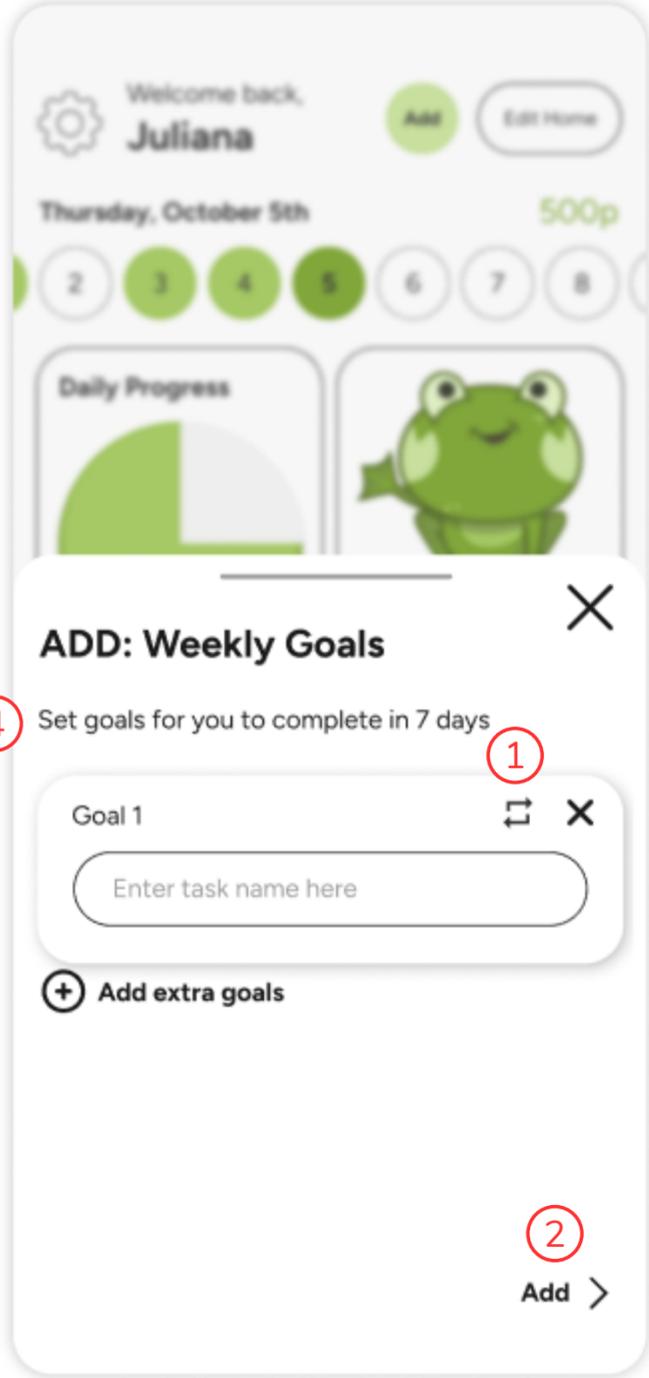
Appendix C.3.1.2

- 1. Simplify the user experience.** Instead of requiring a separate page to set the repetition of the goals, this can now be done in one page, using repeat symbol using familiar iconography.
- 2. Fixing errors in the design.** The experts noted an error in the second screenshot in the first iteration, with both a continue button and a add weekly goals button. This was simply changed with just a 'add' button where the continue button used to be. (Appendix D.3.3)
- 3. Process when adding to homepage.** Previously when you would continue once configuring the habit, you have to manually place the weekly goals. One of the experts rated this a 3 in severity rating. They thought it would be automatically placed, and also got confused with what the hand icon meant. Therefore, instead of this user’s now get a successfully added pop-up with a tick gif (sourced from Lottiefiles) which also explains it has been added to the bottom of the home page. (Appendix D.3.2)
- 4. Additional clarity.** One expert thought that weekly goals meant a single goal that you have one day to complete repeated weekly. To add additional clarity a small text explanation was added. (Appendix D.3.2)

Some of the advice from experts was carried over into other sections, with all drop downs which have only two options changed to a tick box instead.



after

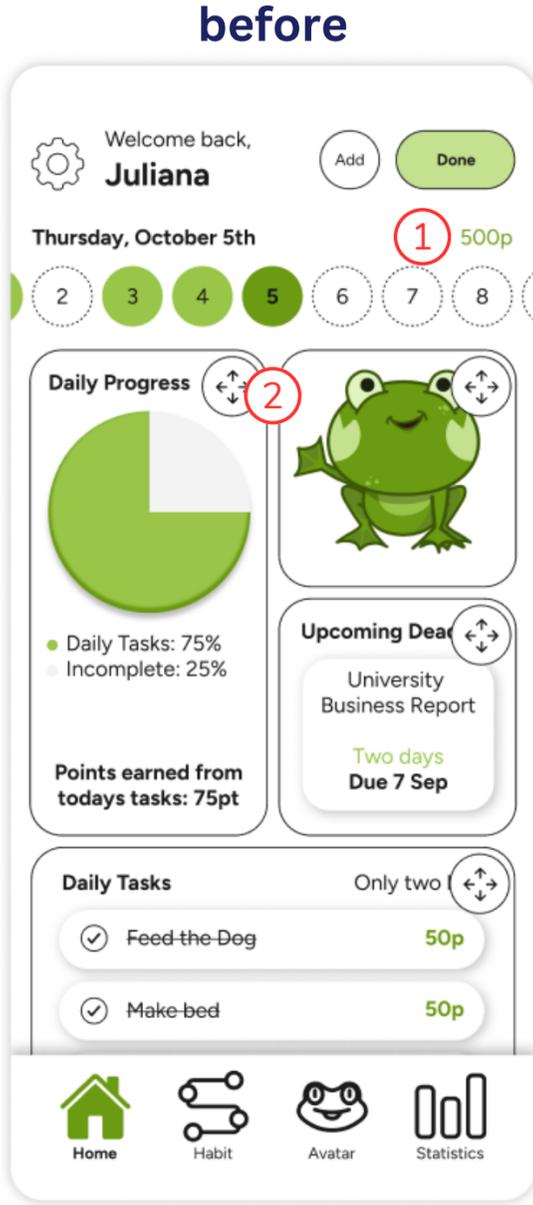


Appendix C.4.1.4

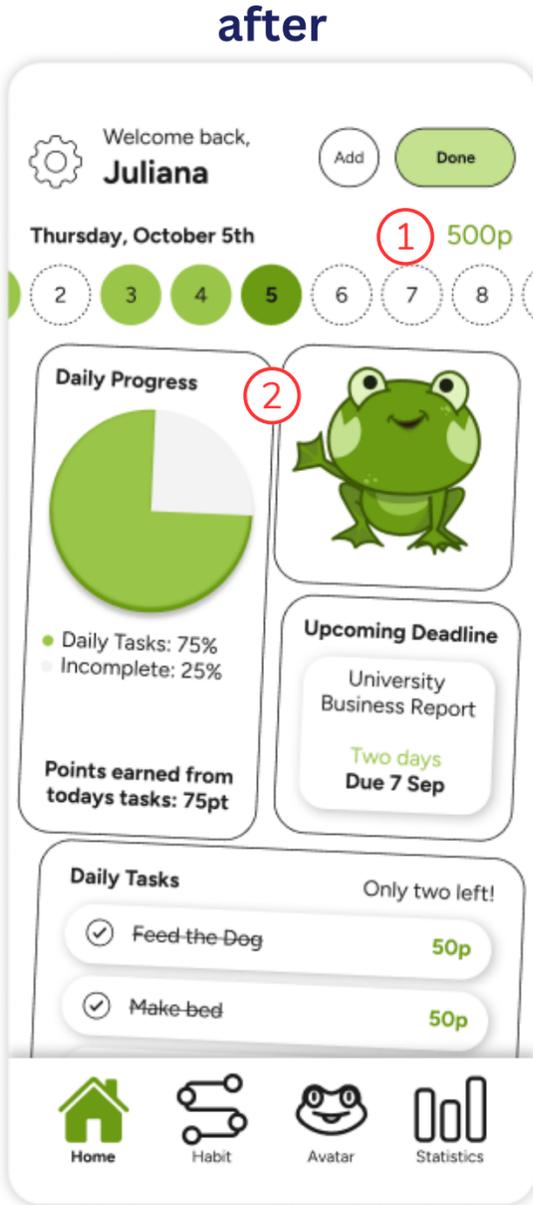
# 3: TESTING & ITERATING - ITERATION 2 MOBILE - MINOR CHANGES

In this section we will go over a few minor changes made based off expert usability testing results. Although changes were added for the edit home functions, the Experts enjoyed this functionality with the least heuristic evaluation notes taken for this task in usability testing (Appendix D.3.3 + D.3.1)

## EDIT HOME



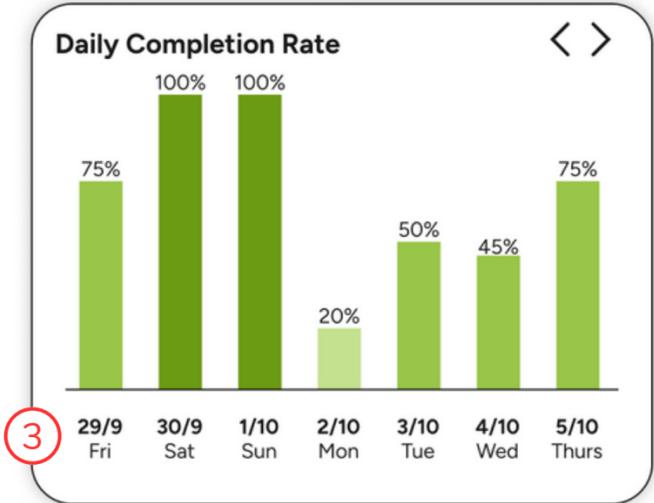
Appendix C.3.1.6



Appendix C.4.1.7

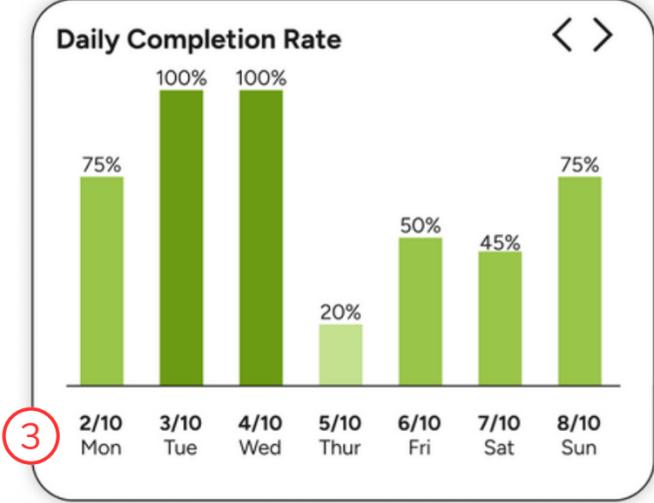
## STATISTICS

before



Appendix C.3.1.8

after



Appendix C.4.1.8

- Improved visibility.** As the points is a vital aspect of the application with a rewards based system, the size was increased. This was applied to all other pages which had the points visible. (Appendix D.3.3)
- Changes to the visualisation for moving widgets.** Although experts were able to recognize the move icons as an interaction to move a widget, it made the home page look much more clunky. Utilising recognition over recall, in the second iteration the widgets wiggle similarly to that of the apple home screen. (Appendix D.3.3)
- Better relation to existing representations.** Originally, the daily completion rate statistic started on Friday and ended on Thursday as in this example the next day is meant to be Friday. As noted in the discussion and heuristic evaluation (Appendix D.3.1 + D.3.3) it should start on Monday and end on Sunday similarly to other weekly based statistics.

There were some additional changes made to the statistic page aswell, which involved changing the wording for some of the statistics for better clarity for users.

# 3: TESTING & ITERATING - ITERATION 2 - MINOR CHANGES

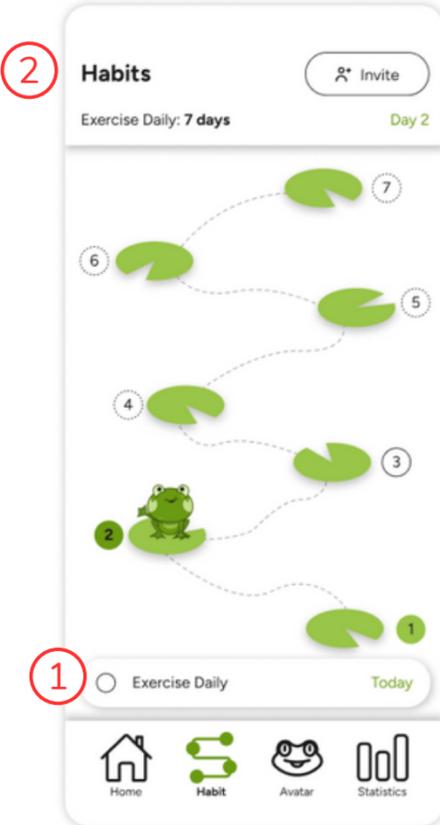
In this section we will go over a few minor changes made based off expert usability testing results. This will also include some animation changes to better apply persuasive design patterns of praise, set completion and choice closure. (UI-Patterns, n.a.)

To reflect on the usability testing, Experts did not like that there was a separate page dedicated towards habits and you cannot complete this directly on the home page (Appendix, D.3.3) I explained to them in the discussion that it would be possible to do this from the home page but it was not included in this example. Furthermore, as mentioned previously the habit page utilised the Progressive disclosure design pattern to limit distractions from the primary task at hand, which is important to aid in building long-term habits. (UI-Patterns, n.a.)

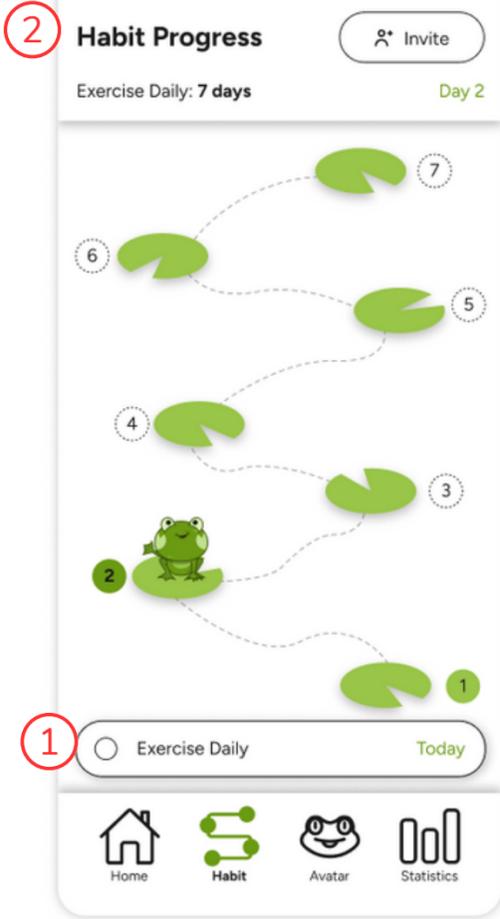
## HABIT PROGRESS

after

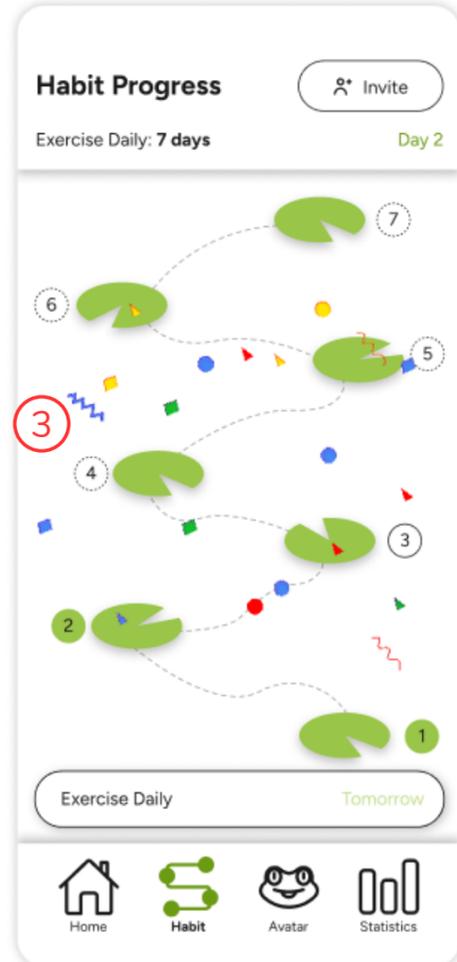
before



Appendix C.3.1.7



Appendix C.4.1.3



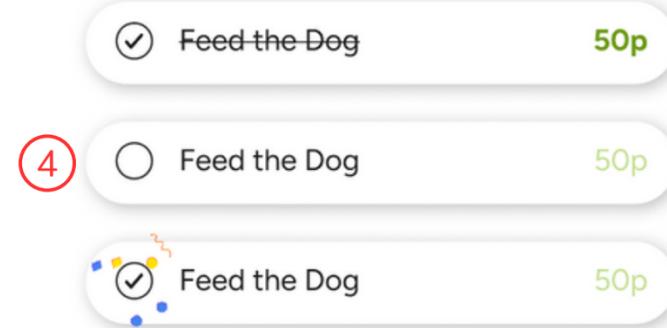
## COMPONENT CHANGES

before

after



Appendix C.3.1



Appendix C.4.1.6

- 1. Improved visibility.** Expert 1 indicated that the “Visibility of the daily exercise check off is pretty low” in the heuristic evaluation (Appendix D.3.2). A simple black 1pt stroke was added to solve this.
- 2. Minor UI Error change.** Experts in the discussion raised attention to the title in iteration 1 saying ‘Habits’ instead of ‘Habit’ despite there being only a singular Habit able to be completed (Appendix D.3.3). This was instead replaced to Habit progress.
- 3./4. Praise Visualisation.** In order to better visualise completion of tasks and make it feel rewarding a confetti gif (sourced Lottiefiles) is added in the animation when a task is complete. This not only praises the user’s progression, but provides closure and set completion. (UI-Patterns, n.a.)

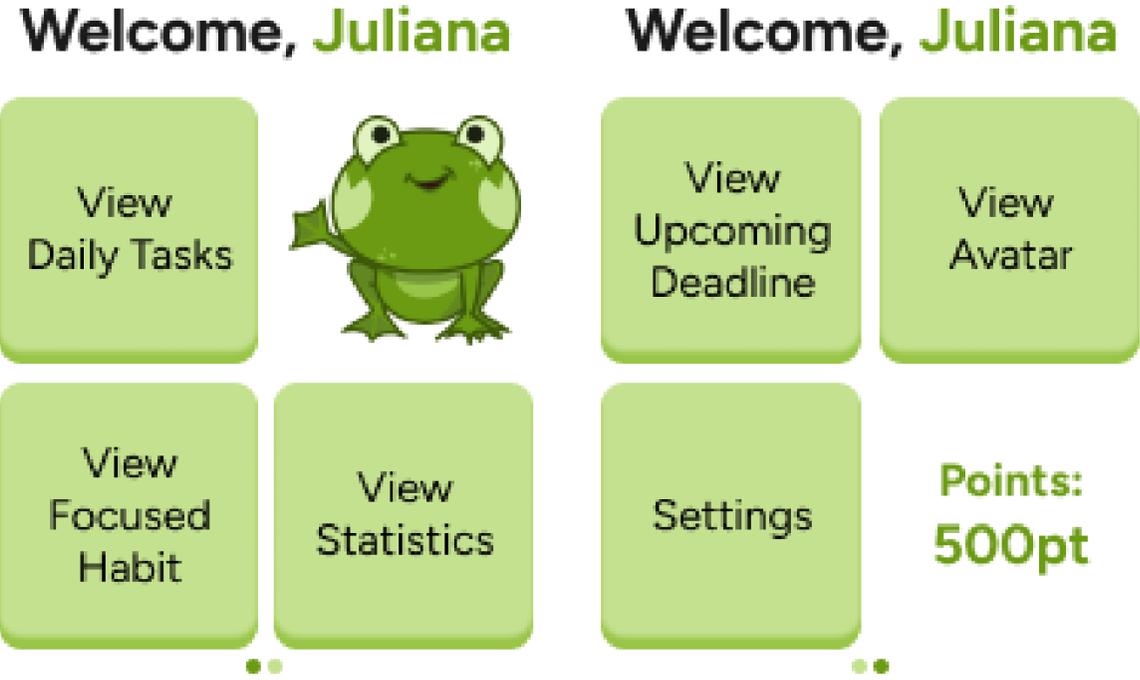
This section has covered the most notable changes made from iteration 1 to iteration 2, however the Experts also noted some significant UI issues with the home page being visually confusing, being hard to know where to look on the home page as an example (Appendix D.3.2). However due to time constraints we decided to wait until the third iteration to make significant UI changes which requires a change to the mobile design system. To see more of mobile iteration 2 see Appendix C.4.1

# 3: TESTING & ITERATING - ITERATION 2 WATCH - HOMEPAGE

Here, we redesigned the watch homepage to be more icon based - as per expert feedback. When doing our heuristic evaluation on the watch interfaces, the experts noted that our homepage design was very text heavy, and suggested that we integrated more icons in order to promote **H6 (recognition rather than recall) (Appendix D.3.2)**. By making this change, users are able to get a better understanding of what each button entails and how it related to the function they are trying to achieve.

As well as this, the text from the “View focused habit button” changed to be “start new habit”. By making this change, users had a clearer idea of how to create a new habit if having never made a habit before. Since users can only focus on one habit at a time, the phrasing of this button reverts back to “view focused habit” once a habit has been set. The motivation to change the phrasing of this button also came from the **heuristic evaluation**, as the experts noted that the initial phrasing was unclear when they were instructed to specifically create a new habit (Appendix D.3.2). By changing this, it also addressed **H6 (recognition rather than recall)**.

## Before: Appendix C.4.2.2



## After: Appendix C.5.2.2

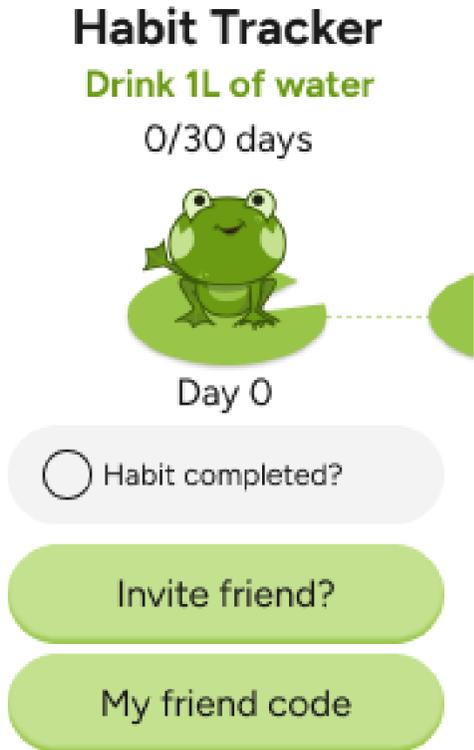


# 3: TESTING & ITERATING - ITERATION 2 WATCH - ADDING FRIEND

After getting expert feedback that they were “unsure where on this device (as well as a friend’s device) where the code to input would be” (Appendix D.3.2), we added an extra button in the habit tracker page to show the users friend code. When clicking on these buttons, users are also provided with extra information pertaining to the code’s purpose, as well as how to find it on another user’s device. We felt that adding these pages was necessary in improving the interface’s usability, as it addressed **H10 (help and documentation)** by providing users with more explicit information as to how the codes work.

In our expert feedback, we also received the note that it may be hard to find the invite friend button as users would need to scroll to find it (Appendix D.3.2). While we agreed that the need to scroll to find this key feature inhibited the interface’s ability to meet **H1 (visibility of system status)**, we felt that this would be very difficult to remedy given the hardware constraints of a smartwatch’s small screen. The experts also acknowledged this, stating that “we know that because it’s a watch, it’s kinda hard to fit all the elements in the page so we had [finding the add friend button] as a minor issue.”. Therefore while this wasn’t directly fixed, we hope that since a portion of the button shows in the un-scrolled frame, users would know that the ability to scroll is there.

Page extended to show added  
“My friend code” button



## These pages did not previously exist

### My friend code

594-MXT

Use this code to add friends to your habits!

### Add unique code

213-DXM

Find your friend’s code in the habit tracking page of their app

### Habit Tracker

Drink 1L of water

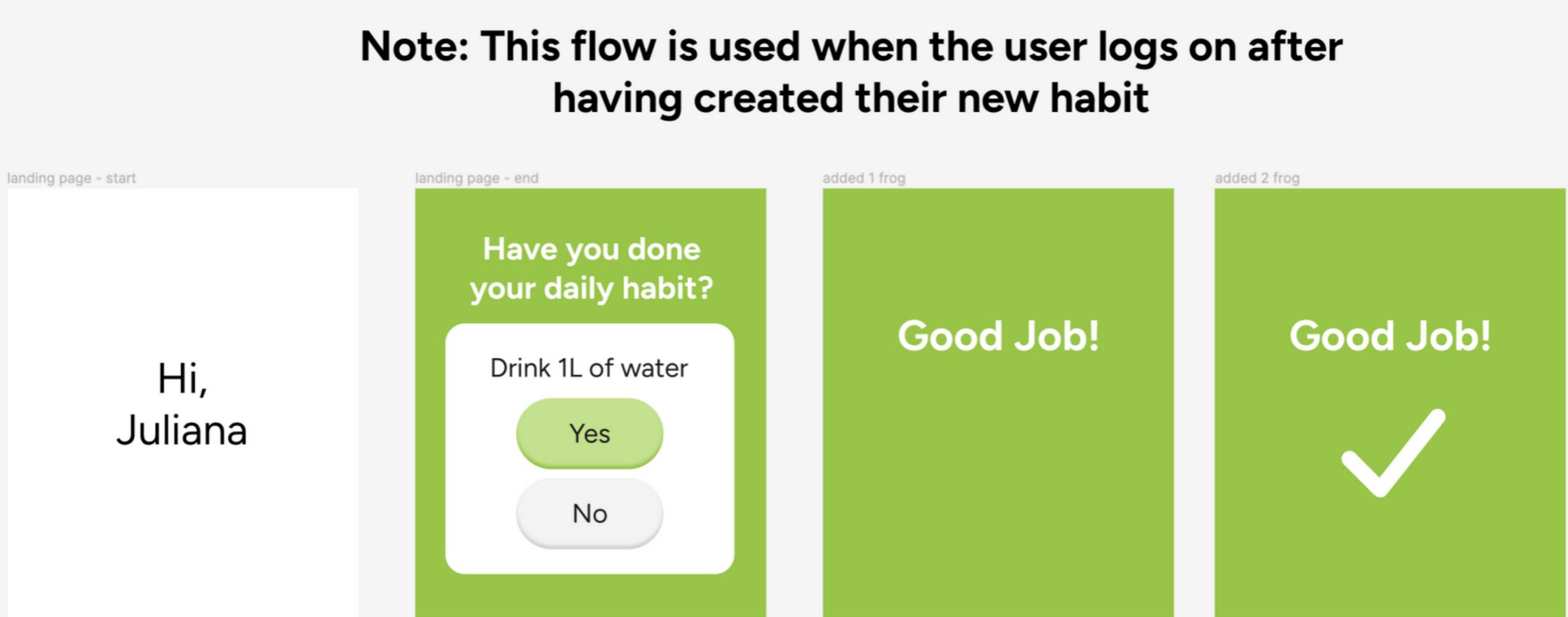
1/30



# 3: TESTING & ITERATING - ITERATION 2 WATCH - HABIT CHECK

Here, we decided to add a new chain of interfaces that user will encounter every time they open the app on their watch, after having set up their profile and a habit. This is greatest change we made between this iteration and the last and felt it was crucial in making the watch interface more usable. From the expert feedback, it was noted that there were too many steps needed to tick off a habit when navigating from the homepage (Appendix D.3.2). This was rated as an issue that needed to be immediately fixed in the heuristic table, as habit tracking is the main function of the app. To amend this issue and improve the **system's visibility and status (H1)**, we added a new series of pages that users would encounter every time they open the app on their watch. By immediately asking the users if they had done their daily habit and prompting with this question on every open until they answered "yes", we hoped that this would further encourage users to stay consistent with their habits as they are given a constant reminder, as well as improve the engagement with the app, as most users would want to download the app for this feature alone. After clicking either option, users are taken to their homepage, however, for users that click yes, they are given a "good job" animation, making the system feedback more obvious to users.

Since we decided to add a whole new series of pages in our iteration, we have no interfaces to compare these new interfaces with.



Appendix: C.5.2.1

# 3: TESTING & ITERATING - ITERATION 2 WATCH - MINOR CHANGES

## Added extra text before users proceed to homepage

Here, we made the small change of adding extra text to the end of the character set up flow. In the heuristic evaluation, the tested experts noted that it should be “made more clear that users can tap anywhere to proceed to the next step.” (Appendix D.3.2). In making this small change from “tap to start tracking” to “tap anywhere to continue”, we better address H7 (Flexibility and efficiency of use).

### Before

Congrats!



Sammy

Tap to start tracking

Appendix: C.4.2.1

### After

Congrats!



Sammy

Tap anywhere to continue!

Appendix: C.5.2.1

## Added “add task” function & ensured ticking off tasks were responsive

From the previous iteration to this one, we noticed that we had an oversight in that we didn’t make it available for users to add new tasks to their daily tasks list on the watch interface. As well as this, the experts noted that they weren’t able to tick off tasks in the prototype they tested (Appendix D.3.2). To fix this, we made it so that users could now tick off tasks in this page, as well as add tasks. When adding a task, we also ensured that the “add task” button stayed at the top of the list - as we felt it was a crucial feature that users should encounter right away.

### Before

Daily Tasks

Only 2 left!

- Walk the dog
- Eat 3 meals
- Wake up before 8am
- Make the bed

Appendix: C.4.2.2

### After

Daily Tasks

Only 2 left!

- Add task
- Walk the dog
- Eat 3 meals
- Wake up before 8am

Appendix: C.5.2.2

# 3: TESTING & ITERATING - USABILITY TESTING PROTOCOL ROUND 3

The third and final round of usability testing will require three separate user usability testing sessions for each interface. The structure of the user testing protocol is similar to that in round 1 with an in-person session with an additional SUS Survey to be completed by each user. The moderator of the session will first introduce the application with the same script in usability testing round 2 with experts. The user will then be informed of the scenario and tasks which differs in each interface and encouraged to verbalise their thought process. Whilst this is happening the moderator should track the success rate and first click metrics. Following this the user will fill out the SUS Survey and be asked questions upon completion for a deeper understanding of the results. (Appendix D.2.2)

**USER**  
Think Aloud +  
Contextual Interview

Due to how successful the round 1 user usability testing was we decided to re-use these methods in this round of user usability testing. As emphasised by Jakob Neilson, Think Aloud is one of the best usability testing methods. The structured contextual interview used in the round 1 did limit the depth of the data we gained, and therefore for this round an unstructured contextual interview will occur, relating questions towards moderator observations and user SUS results.

**USER**  
SUS Survey

A SUS Survey is a quick 10 question usability testing method which is effective in a small sample group which reflects the sample size of the testing session. Although the scoring system is somewhat complex it is known to be reliable and simple way to identify a usable and unusable system. The range of questions is also helpful for us with 5 'positive' and 5 'negative' based questions. This was not applied in the first round of usability testing as the wireframes were low-mid fidelity making it difficult for user's to answer some of these questions. As the users now will see high-fidelity interactive prototypes they will be better able to grasp the application and it's functions. (usability.gov, 2019)

The same goals from Round 2 are applicable here:

- Ease of use for the habit page
- Ease of use in the onboarding and sign up progress
- Ease of use of home page
- Learnability of the home page
- Utility in the statistics page
- Learnability of the avatar page
- Memorability of how to use habit page

**Smart Phone features to be tested:**

1. Sign up
2. Configure a new Habit
3. Invite friend to habit

**Watch features to be tested:**

1. Set up a new characters
2. Check off a daily task
3. Navigate to statistics page
4. Navigate to avatar page
5. Navigate to upcoming deadline page
6. Add a new, custom habit
7. Invite a friend to join a habit with a unique code
8. Edit habit to remove the friend
9. [TURN OFF DEVICE]
10. Log back on (tick whether or not habit had been completed - landing page ver.)

As you can see, the features tested for the Smart phone is much less than that of the Watch. Each group member is in charge of each interface's development were able to choose which features to test which will better inform the changes in the iterations.

# 3: TESTING & ITERATING - MOBILE DATA ANALYSIS AND SYNTHESIS

The mobile usability testing session had three users complete SUS surveys. The interface was well-received by users with an average SUS score of **84.17** (see Appendix D.4.1 for all SUS). The users tested sections of the interface that hadn't been tested yet by the experts. Furthermore, observations by the moderator were gathered of the user's actions and the tracking of the quantitative data of the success rate and first click metrics found a few errors in the interface. This will become more evident with the discussion of the changes however it was clear the UI was somewhat confusing with it misleading the users in some cases (see Appendix D.4.2 for observations). Due to the depth of the data gained in round 2 of usability testing I did not find it necessary to re-test these features and instead wanted to focus solely on features that hadn't yet been tested. It should be noted that at this time the messaging feature was non-functional and not apart of the features but will be in the final high-fidelity product.

- Log-in task had most usability issues but a low severity rating.
- Users swiftly navigated to habit page, differing from round 1 results.
- 100% of users clicked habit library when configuring a habit
- 100% success rate for the inviting friend feature
- Overall the tasks were well received by the users resulted in a high SUS score average of **84.16**

To consolidate the data gathered a usability testing insight table was created which included quotes and observations (see Appendix D.4.3). Here are some interesting insights gained from the data:

- The most issues were apparent in the log-in process but these were a low severity rating as it had low impact on the overall experience
  - 100% of users had issues with the keyboard which was mostly resulted from prototyping issues.
  - 66% of users had issues with the avatar character selection.
- Users quickly were able to navigate to the habit page which differed from the results in round 1 of usability testing. Furthermore only one of these users recognised the CTA whilst the others clicked the Habit page on the navigation bar. This indicates that the change with re-arranging the navigation bar was successful.
- When configuring the habit 100% of users clicked the habit library button before realised it was non-functional
- Overall the inviting feature for the habit was well received with a 100% success rate. However each user inviting a friend a different way. One of them clicked the friend list but quickly went back as they thought this was an inaccessible feature similar to the habit page due to visual familiarity.

**It was quite clear from observations that UI still caused some confusion in the final round of usability testing which was further affirmed in the second round with experts, therefore it was clear that an extensive UI change was necessary to overcome these issues.**

From the usability insight table (see Appendix D.4.3) four usability improvements were identified

1. Make the keyboard automatically close instead of required them to press enter (Efficient) (Learnability) - **applied**
2. User wanted the selected avatar to be more clear by expanding so other ones cant be selected (utility) and wanted the error message to be more clear (learnability)
3. A habit library page should be created and be empty as it is for a new user scenario (learnability) (utility) and change notifications dropdown to a slider or checkbox (learnability) - **applied**
4. Due to the habit library button being non-functional and looking similar to the friends list button, user assumed it doesn't work, to fix this add habit library (learnability) - **applied**

Due to the fact the SUS score was so high, **there were few insights and identifiable improvements to instil in the next iteration.** On top of the usability changes noted above, an extensive UI change will occur, changing the existing design system established for the first iteration of high-fidelity prototypes. The goal for these changes is to simplify the UI and limit visual clutter in order to improve the user experience.

# 3: TESTING & ITERATING - MOBILE DESIGN SYSTEM CHANGES

From round 2 and round 3 usability testing it was apparent that the mobile interface needed a UI design system change to improve clarity within the design. The most significant changes occur in the **buttons** and **boxes**. Previously a drop shadow with 10% blur and 25% opacity, the opacity was changed to 10% in the new UI. This was applied to all boxes previously with a drop shadow applied except for pop-ups. The application of colours for buttons also changed, previously secondary buttons and input boxes had a white fill and black 1px border but now this use the grey accent colour as the fill with no stroke. There are some additional secondary buttons which do not have this and instead have a white fill with a 1px grey accent stroke. This change was motivated greatly by Experts stating some elements were hard to differentiate (Appendix D.3.3). There are two variants in the application and use of boxes in the UI interface, one is simply a white box with a 24px radius (radius is the same as that in the first design system, see in figma file or Appendix C.2.4). The other variant uses a 1px grey accent stroke, as mentioned above this is also seen in some buttons which will be evident on the Avatar page.

### Typography

<https://developer.apple.com/design/human-interface-guidelines/typography>

Font: Figtree

PHONE:  
**H1 - Titles - Bold - 24pt (page title)**  
**H2 - Subtitles - Bold - 20pt (headers)**  
 Body Text - Regular - 20pt (buttons and focal text)  
**H3 - Subtitles - Bold - 16pt (Sub titles)**  
 Body Text - Regular - 16pt (all body)

### Icons

### Buttons

24px radius, Height 50, Text size = 20px

Secondary

- Box fill = Light grey OR Light accent
- Text = Text Black

Primary

- Box fill = accent
- Text = primary white

### Boxes

Two variants

24px Radius

Fill = primary white

- Variant 1
  - Drop Shadow = y2, 10% opacity, 10% blur
- Variant 2
  - Stroke weight = 1
  - Stroke colour = primary gray

### Keyboard

### Input Box

24px radius, Height 50

Box fill = Light grey

Text = Dark grey

Text Size = 16px

Type here

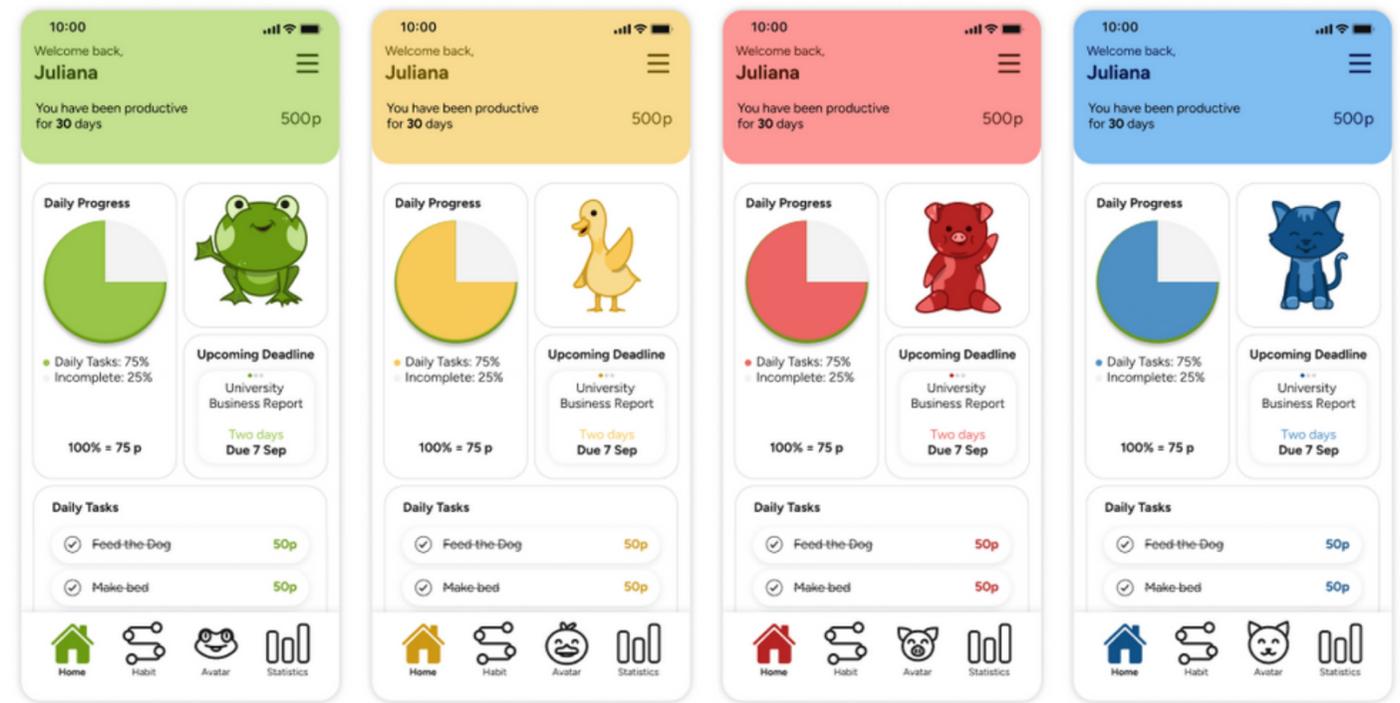
Dropbox

Appendix C.5.1.13



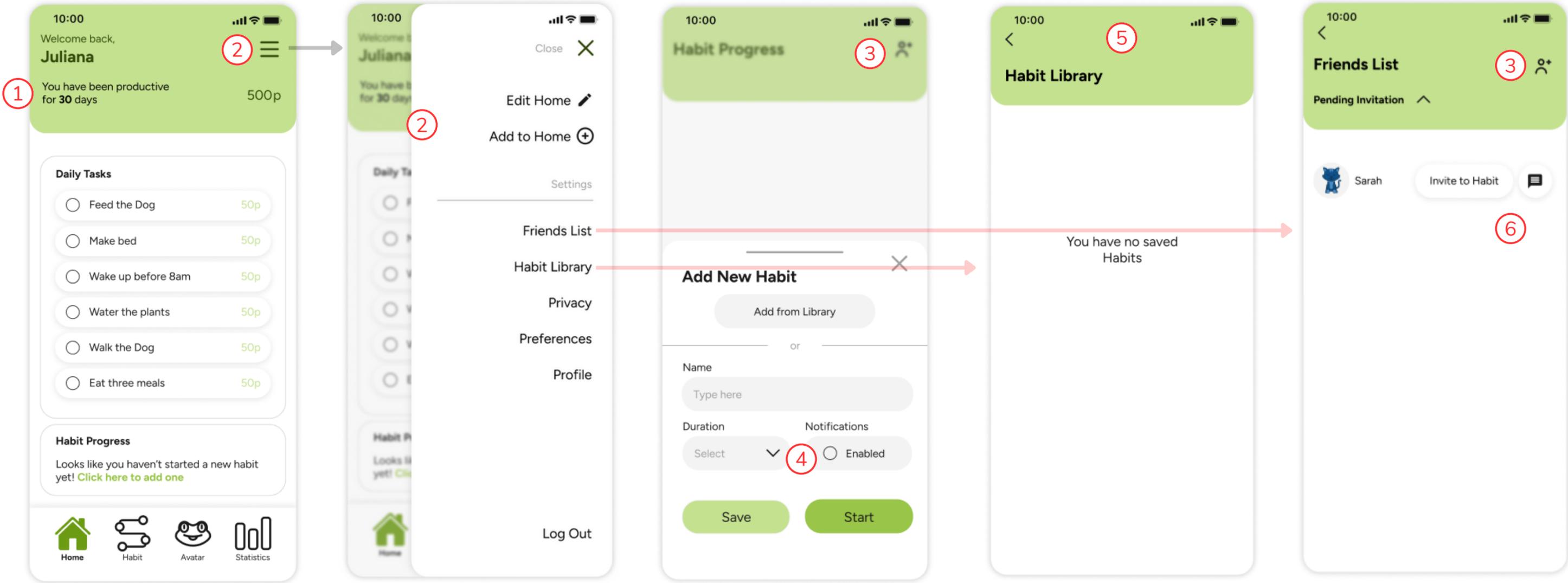
Furthermore the size of some of the icons, especially the 'X' button has been decreased, the majority of these icons are now dark grey instead of black. Two new text hierarchy sizes were also added in these UI changes. being the H2 - Subtitles - 20pt and Body text - Regular - 20pt. This was to increase the visual hierarchy within some pages that require subtitles. The larger body text will be used mostly in pop-ups on the buttons and body text. This was also changed based on Expert feedback, especially on the avatar page which was revealed in the discussion (Appendix D.3.3).

The only other changes is the application and use of colours. An additional colour accent was created acting as a dark text colour. In terms of the application of these colours each page now has a header which uses the regular accent colour and the page title with the new dark text accent. Here is a snapshot of the new UI with different character selections:



Appendix C.5.1.1

# 3: TESTING & ITERATING - 3. ITERATION - MOBILE

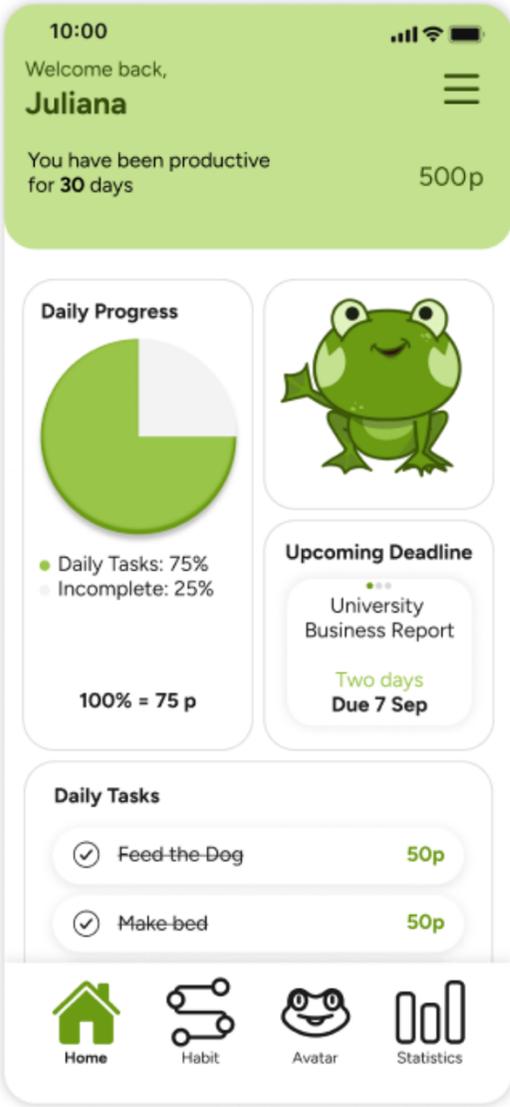


There were some changes in the UX in order to simplify the UI in the final iteration outside of the design system UI changes.

- 1. **Better use of Praise:** In the previous iterations a daily progression slider was here to visualise and inform the users as a way to praise their commitment on the application. However, experts were confused on it's functionality and it contributed to the cluttered UI. Therefore eliminate both these issues text will be used to praise the user's commitment by stating 'you have been productive for NO. days" (Appendix D.3.3 + D.3.2) (UI-Patterns, n.a.).
- 2. **Header simplification in home page:** Similarly to the previous change, this change was motivated due to a cluttered UI. Before the changes three buttons "Add," "Edit Home," and "Settings" with a cog icon where all placed in this top section which made it difficult for users to know where to look. Therefore a hamburg menu was added with three lines uses the user's recognition of menu icons. The top of the menu has the buttons previously on the home page but also access to the habit library (5) and friends list (6) in which you can add and message friends.
- 3. **Invite button familiarity:** Previously a text button was here saying 'invite,' with the goal of simplifying the UI this was changed to just a plus friends icon.
- 4. **Button change:** Experts claimed that a dropdown was not necessary unless there were many options, one user also thought this and therefore was changed to a tick box (Appendix D.3.2, D.4.3)
- 5. **Habit Library:** This page was added as 100% of users originally clicked this when trying to configure a habit (Appendix D.4.3)
- 6. **Social features:** The friends list allows users to add friends and message each other directly on the application. Previously, users were only able to message from the habit page and could only invite a friend to a habit through the friends list page. Users thought this didn't make sense and should be accessible in both (Appendix D.4.3)

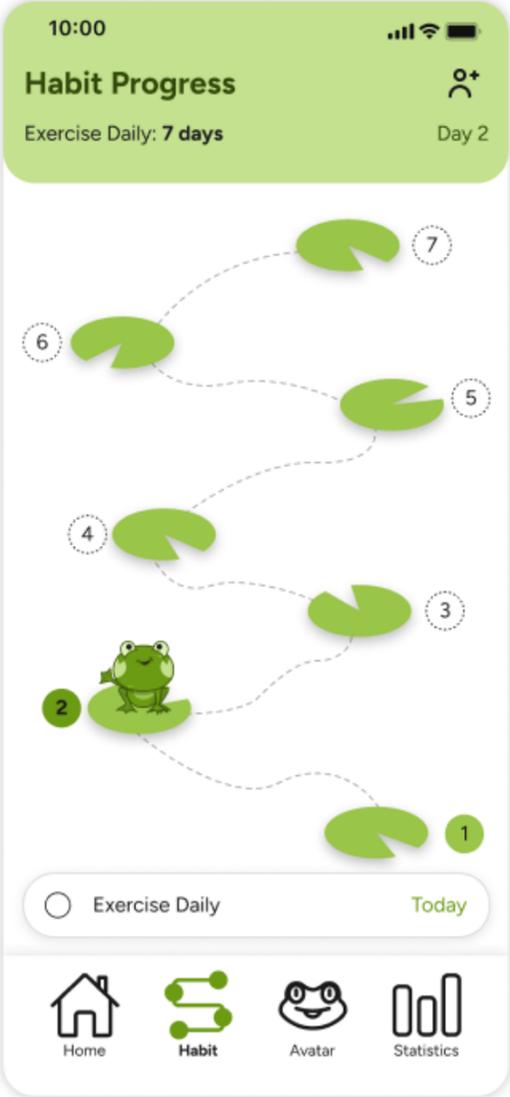
# 4: FINAL PRODUCT - MOBILE OVERVIEW

Achievo is a personalised, customisable and incentive based habit tracking application with the aim of building long term, permanent habits. The application encourages users to stay consistent through social accountability, rewards and clear visibility of progress. The application has four main pages, Home, Habit Progress, Avatar and Statistics which are accessible at all times in the navigation bar.



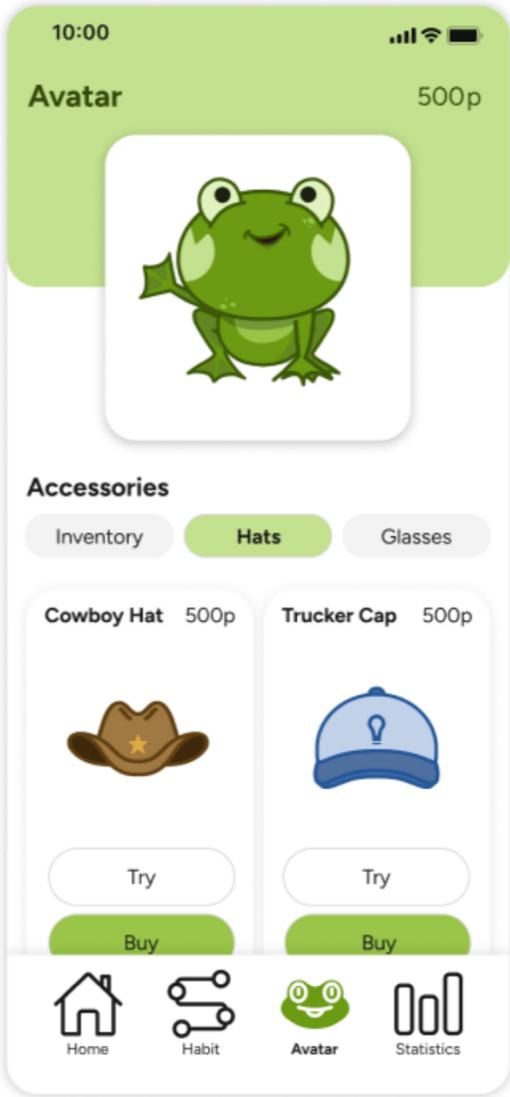
Home

The home page is a customisable dashboard where you earn points for completing tasks. The user can personalise this to include as little or many additional features as they like!



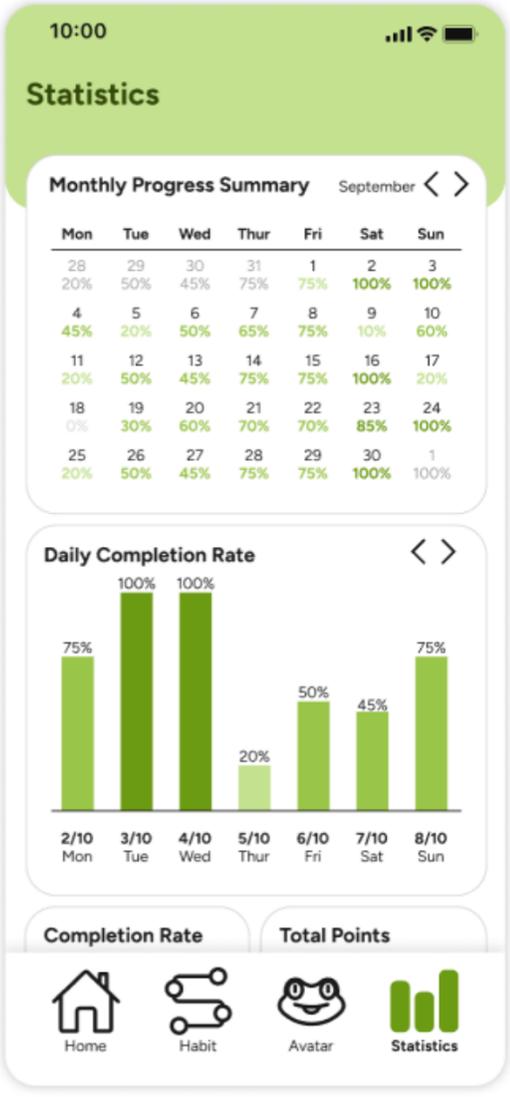
Habit

This page is dedicated for the user to build a long term habit through limited distractions, social accountability, a gamified design, clear visibility and praise upon progress!



Avatar

The avatar page allows users to spend the points they earn from completing tasks on accessorising their unique character with a variety of different hats and glasses!

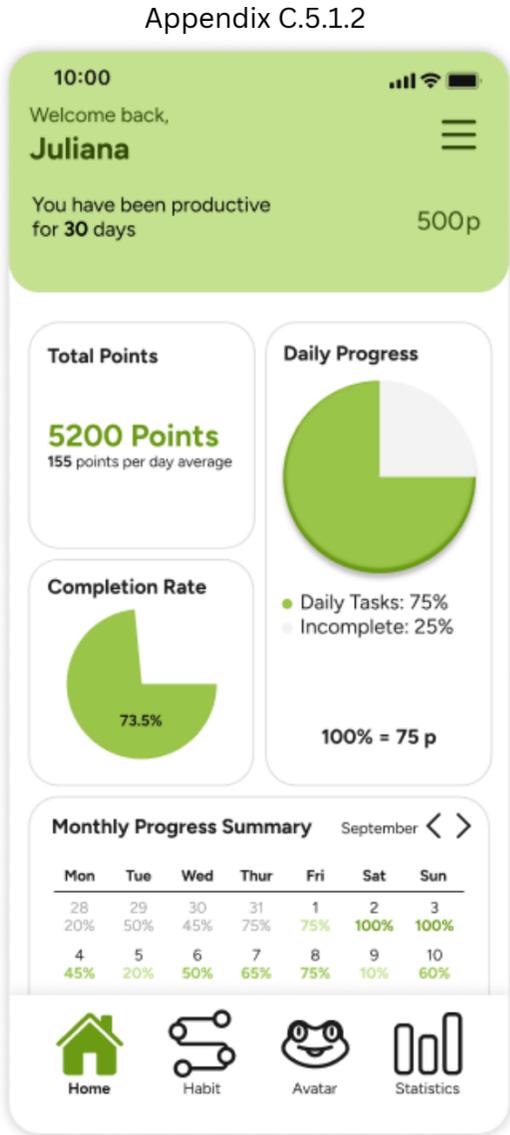


Statistics

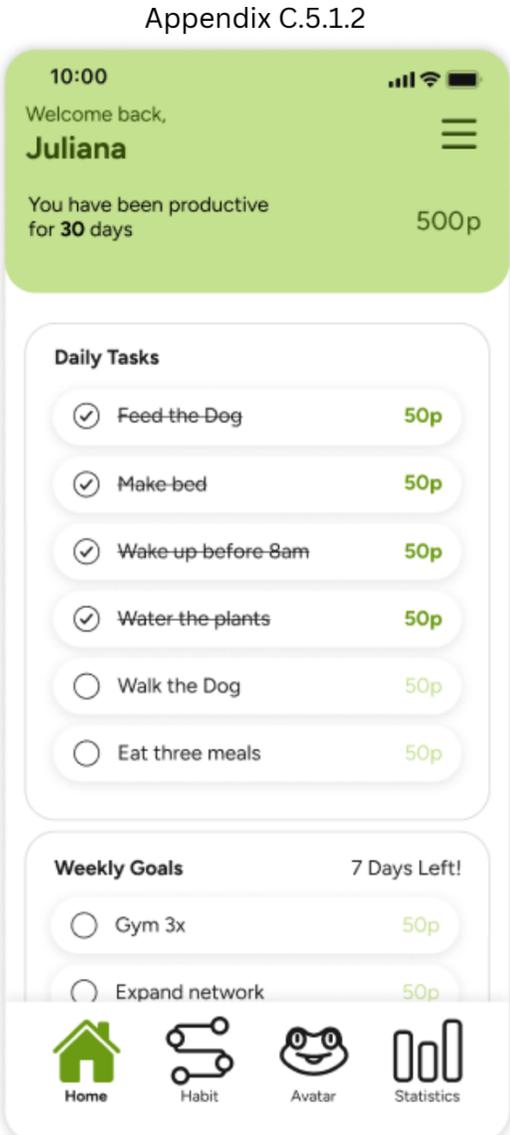
One of the crucial features missing in other similar applications is in-depth statistics. In here you can visualise your commitment and progression over time!

# 4: FINAL PRODUCT - MOBILE - CUSTOMISING HOME PAGE

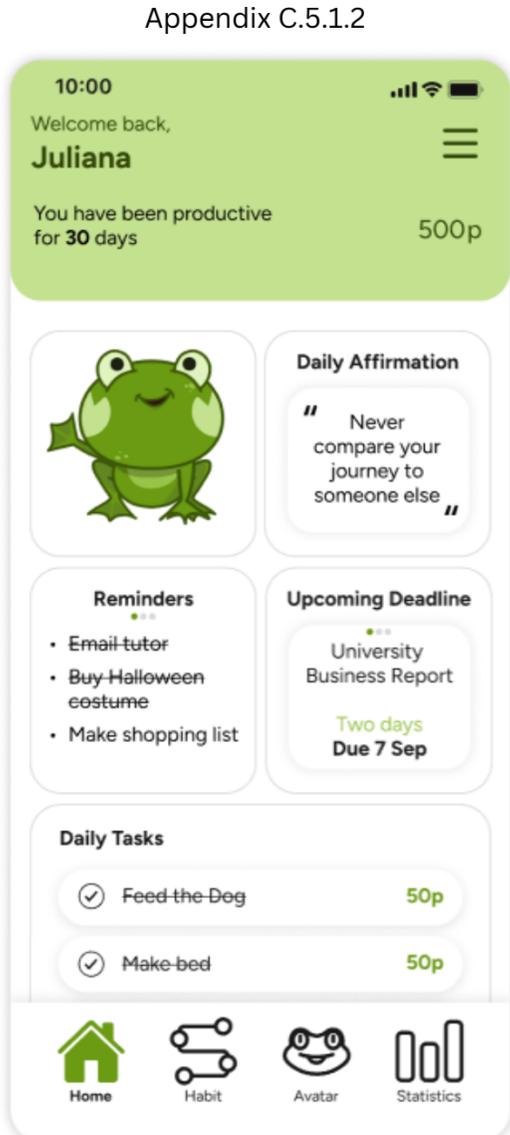
Users are motivated differently, some may want to see their statistics whilst others may only want to see their tasks and allowing for customisation of the home page personalises the experience and better motivates them to stay consistent.



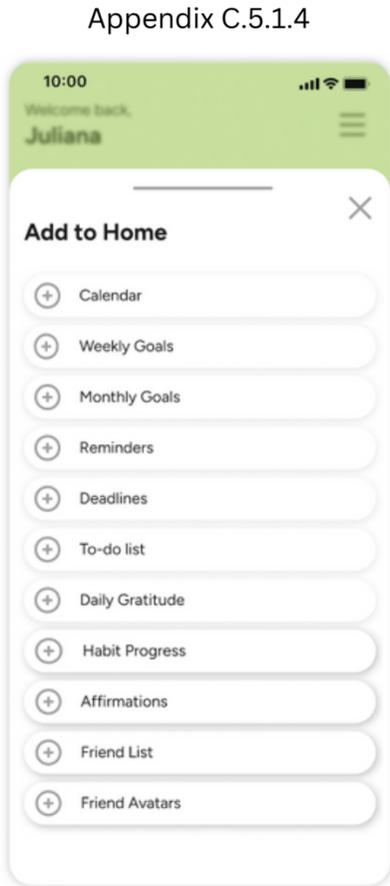
**Example 1: Statistics based**  
This user includes statistics mostly at the top of their home page as they are motivated by seeing their progress and getting 100% completion rates.



**Example 1: Task focused**  
This user wants to limit the complexity and other distractions on the home page. This allows them to see what tasks they have to complete clearly.



**Example 1: New Widgets**  
Although the primary function of the application is building strong habits, users are also able add additional features such as weekly goals, affirmations, reminders and much more!

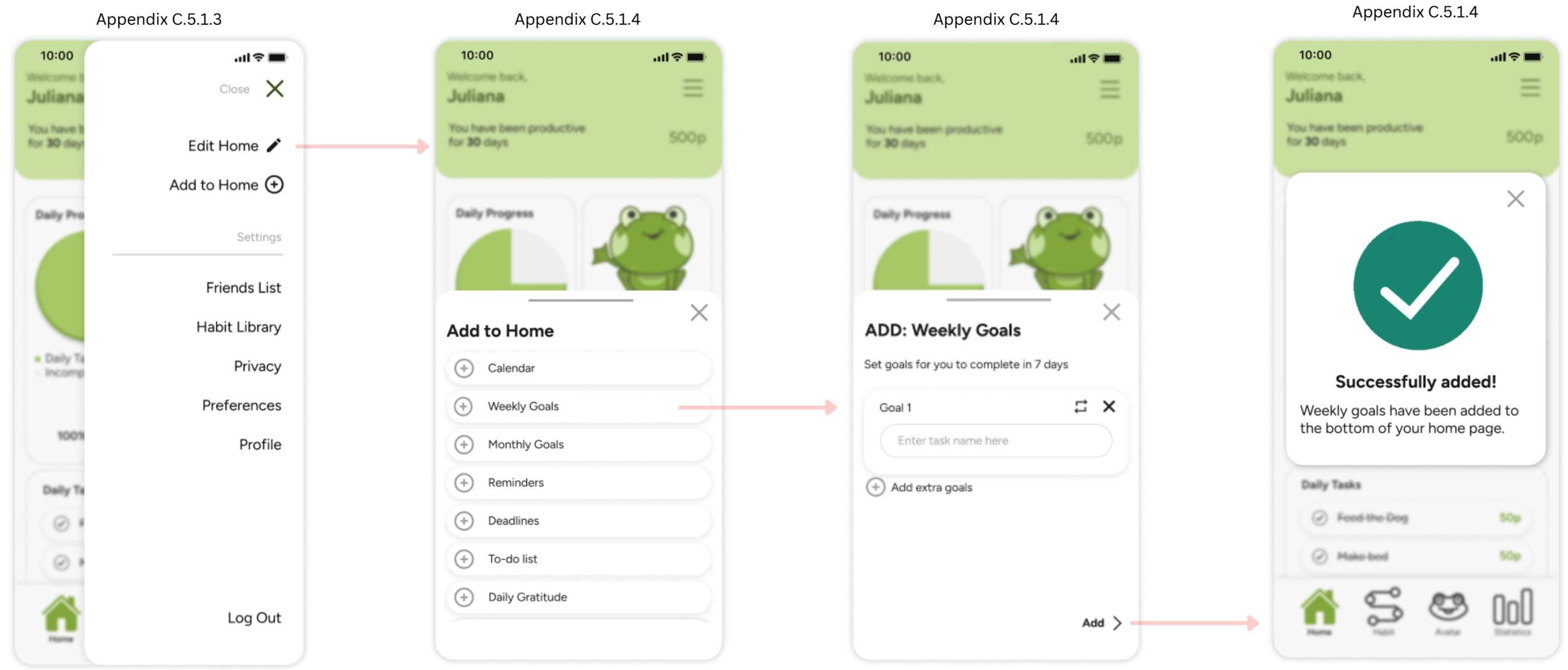


here are some examples of additional widgets and functions users can add to their home page!



# 4: FINAL PRODUCT - MOBILE - ADDING TO HOME PAGE

The custom ability features are both accessible in the hamburg menu button at the top right of the home page.



**Button Hierarchy:** Access customability functions and buttons easily in the hamburg menu at the top

**Multiple Options:** There are many options for users to add onto their home page for more extensive customisation to better help the user achieve their goals and establish habits

**Customisation options:** When adding new features users get to further customise. In this example the user can choose the amount of weekly goals they want and if they repeat weekly

**Visibility of status:** Users are informed by a pop-up that the widget has been successfully added and where they can find it on their home page

# 4: FINAL PRODUCT - MOBILE - MOVING WIDGETS ON HOME PAGE

The custom ability features are both accessible in the hamburg menu button at the top right of the home page.



**Button Hierarchy:** Access customability functions and buttons easily in the hamburg menu at the top

**Apple edit familiarity:** Widgets move similarly to what is seen on the apple home screen to make the process simple and familiar for users

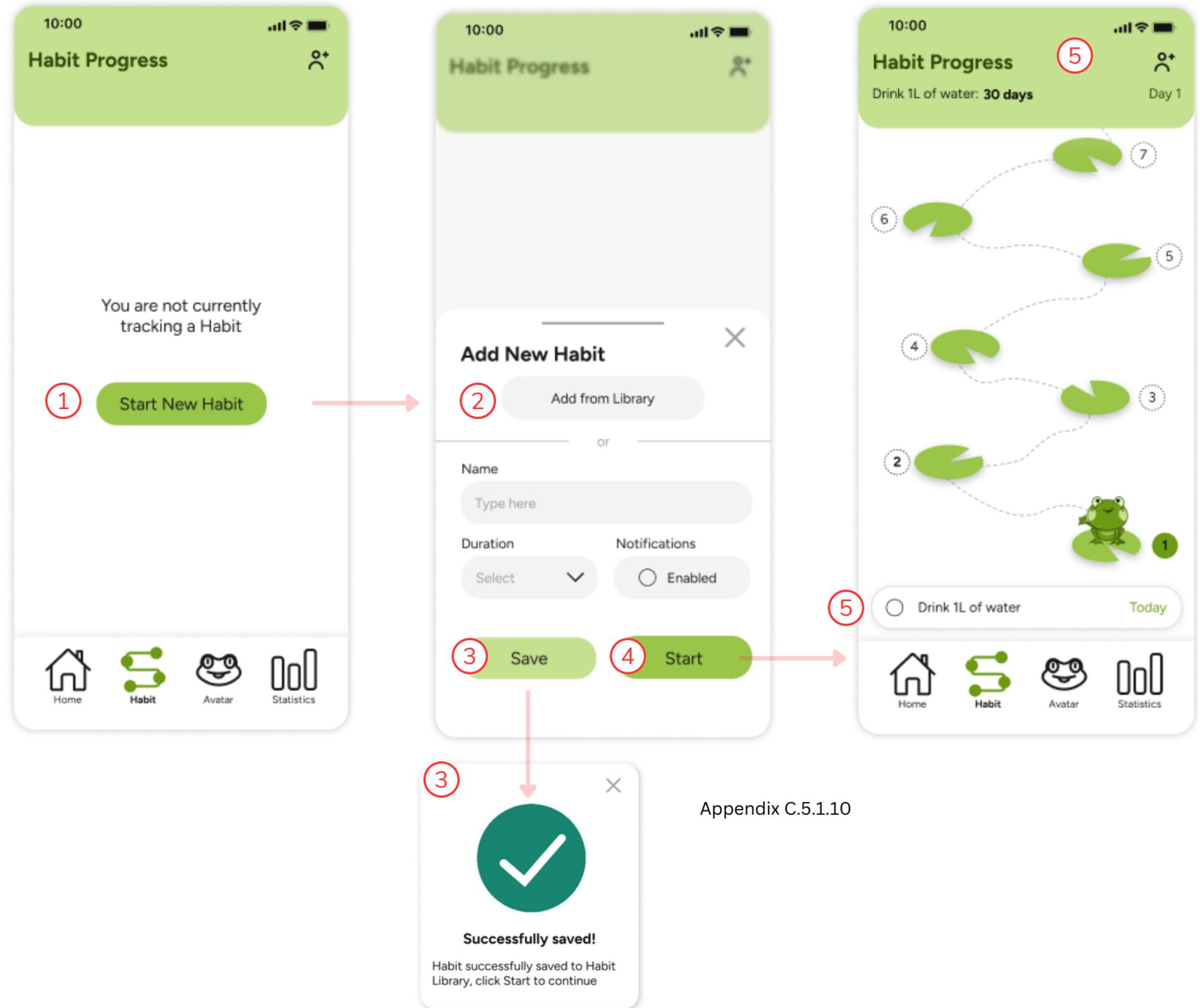
**Apple edit familiarity:** To move a widget the user has to click and drag the widget to where they like.

**Apple edit familiarity:** The widget will be placed where the user wanted automatically re-arranged the layout to exit edit mode click the done button

# 4: FINAL PRODUCT - MOBILE - CONFIGURING A HABIT

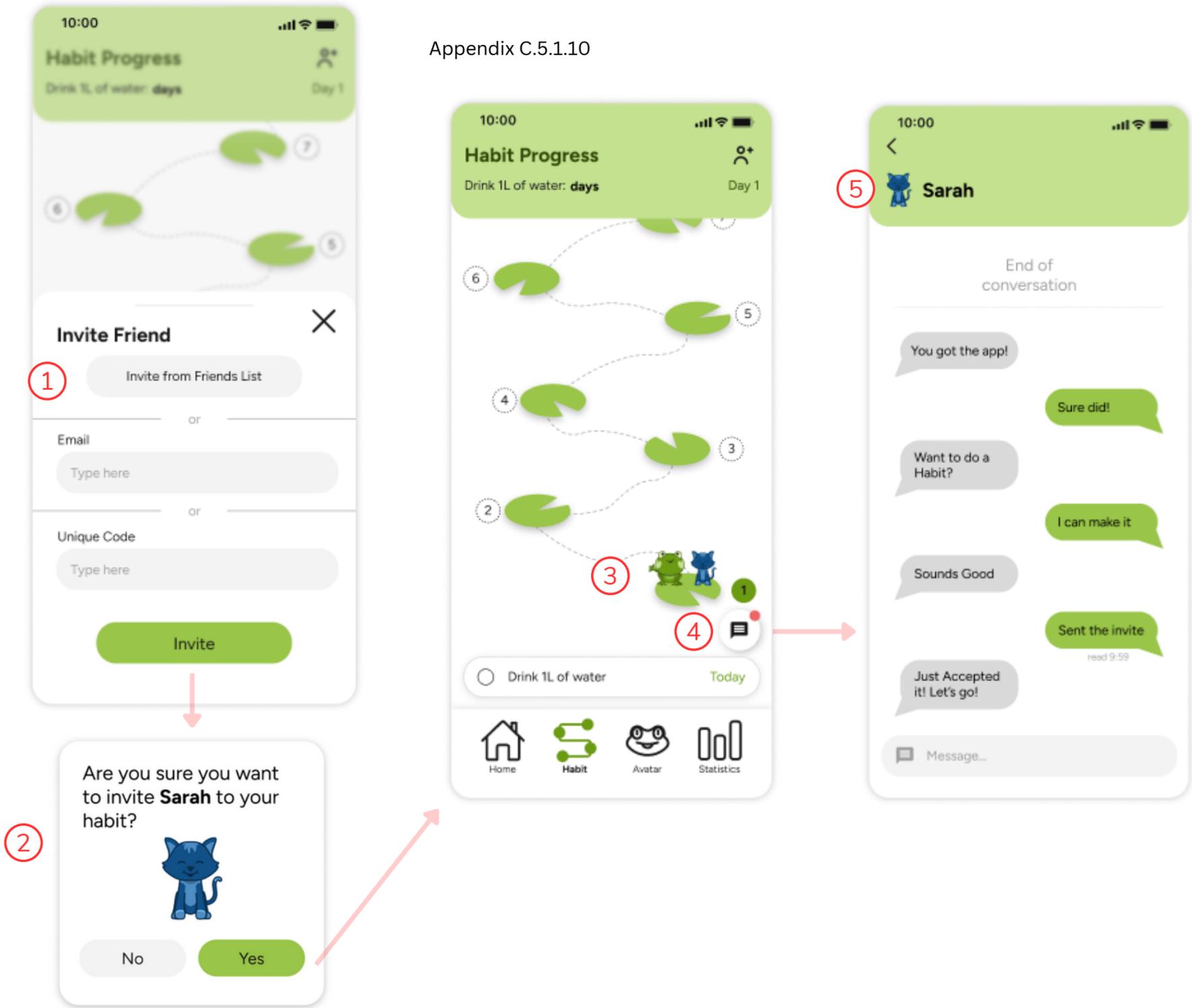
Users are able to quickly configure and choose a habit to focus on for a chosen duration

- 1. **Empty habit page:** When users are currently not tracking a habit a clear CTA button is placed in the centre with limited choice to help encourage users to start a habit.
- 2. **Configure options:** Users have to option to either manually configure a habit or to directly start a new habit which has been previously configured from the habit library. The habit library is also accessible in the settings menu on the home page, in which you can directly start habits from the library and configure additional habits. Once configured users have the choice to either save or start
- 3. **Save confirmation:** When users save the habit this means it will be accessible in the habit library. In this case a clear success pop-up is shown on the screen for the users helping them recognise what their action did and that it was successful.
- 4. **Start:** When users start a new habit, it will automatically set up the habit page.
- 5. **Habit progress:** In this the habit tick box and header which includes the task name, duration and current day is visible at all times. with the task, duration and current day visible at all times at the top of the screen. Furthermore, users are able to invite friends to complete the habit with them to increase social accountability



# 4: FINAL PRODUCT - MOBILE - COMPLETE HABITS WITH FRIENDS

Appendix C.5.1.10

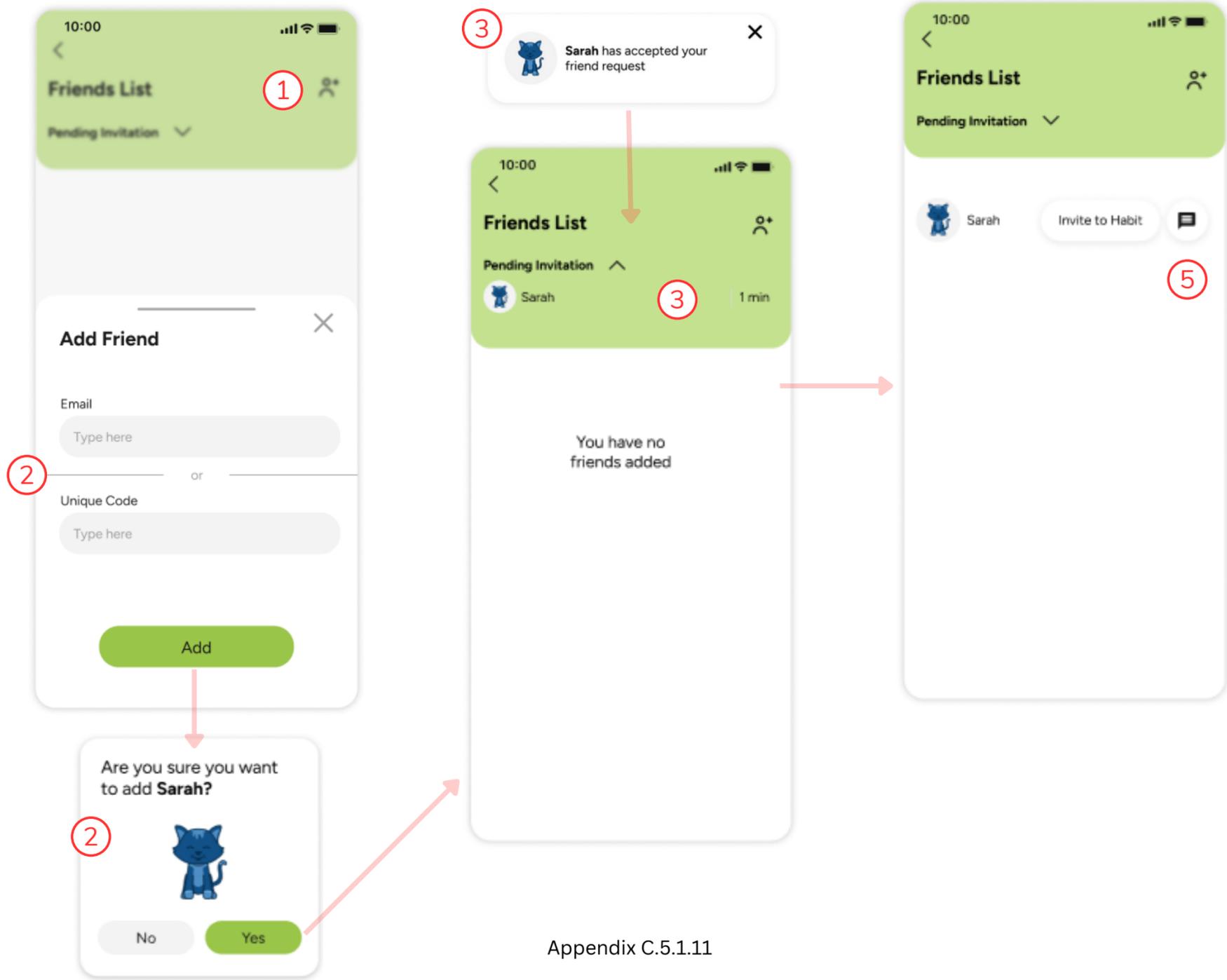


To help keep a user accountable they are able to invite a friend to complete a habit with one another, and message each other directly on the habit page or friends list. If notifications are enabled they will also be notified of their friends progression!

- Multiple options:** Users have three options they can use to invite a friend to their habit, being Email, Unique Code or from their Friends List. As mentioned briefly users are unable to find new friends directly on the application and therefore would be expected to find information of their email or unique code externally.
- Additional confirmation:** Noticeably throughout the application there are many pop-ups which appear as an extra layer of assurance in the user's choice and to inform them of their actions. In this case it is important as the user needs to make sure they are inviting the right person to their habit instead of a random user. If the invited friend is already completing a habit there will be an error message instead.
- Friend progression:** You and your friend are visualised on the habit page, you can see them progress each day on the Habit Progress page. Furthermore, if you enabled notification when setting up the habit you will be informed when your friend progresses.
- Direct messaging and notification:** When you have a friend completing a habit with you a message button icon appears in the bottom right above the task tick box. Here you are able to message each other easily. This is to allow for better social accountability or friendly competition between one another. User's are informed when there is a new message with a small red dot on the button.
- Messaging:** Users are able to message each other on the habit page but also in the friends list as another option. The design is quite simple and user's are informed when their message has been read or sent and at what time.

# 4: FINAL PRODUCT - MOBILE - ADDING A FRIEND

Users can view, add, message and invite friends to existing habits all in the friends list page which can be found in the home page menu settings or in the habit page invite.

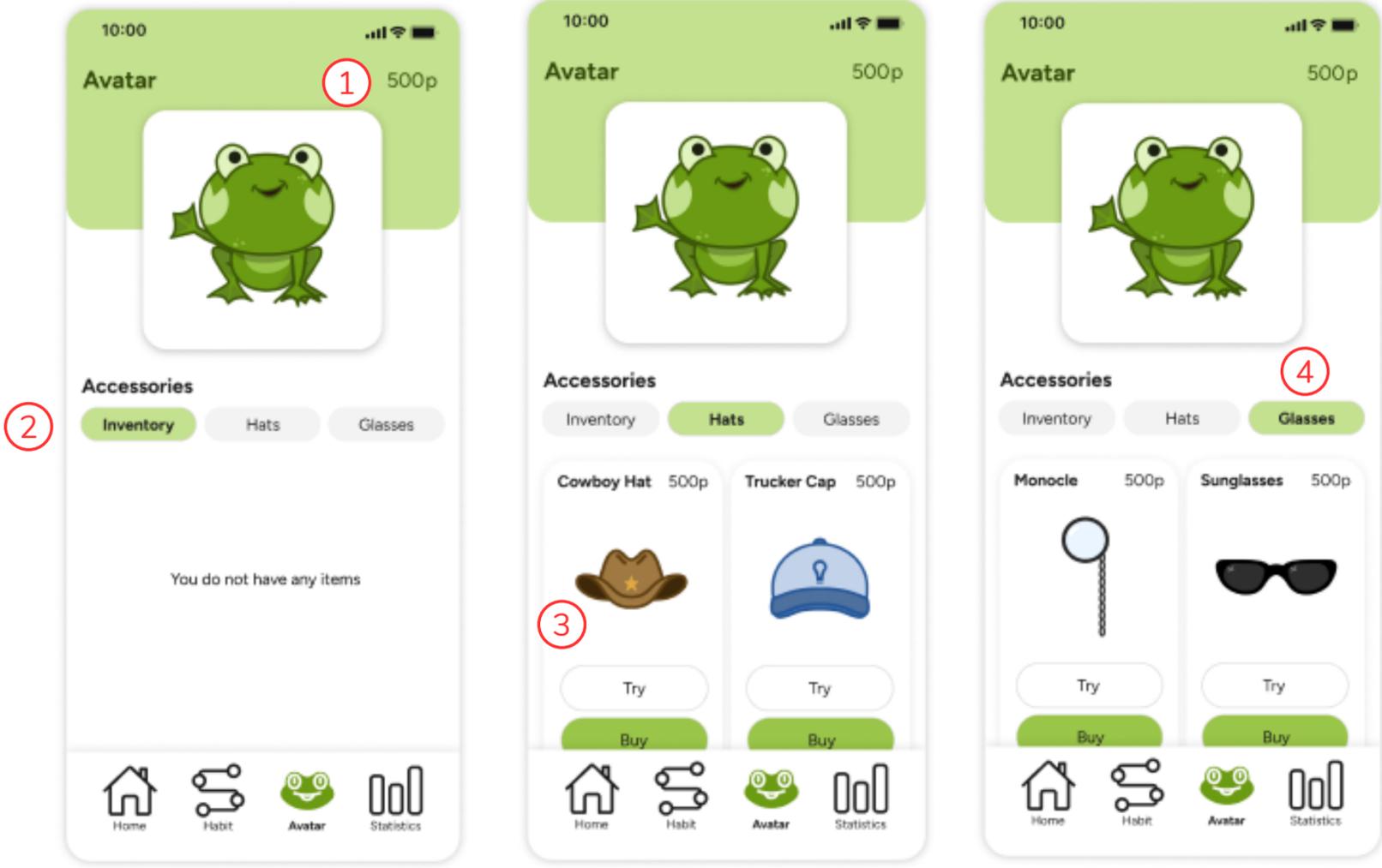


- 1. **Invite button:** When the user clicks the friend plus or invite icon on the top right in the friends list page which is accessible from the home page settings menu or habit invite.
- 2. **Invite options and confirmation:** In this they have two options to invite friends, either with their unique code or email. This would require you to have contact with them outside of the application as there isn't a way to meet and interact with random users. Once a user successfully enters their email or unique code and press add an additional confirmation appears allowing the user to check it is the right person before sending the invitation.
- 3. **Status of friend request:** Once the invitation has sent the user can view pending invitations at the header of the page. Once the invitation has been accepted a notification like pop-up comes down from the top to inform the user.
- 4. **Direct message:** You are able to invite the friend that has been added to your ongoing habit or message them directly in the friends list page.

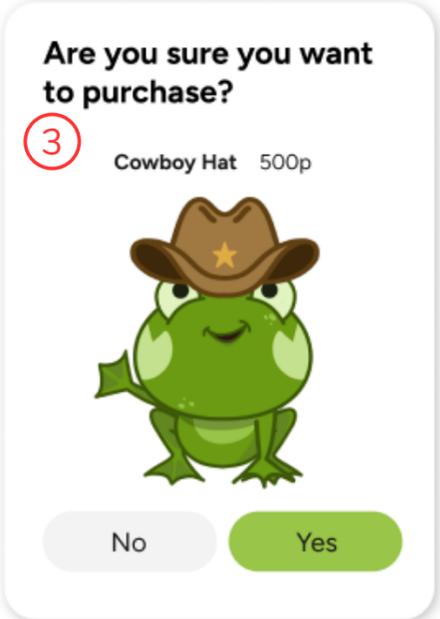
# 4: FINAL PRODUCT - MOBILE - ONBOARDING

Users have a simple process for creating a new account and logging in to further prevent users from getting deterred or discouraged

Appendix C.5.1.7 + C.5.1.8

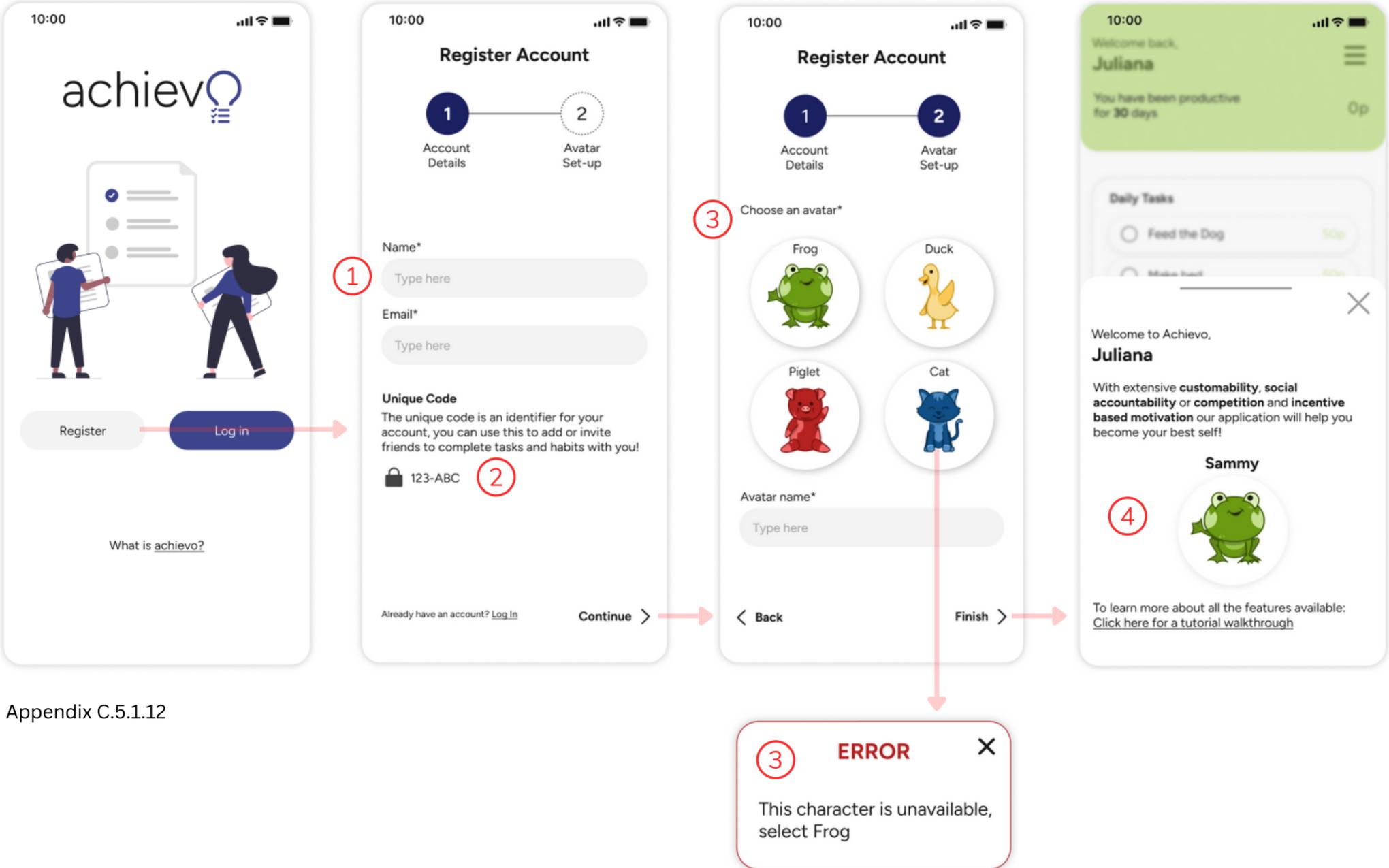


- 1. **Clear visibility:** Users can clearly see the amount of points they have at the top right in the header, alongside a large image of their character.
- 2. **Filter options:** Users have three simple options within the avatar page, being inventory which will show the items the user owns and then hats and glasses in which you can try, view and buy new accessories.
- 3. **Item boxes:** Users are able to try on an accessory before they buy it, showing the item by itself and cost of the item. When the user clicks 'try' a pop-up appears asking if they would like to purchase it, visualising their character with the item and showing the price.
- 4. **Stacking accessories:** There are two different types of accessories within the application, hats and glasses. These are separated as they can an item from each can be equipped at the same time, for example a cowboy hat and sunglasses.
- 5. **Available options:** Overall in the final version of the prototype only four accessory options are available with two hats and two glasses. This is a decent downfall of the final product due to the significance of reward based motivation within the application, limited options will likely make users lose interest faster. This of course would be expanded with more options if further development occurred.



# 4: FINAL PRODUCT - MOBILE - SIGN UP AND ONBOARDING

Users have a simple process for creating a new account to prevent users from being deferred from the application. From research in A1 it was evident that long sign up processes would discourage users from either staying consistent on the application or from completing their account registration (Appendix A.4.3)

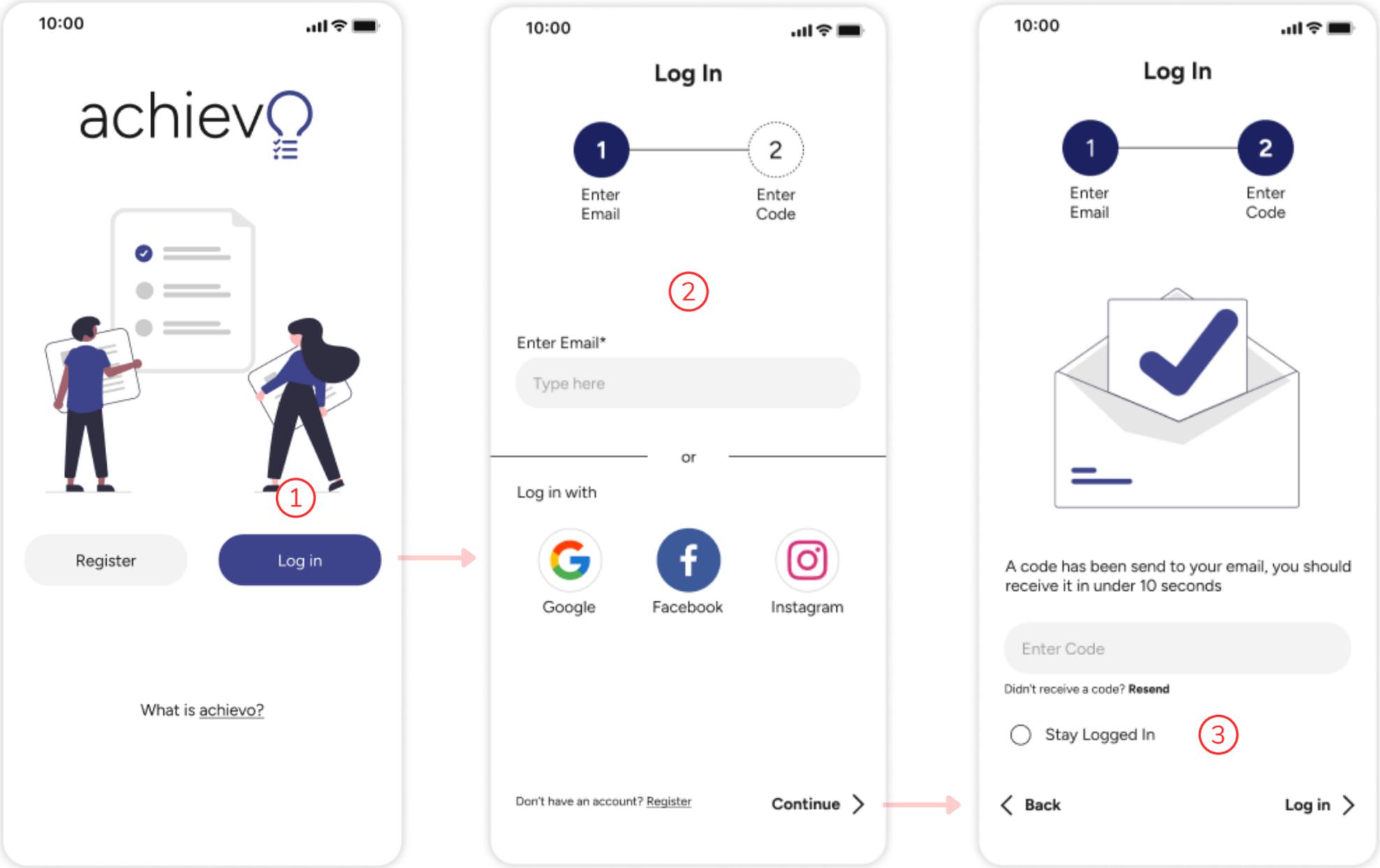


Appendix C.5.1.12

- Limited personal information needed:** When registering a new account there are only two required fields for your personal information, being your name and email. These are indicated to be required with an asterisks '\*'. Your name is used in the home page to make the experience more personalised to better motivate consistency, and your email is used to log-in and as an identifier similar to the unique code.
- Unique code:** The unique code is an identifier for your account, meaning passwords and usernames are not needed simplifying the sign up process. These can be accessed at all time in the application in the profile section in the settings menu. Your unique code can be used by your friends to add you and invite you to habits. However, your email can also be used in these cases.
- Personalising the user experience:** There are two steps in setting up your account, your personal information and then choosing your character and it's name. Due to the limitations of the final prototype the user will get an error message if they select a character which is not the frog. If further development would occur all characters would be available. When selected the circle is filled with a different accent colour.
- Onboarding:** Once the account is created the user will be shown a default home page which is blurred out with a pop-up which summarises the application, showing your name, and your character! If needed, the user also has the option to go through a walkthrough of the application. Due to many additional features of the application being hidden by the user in the add to home panel, we found that a walkthrough may be necessary for new users to utilise all that the application has to offer. The tutorial is non-functional in the final prototype.

# 4: FINAL PRODUCT - MOBILE - LOG IN

Users have a simple log-in process with multiple log-in options and a verification code sent to email to increase security of the user's data.



- 1. **Primary log-in button:** With the intention of this application being used consistently by users the Log-in button is the primary whilst the register button is a secondary. On this page you are also able to click the text button 'What is achievo?' to learn more.
- 2. **Log-in options:** Users have the ability to either log-in with their email or with Google, Facebook or Instagram. If the user accidentally clicks the log-in button instead of the register button as it is primary button and therefore likely, they are able to click the text button at the bottom left which directs the user to the register page.
- 3. **Verification:** To ensure security for the user they are required to enter a code sent to their email. This is necessary as there is no password required to set when signing up. However, to prevent this from occurring each time users can enable the tick box to stay logged in, recognising the device the user is using. Errors with email deliveries can occur, therefore the user of when they should get the code and an option to get the code re-sent.

# 6. Appendix

A. Research / A1

B. Concept Development / A2

C. Artefacts

D. Usability Testing

E. References / Team Charter

# **A. Research**

Secondary and primary Research

## A.0 Secondary research and research plan

- <https://uxstudioteam.com/ux-blog/self-tracking/>
  - UX self tracking tips
- Notification
  - <https://www.nirandfar.com/notifications-that-work/>
- Existing apps and missing elements
  - <https://www.notionhub.net/free-templates/gamify-goals-tasks-and-daily-habits/>
  - <https://www.tiktok.com/search?q=notion%20game&t=1691630398629>
  - <https://www.tiktok.com/@youarelovedtemplates/video/7161992990037167403>
  - There are no gamified apps specifically focused on habit and productivity tracking
    - Most are related to individual tasks like fitness, drinking water, to-do lists, etc...
    - The only one similar is "<https://habitica.com/static/home>" however, it is very strong on the 'game' sense, we want our app to feel like your life is a game not like you are building a custom persona / rpg.
  - <https://www.forestapp.cc/>
    - Focus app – if you leave the app, your tree dies
  - [Virtual Cottage](#)
    - App where you can set a timer and just listen to lo-fi music.
- Why productivity is important / habits
  - <https://www.healthline.com/health/mental-health/why-are-habits-important>
  - Habits improve mental health greatly
  - Increased motivation
  - 
  - Different types of habits
    - Preventative (brushing teeth)
    - Eating habits (eating a portion of vegetables with each meal)
    - Habits of mind (positive self talk, diary or journaling, meditation)
    - Productive (to-do lists)
    - Social and communication (
    - Unwanted (procrastination)
- Do people have issues with productivity
  - <https://facilethings.com/blog/en/micro-tasks>
  - The reason is that whenever you recognize a task or project as completed, your brain releases a load of [dopamine](#), a neurotransmitter that is responsible for generating feelings of accomplishment, satisfaction and happiness. This release of dopamine not only makes you feel good but also motivates you to continue completing tasks and extend that pleasant feeling.

- Attention span issues
  - <https://www.wyzowl.com/human-attention-span/#:~:text=According%20to%20research%2C%20our%20attention,or%20object%20for%209%20seconds.>
  - Decrease from 12.25 in 2000 to 8.75

Problem Area & scenario

Problem Area: Lifestyle, Leisure and Entertainment

Scenario: How can self-tracking apps be better suited for young adults, in order to address their needs regarding productivity.

- With a growing trend of low attention spans, young people are struggling to keep and maintain healthy habits and remain productive. With digital generations entering adult life, it is easy to remain distracted and forget important tasks and habits which aid in their overall mental and physical health . To address the issue of attention span and our age demographic, producing a fun and incentive based self-tracking application could help users overcome these barriers and build long term habits.

Research questions

- How do gamified ways of self tracking improve engagement?
- How can self-tracking apps be better suited for young adults?
- What type of features are effective or missing from self-tracking applications?
- What are the barriers that are currently stopping young adults from being productive?
- What motivates people to maintain and create healthy habits and be productive?

\*Find secondary research to justify why these are our research questions.

### A.1.1 Questionnaire Planning:

• Justification: In order to gain a broader view of the information regarding productivity, self-tracking our survey will target people who both use self-tracking apps and don't, and people who are also productive/have good habits and not. I find that is important to understand all 4 of these factors. In terms of self-tracking apps, we need to understand why people use it and how it is effective, and it's impact on productivity in general. We also want to find out why people don't use self-tracking apps, and if they consider themselves to be productive, and why if so. Furthermore, identifying people who are productive without these apps are important as we can find out what motivates them, and therefore incorporate similar motivations within the application to aid users without healthy habits. However, we want to expand on questions targeted to particular people, especially those who use or have used self-tracking applications to find out what works within those apps, what doesn't, or personal issues preventing them. Of course, the survey also needs to include basic demographics, and for this, mental health will also be considered. Mental health and healthy habits are often related, with people with mental health issues often struggling to maintain healthy habits, and see what we could do to accommodate our application and make it more accessible for them.

- Aim for 50+ participants
- Approximately 5-10 minutes long
- Rikert scale questions mostly with some yes and no.
- I want the first few questions to focus on productivity and habits
- I want to find out which participants are productive, and which have good habits
- I want to find out what motivates participants to be productive
- I then want to find out how they are productive and how they maintain good habits
- I also want to find out why people find it difficult to be productive or maintain good habits
- The next questions I want to focus on self-tracking applications, particularly with productivity and habits. It would be necessary to provide a description and further information (make this a separate section, make sure to include educational, self-improvement in this)
- I want to find out which participants have used self-tracking or applications before
- I want to find out what type of self-tracking applications participants use
- I also want to find out how effective these applications were, and what made them effective.
- Ask about notifications, if they were effective or not.
- I want to find out the impact these applications had

#### Section 1 - Demographics

1. What is your age?
2. What is your gender?
3. What is your highest level of education?
4. What is your occupation (select all that apply)
5. Do you identify as someone with a mental illness, physical impairment or learning difficulty? (OPTIONAL)

#### Section 2 - Productivity and Habits

1. You are more productive than the average person [rikert scale]
2. What tools do you use to remain productive? (select all that apply)
3. What techniques do you use to remain productive? (select all that apply)
4. What motivates you to be productive? (select all that apply)
5. Do you struggle with self-determination?
6. Would you say you have healthy habits?
7. It is easy to maintain your habits [rikert scale]
8. It is hard to establish and create new habits [rikert scale]
9. How often do you forget or lose track of time, preventing productivity and your daily habits [rikert scale]
10. Productivity and healthy habits are necessary for success [rikert scale]
11. What type of habits do you STRUGGLE with the most? (select all that apply)
12. If you find it difficult or really easy to remain productive and establish good habits. Why do you think this is? (OPTIONAL)

#### Section 3 - Self-tracking applications

1. Have you actively used self-tracking applications before?

a. YES - sent to section 4 / b. NO - sent to section 6

#### Section 4 - Self-tracking continued

1. What type of self-tracking or self-improvement applications have you used? (select all that apply)
2. Would a more fun and engaging tracking application be more effective than a professional one?
3. What features or aspects did you like or dislike about the application(s)?
4. Were notifications effective at keeping you on track?
5. Have you specifically used a habit or task tracking application before?

a. YES - sent to section 5 / b. NO - sent to section 6

#### Section 5 - habit tracking

1. What habit tracking application did you use? (OPTIONAL)
2. Would a 'gamified' habit tracker application motivate you to stay on track with your habits?
3. What features did you enjoy in the habit tracking application you used?
4. What would you improve on or features you would want added in a habit tracker?

#### Section 6 - never used self-tracking

1. What has deterred you from using these types of applications? (OPTIONAL)
2. Do you think if you had a self-tracking application, your productivity would improve and maintaining habits would be easier?

#### Section 7 - final questions

1. Do you think productivity and habits are improved with most self-tracking applications
2. Why do you think some people struggle to remain productive or have healthy habits? (OPTIONAL)
3. Why do you think some people struggle to use self-tracking applications? (OPTIONAL)
4. What features would you want in a habit or task tracking application?

## A.1.2 Questionnaire Raw Data:

What is your age?	What is your gender	What is your highest level	What is your occupation?	Do you identify as someo	You are more productive i	What tools do you use to	What techniques do you u	What motivates you to be	Do you struggle with self-	Would you say you have	It is easy to maintain your	It is hard to establish and	How often do you forget c	Productivity and healthy h	What type of habits
18-22	Male	Bachelor's degree	Full-time Student	Mental illness	Strongly Agree	To-do lists or Writing down	The Pomodoro Technique	Competition, Success, Re	Maybe	Maybe	Agree	Agree	Occasionally	Strongly Agree	Preventative - maint
18-22	Female	High school diploma	Part-time Employee		Neutral	To-do lists or Writing down	None of the above	Success, Self-improveme	Maybe	Yes	Neutral	Neutral	Occasionally	Strongly Agree	Productive - accom
18-22	Male	High school diploma	Casual Employee, Part-time Employee		Strongly Agree	To-do lists or Writing down	5 push ups every time I bi	Competition, Success, Re	No	Yes	Agree	Disagree	Often	Strongly Agree	Unwanted - negative
18-22	Female	High school diploma	Casual Employee, Full-time Student		Agree	To-do lists or Writing down	Getting Things Done (GTI)	Success, Growth, Self-im	No	Maybe	Disagree	Disagree	Occasionally	Strongly Agree	Unwanted - negative
18-22	Male	High school diploma	Part-time Employee, Full-time Student		Neutral	To-do lists or Writing down	Skin the baguette	Competition, Success, Se	Yes	Maybe	Disagree	Neutral	Often	Strongly Agree	Productive - accom
18-22	Female	Bachelor's degree	Casual Employee, Full-tin	Mental illness	Neutral	To-do lists or Writing down	I do not use productivity ti	Competition, Awards or In	Yes	No	Strongly Agree	Strongly Agree	Always	Strongly Agree	Productive - accom
18-22	Male	High school diploma	Casual Employee		Neutral	To-do lists or Writing down	None of the above	Competition, Success, Re	Yes	Maybe	Neutral	Agree	Always	Agree	Productive - accom
18-22	Male	Bachelor's degree	Part-time Employee, Full-time Student		Disagree	To-do lists or Writing down	Getting Things Done (GTI)	Competition, Success, Re	Yes	Yes	Agree	Neutral	Sometimes	Strongly Agree	Unwanted - negative
18-22	Male	High school diploma	Full-time Employee, Full-time Student		Agree	To-do lists or Writing down	Time Blocking, Intentional	Competition, Success, Se	No	No	Agree	Agree	Sometimes	Disagree	Preventative - maint
30-35	Female	Master's degree or higher	Full-time Employee	Mental illness	Strongly Agree	To-do lists or Writing down	Haven't heard of these bu	Competition, Success, Gr	Yes, in that I'm too determ	No	Neutral	Disagree	Sometimes	Strongly Agree	Social and communi
18-22	Female	Bachelor's degree	Part-time Employee		Agree	To-do lists or Writing down	Zen to Done, Eat the Fro	Competition, Self-improve	No	No	Agree	Disagree	Sometimes	Neutral	Eating - types of foo
18-22	Female	High school diploma	Casual Employee, Full-time Student		Agree	To-do lists or Writing down	I do not use productivity ti	Awards or incentives, Grc	No	Yes	Agree	Disagree	Occasionally	Agree	Preventative - maint
18-22	Female	Certification	Casual Employee	Mental illness, Learning C	Strongly Disagree	I do not use productivity ti	I do not use productivity ti	Being held accountable b	Yes	No	Neutral	Agree	Often	Agree	Preventative - maint
<18	Female	High school diploma	Casual Employee	Mental illness, Learning C	Strongly Disagree	Journaling, Turning off yo	I do not use productivity ti	Competition, Success, Re	Yes	No	Strongly Agree	Strongly Agree	Often	Strongly Agree	Preventative - maint
18-22	Male	High school diploma	Casual Employee		Neutral	To-do lists or Writing down	I do not use productivity ti	Pressure	Maybe	Maybe	Disagree	Agree	Sometimes	Agree	Eating - types of foo
18-22	Female	High school diploma	Part-time Employee		Neutral	To-do lists or Writing down	Getting Things Done (GTI)	Competition, Recognition, Yes		Yes	Agree	Neutral	Sometimes	Agree	Preventative - maint
18-22	Female	High school diploma	Casual Employee	Mental illness	Strongly Disagree	To-do lists or Writing down	I do not use productivity ti	Success, Self-improveme	Yes	No	Strongly Disagree	Strongly Agree	Often	Strongly Agree	Productive - accom
18-22	Male	High school diploma	Full-time Student		Neutral	To-do lists or Writing down	The Pomodoro Technique	Success, Growth, Self-im	No	Yes	Disagree	Agree	Sometimes	Strongly Agree	Unwanted - negative
18-22	Male	High school diploma	Casual Employee, Part-time Employee, Part-time St		Disagree	I do not use productivity ti	I do not use productivity ti	Competition, Success, Re	No	No	Neutral	Agree	Often	Agree	Preventative - maint
18-22	Female	High school diploma	Part-time Employee, Full-time Student		Disagree	To-do lists or Writing down	The Pomodoro Technique	Competition, Success, Re	Yes	No	Neutral	Strongly Agree	Sometimes	Strongly Agree	Eating - types of foo
18-22	Male	High school diploma	Intern, Full-time Employee		Disagree	Calendars	I do not use productivity ti	Power, Pressure	Yes	No	Strongly Agree	Strongly Agree	Often	Neutral	Productive - accom
50<	Male	Master's degree or higher	Full-time Employee		Agree	To-do lists or Writing down	Time Blocking, Getting Th	Success, Recognition, Pr	No	Yes	Agree	Agree	Occasionally	Agree	Social and communi
18-22	Male	High school diploma	Intern		Agree	To-do lists or Writing down	I do not use productivity ti	Success, Recognition	Maybe	Yes	Neutral	Neutral	Occasionally	Agree	Unwanted - negative
18-22	Female	High school diploma	Casual Employee	Mental illness	Neutral	To-do lists or Writing down	The Pomodoro Technique	Success, Self-improveme	Maybe	Yes	Agree	Disagree	Never	Maybe	Eating - types of foo
18-22	Female	High school diploma	Casual Employee, Full-time Student		Agree	To-do lists or Writing down	I might use some subcont	Growth, Self-improvemen	Maybe	Yes	Strongly Agree	Strongly Agree	Occasionally	Strongly Agree	Productive - accom
18-22	Female	High school diploma	Intern, Casual Employee, Mental illness		Strongly Agree	To-do lists or Writing down	The Pareto (80/20) Techn	Pressure, Recognition	Yes	No	Agree	Agree	Often	Strongly Agree	Productive - accom
18-22	Male	High school diploma	Full-time Student		Neutral	I do not use productivity ti	I do not use productivity ti	Competition, Success, Re	Maybe	No	Neutral	Neutral	Often	Strongly Agree	Productive - accom
18-22	Male	Diploma	Full-time Employee, Part-	ADHD	Disagree	To-do lists or Writing down	The Pomodoro Technique	Pressure	Yes	Ebs and flows	Disagree	Neutral	Often	Agree	Preventative - maint
18-22	Female	High school diploma	Full-time Student	Mental illness	Disagree	To-do lists or Writing down	Time Blocking	Competition, Pressure	Yes	No	Strongly Disagree	Strongly Agree	Often	Strongly Agree	Preventative - maint
18-22	Female	High school diploma	Full-time Student	Mental illness	Agree	To-do lists or Writing down	The Pomodoro Technique	Competition, Success, Re	No	Yes	Agree	Strongly Agree	Occasionally	Agree	Preventative - maint
18-22	Non-Binary	High school diploma	Casual Employee, Full-tin	Mental illness	Strongly Disagree	To-do lists or Writing down	idk what any of these are	Competition, Awards or In	Yes	No	Neutral	Neutral	Always	Agree	Preventative - maint
18-22	Female	High school diploma	Full-time Student	Physical Impairment, Mer	Agree	I do not use productivity ti	Task Batching, Intentional	Competition, Success, Re	No	No	Disagree	Strongly Agree	Often	Disagree	Preventative - maint
18-22	Female	High school diploma	Casual Employee, Full-tin	Mental illness	Neutral	To-do lists or Writing down	The Pomodoro Technique	Competition, Success, Re	Maybe	Maybe	Neutral	Neutral	Occasionally	Agree	Habits of mind - help
18-22	Female	High school diploma	Casual Employee	Mental illness	Disagree	None of the above	I do not use productivity ti	Pressure	Yes	No	Agree	Agree	Often	Maybe	Preventative - maint
18-22	Male	High school diploma	Full-time Student	Mental illness	Neutral	None of the above	None of the above	Competition, Success, Pr	Yes	No	Neutral	Neutral	Often	Agree	Productive - accom
18-22	Female	High school diploma	Part-time Employee	Mental illness	Agree	To-do lists or Writing down	I do not use productivity ti	Success, Growth, Self-im	Yes	Yes	Agree	Agree	Occasionally	Agree	Preventative - maint
18-22	Female	Diploma	Full-time Student, Unemp	Mental illness	Disagree	To-do lists or Writing down	The Pomodoro Technique	Pressure	Yes	No	Neutral	Agree	Often	Agree	Eating - types of foo
18-22	Female	High school diploma	Casual Employee, Full-tin	Mental illness, Learning C	Neutral	Turning off your phone, P	The Pomodoro Technique	Competition, Awards or In	Yes	No	Neutral	Strongly Agree	Often	Agree	Preventative - maint
18-22	Male	Bachelor's degree	Intern, Part-time Emplo	Mental illness	Agree	To-do lists or Writing down	The Pomodoro Technique	Competition, Success, Au	Sometimes (burn out)	Yes and no	Agree	Disagree	Sometimes	Strongly Agree	Preventative - maint
50<	Female	Master's degree or higher	Unemployed		Strongly Agree	To-do lists or Writing down	I do not use productivity ti	Success, Recognition, Se	No	Yes	Strongly Agree	Agree	Never	Strongly Agree	Eating - types of foo
18-22	Female	High school diploma	Casual Employee, Full-time Student		Agree	To-do lists or Writing down	I do not use productivity ti	Success, Recognition, Be	Sometimes	Yes	Neutral	Agree	Occasionally	Strongly Agree	Productive - accom
18-22	Male	High school diploma	Full-time Employee		Strongly Agree	To-do lists or Writing down	None of the above	Awards or incentives, Se	No	Maybe	Neutral	Agree	Sometimes	Maybe	Preventative - maint
18-22	Male	High school diploma	Casual Employee		Disagree	music	I do not use productivity ti	None of the above	Maybe	Maybe	Disagree	Agree	Sometimes	Agree	Habits of mind - help
18-22	Female	High school diploma	Part-time Employee, Part-	Mental illness, Learning C	Disagree	To-do lists or Writing down	I do not use productivity ti	Success, Recognition, Gr	sometimes	Maybe	Disagree	Strongly Agree	Always	Strongly Agree	Productive - accom
18-22	Non-Binary	High school diploma	Casual Employee, Full-tin	Mental illness	Strongly Disagree	To-do lists or Writing down	The Pomodoro Technique	Competition, Awards or In	Yes	No	Neutral	Strongly Agree	Always	Agree	Eating - types of foo
18-22	Non-Binary	High school diploma	Full-time Student, Unemployed		Disagree	To-do lists or Writing down	Task Batching	Competition, Pressure	Yes	No	Disagree	Strongly Agree	Always	Maybe	Preventative - maint
18-22	Non-Binary	High school diploma	Casual Employee, Part-tr	Mental illness	Strongly Disagree	Journaling, alarms and re	I do not use productivity ti	Self-improvement, Pressu	Yes	No	Strongly Disagree	Strongly Agree	Always	Maybe	Preventative - maint
18-22	Female	High school diploma	Part-time Employee, Part-time Student		Disagree	To-do lists or Writing down	Intentional Single-tasking	Success	No	No	Agree	Agree	Always	Maybe	Eating - types of foo
18-22	Female	High school diploma	Casual Employee, Full-time Student		Disagree	To-do lists or Writing down	Getting Things Done (GTI)	Competition, Recognition, Yes		No	Disagree	Strongly Agree	Often	Neutral	Eating - types of foo
18-22	Female	Certification	Full-time Student	Mental illness, Learning C	Disagree	To-do lists or Writing down	None of the above	Deadlines	Yes	Maybe	Neutral	Strongly Agree	Always	Maybe	Preventative - maint
18-22	Male	High school diploma	Full-time Student	Physical Impairment, Mer	Agree	To-do lists or Writing down	I do not use productivity ti	Competition, Success, Gr	Yes	No	Neutral	Agree	Often	Strongly Agree	Preventative - maint
18-22	Male	High school diploma	Full-time Employee	Mental illness	Disagree	Turning off your phone, C	The Pomodoro Technique	Pressure	Yes	Maybe	Strongly Disagree	Strongly Agree	Often	Agree	Preventative - maint
18-22	Female	High school diploma	Casual Employee, Sole trader		Neutral	To-do lists or Writing down	None of the above	Competition, Success, Re	No	Maybe	Agree	Agree	Always	Neutral	Eating - types of foo
18-22	Non-Binary	High school diploma	Casual Employee, Full-tin	Mental illness	Disagree	To-do lists or Writing down	I do not use productivity ti	Competition, Awards or In	Yes	No	Disagree	Strongly Agree	Often	Agree	Eating - types of foo
18-22	Male	Bachelor's degree	Full-time Student		Neutral	To-do lists or Writing down	I do not use productivity ti	Success, Growth, Self-im	Yes	No	Disagree	Agree	Occasionally	Agree	Productive - accom
18-22	Male	High school diploma	Casual Employee, Full-tin	Learning Difficulty	Neutral	To-do lists or Writing down	Getting Things Done (GTI)	Competition, Recognition, Yes		Maybe	Agree	Agree	Often	Strongly Agree	Habits of mind - help

\*Sample as data set is too large, for full data, go to this link: <https://docs.google.com/spreadsheets/d/1TVf0WlNuwzN8grSqGl1zpAN3QjE--Zamk7tmANHcl0l/edit?usp=sharing>

## A.2.1 Interviews planning

We have decided to conduct conversational, semi-formal interviews that will allow us to gain better, more personalised insights into the effect of different self-care and productivity habits used by our target demographic, which – in this case – was largely young adults due to the scope of our project and our access to people of that age. Although we acknowledged that this method is prone to bias, since we did not have as many participants, it nonetheless provided valuable insight and allowed us to adjust and create our personas, storyboards, and other key research elements accordingly. The questions were created with reference to the results given by the questionnaire outlined above. Interview questions Since we wanted to largely focus on personal insights and perspectives we may not have sufficiently explored, the interviews were largely conversational, open-ended, and informal. Rather than limiting myself to a select set of questions, I instead created a few key questions that I could go off of (based on design, think, make, break, repeat book), thus allowing myself to gain a wider scope of experiences... **Additionally, I had the following questions that I could revert to if I got stuck:**

**The interviews aimed to answer three questions:**

1. What contributes to making a person productive or unproductive?
2. Why or why not do productivity methods work?
3. What methods, if any, have worked in helping the individual establish healthy habits?

## A.2.2 Interview transcripts

**transcript – sacha gross, 15/08/2023**

E: Good morning! So, you've– you've done these before, you know the drill, I'm just going to ask you a couple questions and then go over your productivity habits with you. Is that alright with you?  
S: Yeah, yeah, that's chill.  
E: And these, ah– you might be quoted or used for research purposes, et cetera, et cetera...  
S: Yeah! Yeah, that's chill.  
E: Okay, perfect! So, starting off pretty simple: would you call yourself a productive individual?  
S: [laughs] No. Definitely not.  
E: Mhm? How so?  
S: I, uh– I get that good ol' stress paralysis? You know what I mean. Where, like, I physically can't get myself to do the work 'cause I'm so stressed about how much there is in front of me, so I sit in that until the stress builds up so much to where I actually have no other choice than to do the work.  
E: Sounds healthy!  
S: [laughing] *Right?!*  
E: Okay! And you clarify 'work' here - is that what you personally tie your productivity to?  
S: Well, currently it's uni work, so assignments and projects, and stuff.  
E: Alright, yeah, that makes sense! And have you found that your stress paralysis impacts other aspects of your day-to-day life, or is it just university work?  
S: Oh, nope, I, like– forget to eat food. [pause] 'cause I'll just be sitting in front of my work doing nothing, and suddenly it's 3pm and i haven't had breakfast. [laughs]  
E: Yeah, that makes sense! And have you ever tried any methods of getting yourself to eat regularly -- timers, apps, reminders, et cetera..?  
S: Honestly, no.  
E: Is there a reason why not?  
S: I'm– [laughs] I'm not gonna lie, I never thought of it.  
[both laughing]  
S: And– and if I was really going to dig into it, I think there's a part of me that thinks it's dumb to have to set a reminder to eat? I dunno! To me it feels like I'm a child having to be told when to eat.  
E: So there's kind of... an established idea in your brain that being told when and what to eat would come as a sort of moral failure?  
S: Yeah! Yeah, no, definitely. I'd definitely say that.

E: Have you tried any methods of establishing good habits, whether those be digital, physical, et cetera..? [pause] some– some examples of which might be a diary, an app that tracks your habits, a–  
S: I really have a hard time remembering to write in a diary. I just... I don't remember. [laughs] and I've tried those 'grow a plant' study apps, like, during HSC, but those did *not* work.  
E: Oh? How come?  
S: Uhhh... [*'I-don't-know'* noise.] I just got bored of it, not gonna lie, like– like, okay, in thirty hours my plant will be a tree, so what if I just... don't..? [Laughs] That takes long and is boring.

Emma  
I mean, I don't know if you would count this as productive. But in terms of like, self care, mental health, would you say you're a productive person? Say like, eating three meals, getting enough sleep?

Emmanuelle  
In terms of eating three meals? No, but most other things? Yeah, I meet the requirements.

Emma  
Just generally... healthy habits.

Emmanuelle  
Yeah. My habits, yeah, I think are pretty healthy habits.

Emma  
And would you find it easy to like, maintain those habits?

Emmanuelle  
Oh, yeah. Because I've sort of like just got them as like, my regular rhythm. Well, they're things I want to do anyway.

Emma  
So it's not really like difficult to incorporate?

Emmanuelle  
Yeah, absolutely.

Emma  
Um, can I ask when you were setting up those habits, but there any methods you used? Like any specific digital or physical diaries, or apps, or something like that?

Emmanuelle  
I sort of set myself like, Okay, I tried to, like, just tell myself every day, but that didn't really work. Like the whole, you know, physically telling yourself? No, that did not work. Yeah, it was more just like, um, reminders on my phone, like, I would like literally just like, have like, one like, like four or five? Actually, no, yeah. Like, I have a bunch of reminders, like every day. And then I just like, see those in the corner on my screen. And remember, I like it was also because I was just like, in the stage where I wanted to change a lot of stuff.

Emma  
Yeah. So it was like, very self focused motivation.

Yeah. Yeah, that makes sense. And would you say that that came from a place where you weren't doing all that stuff?

Emmanuelle  
Yeah, I would say that. I was like, you know, barely sleeping, kind of skipping meals all over the place. And when I was eating, I was eating like, really junk food.

Emma  
Yeah.

Emmanuelle  
Like I was, it was kind of like, also socially, I was just like, unmotivated. I wasn't seeing people, I wasn't doing things. So it kind of like, came from that sort of place, where I kind of had a bit of a wake up call. I went on, like, a holiday with my family. And then I realized, like, how miserable I was like, at home. And then I kind of just, like, decided to change.

Emma  
And when would you say that happened?

Emmanuelle  
I'm actually like... what month is it? August? Um, like three months ago? Yeah. Well, it happened mainly at the start of the year, but it really manifested itself properly, like two or three months ago. Like, when I got back, I kept these habits regularly for around three months. Well, I started them in January. Now they're like, steady for the last three months.

Emma  
So it took a couple of months to like, get into the rhythm of it.

Yeah, basically.

And would you say... I know you just said this. But just to clarify, you use like digital platforms

Emmanuelle  
Yeah, there's reminders. I used Apple reminders. Basically, like I just like, put one. So there's one at like, 9am. And then there's another one at 11. And then there's two, there's one at four and one at five.

Emma  
Yeah.

Emmanuelle  
And like the first two are like, just like sort of mental reminders. And then the to like later in th day at four and five are like physical, like, do an exercise type thing.

Emma  
Yeah.

Emmanuelle  
Yeah. Um, so it's a lot of like, you use that for a lot of your day to day life. And I found like, when I do actually, like, follow that stuff consistently, because obviously, sometimes I forget to, like, do some of the stuff in the reminders like, when I actually follow it the most, like at th times when I'm doing the best. I found like, I am the happiest, so I just tried to like, stick to it.

Emma

And have you would you say you've ever, like, used different apps, or have you only really experimented with Apple reminders?

Emmanuelle  
I've only really done stuff with Apple reminders so far, because usually like my family, like sort of bug me about similar things anyway. So it's kind of like, I don't know, I don't usually like look for much more because also, like, I'm always in like a rush. I don't really, like, have time to look for a lot of like, yeah, things to use instead.

Emma  
Yeah, that's very fair. And so you'd, like... you wouldn't necessarily need something you interact with light physically kept you motivated, such as like, I don't know, if it was like a streak thing. I know that some apps have-

Emmanuelle  
Oh, streaks like..? I guess they work. But like, you know, there's Yeah, like it's kind of like, well... Oh, you mean like the same way as a Duolingo streak? Like, just be yourself.

Emma  
Yeah.

Emmanuelle  
I mean, the issue with me is like, I'm kind of forgetful, so I won't remember the streak is there. Whereas with a reminder, like, it feels like it actually like, but like, visually reminds me, you know, and it makes like the ding noise and like, because, like, I get distracted easily, so I won't remember a streak, like, I forgotten it so many times.

Emma  
So you're saying that, like, even if you did do the thing you wouldn't remember to like, say, yes, I've done this and kind of keep the streak going.

Emmanuelle  
Yeah, no, I would not remember. Yeah, it takes me like, even with Snapchat streaks, like other people have to remind me that I'm like, you know, losing the streak, like, because I will literally forget, like, I can go like, literally days without looking at my phone. Unless if it's doing that reminder, ding thing. Yeah, like, apart from that I literally don't need a look at my phone for days.

Emma  
So yeah, so you don't use your phone as much?

Emmanuelle  
No, it's more like, since like, the stuff I do. It's like more like I go my computer and like, like, my computers, the device, I use the most other than that. It's kind of like, I just read paper books or watch like, TV, or other things.

Emma

## A.2.2 Interview transcripts

Absolutely. And you said, um... you use Apple reminders? How detailed are those reminders? Like how, what would you... would you tell me what exactly the reminder says?

Emmanuelle

Okay, so one of the reminders is like, it's sort of like, like, just get up and like, move. Like, it's like literally just like reminding me to like not be like sloppy as hell. And then the second one is actually related to like, the social life I had before I kind of set myself a reminder to not like, saying negative things, I guess like about other people. Like it literally says in quotation marks do not say it. Yeah, that's literally the whole reminder. Like, I put it aside for the morning, so that I see it like bright and early. And I'm like, okay, like, just like reminding myself like, because like, I genuinely, as a person, like, I think like a lot of like, negative things. I'm not gonna lie, like, especially like, I kind of found, like, apart from my closest friends, who I like, really don't care what they do. Like everyone else. I'm very like, like, I do, like, kind of judge them a bit. And like, I think those things and like some, when I verbalize them, like it's bad. You know what I mean? Like, I just keep, like thinking about it. So if I like stopped talking about it, then I stopped thinking about it. Yeah. Which just makes me happier. You know?

Emma

Yeah, absolutely.

Emmanuelle

And then the other like, later in the day reminders are just like, you know, 100 squats, and then the other one is like, go do something outside.

Emma

Yeah.

Emmanuelle

Yeah.

Emma

Yeah, that seems really good. And you found that this... Would they like, influence you to do other things as well.

Emmanuelle

The reminders?

Emma

Yeah.

Emmanuelle

Ah, yeah. Actually.

Emma

You said that they helped you remember to like... sleep, I guess?

Emmanuelle

Would it have to be, like, malicious, though? Like, say someone comes up to you and they're just like I've been working out everyday this month. You should join me.

Emmanuelle

Yeah, no, that's true. I have actually joined those types of things as well. It's just that usually when there's a bit of like a joking like, I'm better than you think to it, it kind of like helps a little bit.

Emma

Yeah.

Emmanuelle

Because like, then you're also motivated, like a little bit like by friendly vindictiveness, I guess. Like, it's not like you're like trying to be better. Exactly. Yeah. But it's like, you're just trying to like, beat them at this one thing?

Emma

Yeah.

Emmanuelle

Like, yeah, but um, no, no, I've done like, friendly, like competition type things before. Like, they will just as well because like, then you like, remind each other like, oh, you ate it? Why didn't you remember to do it today? I'll do it right now. Like, you know, and you send each other videos of doing it. Like I remember. I did like an app challenge with cat like, it did not work for long. Yeah, like my friend Kat like I did. Yeah. I'm specifying. But um, basically, like we said, you know, we're gonna do like 100 setups a day. And then we would send each other like videos of each other doing it. Like it obviously didn't like go for super long. Because, you know, we kind of like rolled into our own things and grew apart slightly. But, um, it did actually work for a while, like, it was actually pretty good. Yeah, that's good. And then, um, yeah, so that sounds really good.

Well, no, they helped me remember to like, keep healthier habits, I guess. Because like, those, like, they don't really encompass like, all the healthy habits that you would say, like, are good for you. But in doing like, in like, kind of having that more positive mentality. I think like, oh, what can I do instead of what I would have been doing if I was like, bitching about stuff, you know, like, if I'm not bitching about something, then that gives me like, like, because, you know, I'll be on the phone bitching or something? If I'm not doing that.

Emma

Yeah.

Emmanuelle

Then that means that instead, I can be reading or I can be talking to my family, or like, you know, doing I guess, like things that just like, feel more productive feel. Not just productive, like, feel better? And like, yeah, and they make you feel better about yourself when you're not like, yeah, absolutely. Yeah. Yeah. Like when you're doing good things for yourself. You just feel like a better person, I guess.

Emma

Yes, I definitely understand that. So it's mostly like self motivated.

Emmanuelle

Yeah.

Emma

Have you ever tried to do like, is there ever an element of like competition with other people? Yeah. I remember you mentioned a couple months, years ago that you were doing something with Tim.

Emmanuelle

Tim? Like, oh, like a physical competition?

Emma

Yeah, I mean, just kind of keeping each other in check.

Emmanuelle

Yeah, that's true. I have done that a few times. Actually. It's pretty effective when I do that, because, like, you keep each other in check. And like, as a general thing, like, I'm a pretty competitive person. Like, if someone starts saying, you know, I'm better than you at something that like. I think I'm like, pretty okay. Yeah, I like kind of rise up and I'm like, yo, like, don't, don't you don't do that. Like, like I do, like, it stays on my mind. If it's like a competition thing like that. Really, like kind of, so if someone came up to you, and they were like, get flogged out three meals today. I don't know about that. Like that wouldn't really, but like if someone came up to me, and they were like, you know, like, I bet. Screw you. You know, like, I've been working out every single day this month. Like, I'm more fit than you. You know, like that type of thing. I would be like, Excuse me. I bet I could do that for two months. You know what I mean?

Emma

### A.3.1 Online Ethnography planning

Online ethnography plan

We have decided to conduct an online ethnography as it allows us to understand data from an observational point of view, as well as provide data from “in-the-wild”. Since method assesses online data, we decided this would be valuable when understanding how best to design digital interfaces.

Plan (based on design, make, break, repeat book):

1. Choose an online platform

- Focus on reddit, specifically subreddits about planning, organisation, and productivity

- Also potentially look at app store reviews on productivity apps

2. Decide on specific set of criteria

- Choose to focus on reddit posts that address personal experiences with the Intersection of productivity and digital productivity apps.

- From apps mentioned by users, also consider the year they have been created, and if they address the concerns from users who have had problems with productivity apps prior.

3. Read entries posted on online platform and make note of observations

- Make note to observe:

o What people say

o Attitudes of different users

o Common themes that emerge

o Social interactions between people across posts

4. Analyse field notes

- Create an affinity diagram to understand people’s attitudes, as this will allow us to see the most common sentiments being expressed by users.

### A.3.2 Online Ethnography data

Reddit - Qualitative Focus r/Productivity Subreddit					
Link	Prompt	Data Record	Recorded Observations	Interpretation	Themes
<a href="https://www.reddit.com/r/productivity/comments/13egwge/if_you_could_pick_only_one_productivity_app_to_use_for_the_rest_of_your_life_what_would_it_be/">https://www.reddit.com/r/productivity/comments/13egwge/if_you_could_pick_only_one_productivity_app_to_use_for_the_rest_of_your_life_what_would_it_be/</a>	If you could pick only ONE productivity app to use for the rest of your life, what would it be?	[Comment] forest because it locks my phone while i study.	Forest forces the user to not procrastinate by going on other apps while studying	Users like when the app holds them accountable. Forest has a gamified aspect (growing a tree) that motivates users to be	Gamified motivation, app holds user accountable
		[Comment] Amazing Marvin. I love how customisable it is! You can turn strategies (such as top of mind, most important projects, tags etc) on and off without messing up the master list. You can also colour code tasks, group tasks eg. by category, projects or smart lists in the main view and you can also create daily or weekly targets. There’s are so many options besides this. It’s not the cheapest but it’s such a powerful tool.	The user likes when they are able to customise their app, however, within the frameworks of a UI (not just a blank slate)	Users like to tailor their experience in productivity apps	Customisation, aesthetics, tailored experience
<a href="https://www.reddit.com/r/productivity/comments/1uзеbr/what_app_have_you_started_using_that_has_boosted/">https://www.reddit.com/r/productivity/comments/1uзеbr/what_app_have_you_started_using_that_has_boosted/</a>	What app have you started using that has boosted your productivity?	[Comment] notion!! i like that it’s relatively simple and you can add whatever media you want, so you can add gifs and embed links and stuff. it allows me to visually see everything, for example if i’m compiling recipes and blogs, or if i’m getting stuff for inspiration. it’s not like arbitrary links that i click on and then find out what exactly it’s for. you can make it nice and aesthetic and peaceful, add motivational quotes. when i open up mine it’s peaceful bc my cover photo is an gif of a rain animation :)	User likes the ability to aesthetically tailor their productivity app as it makes them more incentivised to open the app.		
<a href="https://www.reddit.com/r/productivity/comments/14dwj3b/how_to_start_your_productivity_journey/">https://www.reddit.com/r/productivity/comments/14dwj3b/how_to_start_your_productivity_journey/</a>	How to start your productivity journey	[Post] ...start gaining some control over your calendar. If you control your mornings and nights, it’s easier to grasp your day and achieve small wins, building momentum. It’s something you can build off of. Calendar planning and effective time use are the foundation of productivity.	In order to have a productive day, it’s important to have a planned routine/calendar	This concept carries over to a habit tracking app, as users should be prompted to	Prompt planning with calendars

### A.3.2 Online Ethnography data

r/GetMotivated Subreddit						r/GetDisciplined Subreddit					
Link	Prompt	Data Record	Recorded Observations	Interpretation	Themes	Link	Prompt	Data Record	Recorded Observations	Interpretation	Themes
<a href="https://www.reddit.com/r/GetMotivated/comments/28e4ae/my_secret_to_building_new_habits/">https://www.reddit.com/r/GetMotivated/comments/28e4ae/my_secret_to_building_new_habits/</a>	My secret to building new habits...	[Post] Habit has to be SUSTAINABLE at all times. Meaning, it cannot cause too much discomfort, or mental anguish. I'm sure we've all been through the situation where we are initially psyched about something (eg. I'm gonna hit the gym at 7am and pump my guts out EVERYDAY!!!), we do it a few times, then one day we get sick / lazy / busy, and we stop doing it.	In order to have successful habit-making to be achieved, individuals need to make sure they are easily achievable	Apps should ensure that users aren't over-extending themselves when setting habits.	Achievable, consistency	<a href="https://www.reddit.com/r/getdisciplined/comments/121ad0/method_make_it_stupid_easy_but_do_it_every_day/">https://www.reddit.com/r/getdisciplined/comments/121ad0/method_make_it_stupid_easy_but_do_it_every_day/</a>	[METHOD] Make it stupid easy, but do it every day. This approach saved my life and is finally changing my habits after years of failure.	[Post] Focusing on consistency instead of intensity is the key to changing your life: to building lasting habits, crushing your goals, and becoming the person you dream about.	In order to make sure habits stick, they need to be practiced consistently	When designing an app, the app should reward/focus on consistency	Consistency, easy to set habits
<a href="https://www.reddit.com/r/GetMotivated/comments/12xyam4/discussion_are_there_motivating_apps/">https://www.reddit.com/r/GetMotivated/comments/12xyam4/discussion_are_there_motivating_apps/</a>	[Discussion] Are there motivating apps?	[Post] I kind of thought it would be cool and hoped it already existed. I'd love an app that periodically motivates you; like say you're about to go exercise, you click that option in the app, and it can send a little text with "You're doing great!" or "Keep it up!"	When using an app, the user would like to be notified by the app as a way of keeping them motivated.	Users like when apps hold them accountable. Even if it's in a small way	Accountability, fun	<a href="https://www.reddit.com/r/getdisciplined/comments/1dnaqw/advice_my_favorite_apps_for_discipline/">https://www.reddit.com/r/getdisciplined/comments/1dnaqw/advice_my_favorite_apps_for_discipline/</a>	[Advice] My favorite apps for discipline, productivity, and overall self improvement	[Comment] Productivity apps will not generate productivity for you. They are merely tools that you can use to assist your efforts. You need to have a purpose for using them, otherwise it won't last long. These apps aren't going to help you if you don't have some discipline and effort already. Having the sharpest sword means nothing if you don't have the strength and skill to use it.	Productivity apps cannot provide a "fix all" solution to productivity issues.	Final design should focus on assisting with productivity, rather than making the user feel that the app is necessary	Digital assistance, over reliance/too demanding
<a href="https://www.reddit.com/r/GetMotivated/comments/ttro4c/discussion_searching_for_a_simple_focusreminder/">https://www.reddit.com/r/GetMotivated/comments/ttro4c/discussion_searching_for_a_simple_focusreminder/</a>	[Discussion] Searching for a simple focus-reminder app, one that specifically checks in to make sure I'm focusing on my priority. If I respond "Yes," it mutes for an hour. If I respond "No," it asks why, then repeats every 2 minutes until I get back to my priority.	I'm thinking of a desktop app to help with keeping on track. I set my intention for the day by writing it into the prompt. The prompt pops up, "Am I effectively working on X right now?" If I am, I press "Yes," and the prompt mutes for an hour. If I press "No," it asks "Why not?" and I type in my response. The prompt comes back every 2 minutes each time I reply "No." Only pressing "Yes" (and therefore actually focusing on my priority) will mute it for an hour.	This user likes when they are prompted to stay motivated by an app.			<a href="https://www.reddit.com/r/getdisciplined/comments/eltc38/method_im_working_on_a_neuroscience_app_that_helps_you_break_bad_habits_would_love_to_hear_your_feedback.">https://www.reddit.com/r/getdisciplined/comments/eltc38/method_im_working_on_a_neuroscience_app_that_helps_you_break_bad_habits_would_love_to_hear_your_feedback.</a>	[Method] I'm working on a neuroscience app that helps you break bad habits. Would love to hear your feedback.	[Comment] Here's my number one concern with all habit-help-apps. In order for it to work, you have to use the app consistently. Essentially you have to make a habit of using the app.	Productivity apps shouldn't require a lot of input from users, as then it becomes a chore.	App design should be focused on allowing for low-input	

Habitica - Average Rating: ★★★★★ (3.9 - 182 ratings)

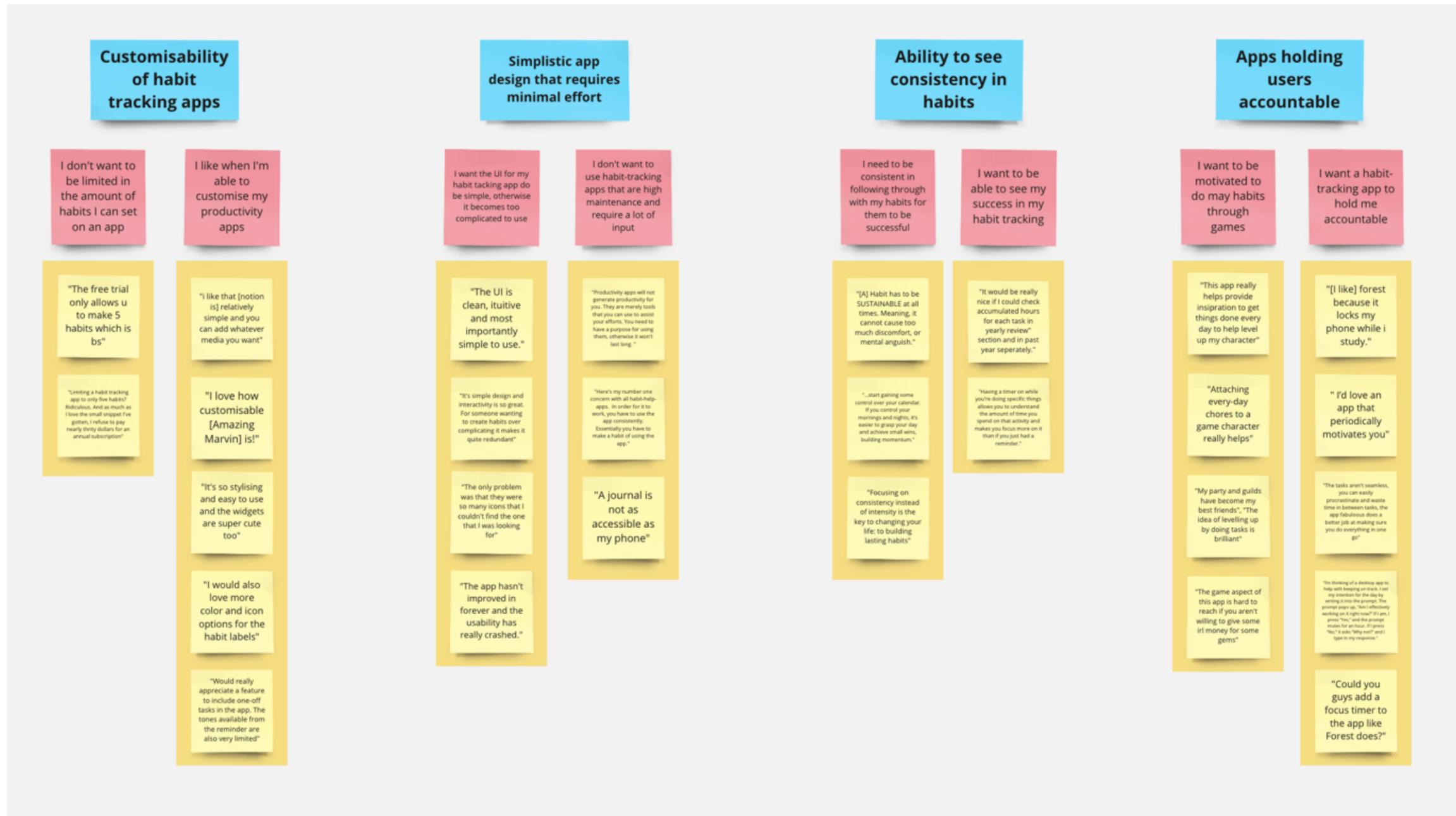
Img	Star rating (/5)	Data Record	Recorded Observations	Interpretation	Themes
	★★★★★	"This app really helps provide inspiration to get things done every day to help level up my character"	The user is more motivated to get things done in real life, in order to level up their character.	Having a gamified aspect to habit tracking apps makes users more engaged and consistent with completing their goals.	Gamified motivation
	★★★★☆	"The game aspect of this app is hard to reach if you aren't willing to give some in-game money for some gems"	The user doesn't like that in order to fully engage with the game aspect of the app, they need to spend money	Users are less engaged with an app if there premium subscription plans that limit the app's capabilities.	Subscription
	★★★★☆	"Attaching every-day chores to a game character really helps", "Could you guys add a focus timer to the app like Forest does?"	The gamified aspect of the habit tracker is helpful, however, this user would also like to be held accountable by the app further through a focus timer.	Users like when the app holds them accountable for following through on their habits - gamified aspect aids in this	Accountability, gamified motivation
	★☆☆☆☆	"The app hasn't improved in forever and the usability has really crashed."	User wants to see more improvements across updates in order to improve the app's usability.	Apps should understand user feedback better and tailor the UI to this	User feedback, intuitive design, usability
	★★★★★	"My party and guilds have become my best friends", "The idea of leveling up by doing tasks is brilliant"	The in-game incentive to complete real life tasks and social aspect of the app has made this user more engaged with the app	Social aspect of app holds users accountable in a way the app alone couldn't. Gamified aspects also encourage engagement.	Gamified motivation, social engagement

Habit Tracker - Average Rating: ★★★★★ (4.8 - 6,133 ratings)

Img	Star rating (/5)	Data Record	Recorded Observations	Interpretation	Themes
	★★★★★	"The only problem was that there were so many icons that I couldn't find the one that I was looking for"	User can become disorientated when there is too much information	Apps with a more simplistic design are more considerate of user needs	Information overload, simple design, customisation
	★★★★★	"It would be really nice if I could check accumulated hours for each task in yearly review" section and in past year separately."	User want to see how successful they are in upholding their habits	Users want the gratification of being able to see how successful they are in establishing habits/completing tasks. This drives users.	Satisfaction, motivation to implement habits
	★★★★☆	"It's so stylising and easy to use and the widgets are super cute too", "It's simple design and interactivity is so great. For someone wanting to create habits over complicating it makes it quite redundant"	User values cute and simple design	Apps are easier to use when they are simple and not over complicated	Simplistic, not over-complicated, cute design
	★★★★★	"The UI is clean, intuitive and most importantly simple to use."	UI is intuitive and easy to use	Users won't have trouble learning how to use apps that have an intuitive and simple design.	Intuitive, simple design
	★☆☆☆☆	"The free trial only allows u to make 5 habits which is bs"	User doesn't want the number of habits created to be limited	Users don't like the barriers of a paid subscription for an app. Also value the ability to change/alter habits inputted into the app	Cost of app, number of habits, customisation

## A.4.1 Affinity Diagram

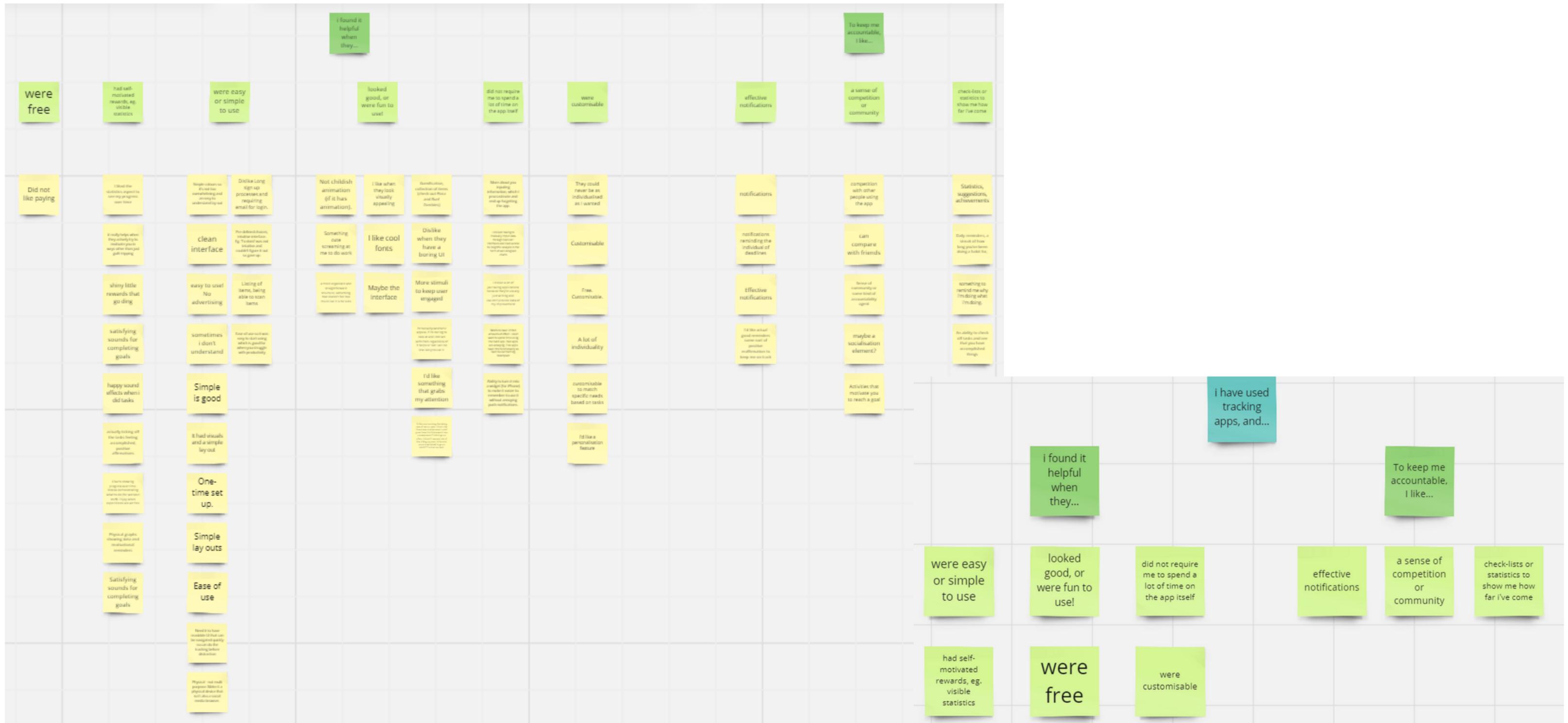
### Online Ethnography Affinity Diagram





### A.4.3 Affinity Diagram

Attributes regarding self-tracking applications



## A.5.1. Synthesis - Persona

### Nia Winters



GENDER	Female
AGE	21
EDUCATION	High-School Diploma
STATUS	Single
OCCUPATION	Part-time hospitality worker
LOCATION	Sydney
TECH LITERATE	High
MENTAL HEALTH	Moderate

“ My life’s just gone downhill all of a sudden. I know what I have to do, and I know how to do it, but actually getting started just makes me so nervous my brain freezes up.”

#### Personality

Ambivert    Anxious  
Low-energy    Quick to anger

#### Bio

Nia just moved out of her ex-boyfriend’s house after the sudden, unexpected end of their relationship. A part-time student who has spent her entire life living with others, this is the first time she has lived on her own – and she’s got no clue where to start. The mental effect of the relationship’s end has caused her self-care habits to become almost non-existent, and since she does not tend to leave her house, the mess that comes from simply existing has begun to pile up, making the gargantuan task of changing her habits feel almost unattainable.

#### Motivations

- The conditions Nia lives in are unsustainable, and she knows that something has to change
- She hates living in her messy house

#### Frustrations

- She’s overwhelmed by the prospect of having to change her habits
- She doesn’t know where to start
- As it’s her first time living alone, she is unaware of any methods of keeping herself accountable
- She is quick to anger, especially when something is finicky or does not work correctly the first or second time
- Does not have the energy to motivate herself

#### Goals

- Make her house feel liveable again
- Improve her living habits, eg. eating, bathing, and drinking water, so that she can feel physically better
- Feel functional in her day-to-day life, instead of just feeling stuck

### Juliana Yang



GENDER	Female
AGE	21
EDUCATION	Undergrad student
STATUS	Single
OCCUPATION	Full-time Student and Casual Employee
LOCATION	Sydney
TECH LITERATE	High
MENTAL HEALTH	Moderate

“ I think I am very self-sabotaging. the only thing that really motivates me is hard deadlines especially if it is impacting other people

#### Personality

Extrovert    Passionate  
High-Achiever    Anxious

#### Bio

Juliana is in her second last year in her Bachelor of Commerce and Art. She has been struggling to stay on top of her university work since she upped her hours working a casual job. In general, Juliana is a positive and extroverted person but has been struggling with self-determination and imposter syndrome. Juliana has always struggled with productivity but it is only getting worse alongside her healthy habits and needs to improve this in order to do well in her academics and maintain a healthy life balance.

#### Motivations

- Juliana is motivated to improve her productivity in order to maintain her current study and work load.
- She is a high achiever but struggles when she is both studying and working

#### Frustrations

- Seems to always run out of time
- She has tried some methods and apps to improve her productivity, but she always loses interest
- Good apps are always too expensive and free apps are boring and too limited
- She is easily distracted, hence why she loses interest in other applications
- Struggles to self-motivate but wants to improve

#### Goals

- Excel in academics whilst still making enough money to do what ddf
- She wants a solution which is easy to use, has a nice interface, shows progress over time and motivates her
- Not much choice and comparison not available

### Nathan Steele



GENDER	Male
AGE	25
EDUCATION	Post-graduate student
STATUS	Single
OCCUPATION	Full-time Student and Works Part Time
LOCATION	Melbourne
TECH LITERATE	High
MENTAL HEALTH	Low-Moderate

“ I should be happy that I have a job doing what I enjoy, but I feel like I can’t enjoy it when I’m too stressed out by the workload I’m undertaking.

#### Personality

Introverted    Stressed  
Studious    Gamer

#### Bio

Nathan is a post-graduate law student who has just started working an part-time entry level job at a law firm. Being new to undertaking such a high workload, he is currently struggling to keep up with deadlines. He is looking for ways he can better keep up with tasks in order for him to find time again to unwind and play video games. He has tried using productivity apps to better establish a routine in his new lifestyle, as well as to form productive habits that can help him better manage his workload. While he has tried to use productivity apps, he finds that he struggles to be consistent in using them as he forgets to use them daily and finds using them to be a chore in itself.

#### Motivations

- Nathan wants to incorporate small, time-conscious ways to destress into his everyday tasks
- Wants to find a way to control his workload without it feeling like a chore to do so

#### Frustrations

- Can’t find ways to adjust to this new level of workload
- Productivity apps feel like a chore to open daily and engage with
- Can’t find time anymore to do the things he enjoys
- Feels very isolated in his new job

#### Goals

- Wants to find a way he can better combine the things he enjoys (eg: gaming) into his life again.
- Nathan wants to be able to feel in control of the workload brought about by his post-graduate studies, as well as his job.
- Wants to feel happier about being in a job he enjoys - rather than only feeling the stresses associated.

## A.5.2. Synthesis - Storyboards



Juliana is leaving Uni and going to work her near-daily night shift.



Juliana is exhausted. She has Uni work due, but has no time or motivation to complete it!



She talks to a co-worker about her issues and is recommended an app.



Nathan is at work feeling stressed by his current workload.



He thinks that maybe downloading a habit tracking app will improve his productivity.



He puts all of his habits in, but fails to choose realistic goals.



The next morning, she downloads the app and completes her daily habits.



She schedules and plans out her day in small steps, feeling motivated to complete her tasks.



Juliana is able to complete her assignment with time to spare!



He looks at the app and gets overwhelmed by all of the tasks.



He uses it the next day, however...



...a month goes by, and Nathan has stopped using the app completely.

# **B. Concept Development**

Concept Iterations to Final Concept

## B.1.1 Ideation Methods and planning

Written features needed for app based off affinity diagram user research and design brief

- \* statistics based
- \* reward as motivator (points?)
- \* include some gamification and playfulness (audio)
- \* customisable (set different tasks, add or remove sections from 'main page')
  - possible character or avatar development with points
  - Maybe target specific areas of concern for habits
  - Community board for more templates for main page?
- \* social accountability, start a 30 day challenge
  - general 30 day challenges, users ~~complete~~ complete tasks with others

### Necessary features

- social
- Omni-channel
- digital

### Specific

- widget
- apple watch
- competition/friends

### What people want

- customability
- audio incentive for tasks
- positive reminders
- limited distractions
- statistics or visibility of progress
- ticking off tasks
- tracking streaks
- resources

### Ideas to help retention

- social aspect
- customisable notifications
- competition and success as motivators
- physical visualisation of progress
- audio visualisation of progress

## B.2 Ideation Evidence

### B.2.1 Crazy 8 feature ideation - Emily

To discover the most effective ways to implement personalised, engaging & managed

<p>IDEA 01 Gamified world/wanted building gamification</p>	<p>IDEA 02 Competition/reliability on friends app</p> <p>Build a habit with friends</p> <p>30 day fitness</p> <p>14 day presentation</p> <p>Leader board 1. Me 2. Friend</p>	<p>IDEA 03 Fast and easy access habit tracker</p>	<p>IDEA 04 Customisable extensive app</p>
<p>IDEA 05 Build habit with friends</p> <ol style="list-style-type: none"> <li>1. Set tasks</li> <li>2. Set time</li> <li>3. Work together to build a habit</li> <li>4. Hold each other accountable</li> </ol>	<p>IDEA 06 Mini gamification</p> <p>Turn life into a game and win</p> <p>SMTWTF S</p> <p>Habits Own 50pts to-do 10pts</p>	<p>IDEA 07 Productivity based on what you struggle with</p> <p>Let's get started</p> <p>Presenting <input type="checkbox"/> <input type="checkbox"/></p> <p>maintain <input type="checkbox"/></p> <p>social <input type="checkbox"/></p> <p>eating <input type="checkbox"/></p>	<p>IDEA 08 Combination - social accountable - custom - tasks and habits</p>

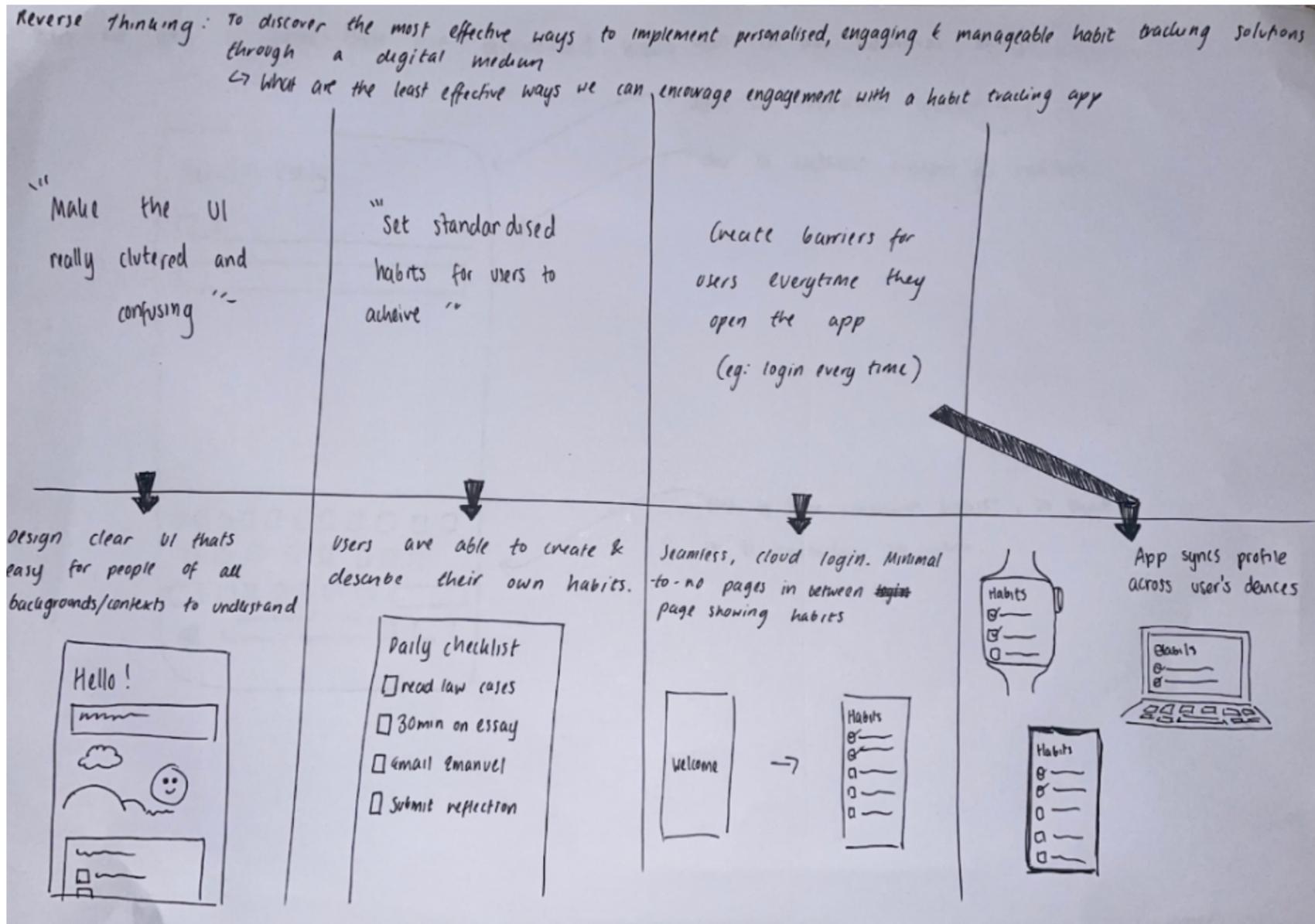
### B.2.2 Crazy 8 concept ideation - Emily

Crazy 8 - solution for productivity gamification

<p><del>Hold accountable</del> Points system</p>	<p>Audio <sup>visual</sup> for task completion</p> <p>Juliana 40pts</p> <p>tasks <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>*ding*</p> <p>*cheering*</p> <p>*tick*</p>	<p>Custom avatars</p> <p>Juliana 40pts</p> <p>Task <input type="checkbox"/> 10pts</p> <p><input type="checkbox"/> 10pts</p> <p><input type="checkbox"/> 10pts</p>	<p>Statistics (in depth)</p> <p>Juliana weekly sum</p> <p>SMTWTF S</p> <p>Today</p> <p>200</p>
<p>More traditional gamification</p> <p>Juliana 40pts</p> <p>Upgrade your world!</p> <p>Tasks <input type="checkbox"/> 20pts</p> <p><input type="checkbox"/> 20pts</p> <p><input type="checkbox"/> 20pts</p> <p><input type="checkbox"/> 20pts</p>	<p>Raise a animal</p> <p>Juliana 40pts</p> <p>Froggie</p> <p>stat - track</p> <p>age - 1 day</p> <p>Upgrade</p> <p>age <input type="checkbox"/> - 20pts</p> <p>colour <input type="checkbox"/> - 20pts</p> <p>personality <input type="checkbox"/> - 20pts</p> <p>Tasks <input type="checkbox"/> +10pts</p> <p><input type="checkbox"/> +10pts</p>	<p>Pokemon thing</p> <p>Juliana 40pts</p> <p>Froggie</p> <p>level=0</p> <p>strength=0</p> <p>agile=0</p> <p>Challenge</p> <p>Lv. 2 agile</p> <p>Lv. 4 transformation</p> <p>Lv. 0 earthquake</p> <p>Lv. 8 earthquake</p>	<p>See other people's world and browse</p> <p>Make your world pathy</p>

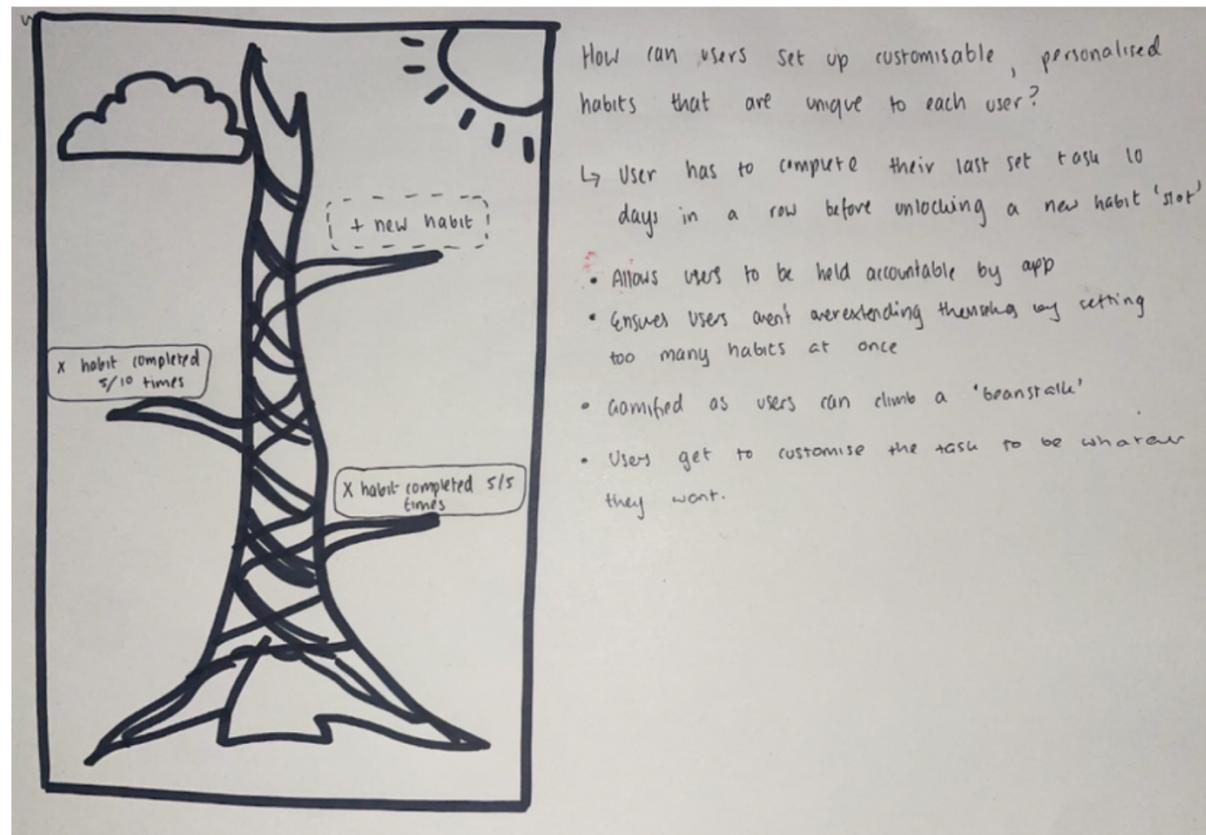
## B.2 Ideation Evidence

### B.2.3 Ideation Evidence - Reverse Thinking

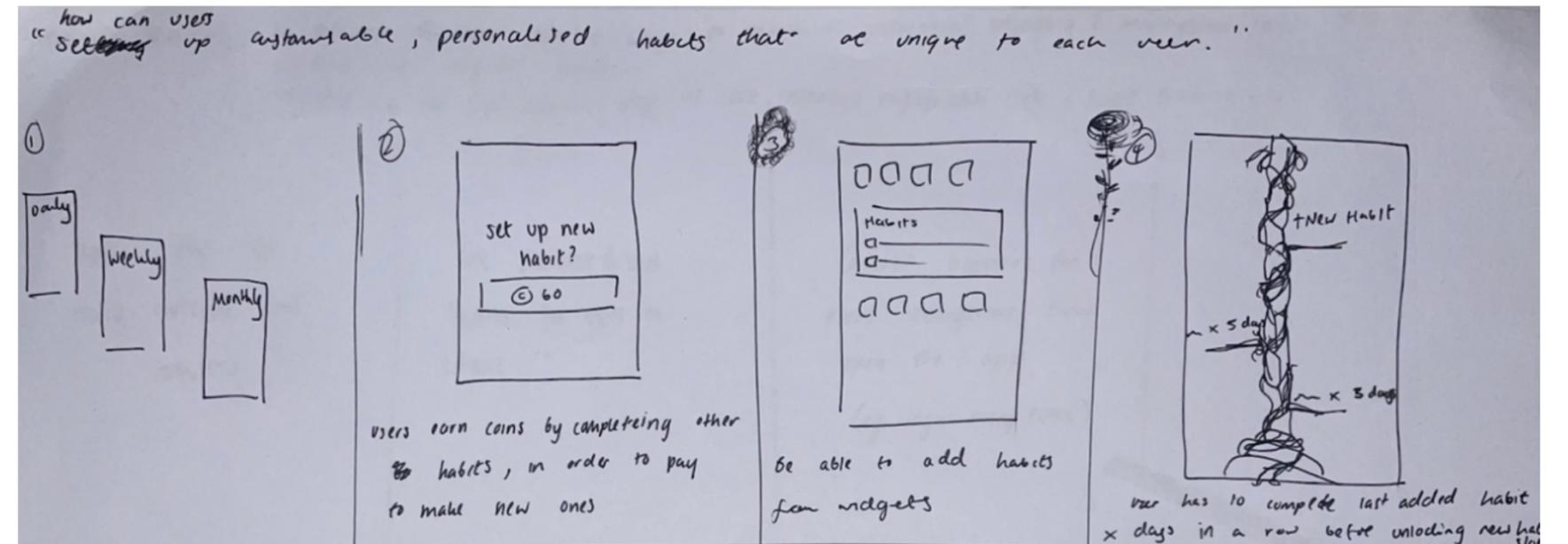


## B.3 Individual Concepts - Sketches

### B.3.1 Sketch 1 - Yasmine



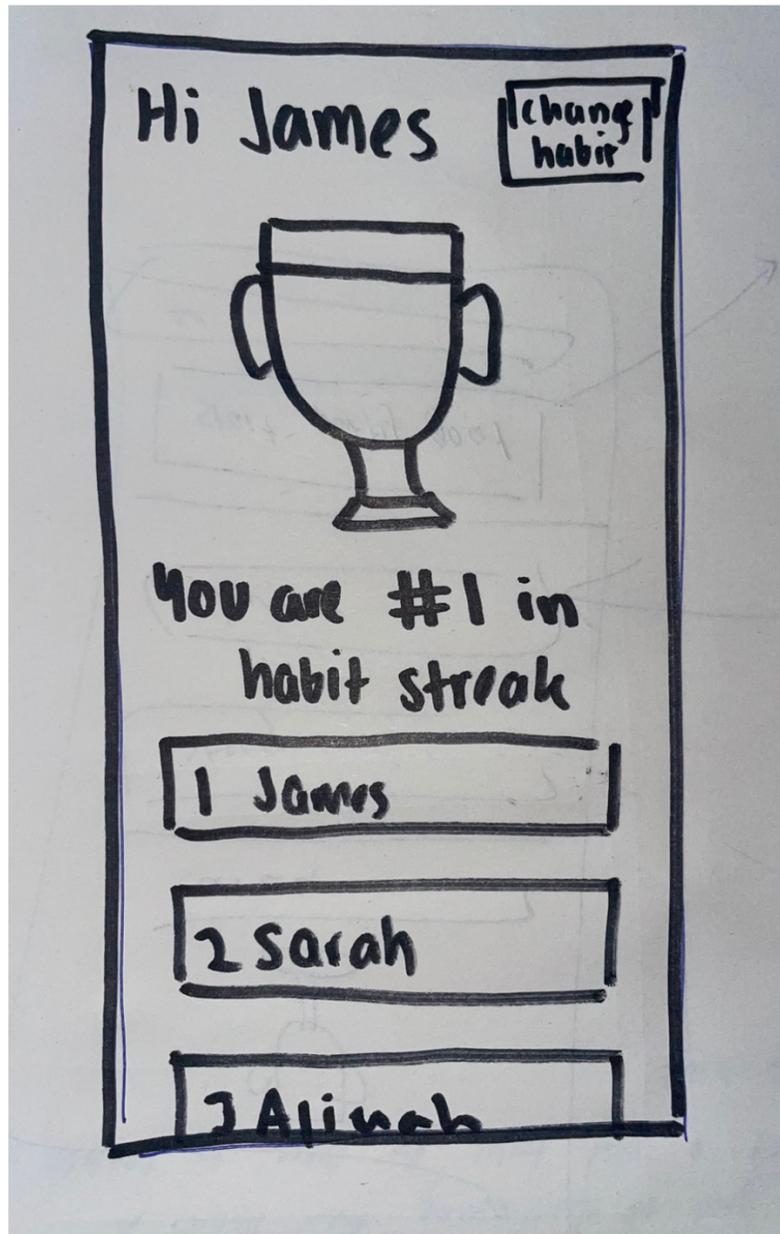
### B.3.1 User flow for Sketch 1 - Yasmine



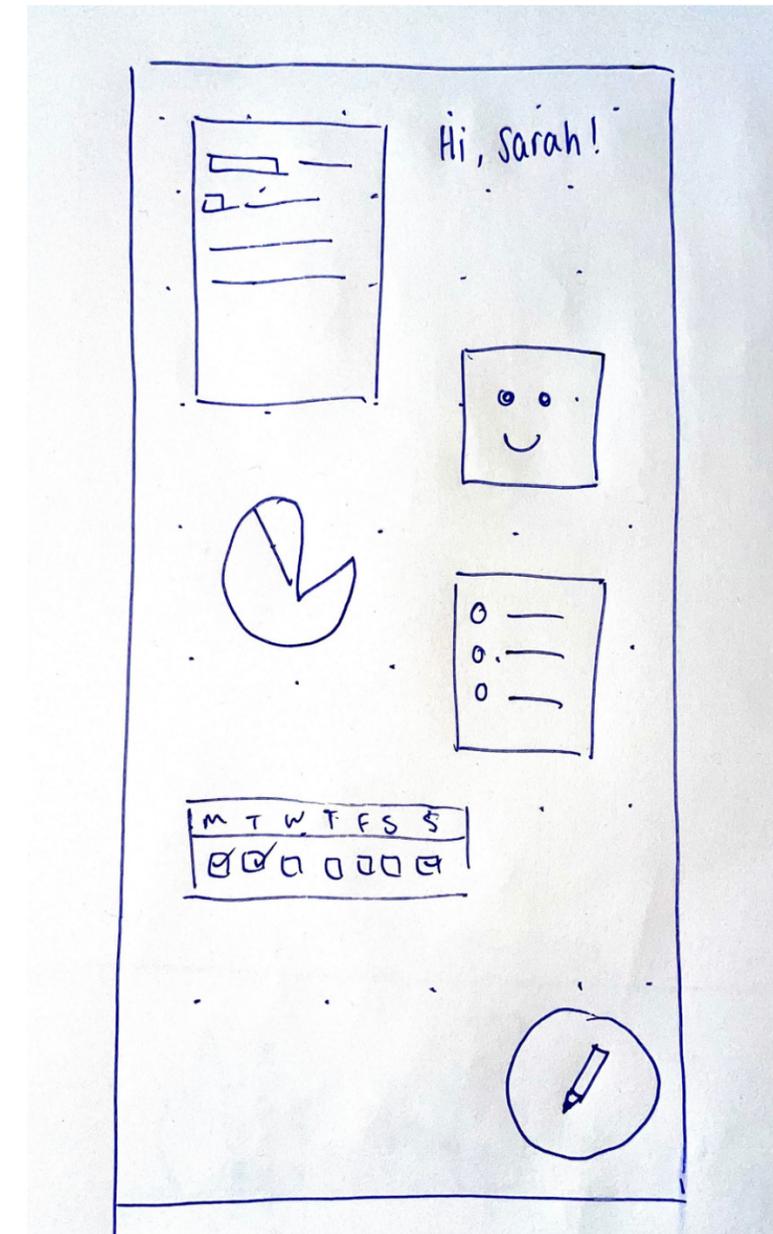
Yasmine's concept involved a tree to visualise habit progression, when you can only climb up the tree once you've complete a habit X amount of times a day.

### B.3 Individual Concepts - Sketches

B.3.2 Sketch 2 - Yasmine

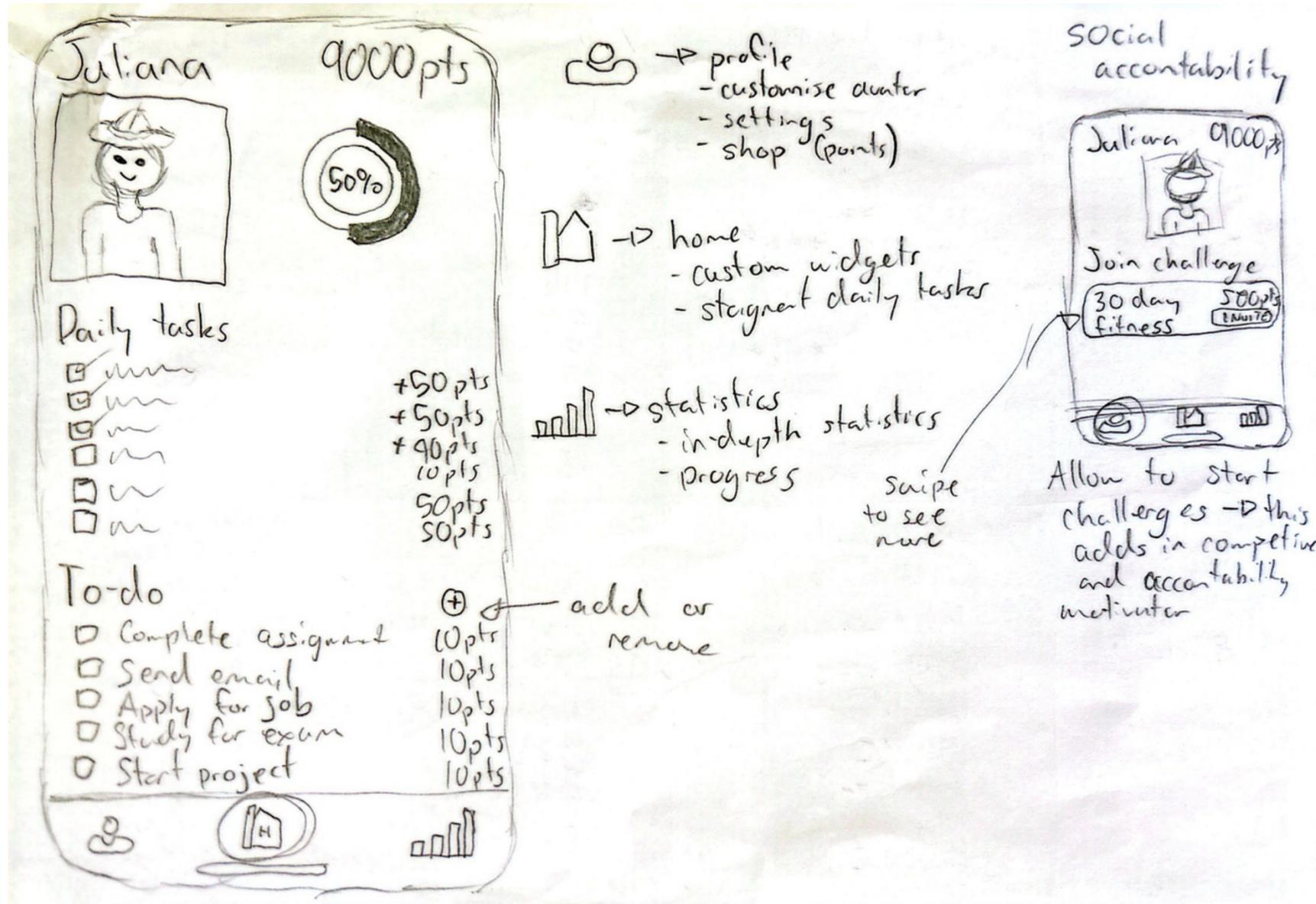


B.3.3 Sketch 3 - Yasmine



### B.3 Individual Concepts - Sketches

#### B.3.4 Main Sketch - Emily



Customisable habit tracker application based on social accountability and statistics to motivate and retain user attention. Users also have the ability to gain points to upgrade their avatar.

### B.4.1 Decision Matrix

Decision Matrix Yasmine  
(leaderboard & freeform board concept)

Criteria	Datum	Competitive leaderboard	Freeform board
Users should be able to reflect on their progress	4	4	4
Motivators are embedded into the app (social/reward)	3	5	2
Gamification aspect	3	4	3
Playful multi-modal qualities	4	2	5
User customizability (aesthetics)	4	3	5
User customizability (features)	4	1	4
Easy to understand/intuitive	5	3	1
Ability to facilitate social interactions	5	1	2
Omni-channel interactions	4	4	3
Can exist within commonly owned hardware	2	4	4
Ability to hold users accountable for actions	3	5	2
Number of pluses			
Number of minuses			
Overall Total		129	128

Decision Matrix Emily  
(User profile concept)

Criteria	Datum	Emily Concept
<u>User should be able to reflect on progress</u>	4	5
motivators embedded in the app (social / reward)	3	4
Gamification aspect	3	3
Playful multi-modal qualities	4	4
User customability (aesthetics)	4	2
User customability (features)	4	4
Easy to understand / intuitive	5	3
Ability to facilitate social interactions	5	2
Omni-channel interactions	4	3
Can exist within commonly owned hardware	2	4
Ability to hold users accountable for actions	3	2
...		
Number of pluses		
Number of minuses		
Overall total		132

### **B.5.1 Concept Explanation and Justification**

Following our decision matrix, we needed to expand our concept further to better fit into all our criteria and reflect our user data from A1 better. We decided to mostly progress with Emily's concept whilst incorporating the habit tracker aspect in Yasmine's concept as the main feature of the application.

We also incorporated other concept ideation features from the Crazy 8's, (see 2.2) replacing the Avatar feature with a character feature instead, with the choice of a frog, duck, piglet and cat.

The app will function the same as Emily's concept, but now with a Habit page which will reflect the character you choose (frogs will leap from lily pad to lily pad as they progress).

The application will be developed in three channels, Mobile, Desktop and Watch. It will also incorporate collaboration social interaction as user's can 'compete' or hold each other accountable if they choose to complete a habit together.

We also identified that individuals with healthy habits were more likely to also be productive, hence why our application has the main focus of building habits rather than a general task tracker. We also will ensure it is accessible for those with disabilities as they were considerably more likely to struggle with habits and productivity.

The next page will go over some features included based off the affinity diagram in 1.3 of the appendix.

#### **List of features (in relation to affinity diagram of key features)**

Short login progress

A.4.3: Were easy and simple to use

Easy access to tick off tasks and see progress on home page

A.4.3 Did not require a lot of time spent in the app

Customisable home page, can move 'widgets' around and add additional features such as to-do lists

A.4.3 Were customisable

A.4.3 Were easy and simple to use

Statistics Page

A.4.3 Checklist or statistics to see how far I've come

A.4.3 Had self-motivated rewards, e.g. visible statistics

#### **List of features (in relation to affinity diagram of key features)**

Points and reward system for completing tasks

A.4.3: Had self-motivated rewards, e.g. visible statistics

A.4.3: Sense of completion or community

Audio queue and visibly tick off tasks

A.4.3: Had self-motivated rewards, e.g. visible statistics

Customisable Avatar

A.4.3: Looked good and were fun to use

A.4.3: Had self-motivated rewards, e.g. visible statistics

A.4.3: Sense of completion or community

Complete Habits with friends

A.4.3: Sense of completion or community

# B.6.1 User Journey

## USER JOURNEY MAP:



**Juliana Yang**

- Gender: Female
- Occupation: Full-time Student, Intern, Casual Employee
- Age: 21
- Location: Sydney

### Scenario

Juliana is struggled with productivity and maintaining her habits since starting an internship, while working casually and studying full time. She needs a solution, otherwise she might have to quit the internship.

STAGES	Awareness	Consideration	Installation	Use	Loyalty
THINKING	<ul style="list-style-type: none"> <li>• I really need to improve my productivity, my friend mentioned this app but im not too sure about it</li> </ul>	<ul style="list-style-type: none"> <li>• My friend seemed to like the app, I still can't overcome my issues. I need to be productive, maybe I should try the app...</li> <li>• After looking at the app, I like the features, I want to try it.</li> </ul>	<ul style="list-style-type: none"> <li>• I just installed the app, I can get started straight away! I completed the daily habit tracking and added in my tasks and goals. I love the sound and seeing my progress when I complete a task!</li> <li>• Guest login</li> </ul>	<ul style="list-style-type: none"> <li>• I have learnt the app well now, and have upgraded my avatar.</li> <li>• I want to get the full use of the application so I have created an account and transferred over my data.</li> </ul>	<ul style="list-style-type: none"> <li>• I love this app! I have been doing a challenge with the friend that introduced me and now we are both dedicated gym rats! Without this app, I wouldn't of survived this semester but I have become so productive!</li> </ul>
ACTIONS	<ul style="list-style-type: none"> <li>• Research solutions to improve productivity and build better habits</li> <li>• Talking to a friend about her issues</li> </ul>	<ul style="list-style-type: none"> <li>• Reads through the reviews for the application</li> <li>• Looks at all the features for the application</li> <li>• Compares it to other applications</li> </ul>	<ul style="list-style-type: none"> <li>• Ticks off the main daily preventative habits</li> <li>• Customises the home page with to-do lists and weekly goals</li> <li>• Works through the to-do lists and priorities</li> <li>• Sees progress in charts and earns points</li> </ul>	<ul style="list-style-type: none"> <li>• Decides to create an account</li> <li>• Gets a nice sign up bonus of points to upgrade the character</li> <li>• Shares her profile with her friend who already has an account</li> </ul>	<ul style="list-style-type: none"> <li>• Starts a public challenge to improve herself and get points</li> <li>• Starts a challenge with her friend</li> <li>• Shares and encourages her struggling friends to also install the app</li> </ul>
PAIN POINTS	<ul style="list-style-type: none"> <li>• Overall, having issues with meeting deadlines and very overwhelmed and needs a lot of help to organise her life</li> </ul>	<ul style="list-style-type: none"> <li>• There are a lot of different options for apps, but she likes the customability and gamification of this one</li> </ul>	<ul style="list-style-type: none"> <li>• The user loves the app, but is still learning some of the new features, it is very customizable, so she wasted some time here.</li> </ul>	<ul style="list-style-type: none"> <li>• The user is still hesitant, but enjoys the reward system of points, but wants the full experience.</li> </ul>	<ul style="list-style-type: none"> <li>• User is very satisfied with the application, she wishes there was more to the avatar gamification part of the app, but is still happy!</li> </ul>
FEELING					

# B.7.1 Ethics Canvas

The Ethics Canvas consists of seven panels, each with a title, a list of items, and control icons (speech bubble, list, up/down arrows, and a circle with an X). Each panel also has a 'Tag selected term' icon and an 'Add an idea' icon (lightbulb).

- Individuals Affected (1)**
  - Young Adults
  - University students
  - high school students
  - People with a lot of commitments
  - people who struggle with productivity and habits
  - people with learning difficulties
- Behaviour (3)**
  - People become productive
  - Better time management
  - Building consistent healthy habits
  - Better choices for productivity and health
- Relations (4)**
  - Competitive between friends of being productive
  - social and communication habits improved
  - Better time management - can see friends more
- What can we do? (9)**
  - Ensure our product is secure and accessible for those with disabilities
  - Limit distractions and allow for extensive custom ability so people are motivated by what fits best
- Worldviews (5)**
  - consumption of content as a waste of time
  - more prioritisation of stopping fast media content
- Group Conflicts (6)**
  - conflict based on the social accountability aspect, if people compare how productive they are
  - people could judge your negative habits or what you want to improve
  - some personal habits or goals if exposed, like overcoming addiction will impact work / social
- Product or Service Failure (7)**
  - distractions due to gamification being counter-productive
  - technical errors for points system
- Problematic Use of Resources (8)**
  - energy and internet
  - technology

## B.7.2 Ethics Canvas - Writing

### Worldviews

- consumption of content as a waste of time
- more prioritisation of stopping fast media content

### Group Conflicts

- conflict based on the social accountability aspect. If people compare how productive they are
- people could judge your negative habits or what you want to improve
- some personal habits or goals if exposed, like overcoming addiction will impact social and work life.

### Relations

- Competitive between friends with productivity
- social and communication habits improved
- better time management - can see friends more

### Problematic Use of Resources

- energy and internet
- technology
- mobile, desktop, smart watch

### Individual Affected

- young Adults
- University Students
- High School students
- People with a lot of commitments
- people who struggle with productivity and habits
- people with learning difficulties or disabilities

### Behaviour

- People become productive
- better time management
- building consistent healthy habits
- better choices for productivity and health

### Relations

- Competitive between friends with productivity
- social and communication habits improved
- better time management - can see friends more

### Product or Service Failure

- distractions due to gamification being counter-productive
- technical errors for points system

### What can we do?

- ensure our product is secure and accessible for those with disabilities
- Limit distractions and allow for extensive customisation so people are motivated by what fits best

## B.7.3 Ethics Canvas - Justification

### Specific Areas for justification in our development

- As the application will likely be used by people with learning difficulties or mental health issues (found in questionnaire data) It is important to make it accessible, not distracting and have a high contrast ratio
- People could choose to track sensitive areas such as addiction within the application.
- Some people do not respond well to competition or social accountability when completing a habit with others. This could be because they struggled with their progress and notifications could continually impact that. This feature is not necessary when completing a habit and notifications can be switched off.
- Gamification can be a distraction to users and be counterproductive. This is why our home page is designed to be the main access point for users and moving off this page is not necessary.

# C. Artefacts

C.1: Wireframes

C.2: Original Design System

C.3: Mock-ups / Iteration 1

C.4: Iteration 2

C.5: Iteration 3

C.6: Design System Changes

**Figma Link for interactive prototypes only:** <https://www.figma.com/file/eCVdA5sAf58z3EE1Mp03V3/DECO2200-Interactive-Prototypes?type=design&mode=design&t=ZBV5aDjeC19718NT-1>

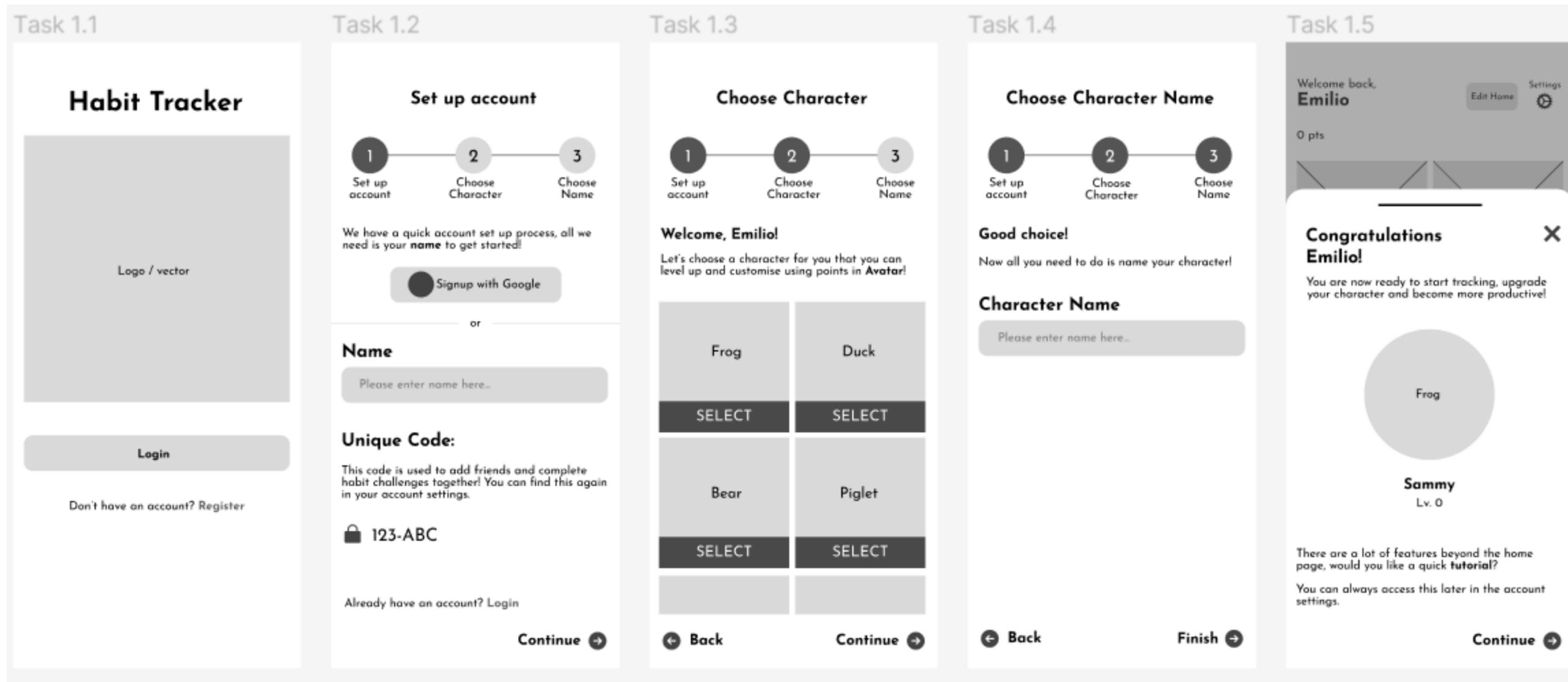
Figma Link for Usability testing + Wireframes + Mockups: <https://www.figma.com/file/TG2hXiKzAW0o8DOBFb0waY/DECO2200-other?type=design&node-id=1%3A18104&mode=design&t=n7lNZyeYXmHKMXGK-1>

# C.1 Wireframes

## C.1.1 Mobile Wireframes

### C.1.1.1 Feature 1. Register an account (Mobile)

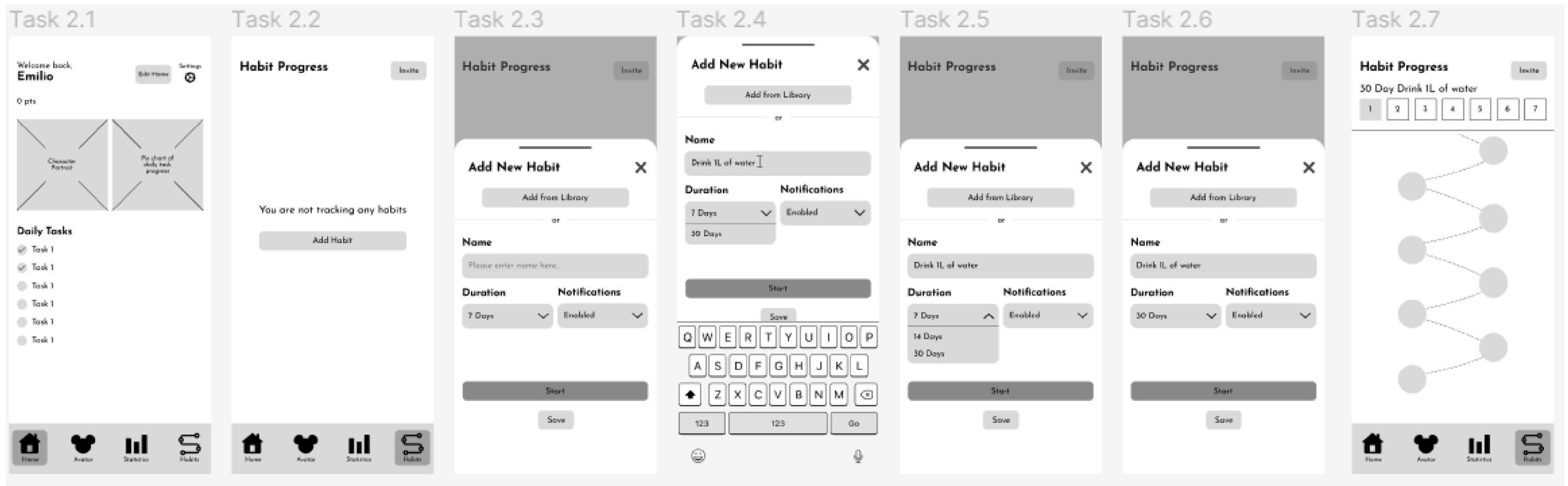
1. Create an account
2. Choose a Name and continue
3. Select a Character
4. Give the character a name
5. Exit pop-up



# C.1.1 Mobile Wireframes

## C.1.1.2 Feature 2. Add new habit

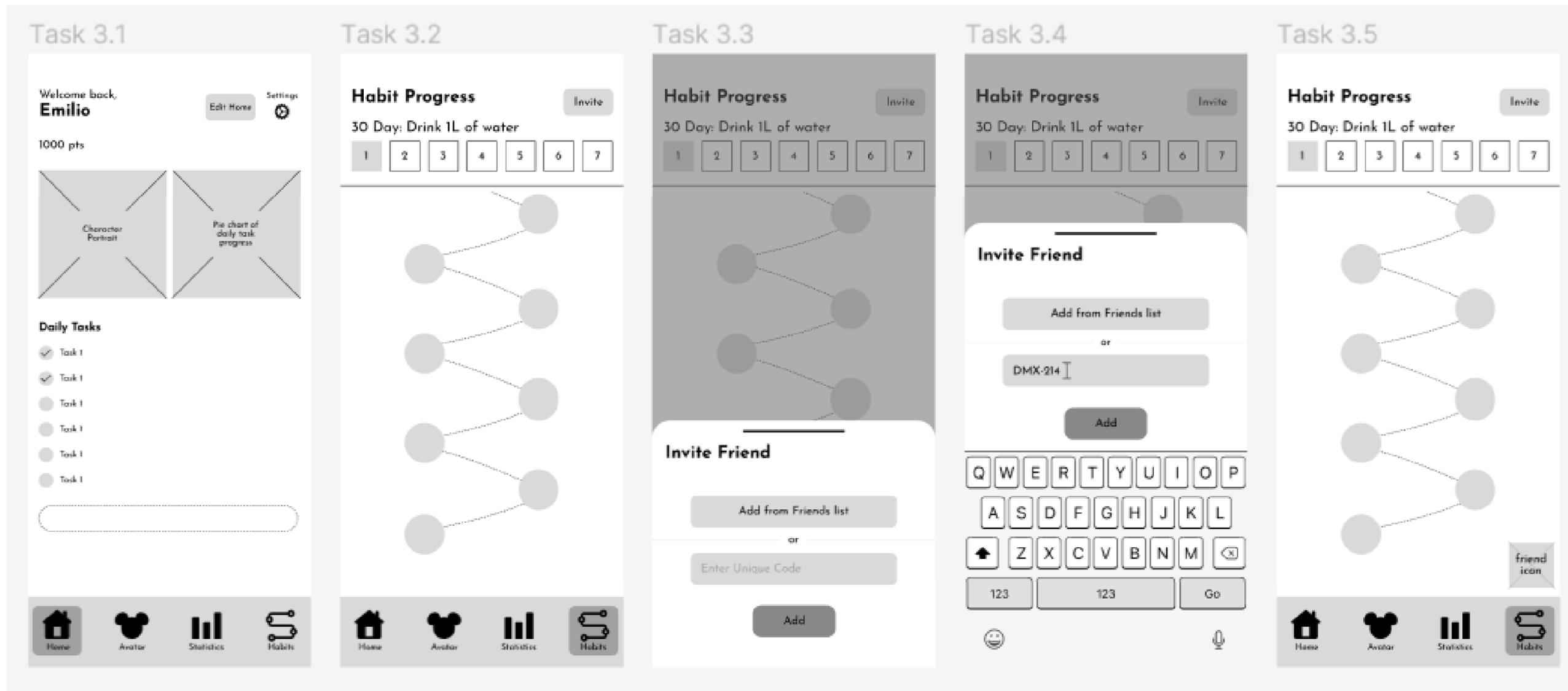
1. Navigate to Habit page
2. Add Habit
3. Name habit
4. Set duration to 30 Days
5. Start new habit



# C.1.1 Mobile Wireframes

## C.1.1.3 Feature 3. Invite friend to habit

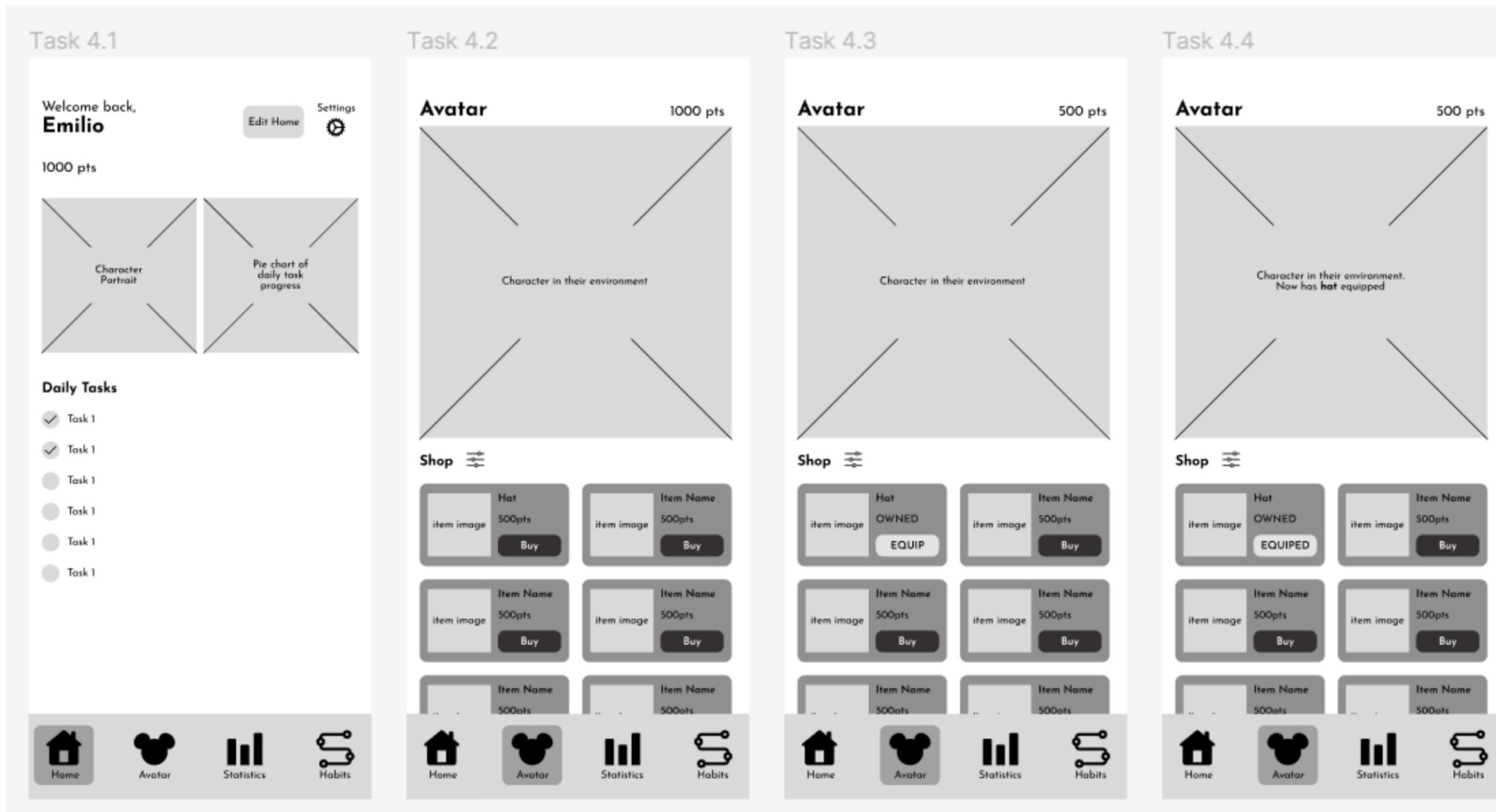
1. Navigate to Habit page
2. Click Invite
3. Enter unique code
4. Click Add



1. Navigate to Avatar page
2. Click Buy
3. Click Equip

## C.1.1 Mobile Wireframes

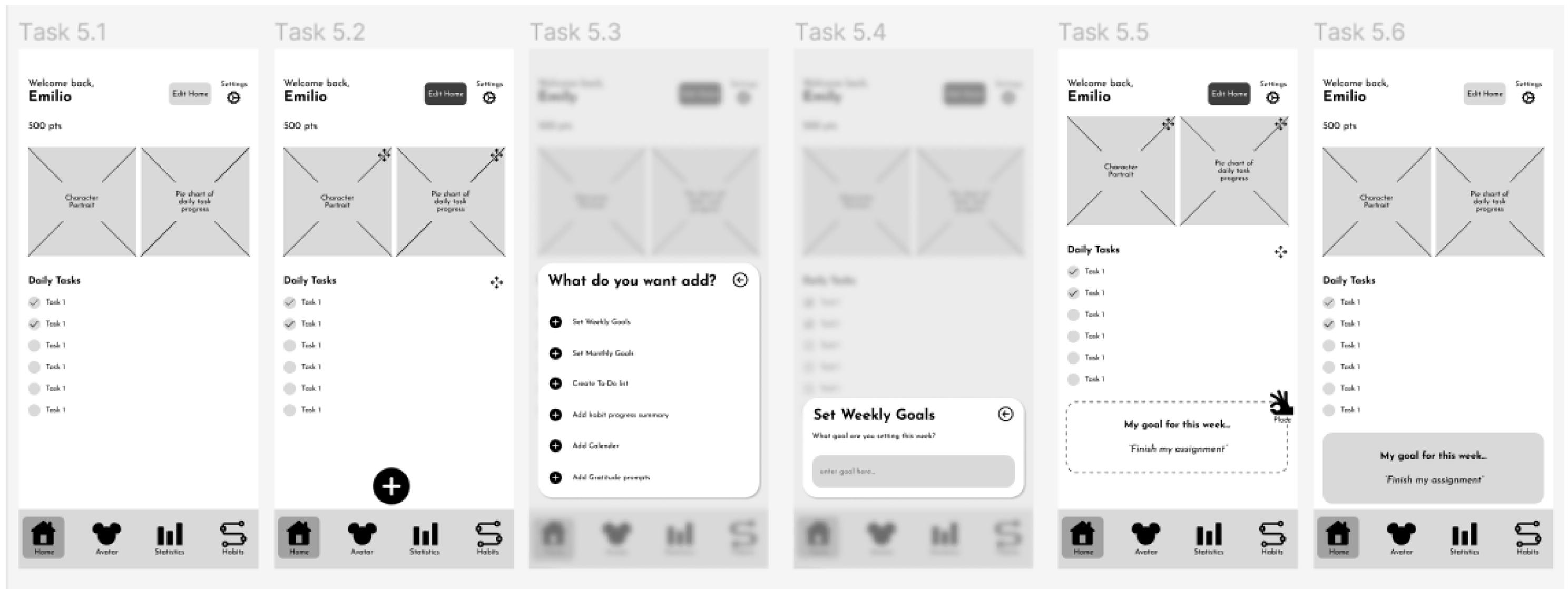
### C.1.1.4 Feature 4. Buy and equip a hat for your character



## C.1.1 Mobile Wireframes

1. Click Edit Home
2. Press '+' button
3. Click Add weekly Goals
4. Type in weekly goal
5. Place Weekly goal on home page
6. Exit edit mode

### C.1.1.5 Feature 5. Add weekly goals to your home page



# C.1 Wireframes

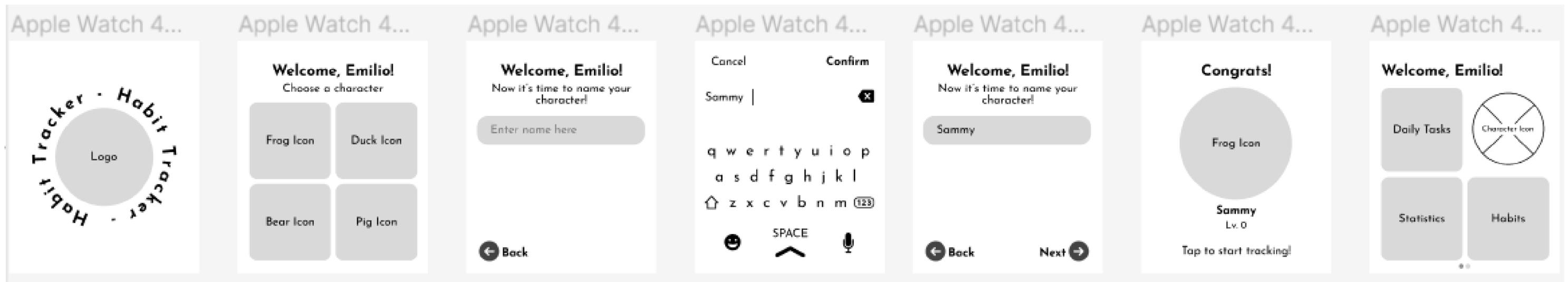
## C.1.2 Watch Wireframes

The Watch wireframes did not include all features in the mobile and desktop version due to the limited functionalities of the watch and the more likely use of it being to quickly tick off tasks.

You are required to link your account to apple watch, there is no sign up or log in

1. Select Character
2. Enter name for character
3. Exit pop-up

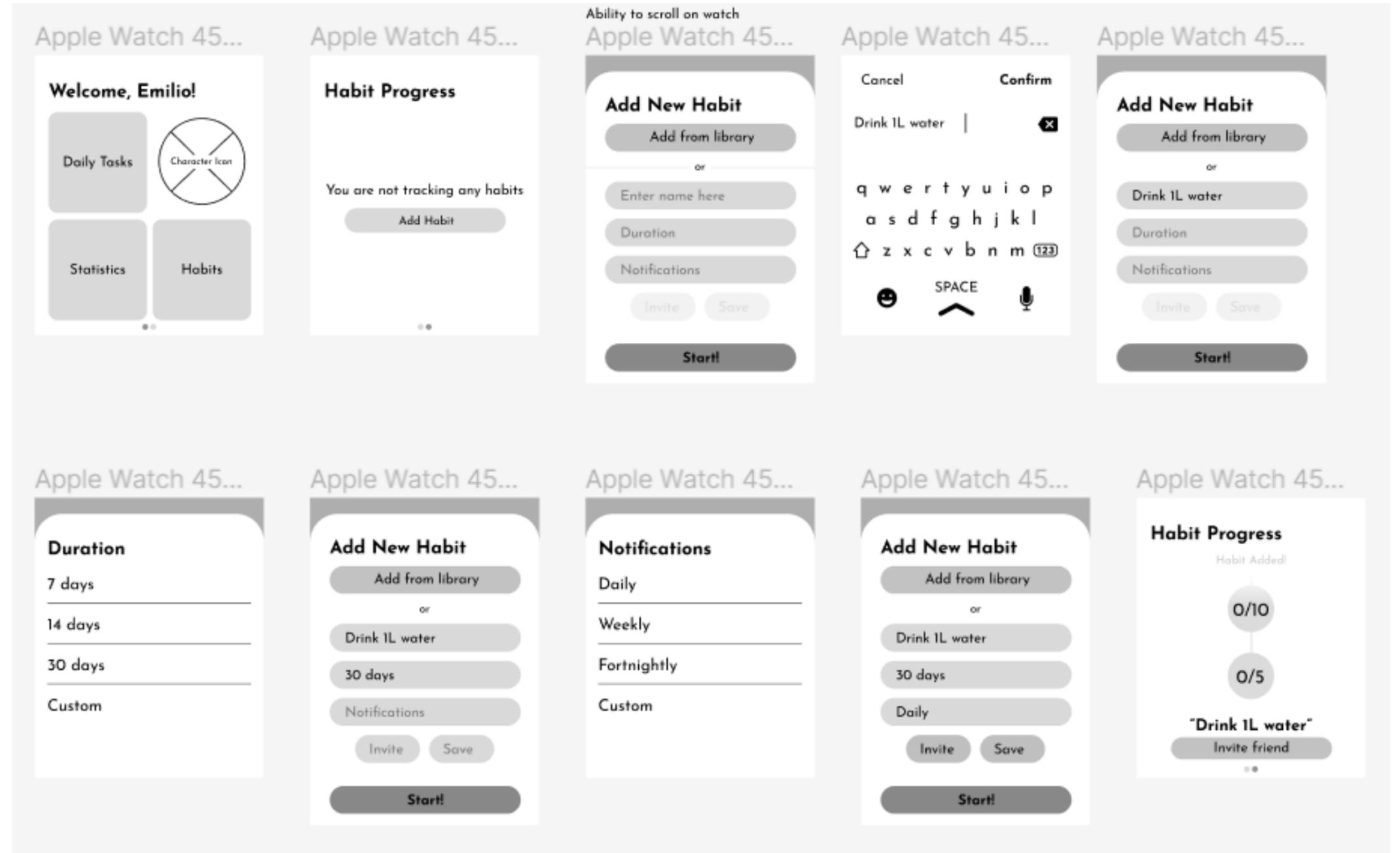
### C.1.2.1 Feature 1. Select a Character



# C.1.2 Watch Wireframes

## C.1.2.2 Feature 2. Add new habit

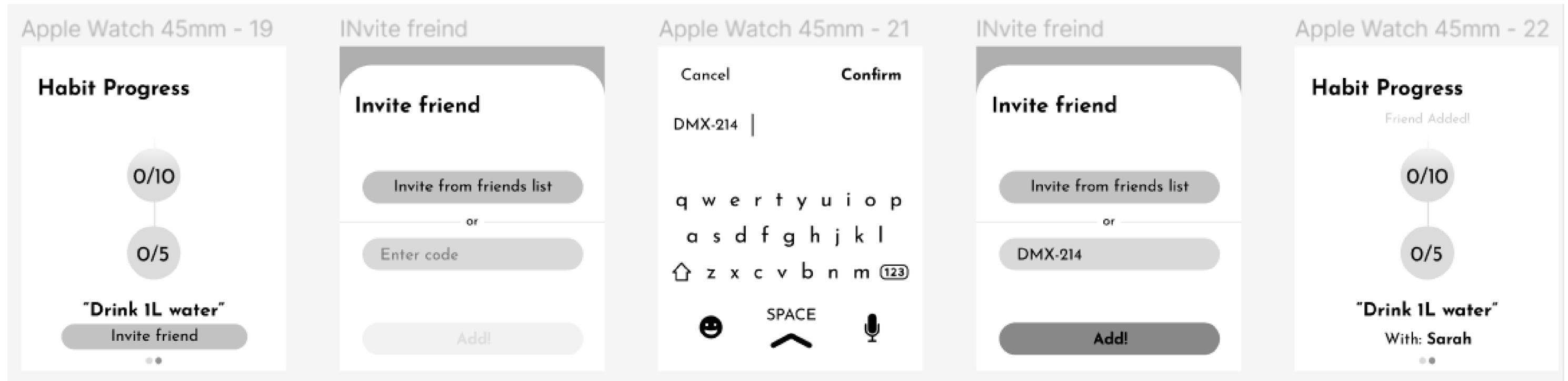
1. Navigate to Habit page
2. Add Habit
3. Name habit
4. Set duration to 30 Days
5. Set notifications to Daily
6. Start new habit



## C.1.2 Watch Wireframes

### C.1.2.3 Feature 3. invite friend to habit

1. Navigate to Habit page
2. Click Invite
3. Enter unique code
4. Click Add

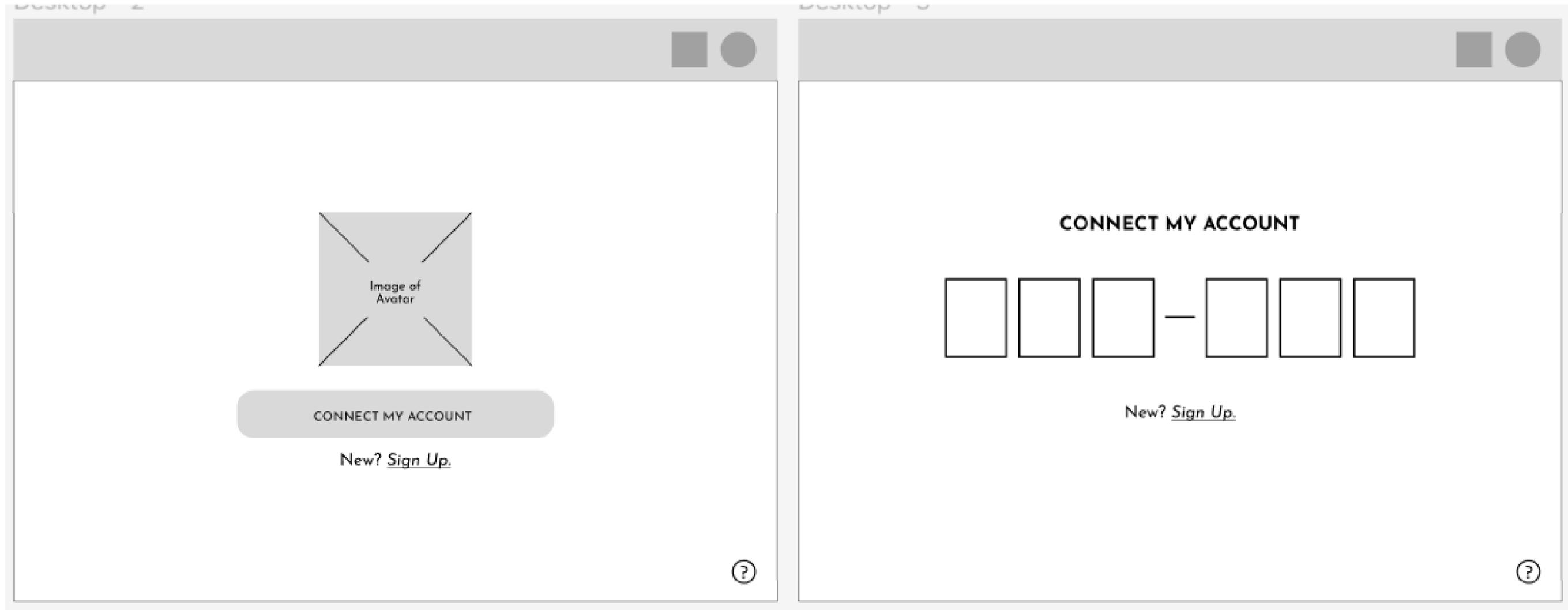


# C.1 Wireframes

## C.1.3 Desktop Wireframes

### C.1.3.1 Feature 1. Connect Account

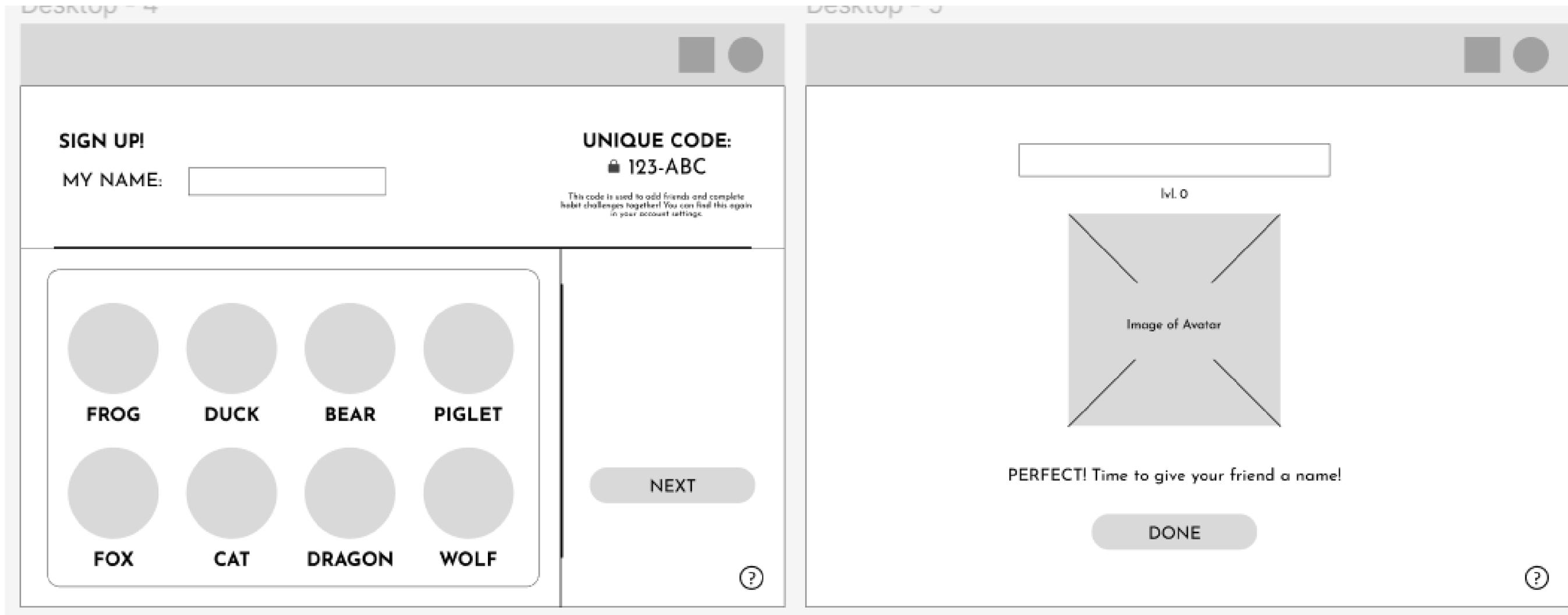
1. Click Connect Account
2. Use Unique Code



## C.1.3 Desktop Wireframes

### C.1.3.1 Feature 2. Choose Character

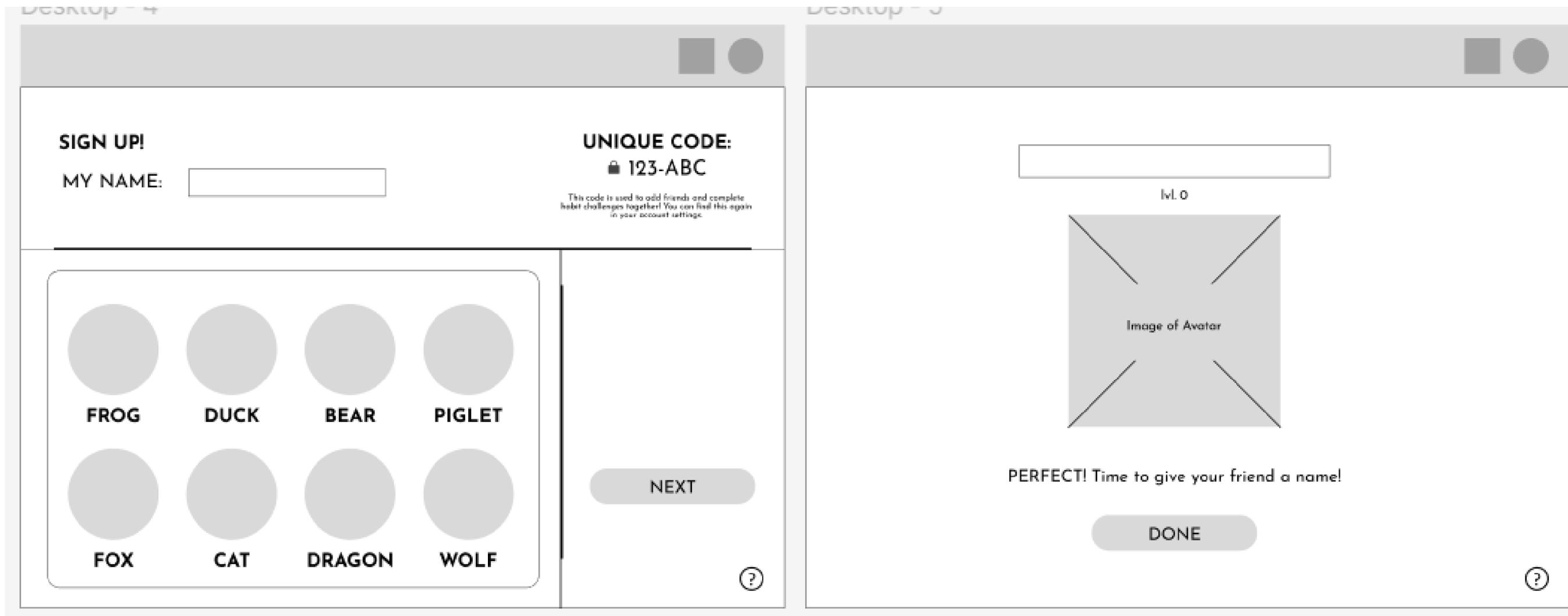
1. Select Avatar
2. Name Avatar
3. Exit pop-up



## C.1.3 Desktop Wireframes

### C.1.3.2 Feature 2. Choose Character

1. Select Avatar
2. Name Avatar
3. Exit pop-up

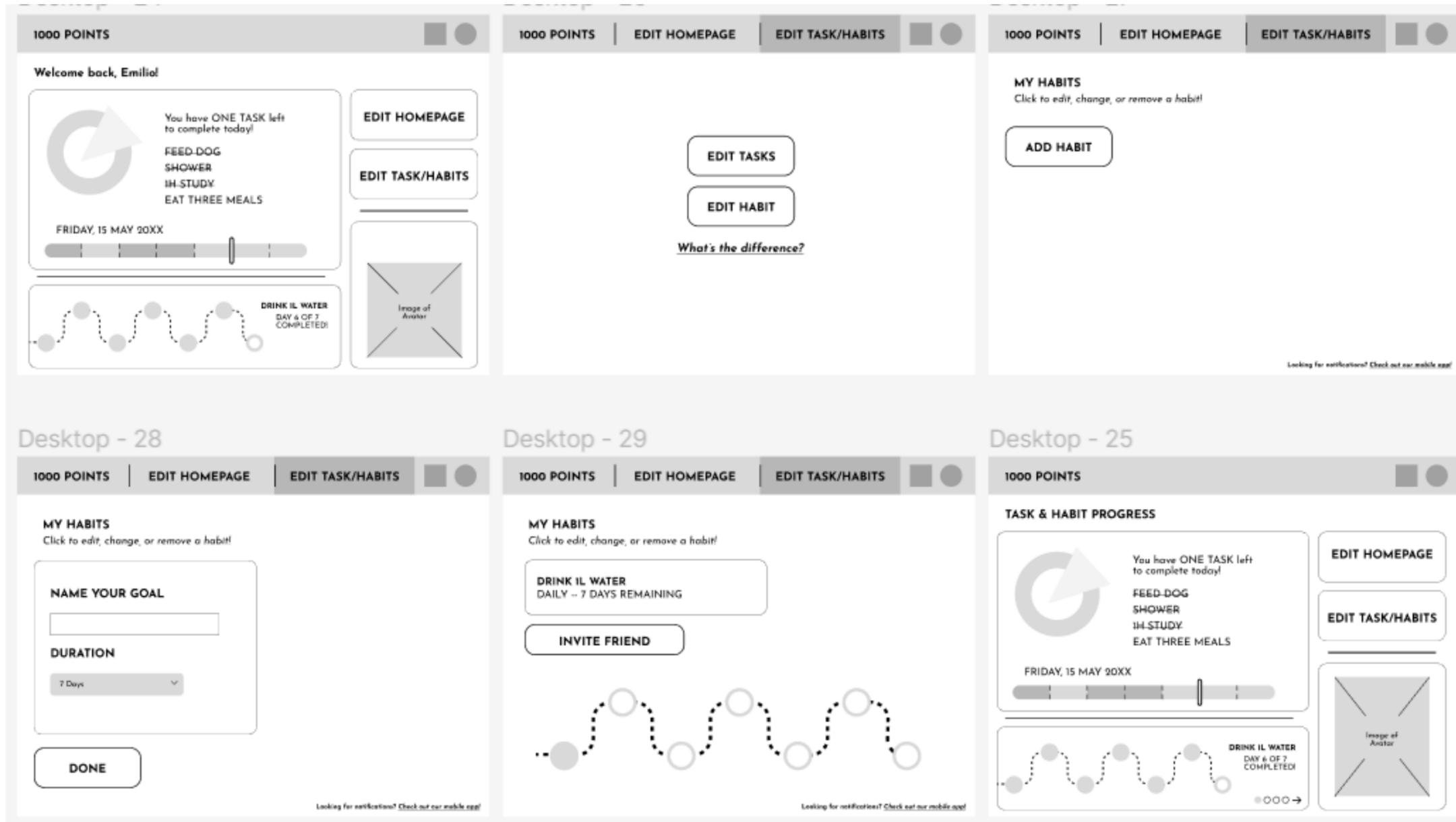


## C.1.3 Desktop Wireframes

### C.1.3.3 Feature 3. Add new Habit

The Desktop system is different from that of the iPhone, as there is no navigation bar the 'homepage' acts as a portal to the rest of the application and it's features

1. Click Edit tasks / Habit
2. Click Edit Habit to go to Habit library
3. Click Add Habit
4. Configure Habit
5. Exit Habit page (accessible through home page widget)

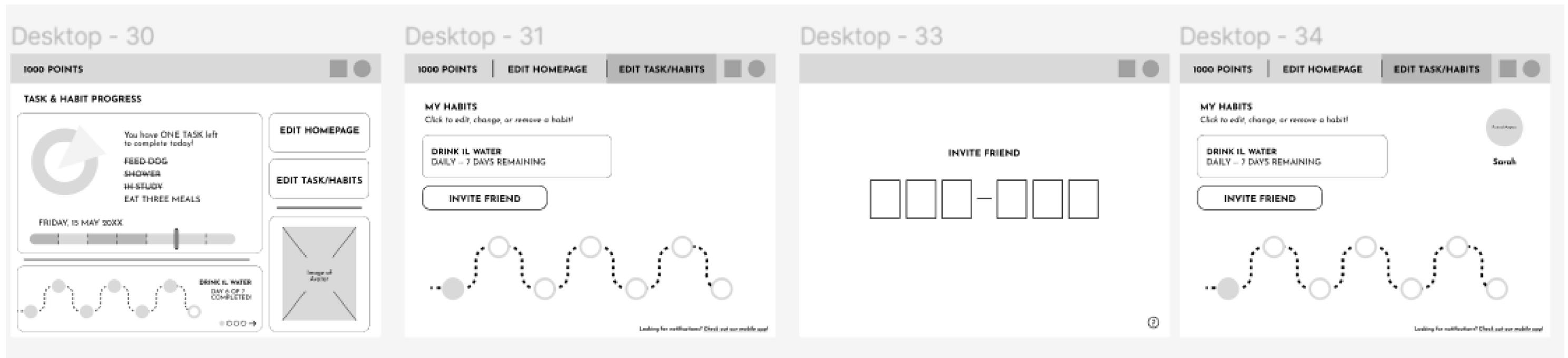


## C.1.3 Desktop Wireframes

### C.1.3.4 Feature 4. Invite friend to Habit

The Desktop system is different from that of the iPhone, as there is no navigation bar the 'homepage' acts as a portal to the rest of the application and it's features

1. Click habit widget on homepage
2. Click Invite friend
3. Enter Code

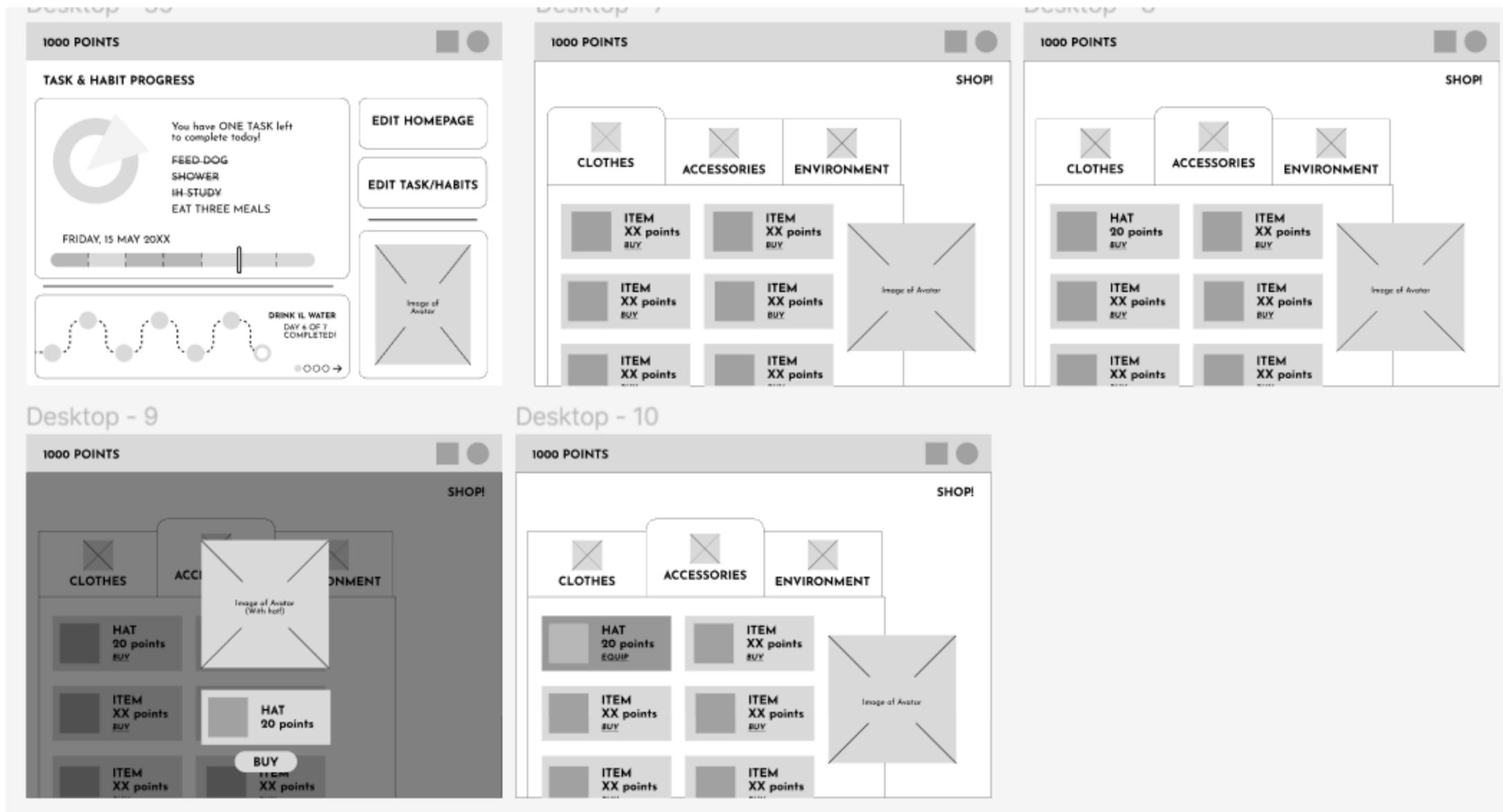


## C.1.3 Desktop Wireframes

### C.1.3.5 Feature 5. Buy and Equip Hat for avatar

The Desktop system is different from that of the iPhone, as there is no navigation bar the 'homepage' acts as a portal to the rest of the application and it's features

1. Click Avatar widget on homepage
2. Navigate to accessories
3. Click on Hat
4. Click buy
5. Click Equip



## C.2 Original Design System

### C.2.1 Typography

# Typography

<https://developer.apple.com/design/human-interface-guidelines/typography>

Font: Figtree

PHONE:

**Large Title - Bold - 32pt**

**Titles - Bold - 24pt (page title)**

**SubTitles - Bold - 16pt (headers)**

Body Text - Regular - 16pt (all body)

WATCH

**Large Title - Bold - 32pt**

**Titles - Bold - 18pt (page title)**

**SubTitles - Bold - 15pt (headers)**

Body Text - Regular - 15pt (all body)

DESKTOP

**Large Title - Bold - 32pt**

**Titles - Bold - 24pt (page title)**

**SubTitles - Bold - 16pt (headers)**

Body Text - Regular - 16pt (all body)

The font we used was one called 'Figtree.' We followed the HIG from apple in terms of sizing for the fonts on each channel

# C.2 Design System

## C.2.2 Icons and illustrations

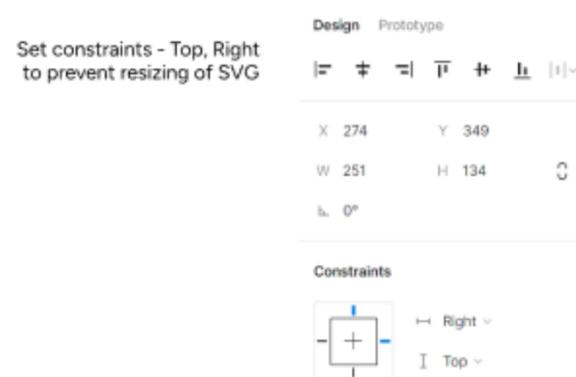
Our navigation bar incorporate custom illustrator made icons in .svg format with a stroke weight of 3 and a filled and unfilled version to indicate status. These were made as SVG's to make it easy to change the colour.

### Icons

#### OTHER



#### NAVBAR



#### SHOP ITEM ILLUSTRATIONS



#### LOGO



#### ICON



#### ILLUSTRATIONS



#### KEYBOARD



We used other icons as well to indicate different things, we tried to make them all 3 stroke weight but were unable to find enough. The sizing displayed in this example is not the same as in the actual mock-ups.

We created illustrations for each character and a few items to display in the avatar shop. The options for accessories will be expanded in the next assignment.

A logo was also created for our application. The name of the application is 'Achievo,' we manipulated this and added a light bulb referencing a spark of productivity and a checklist to reference progress and goals.

## C.2 Design System

### C.2.3 Colour

We chose a monochromatic colour palette, utilising this alongside stroke weight and drop shadows to create depth and separation in our design. The main accent is used in the sign up process acting as the brand colours. However, once an account is set up the accent colours in the application are associated to which character you chose.

# Colour

## Primary - Monochromatic



## Main Accent



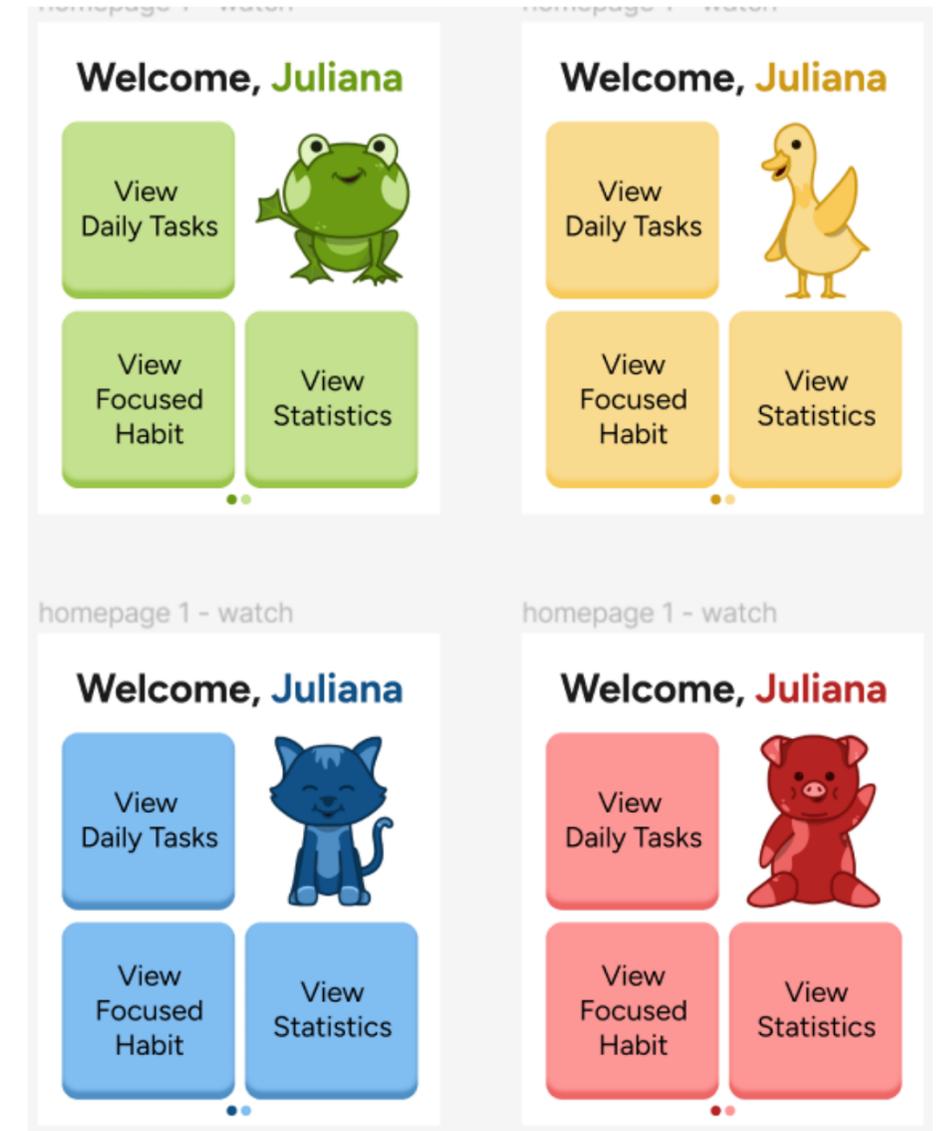
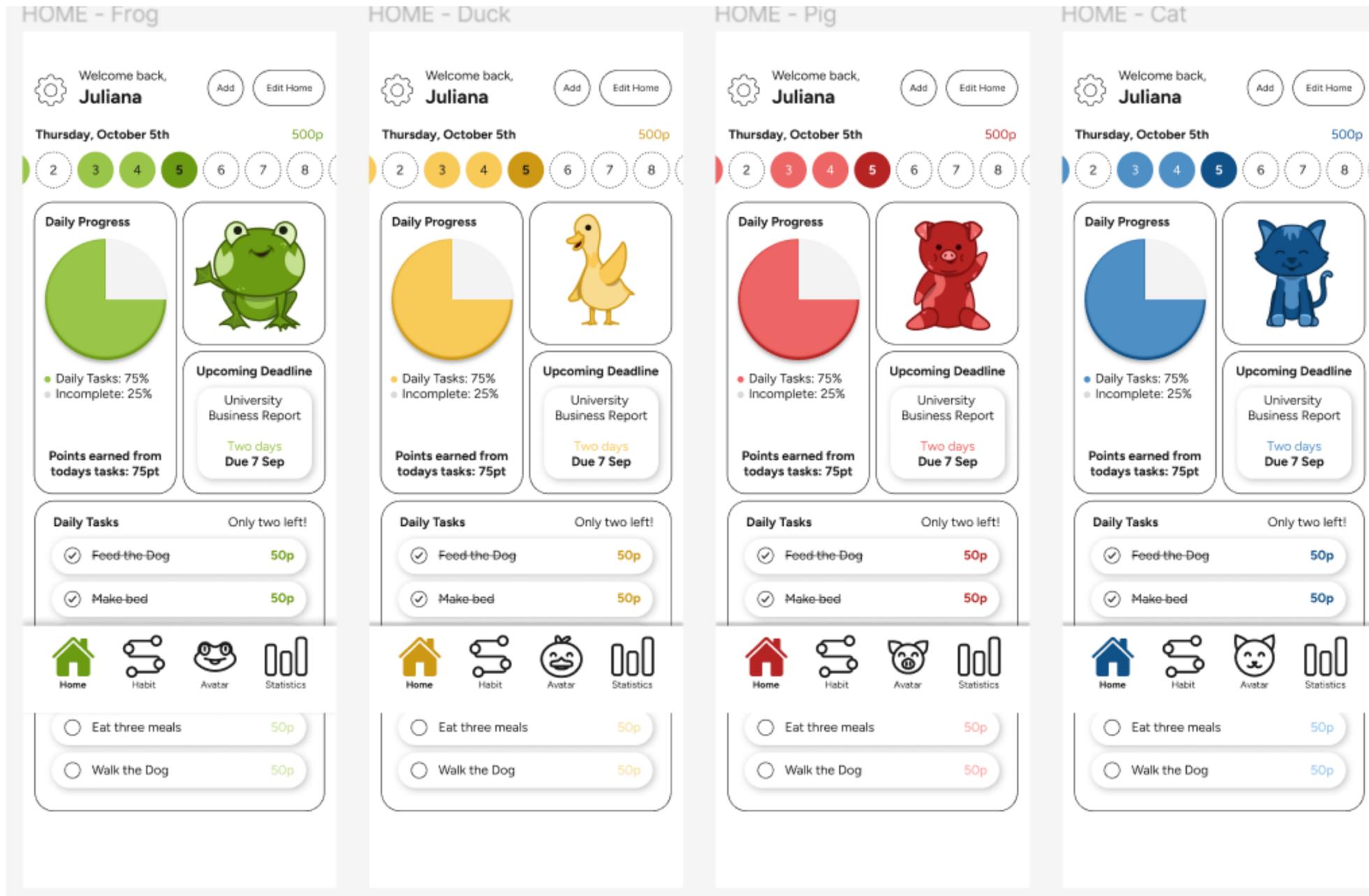
## Other Accents



## C.2. Design System

This here displays how the homepage differs based on the avatar chosen

### C.2.4 Accent example



# C.2. Design System

## C.2.4 Boxes

### Boxes

#### Phone

Box Sizing, minimum height of 44pt for iPhone  
24pt radius



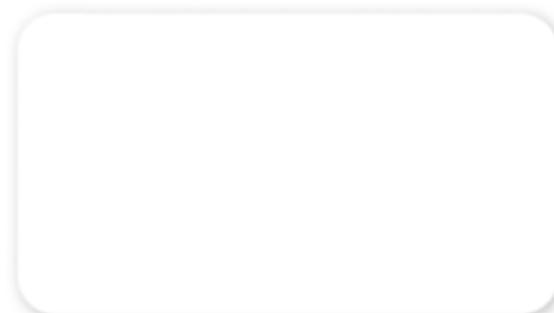
Inactive



Active



Input Box



#### Watch

Box Sizing, minimum height of 40pt for watch  
20pt radius

Inactive



Active



Input Box



This portrays the design approach to boxes and sizing. Following the HIG the iPhone input boxes and buttons will be over 44pt at 50pt. The watch is slightly smaller at 40pt. There will also be a radius of 24pt for the phone and a 20pt radius for watch. These boxes will also have a stroke weight of 1 around the border. In the iPhone design, a drop-shadow of X=2, Y=10, Blur=10 will be applied to create depth in some sections,

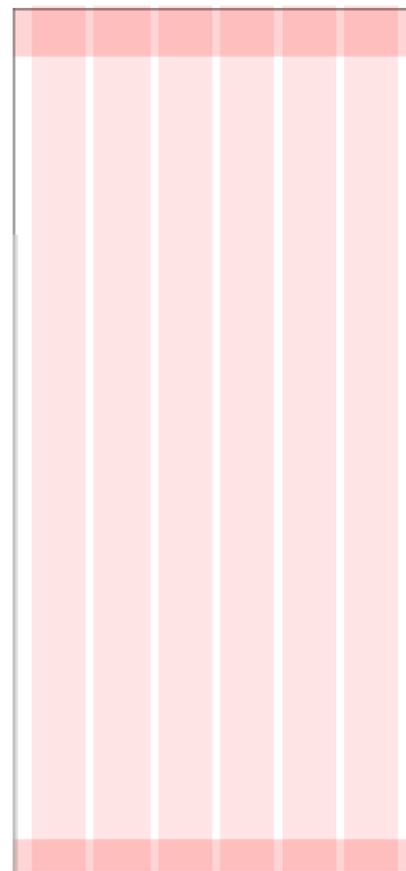
# C.2 Design System

Using online references we created grids for our mock-ups to ensure design consistency and alignment. The iPhone example also includes exclusion zones to make space for the home bar and ios status bar. These exclusion zones have been followed in all of the mock-ups

## C.2.5 Grids

### Grids

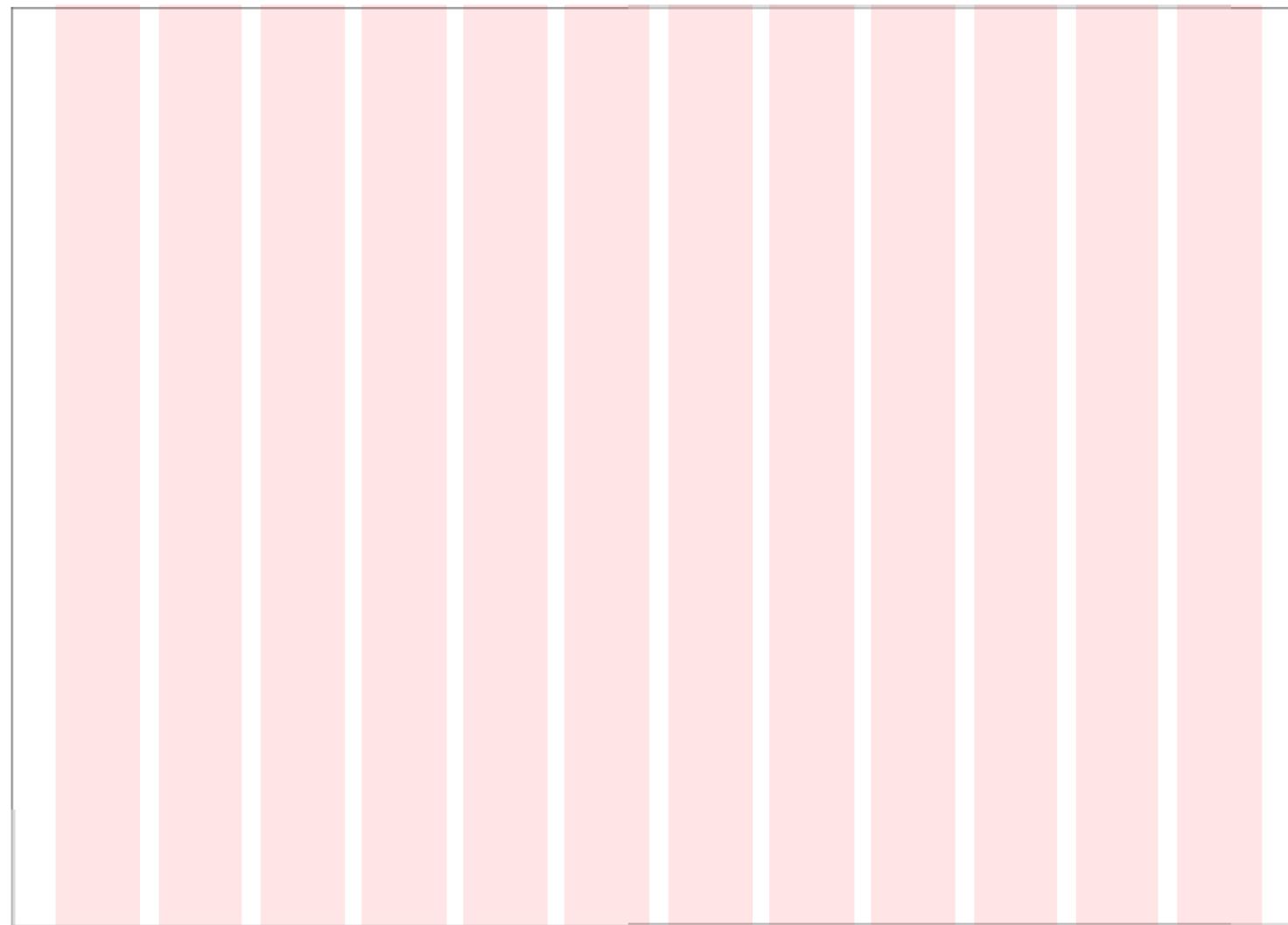
**Mobile**  
6 Columns  
16 Margin  
8 Gutter



Exclusion  
Zone: 47pt

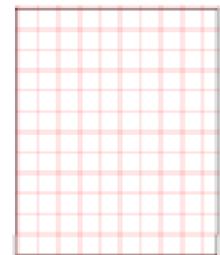
**Desktop**  
12 Columns  
48 Margin  
20 Gutter

(feel free to  
change this  
Emma, just  
general  
guide)



**Desktop**  
20 Size Grid

(feel free to  
change this  
Yasmine, just  
general  
guide)



47 Top exclusion zone

Exclusion  
Zone: 34pt

Illustration on Page 1 from undraw,

## C.3 Mockups

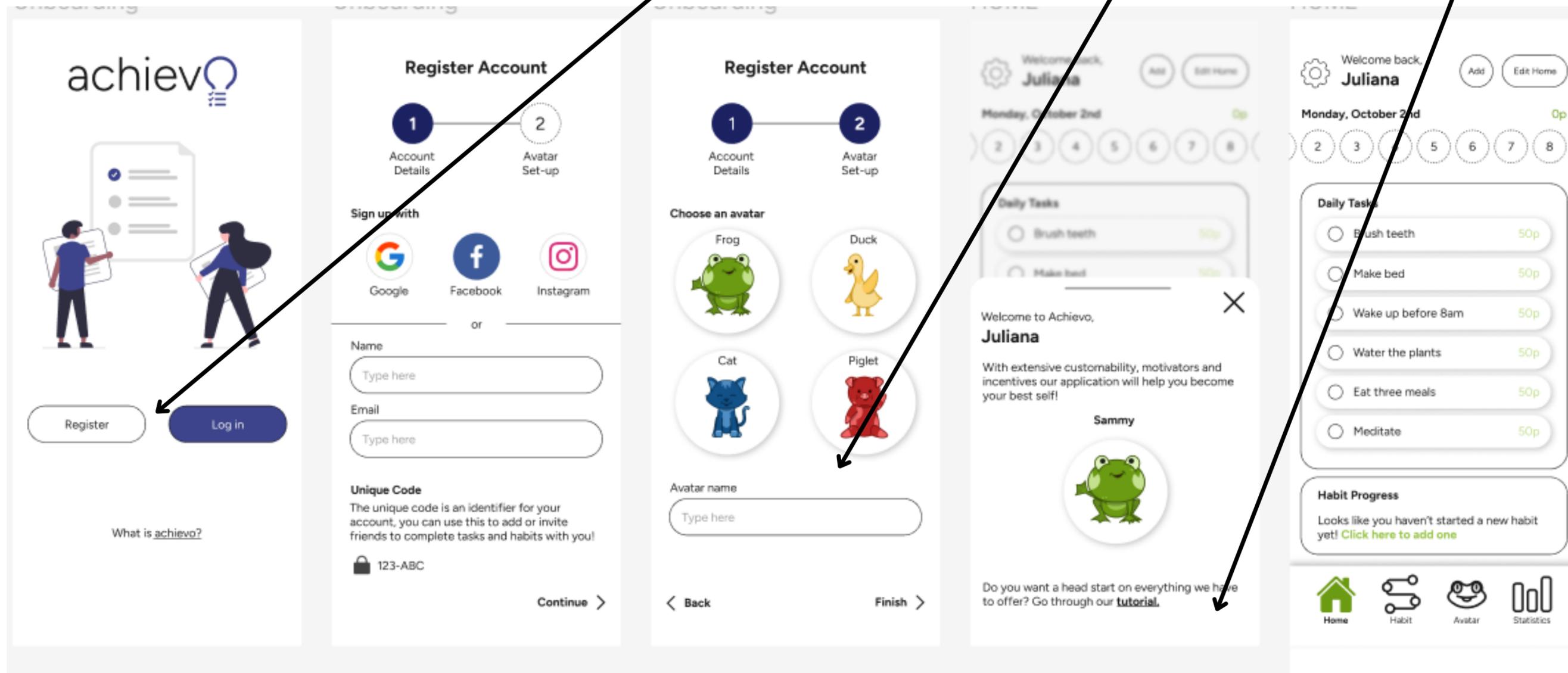
### C.3.1 Mobile

#### C.3.1.1 Onboarding and Sign Up

Changed from original wireframes to have two buttons side by side instead of register in text below log-in, this is because users would often click log-in straight away

Combined choose avatar and name avatar into the same page to simplify the process

Removed 'continue' button which would lead to tutorial as users will click this to try to exit the pop up, instead added a small text button as an option for users



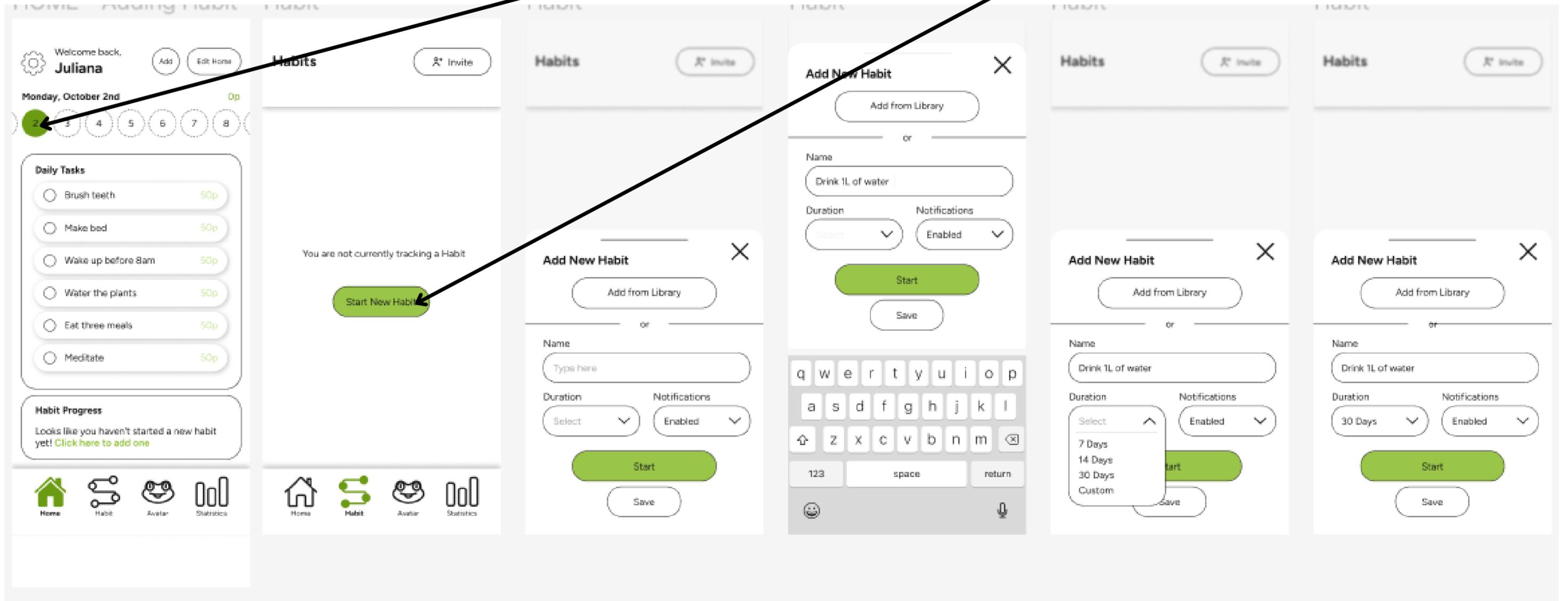
# C.3 Mockups

## C.3.1 Mobile

### C.3.1.2 Creating new habit

Dark accent colour for current day of the week.  
Dashed line for inactive days

Primary button is Regular accent colour



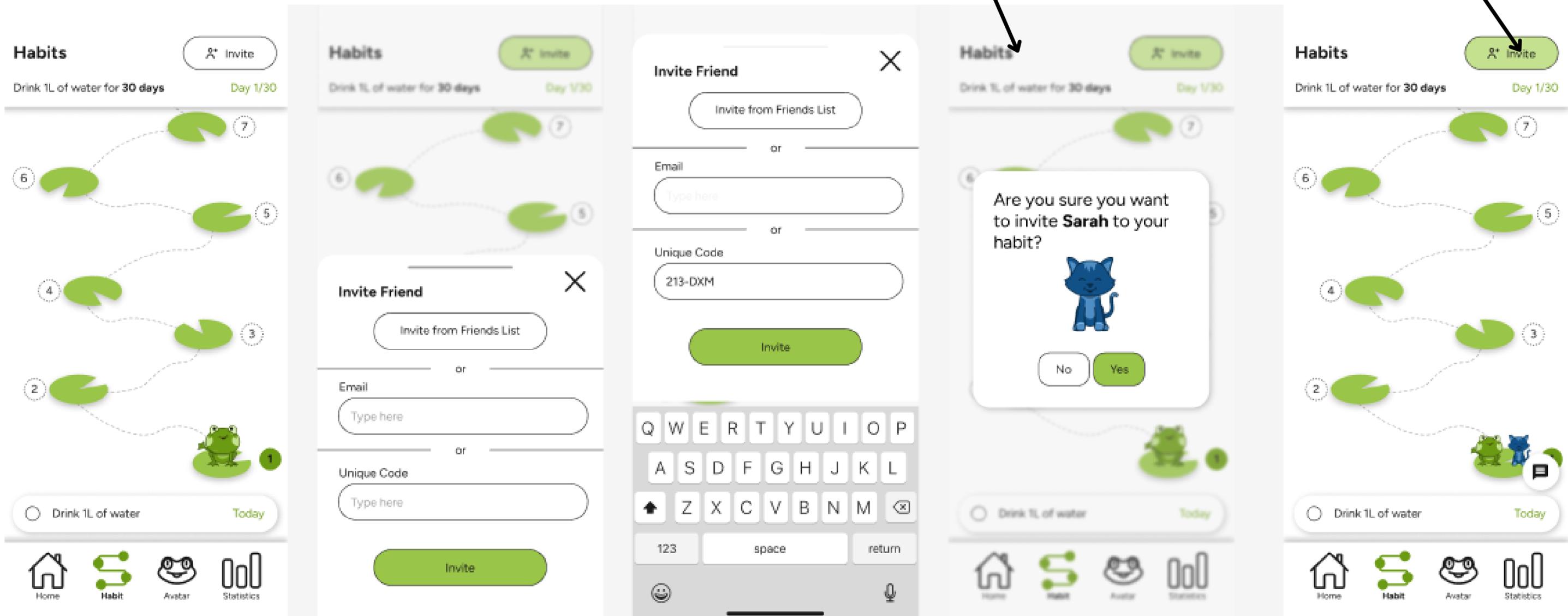
## C.3 Mockups

### C.3.1 Mobile

#### C.3.1.3 Inviting friend to habit

We decided to add a confirmation page when adding a friend, this was not found from user testing however.

Button when active, using light accent Colour



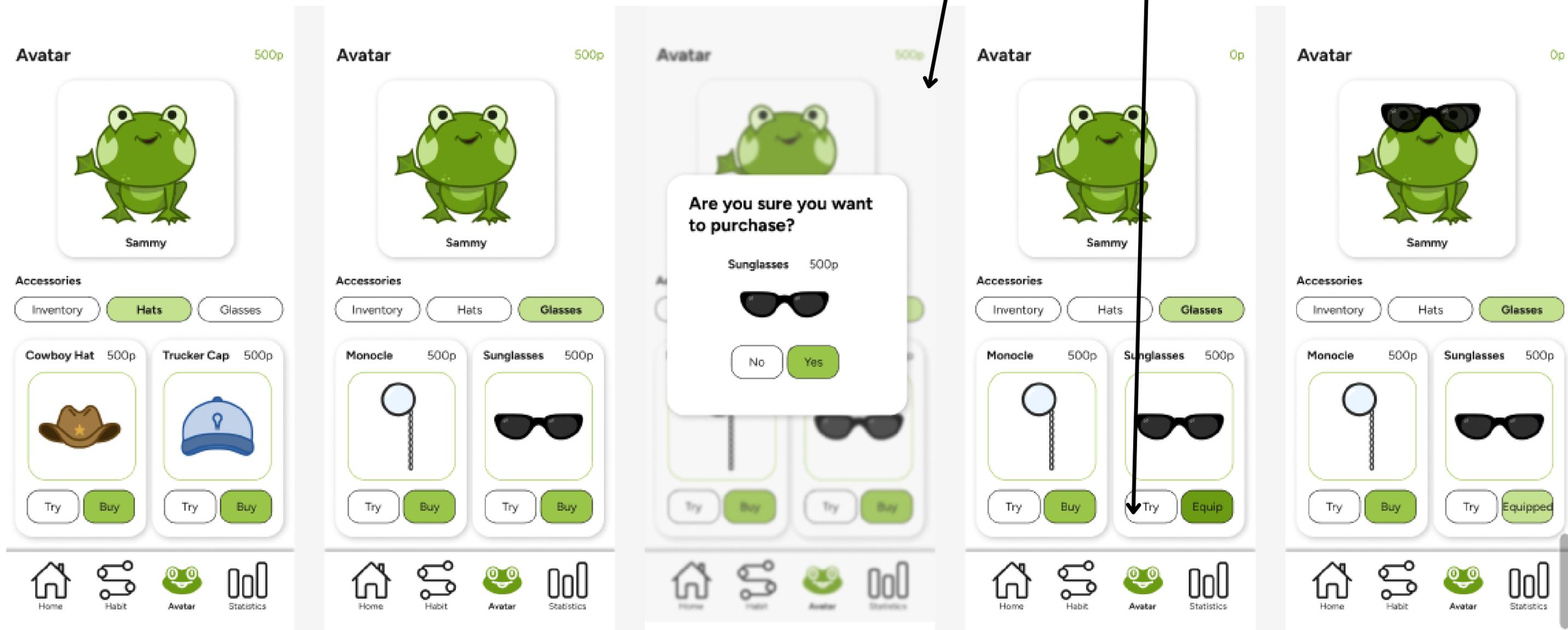
## C.3 Mockups

### C.3.1 Mobile

#### C.3.1.4 Buying and equipping item to character

We decided to add a confirmation page when adding a friend, this was not found from user testing however.

Users wanted to be able to try on the item before they purchased

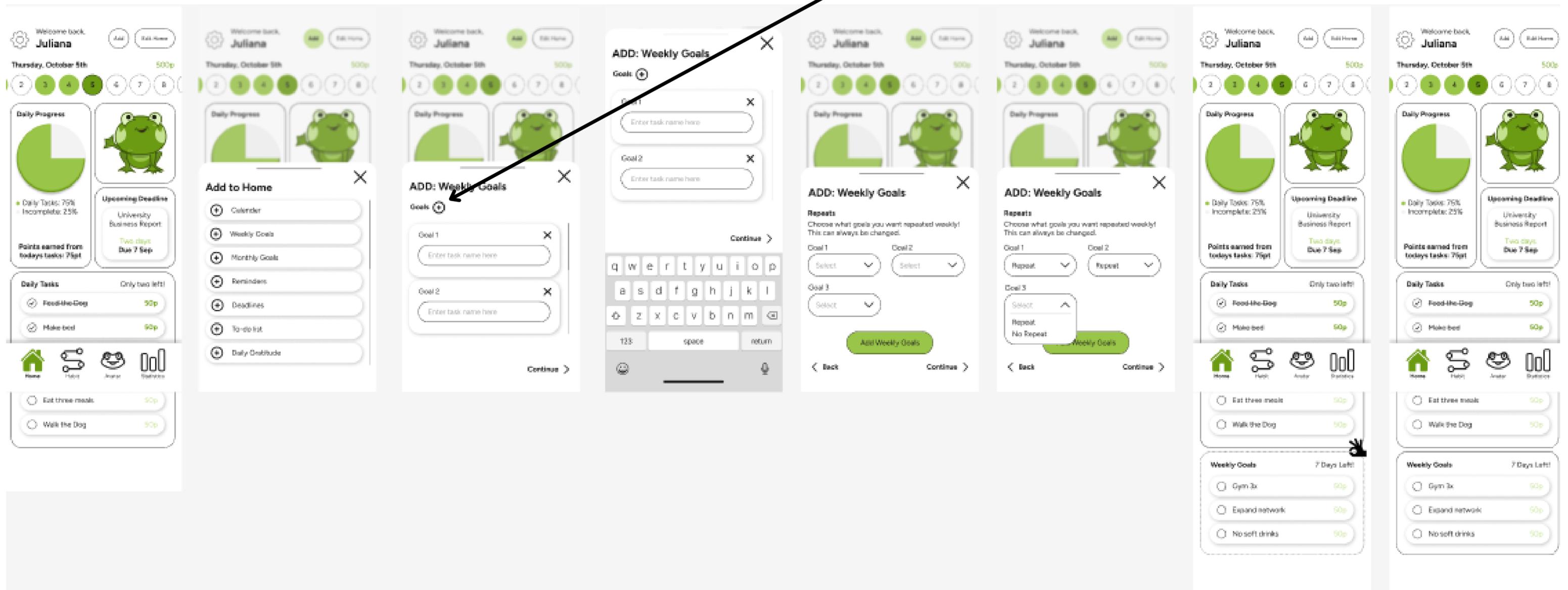


# C.3 Mockups

## C.3.1 Mobile

### C.3.1.5 Adding weekly goals to home page

Ability to add more goals and scroll to view them all. Sizing was considered so it could easily be pushed up to accommodate the keyboard



## C.3 Mockups

### C.3.1 Mobile

#### C.3.1.6 Moving a widget on the home page

Delete button when you are grabbing and dragging one of the widgets

Some users didn't see or understand this function, we created more separation to make it seem like you grab it to move. In the prototypes we intend to apply the 'wobble' effect seen on the iPhone screen

users were confused about the original 'edit home' button being able to both edit home and add, therefore we made two buttons to reference the different functionality

From expert testing, have it say 'Done' when active



# C.3 Mockups

## C.3.1 Mobile

Light green for 'Tomorrow' and no checkbox when the option is inactive

### C.3.1.7 Habit progress flow

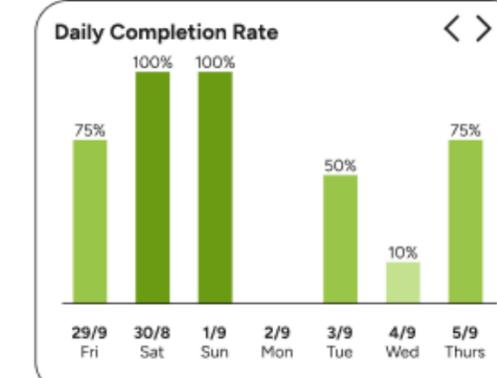


### C.3.1.8 Statistics page

Statistics 500p

Monthly Progress Summary September ▾

Mon	Tue	Wed	Thur	Fri	Sat	Sun
25 20%	26 50%	27 45%	28 75%	29 75%	30 100%	3 100%
4 45%	5 20%	6 50%	7 65%	8 75%	9 10%	10 60%
11 20%	12 50%	13 45%	14 75%	15 75%	16 100%	17 20%
18 0%	19 30%	20 60%	21 70%	22 70%	23 85%	24 100%
25 20%	26 50%	27 45%	28 75%	29 75%	30 100%	1/9 100%



All-time Summary Habit Comparison

Home

Habit

Avatar

Statistics

73.5%

Different accent tones based off progress,

- Dark green for 76-100%
- Green for 25-75%
- Light green for 1-24%
- Light grey for 0% or days not included.

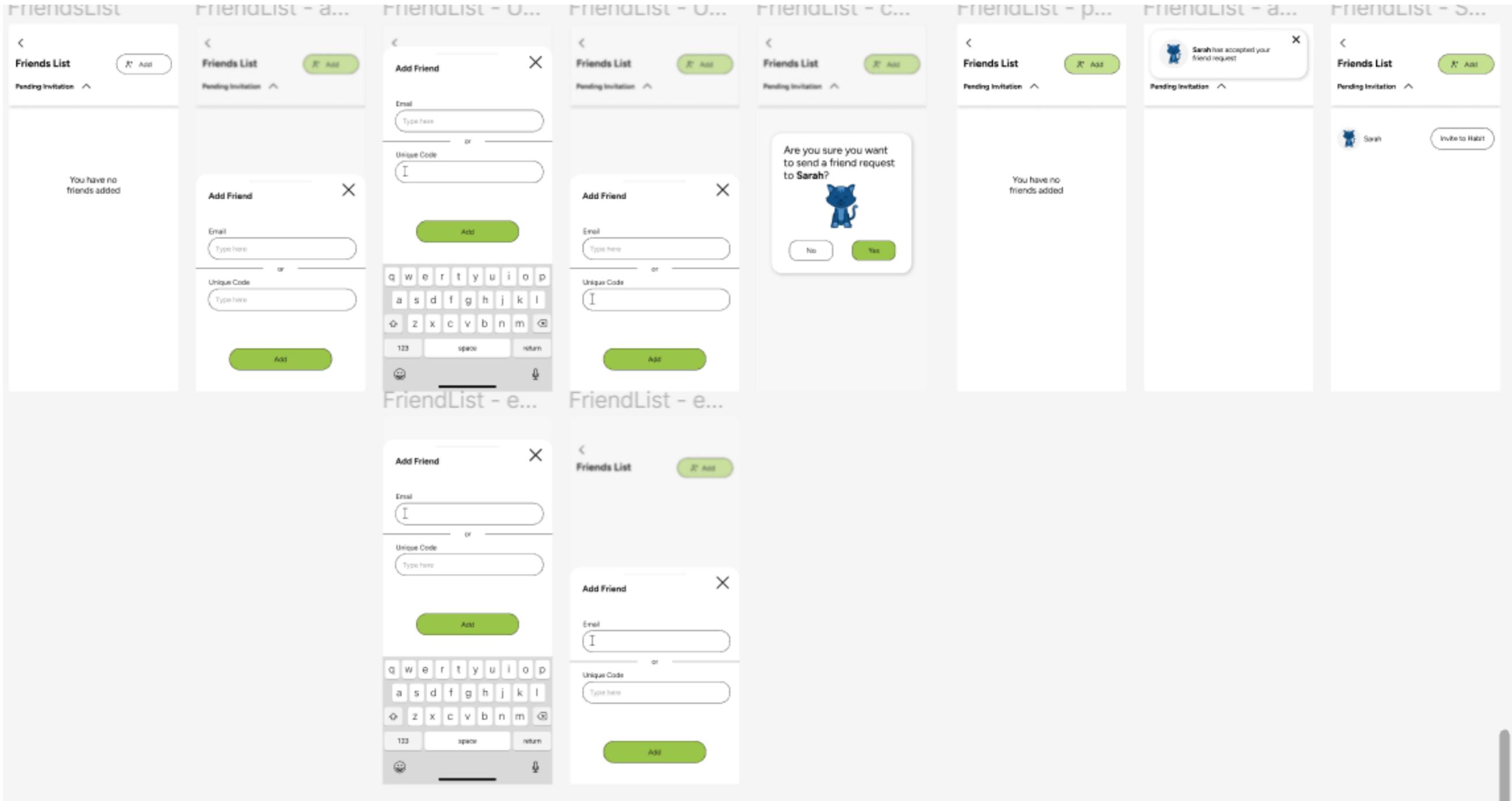
Arrow buttons allowing you to choose another month to look at progress or slide in the weekly one

Users are able to add these widgets to their homepage

# C.3 Mockups

## C.3.1 Mobile

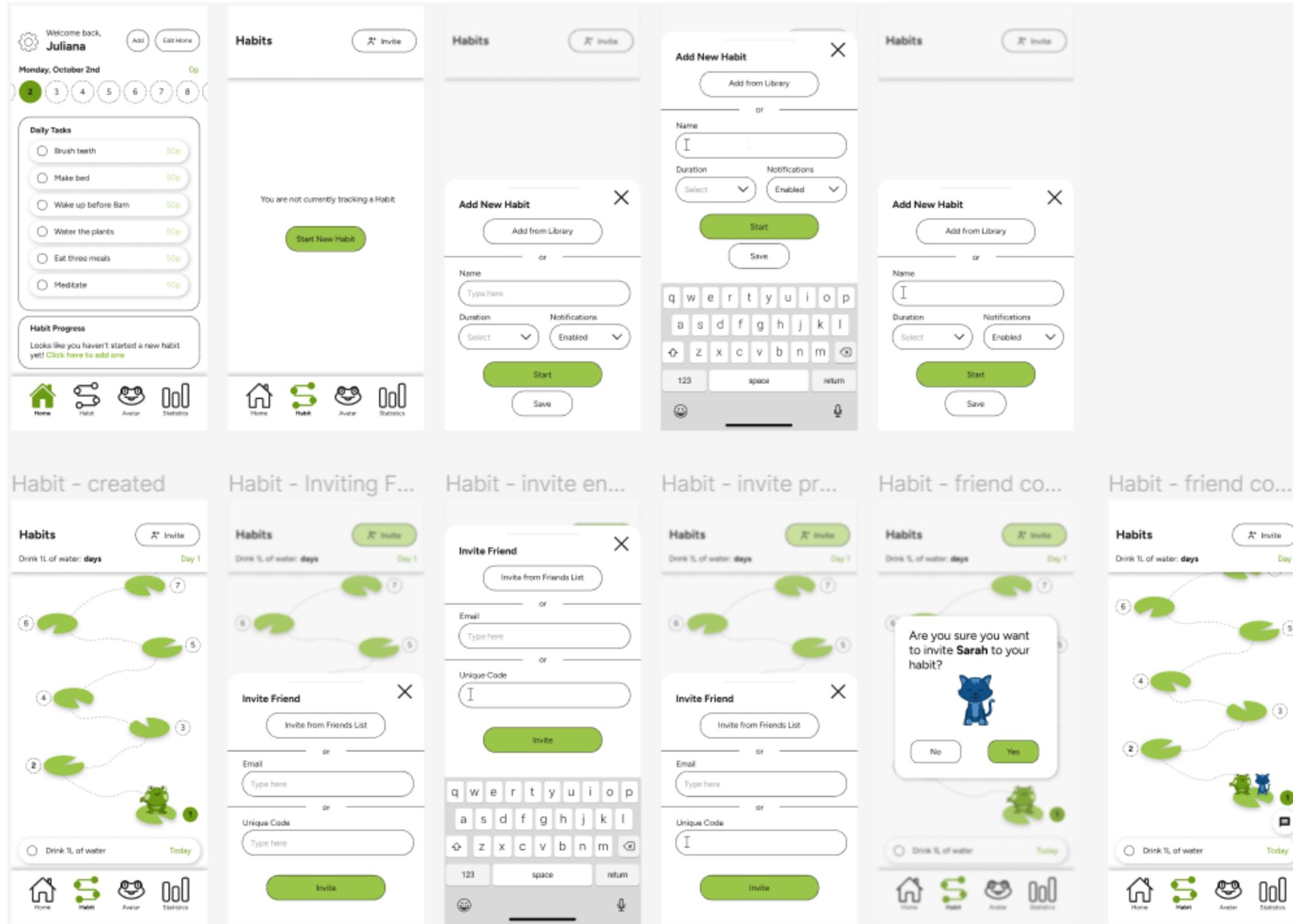
### C.3.1.9 Friend list



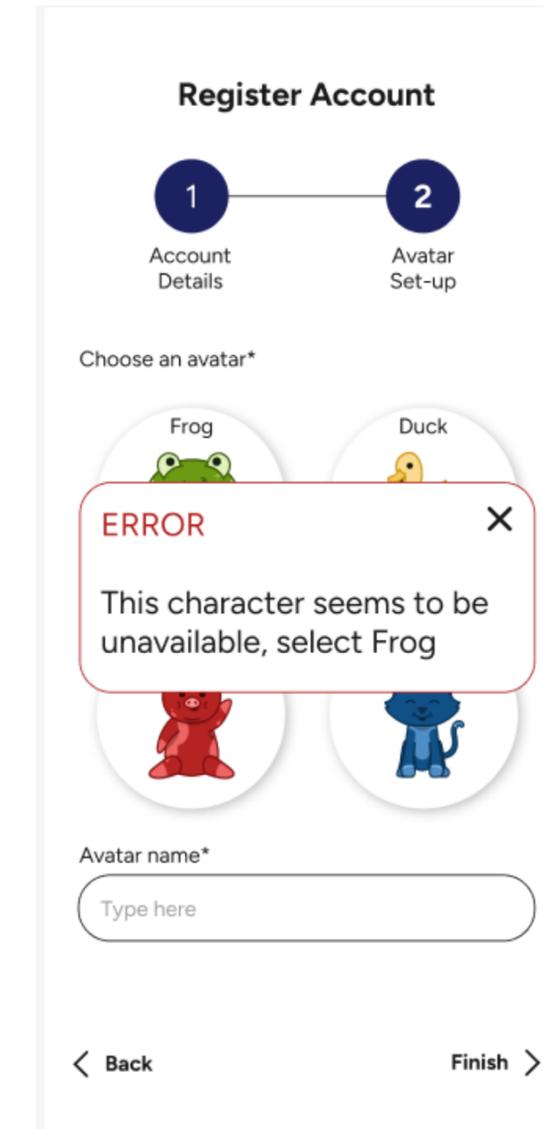
# C.3 Mockups

## C.3.1 Mobile

### C.3.1.10 Configuring habit and adding friend



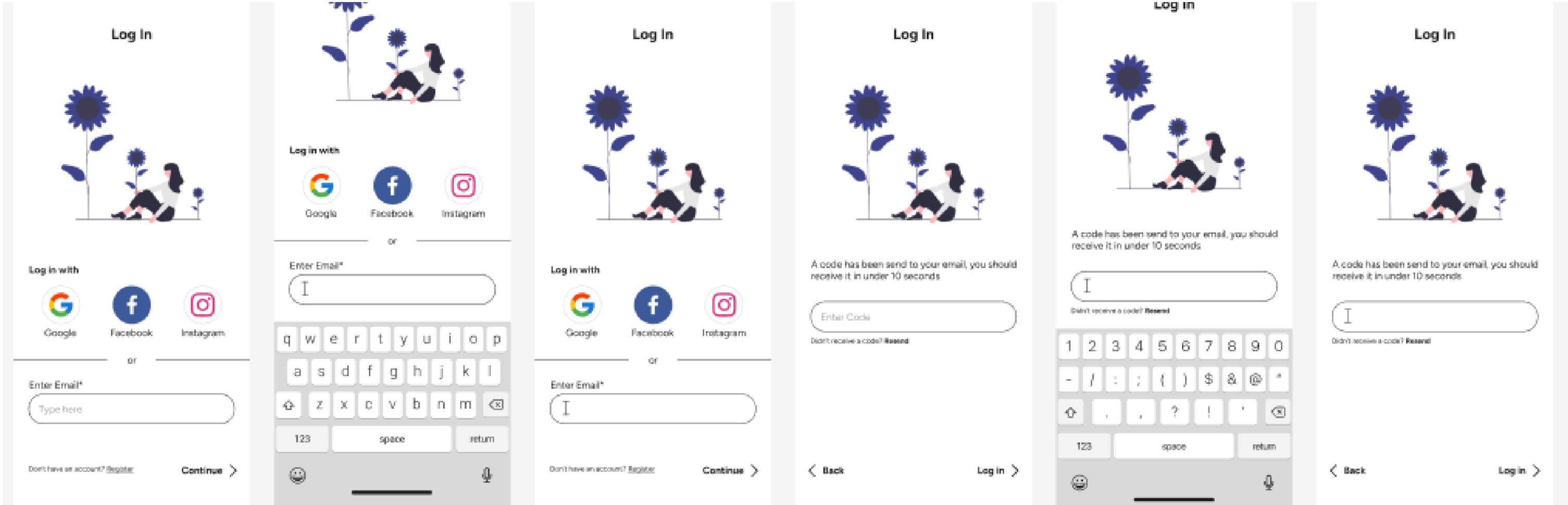
## C.3.1.13 Error Message



Users will get an error message if they do not select frog when creating a character this is to allow for further user freedom and a better ability for error recovery

# C.3 Mockups

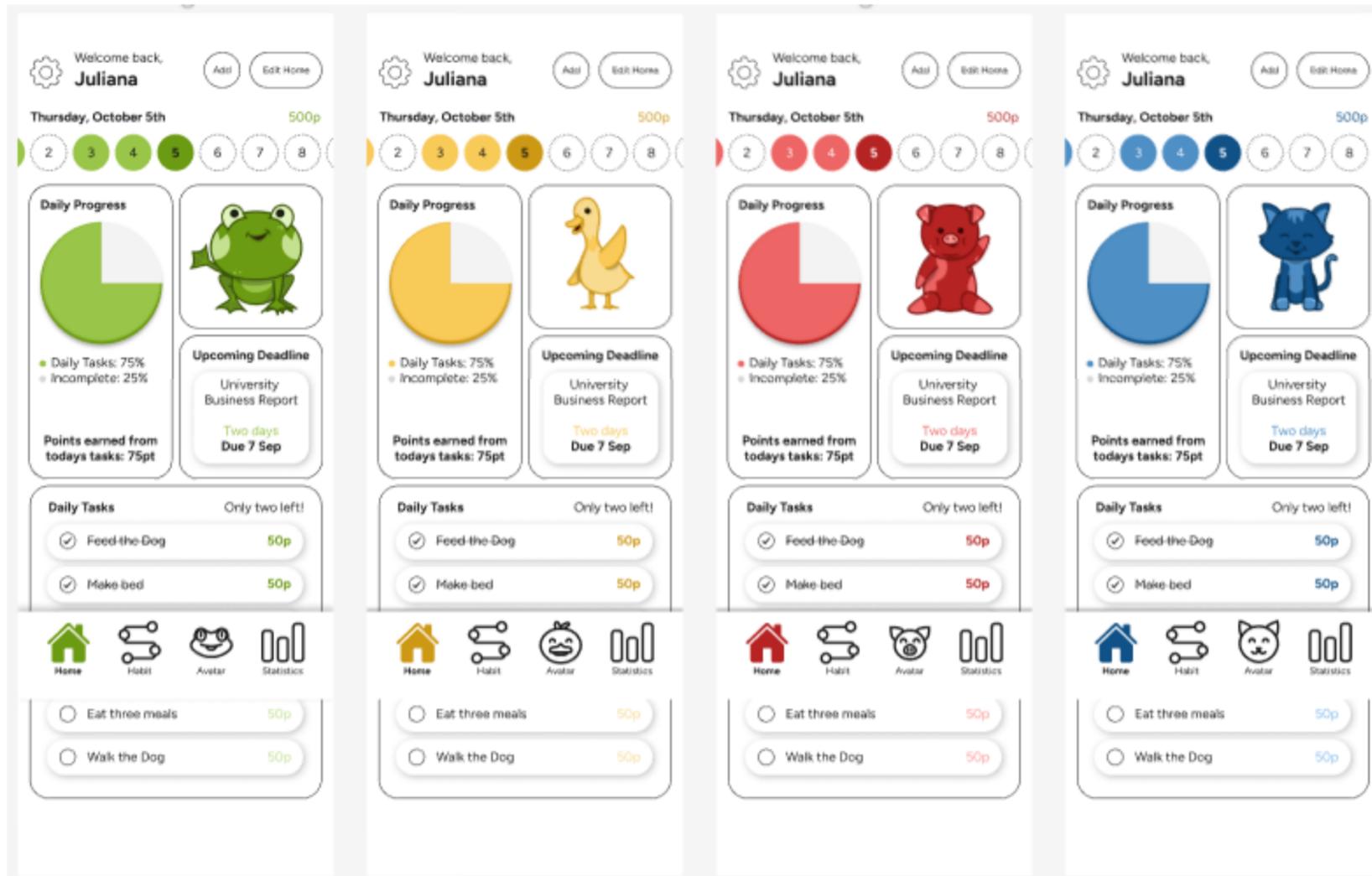
## C.3.1 Mobile C.3.1.11 Log-in



# C.3 Mockups

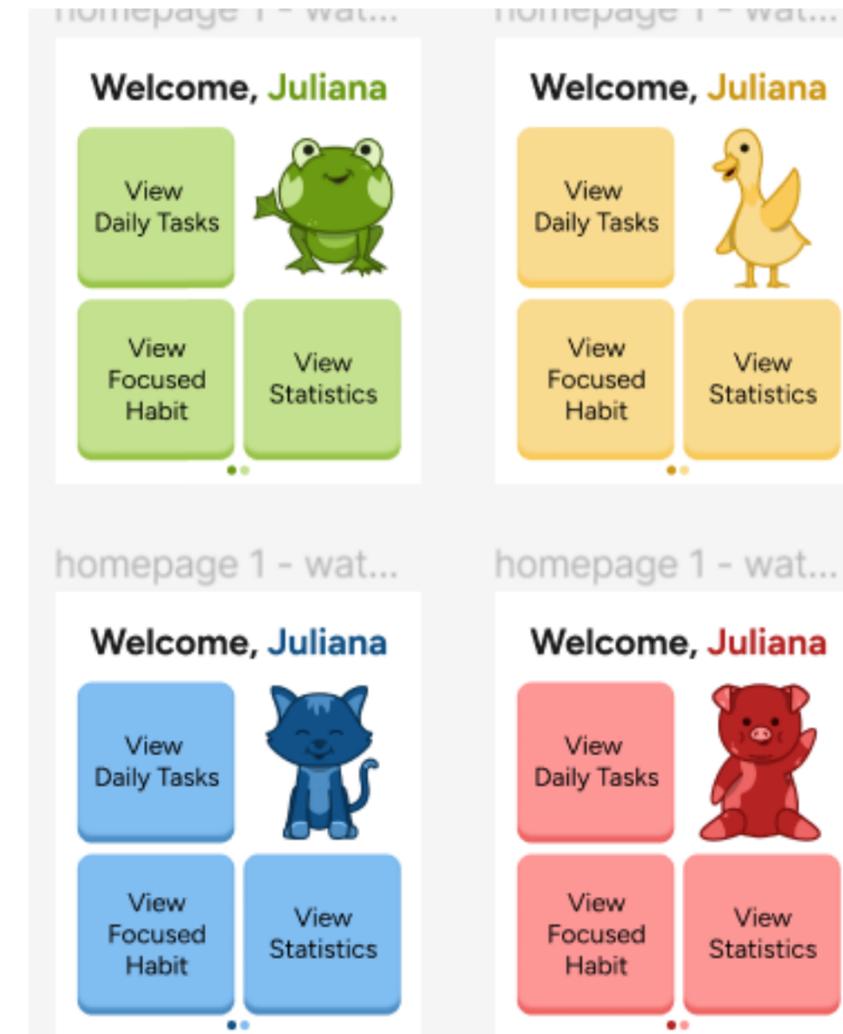
## C.3.1 Mobile

### C.3.1.12 Different home page examples



## C.3.2 Watch

### C.3.2.6 different home page examples

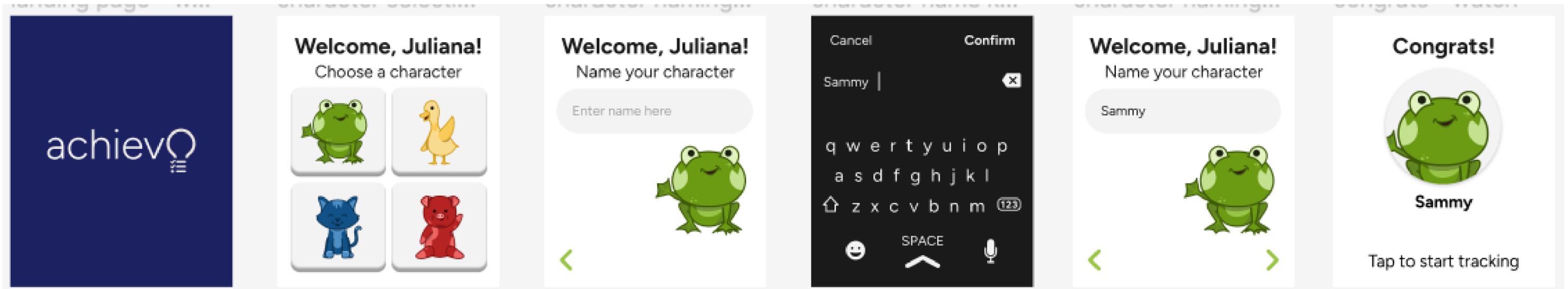


## C.3 Mockups

### C.3.2 Watch

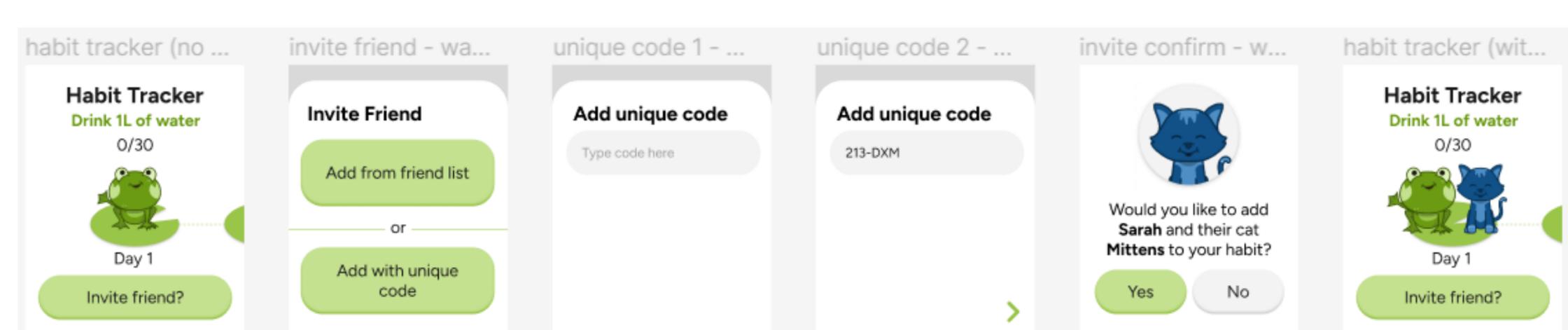
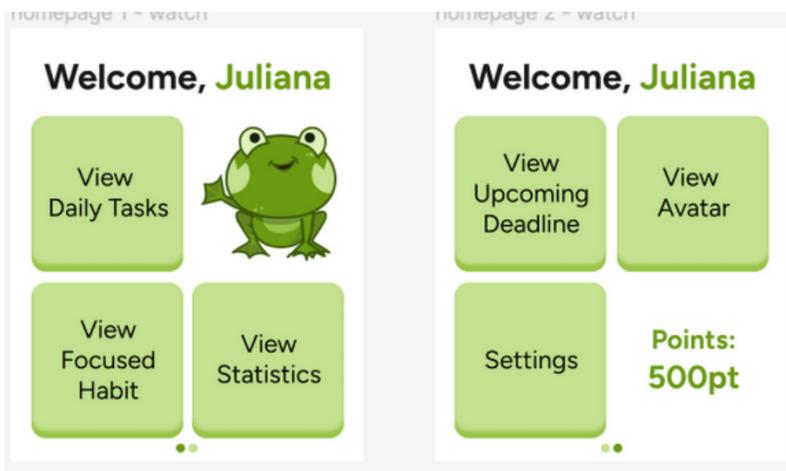
#### C.3.2.1 Onboarding

Note; keyboard page is black, as the smart watch medium modelling (iwatch) defaults all keyboards to black



#### C.3.2.2 Homepage

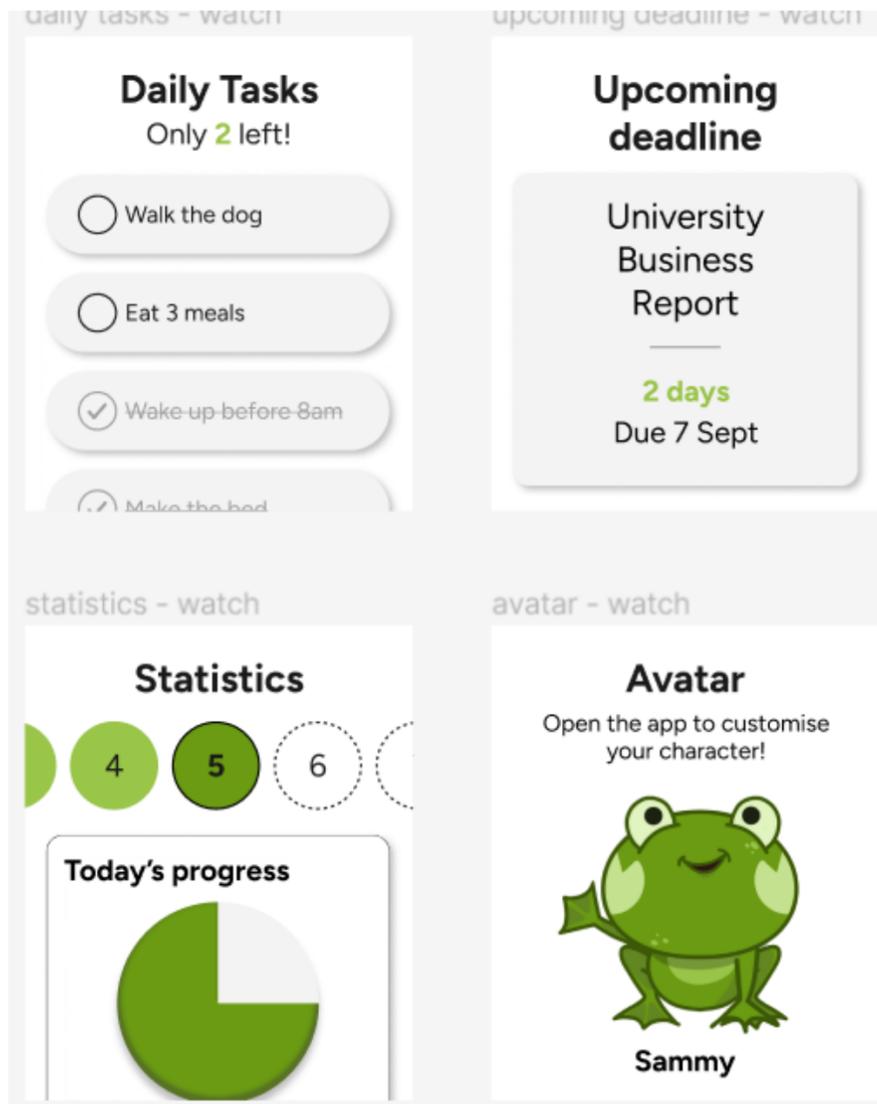
#### C.3.2.3 Inviting friend to habit



## C.3 Mockups

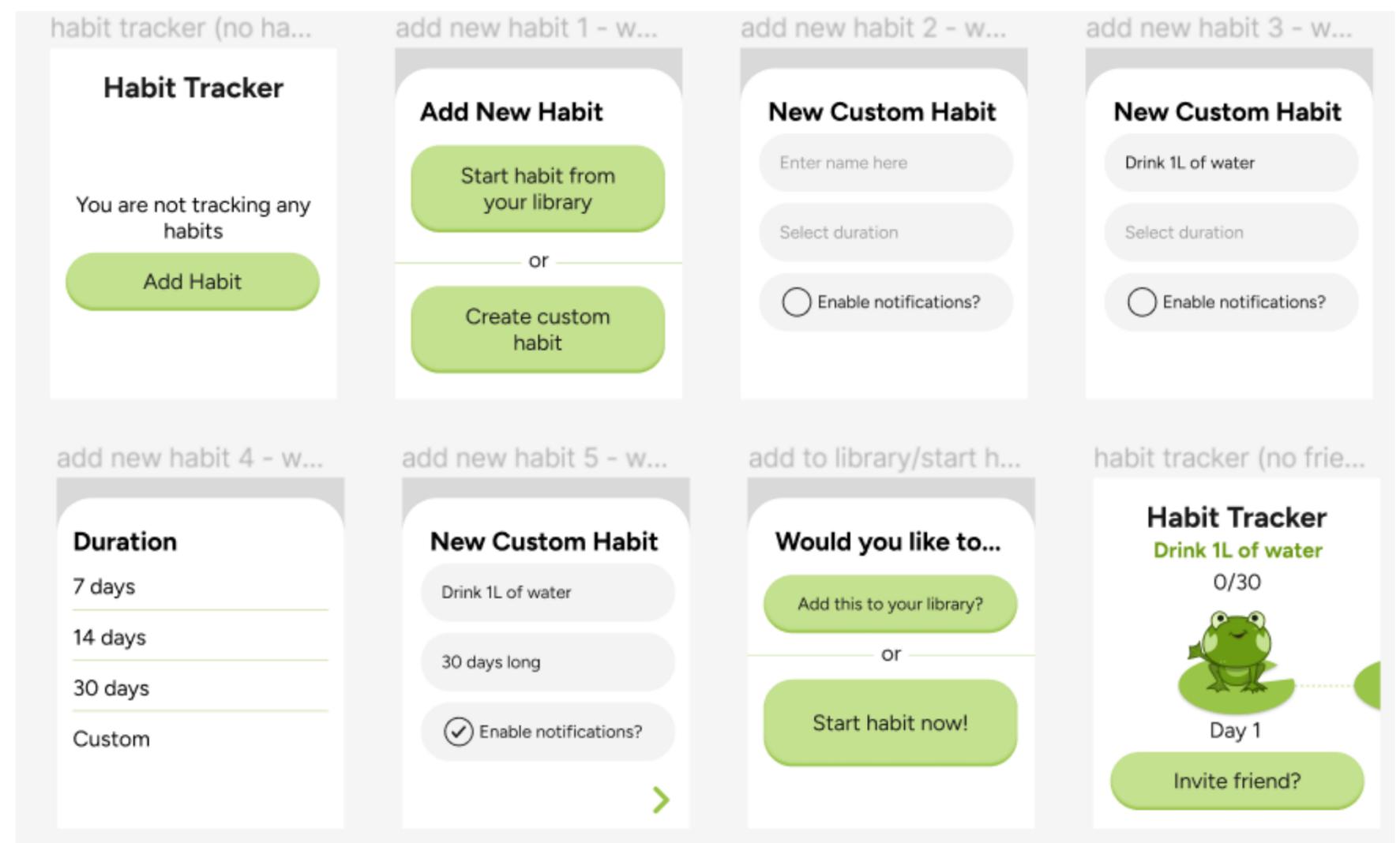
### C.3.2 Watch

#### C.3.2.4 Widgets



#### C.3.2.5 Adding habit

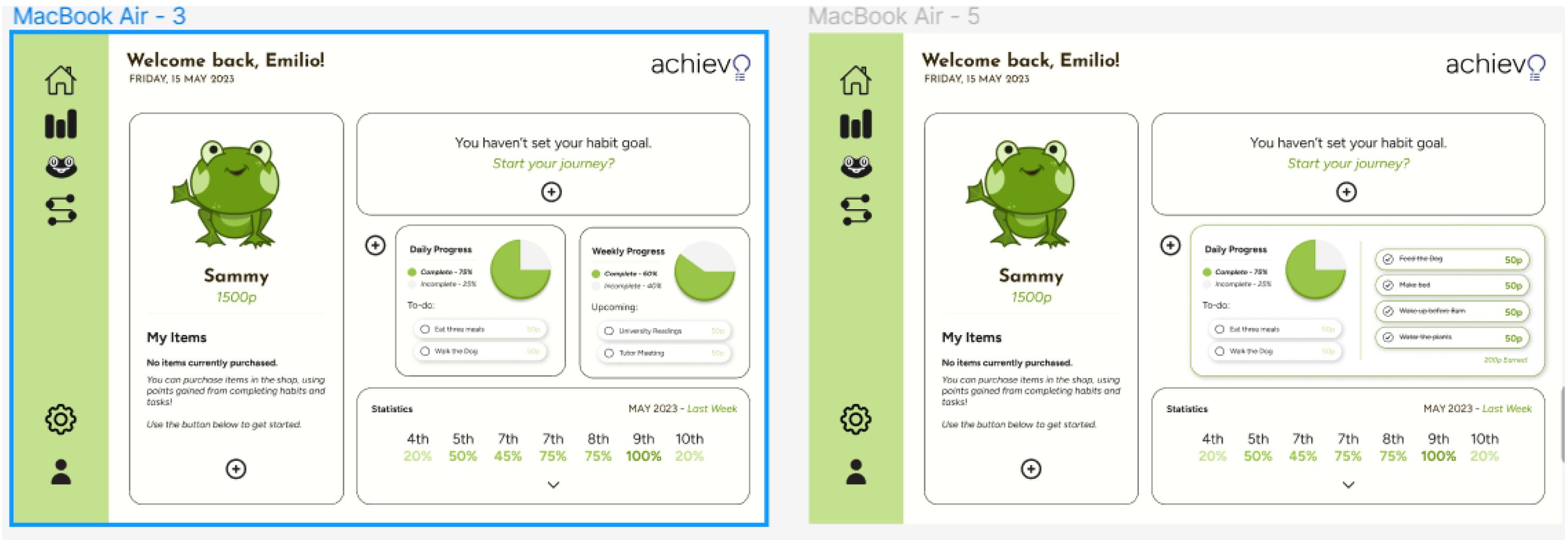
Note; When you click on the homepage buttons, you are redirected to these pages. Daily tasks and statistics page are scrollable



# C.3 Mockups

## C.3.3 Desktop

### C.3.3.1 Homepage



# C.3 Mockups

## C.3.2 Desktop

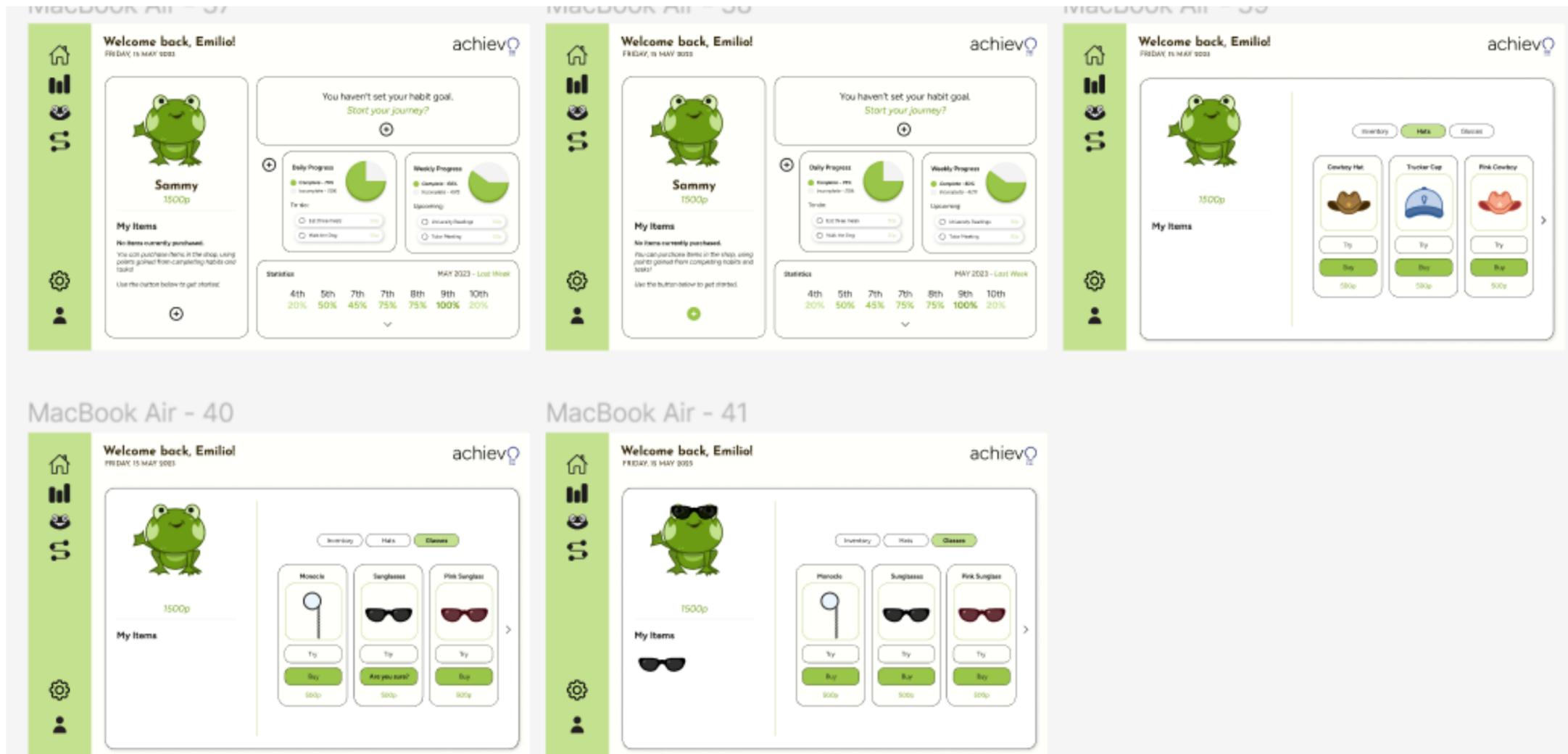
### C.3.3.2 Adding habit to home page



# C.3 Mockups

## C.3.2 Desktop

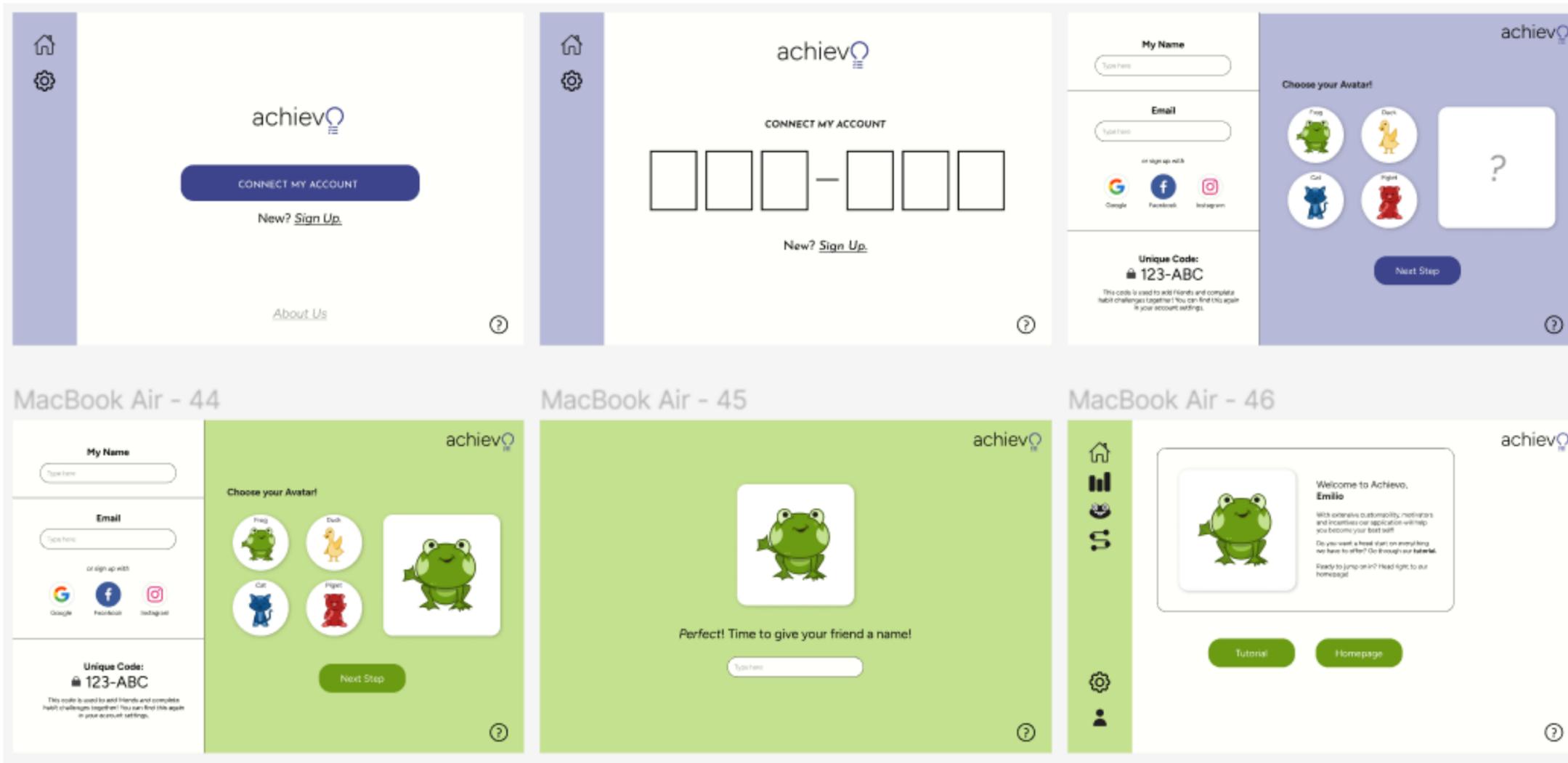
### C.3.3.3 Buying and equipping item



# C.3 Mockups

## C.3.2 Desktop

### C.3.3.4 Onboarding / log in



# C.3 Mockups

## C.3.2 Desktop

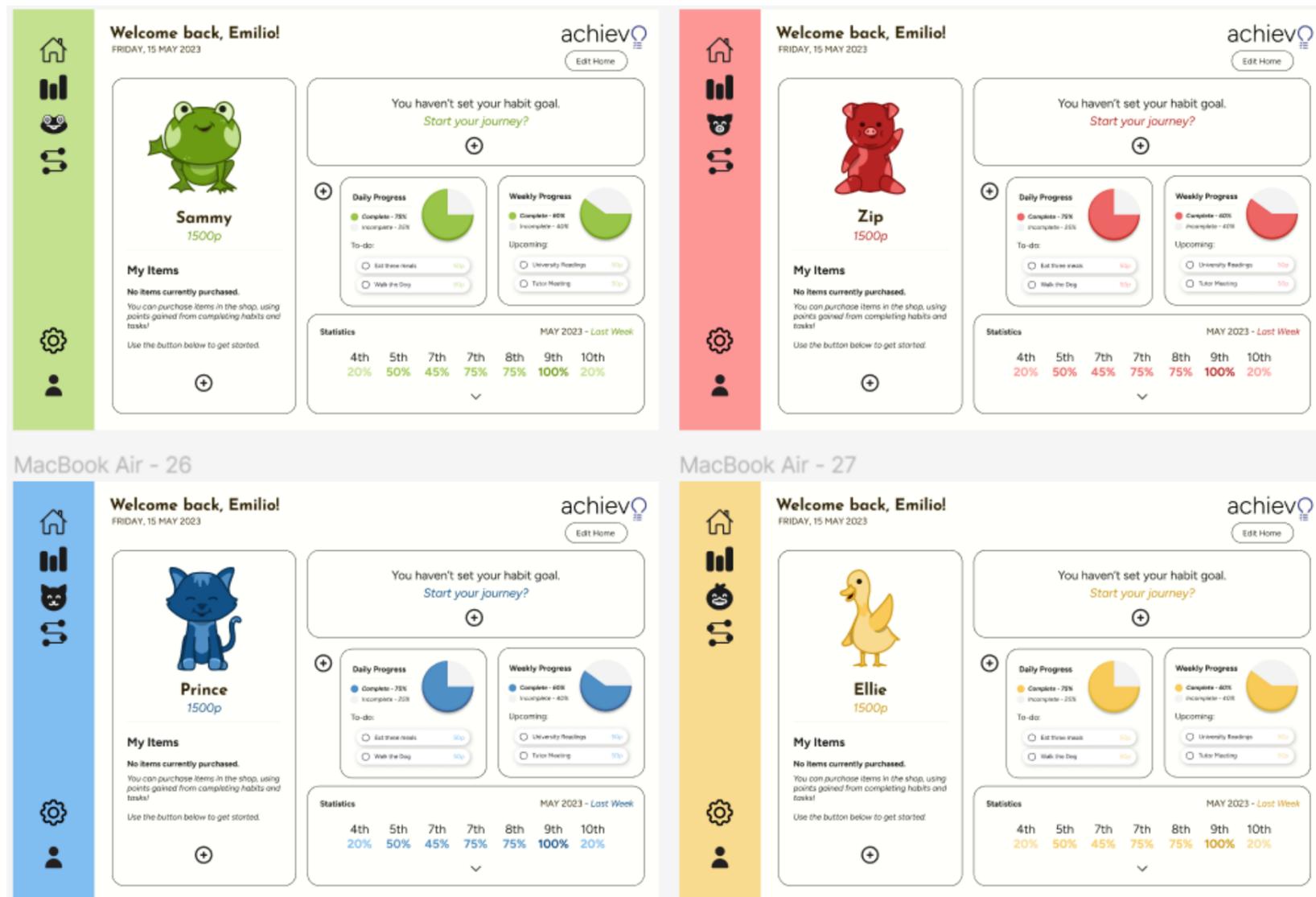
### C.3.3.5 Editing home page



# C.3 Mockups

## C.3.2 Desktop

### C.3.3.6 Different examples of home page

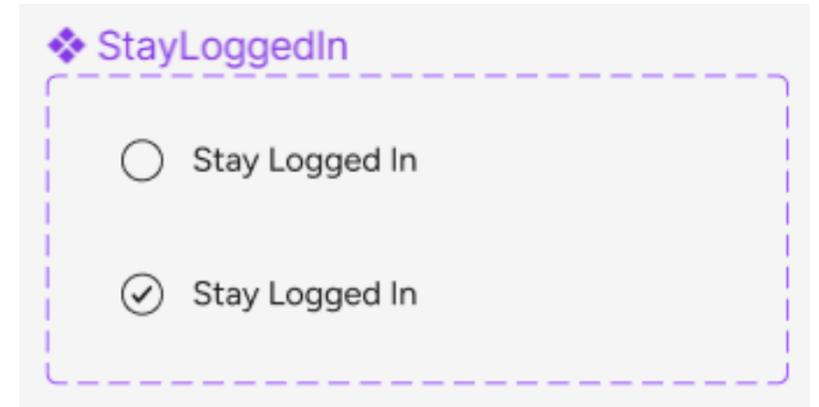


# C.4 Iteration 2 Mockups

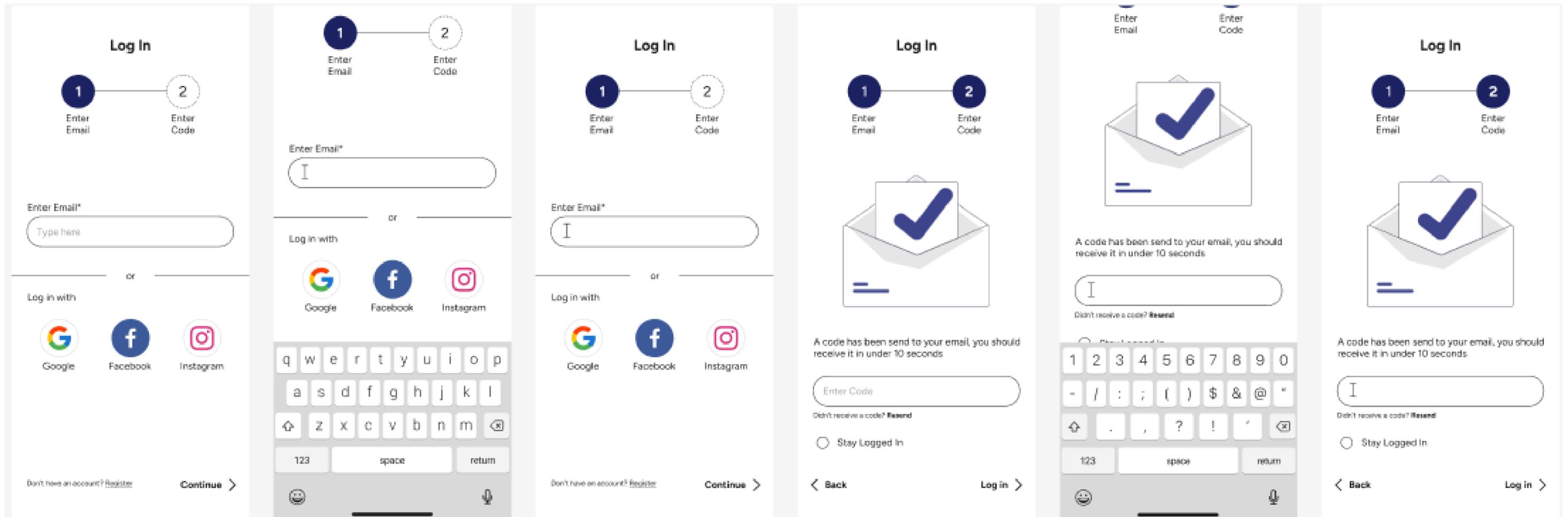
## C.4.1 Mobile

### C.4.1.1 Log in process

Added 'Stay logged in' button from expert testing results



Added a button which re-directs users to register / log-in for further error recovery



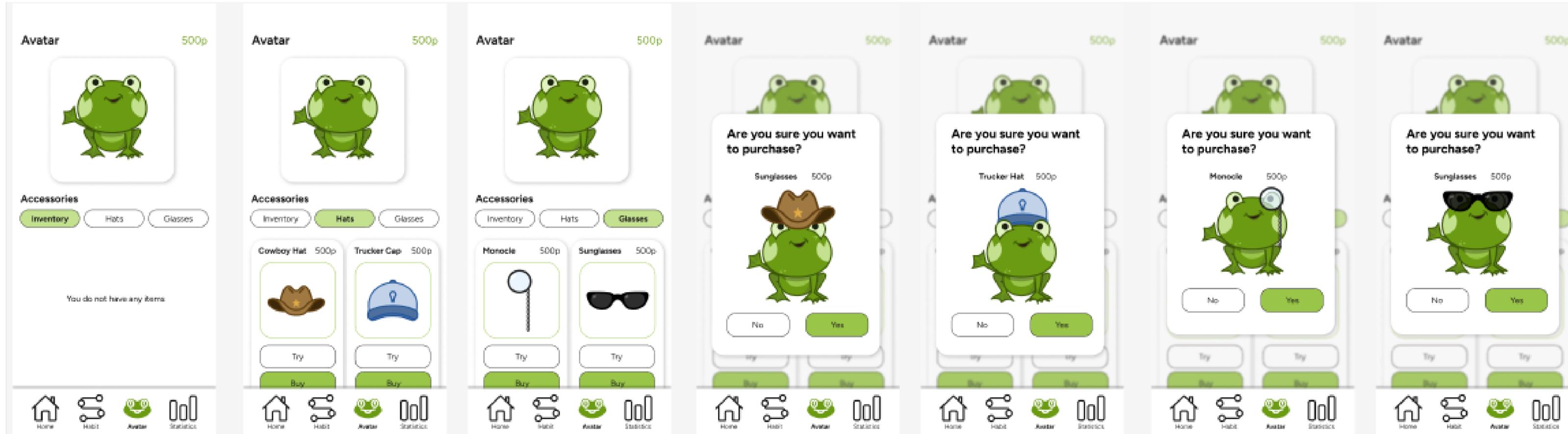
thinks email should be at the top and log in google at bottom  
Thought the vector didn't make sense and too much white space

# C.4 Iteration 2 Mockups

## C.4.1 Mobile

### C.4.1.2 Avatar page

Changed hierarchy of text with accessories now at 20pt



wanted more clear hierarchy from expert testing  
also didn't like the text 'sammy' and wanted it removed

Changed button sizing in  
confirmation pop-up

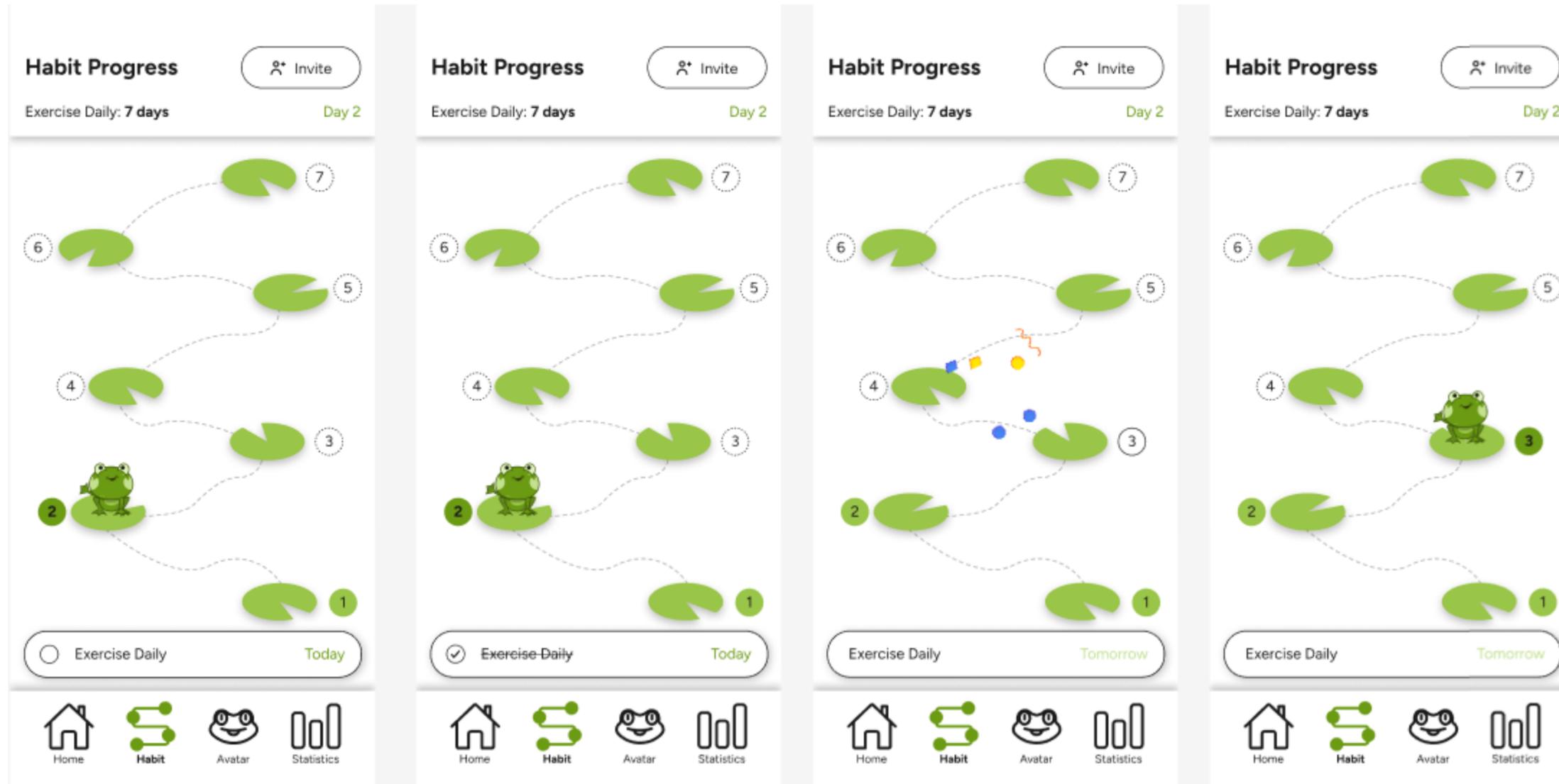
Changed 'try' feature to have it  
with the character equipped item

# C.4 Iteration 2 Mockups

## C.4.1 Mobile

### C.4.1.3 Habit page

Changed title from Habits to Habit  
progress from expert testing



Experts said the habit tick box blended into the background, therefore added a 1pt stroke to it

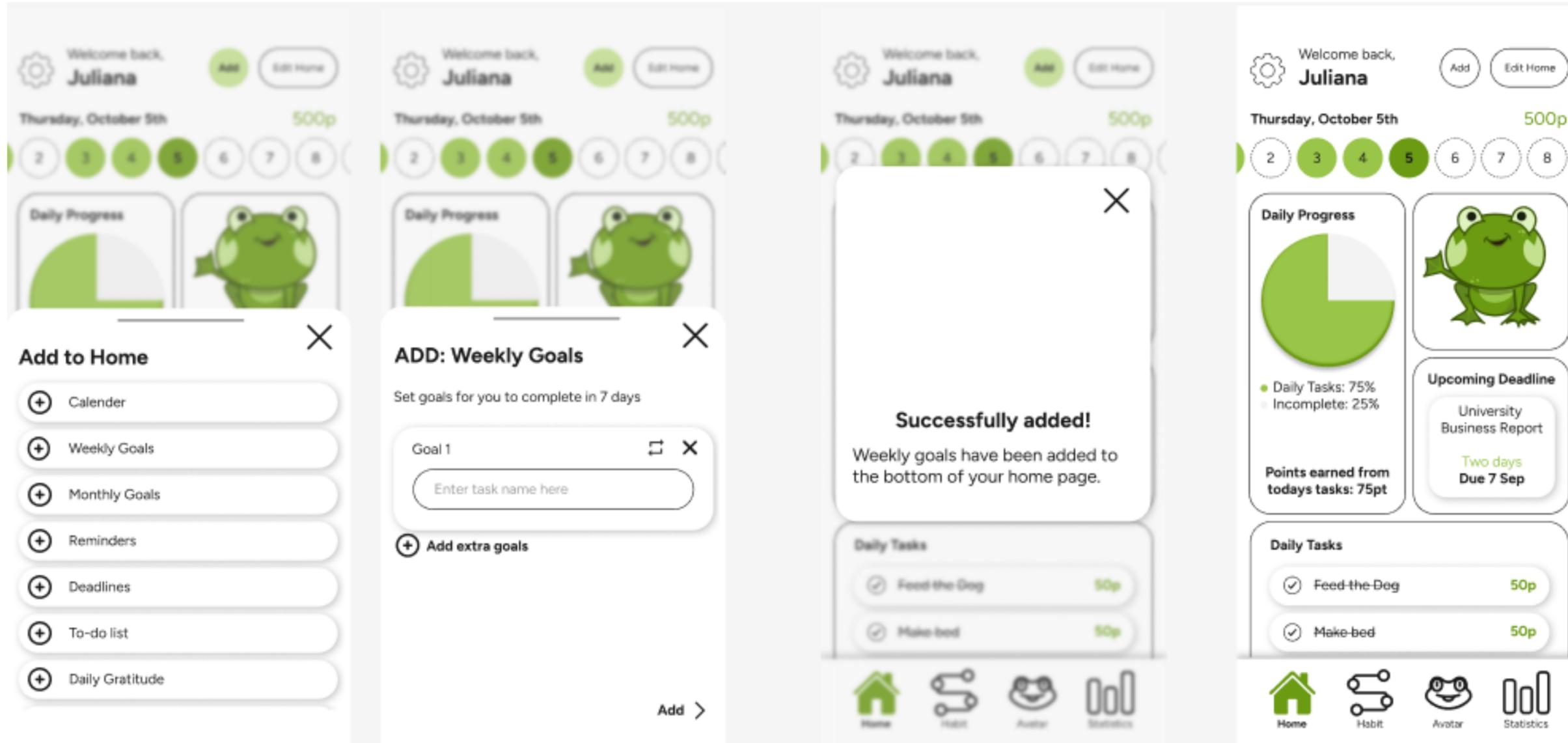
Added additional page in the animation to show task completion, where a confetti covers the screen.

# C.4 Iteration 2 Mockups

## C.4.1 Mobile

### C.4.1.4 Home page - add to home

Experts said that the user experience in adding a weekly goal was weak, there didn't need to be as many pages and the repeat drop down didn't work as there was only 2 options. The process was simplified and a new successfully pop up comes up

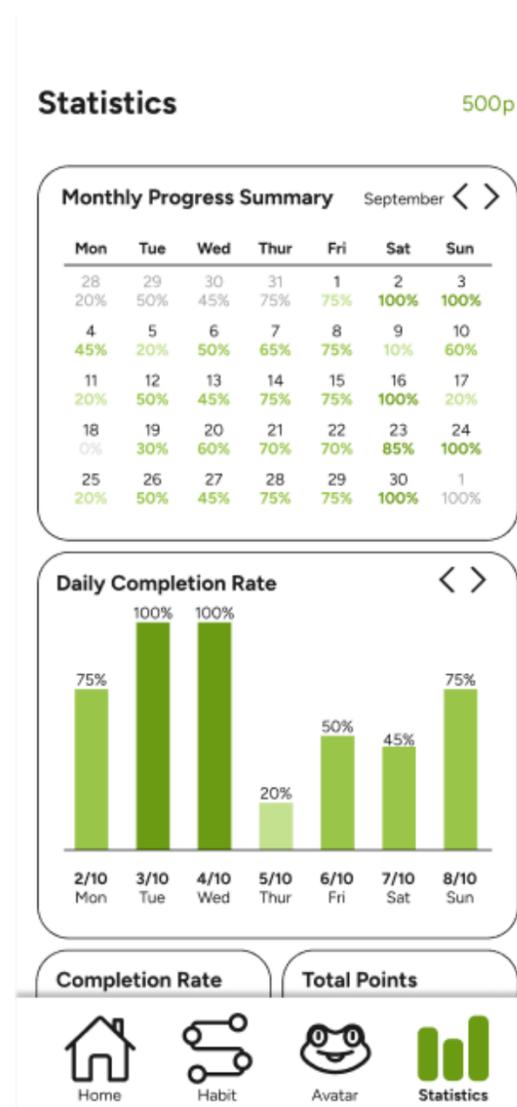


Experts also didn't know that weekly goals meant you had 7 days to complete it, but thought it meant that you would need to complete the task on Thursday (for example) every week

# C.4 Iteration 2 Mockups

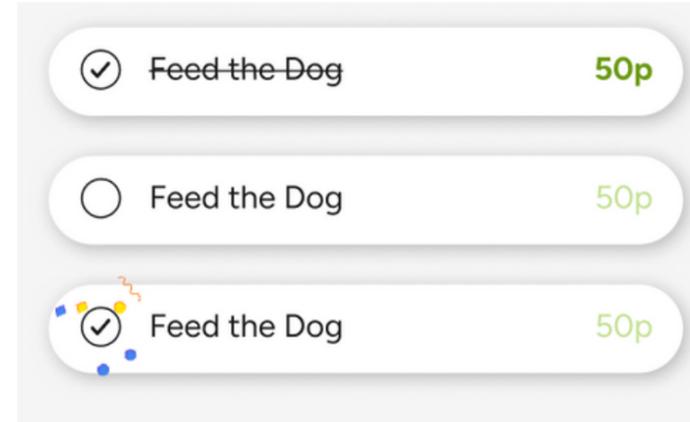
## C.4.1 Mobile

### C.4.1.5 Home page - Statistics



Experts confused on the all-time summary = wording is confusing (changed to total points and completion rate)  
 Experts confused as daily completion rate starts on friday and should be monday - sunday

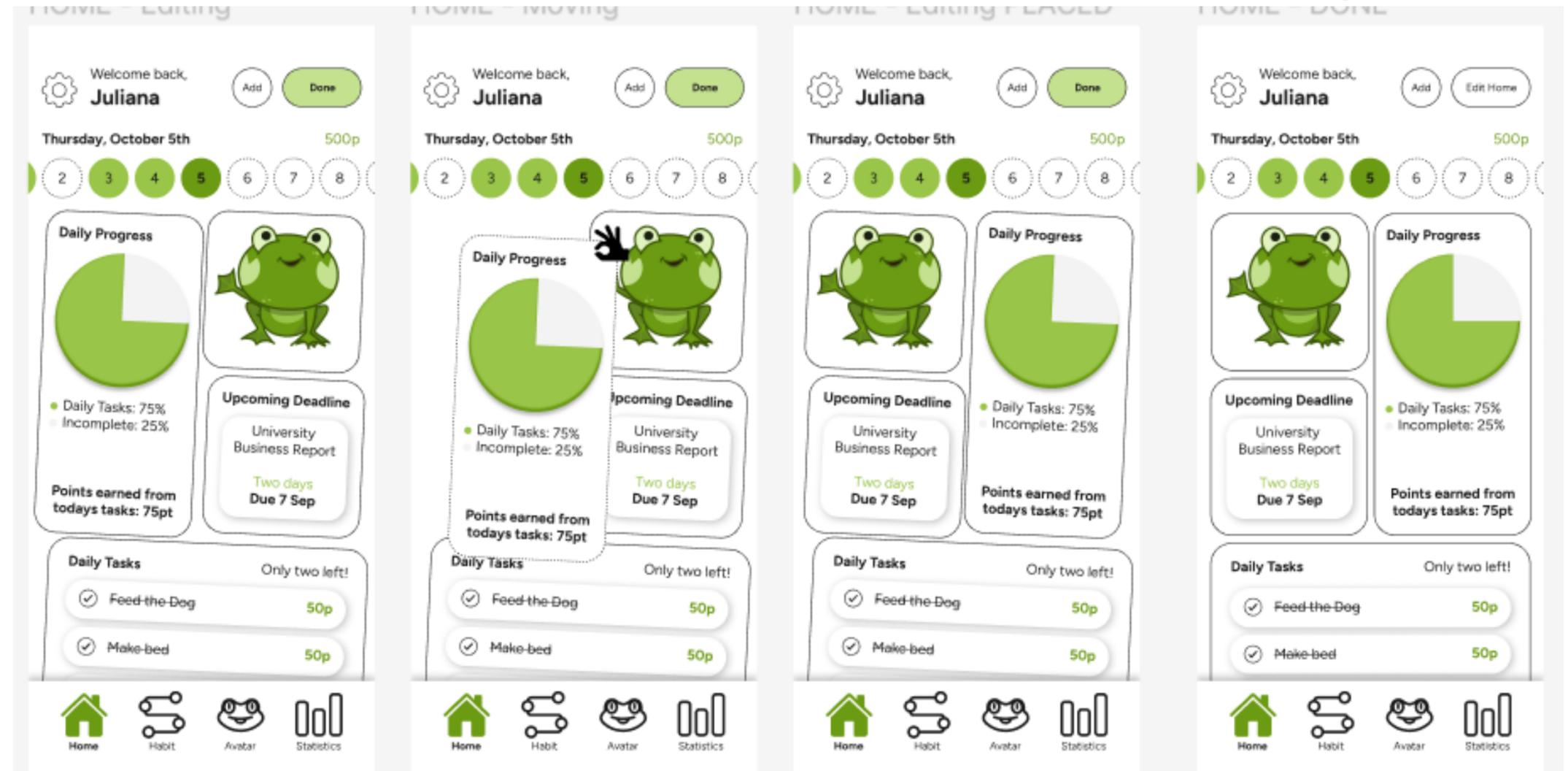
### C.4.1.6 Component changes



added an additional step of the animation with a delay which visualised confetti when the user completes a task

The widgets now wiggle, similar to that when you are moving apps on the apple home screen to visualise the gesture to hold and drag to move widgets

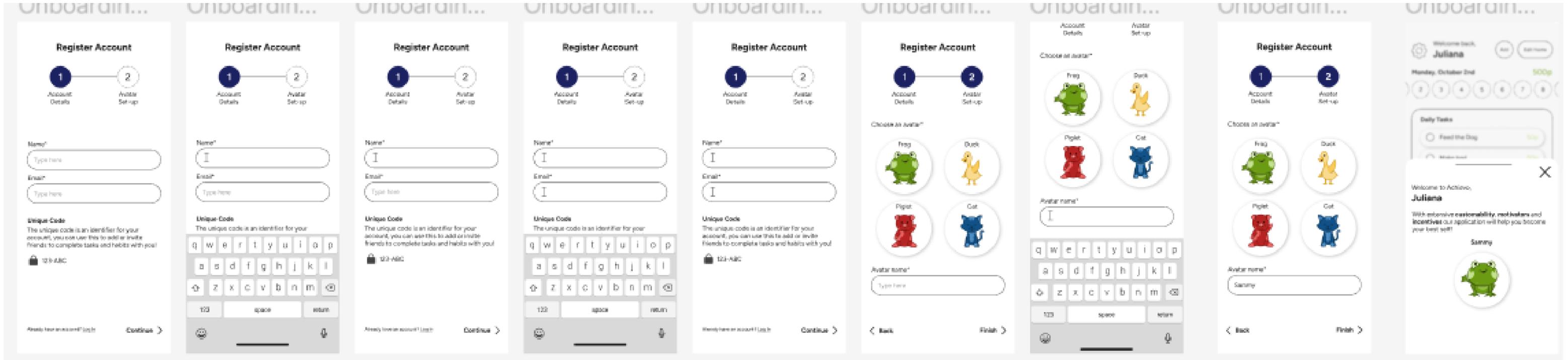
### C.4.1.7 Home page - Move



Experts confused as daily completion rate starts on friday and should be monday - sunday

# C.4 Iteration 2 Mockups

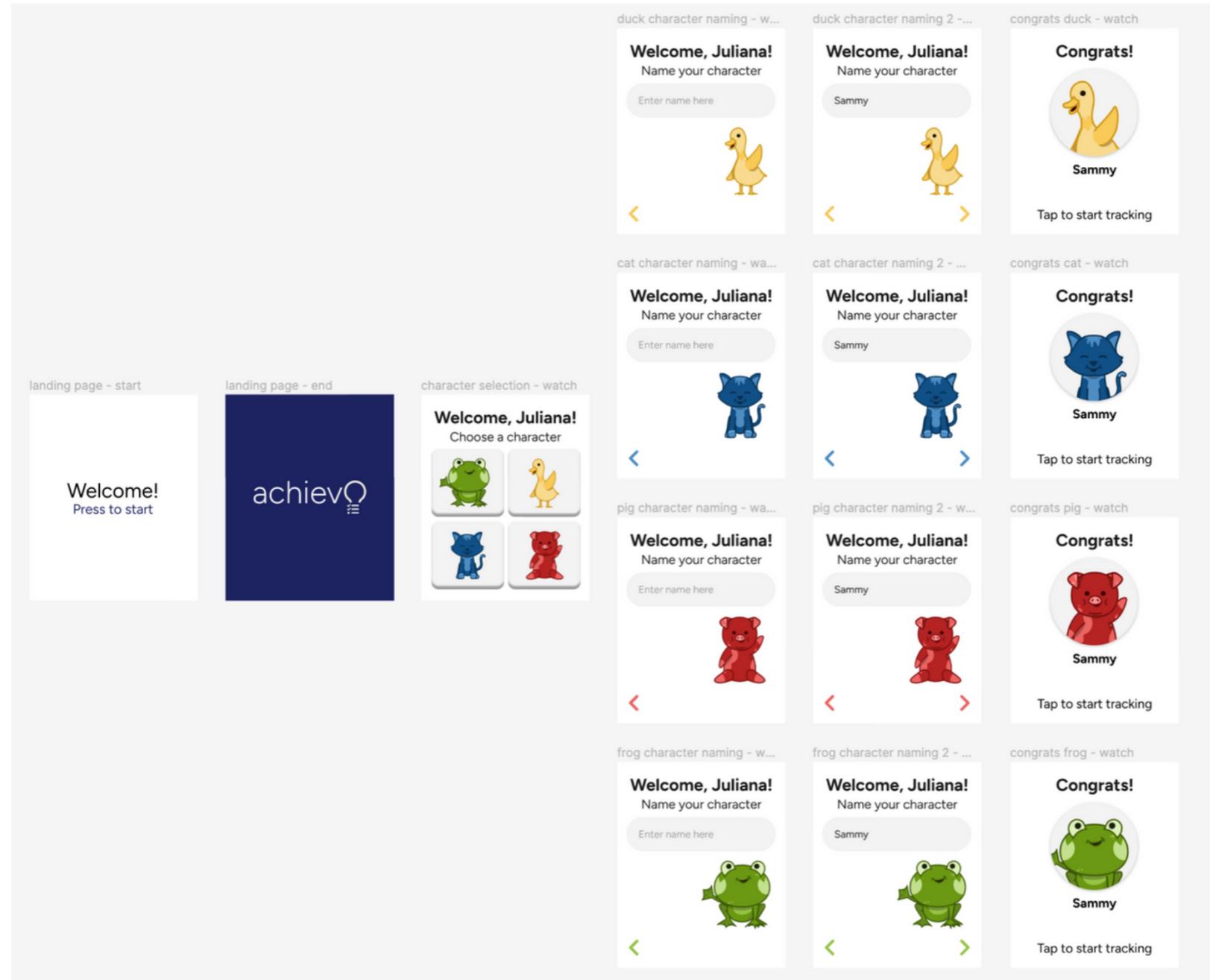
## C.4.1 Mobile C.4.1.8 Sign up



# C.4 Iteration 2 Mockups

## C.4.2 Watch

### C.4.2.1 Creating a character



# C.4 Iteration 2 Mockups

## C.4.2 Watch

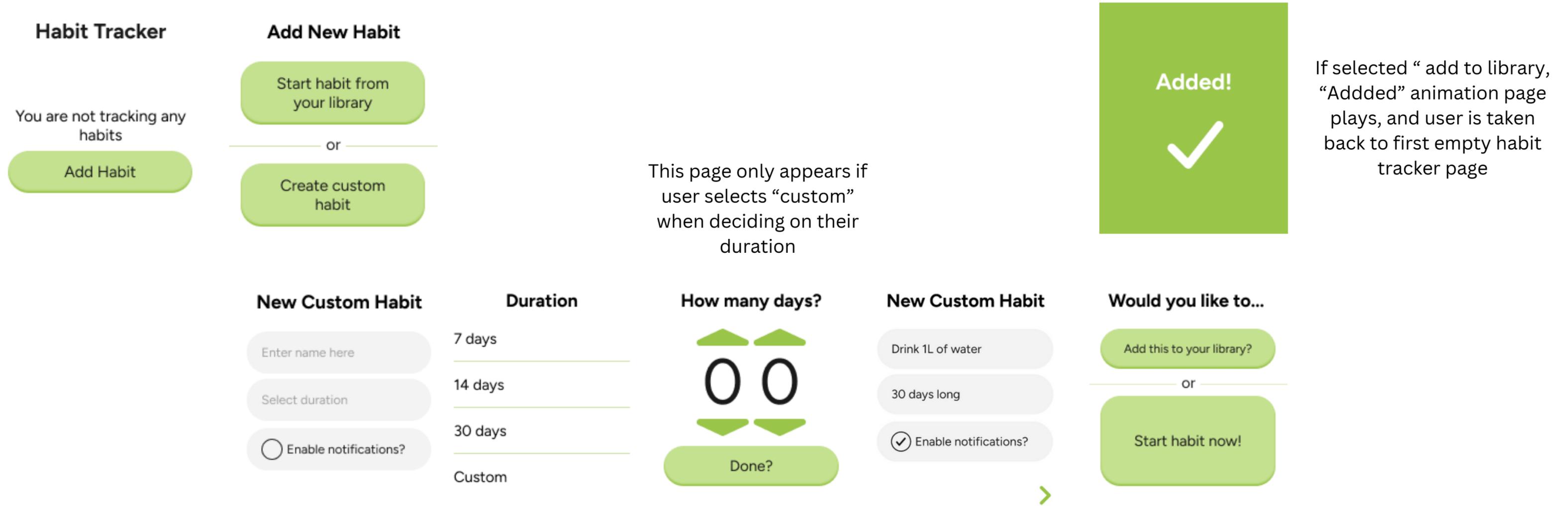
### C.4.2.2 Homepage & different pages



# C.4 Iteration 2 Mockups

## C.4.2 Watch

### C.4.2.3 Setting up a habit

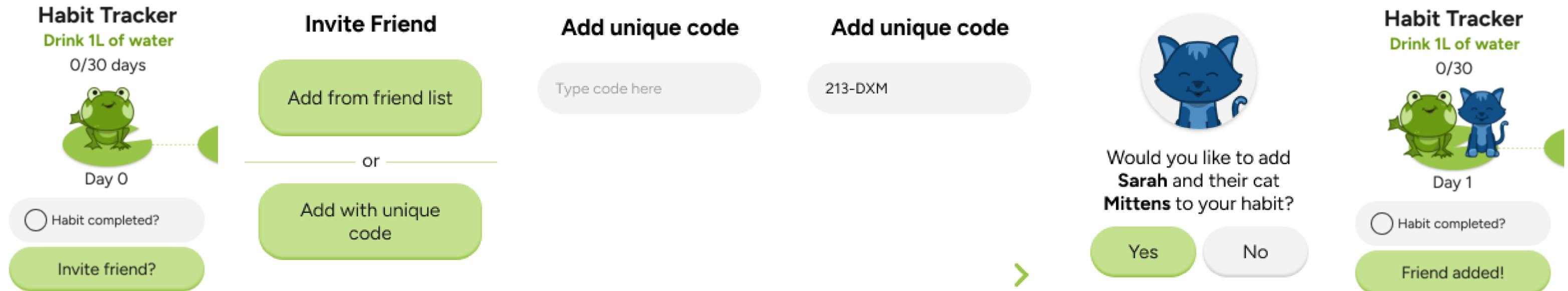


*Note: Frog green colour displayed, as features and functions are the same for other characters, just differing in colourways.*

# C.4 Iteration 2 Mockups

## C.4.2 Watch

### C.4.2.3 Inviting a friend



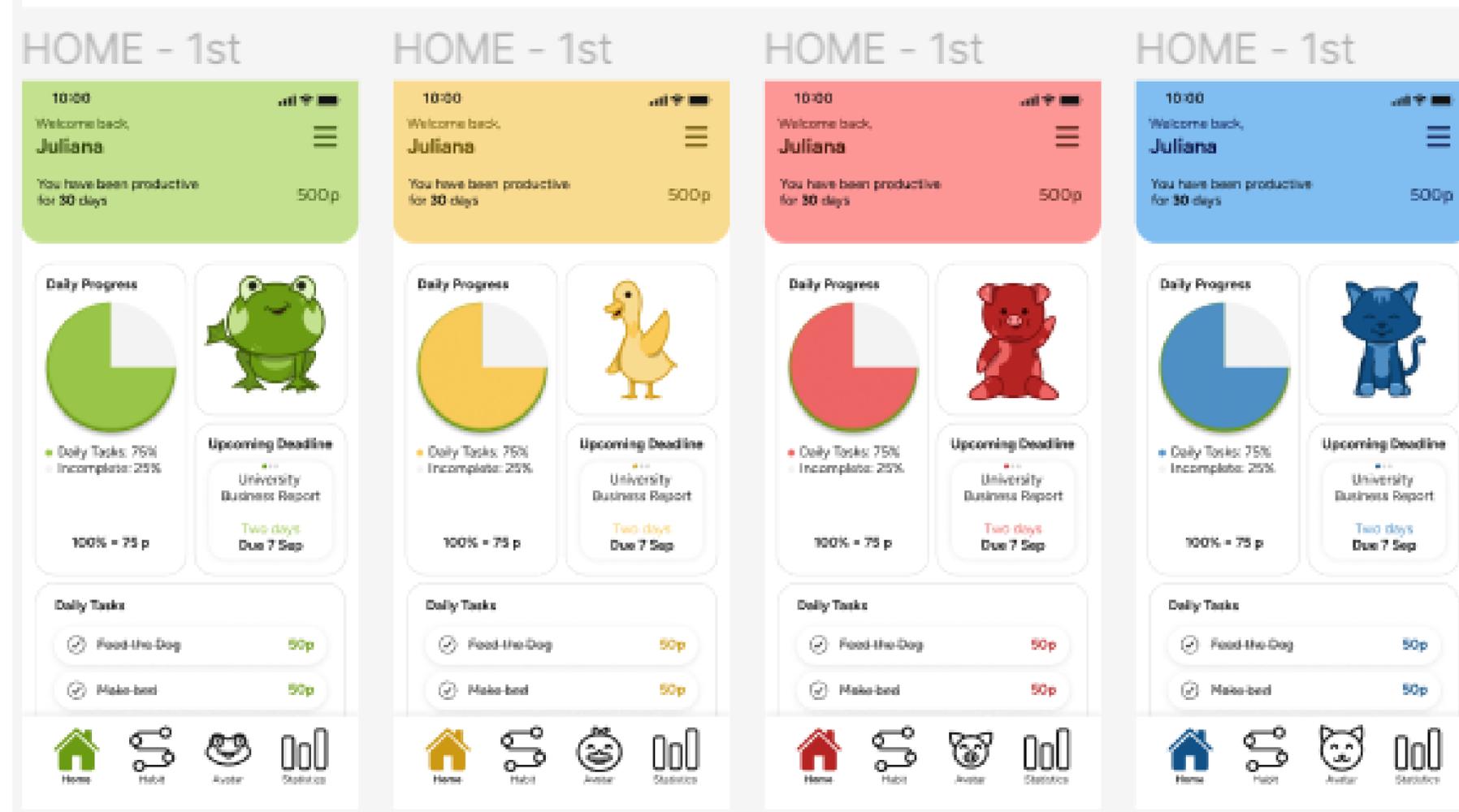
*Note: Frog green colour displayed, as features and functions are the same for other characters, just differing in colourways.*

# C.5 Iteration 3 Mockups

## C.5.1 Mobile

### C.5.1.1 Different character UI

# DIFFERENT CHARACTER UI

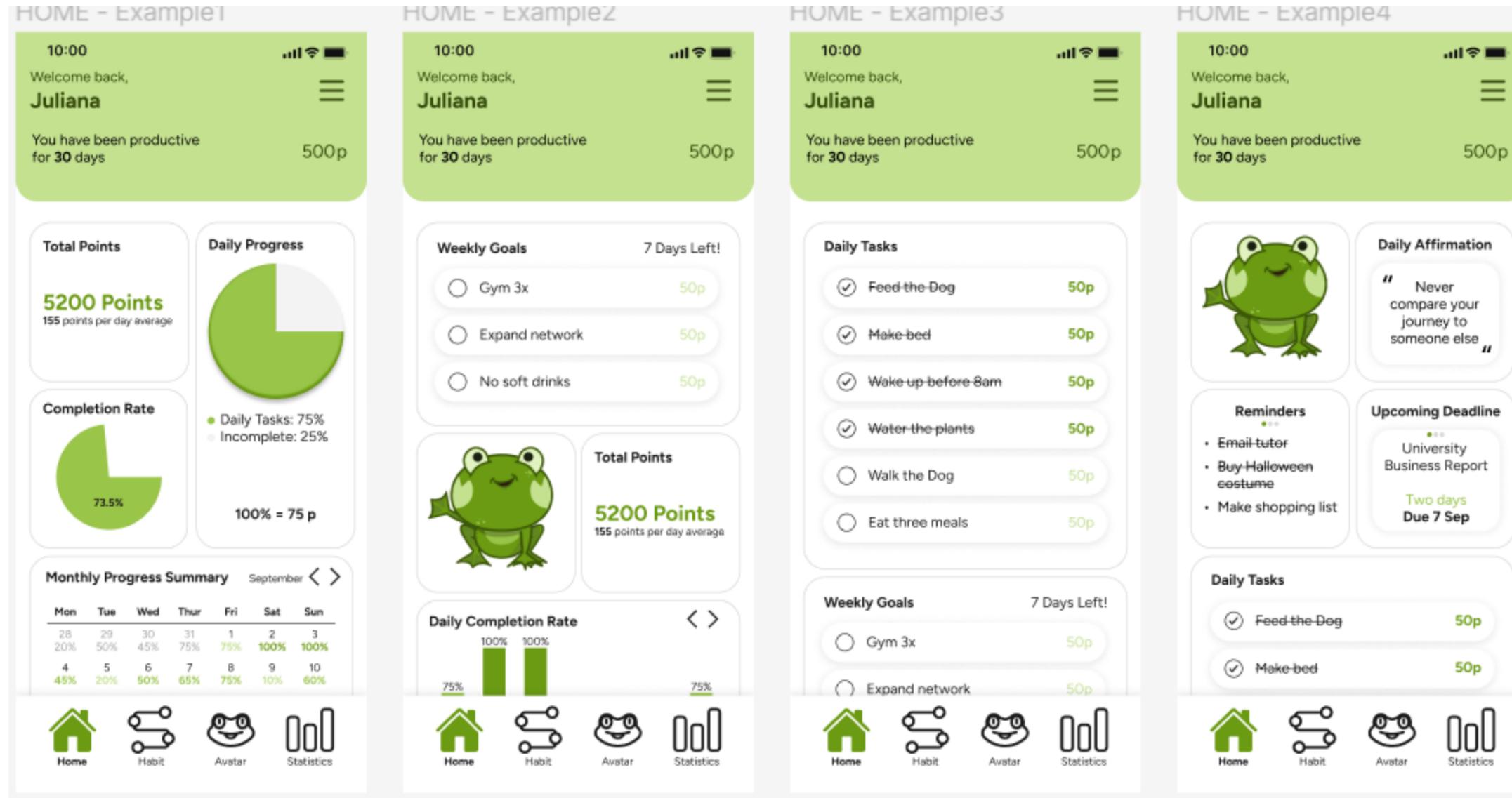


Way to show different UI examples based off character selection

# C.5 Iteration 3 Mockups

## C.5.1 Mobile

### C.5.1.2 Different home page customisation



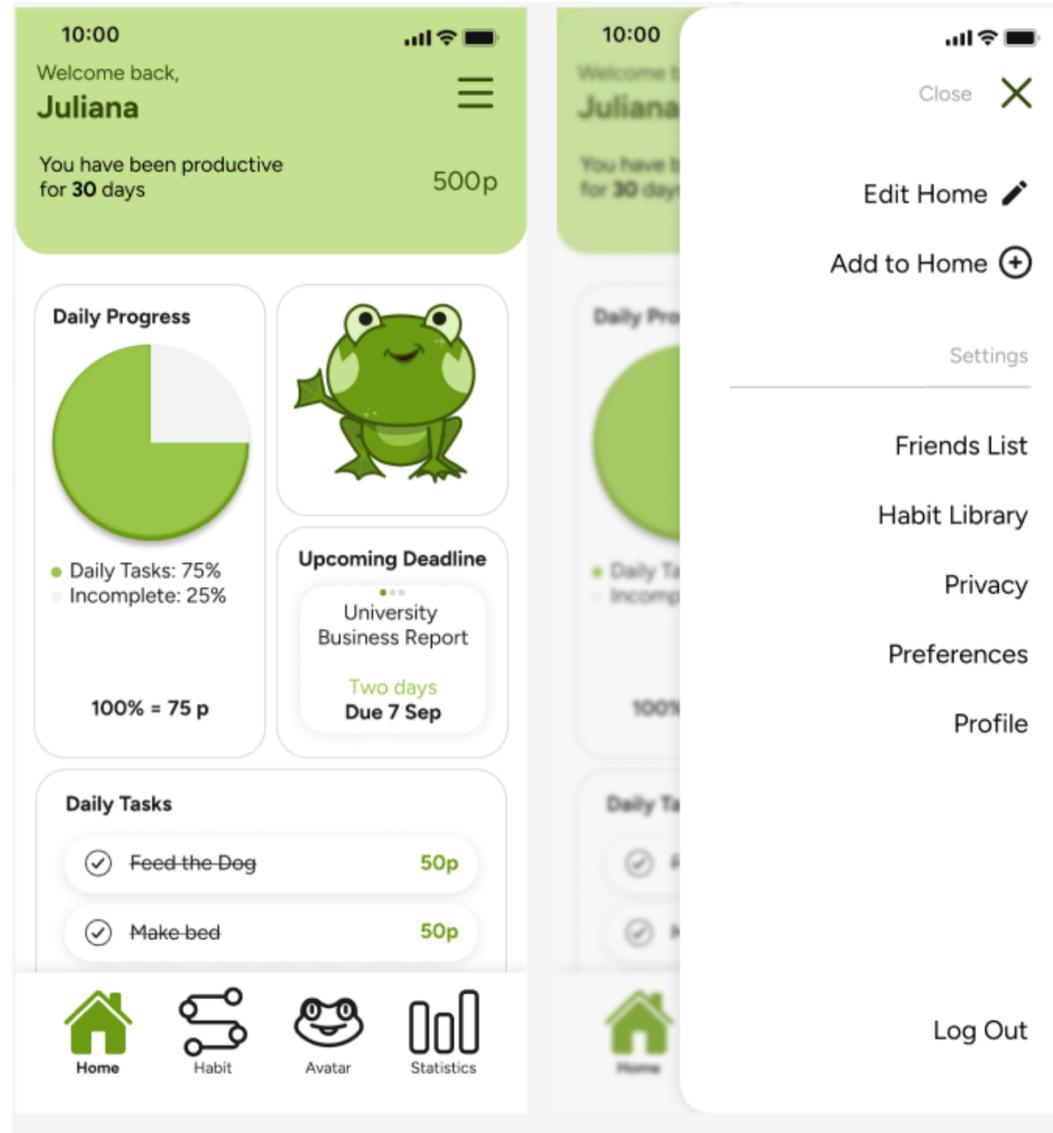
Way to show different customisation possibilities with the applications extensive customability and personability functions. This includes more statistics, new widgets and overall different orientation

tis was also used in the promotional video

# C.5 Iteration 3 Mockups

## C.5.1 Mobile

### C.5.1.3 Home page



There were significant UI changes following the user testing, this was also affirmed in the expert testing but not a priority of change between the original iteration to the iteration used in user testing. The top of each page now utilises the accent colour

Main advice was that the interface was very cluttered and it was hard to differentiate sections. To minimise the clutter we also changed the stroke to a gray instead of black, and decreased the drop shadow to blur 10, opacity 10. This is applicable to the nav bar and task boxes but not pop-ups

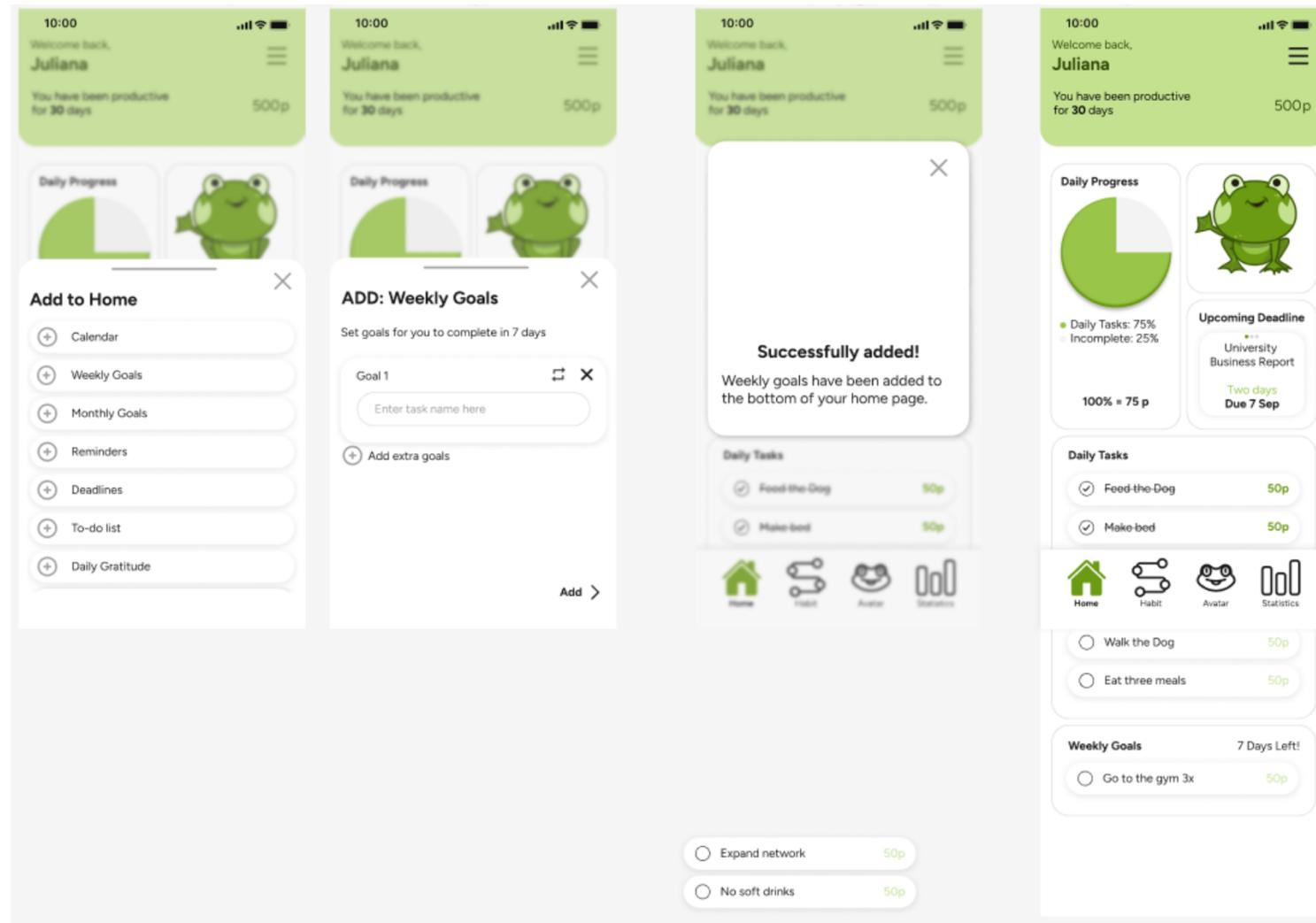
Another aspect of this de-cluttering was removing the top buttons of 'add' and 'edit home' and adding these into a hamburger settings menu.

Furthermore the slider progression bar was removed and instead a text is put in that place using the praise design pattern to inform users of their streak count

# C.5 Iteration 3 Mockups

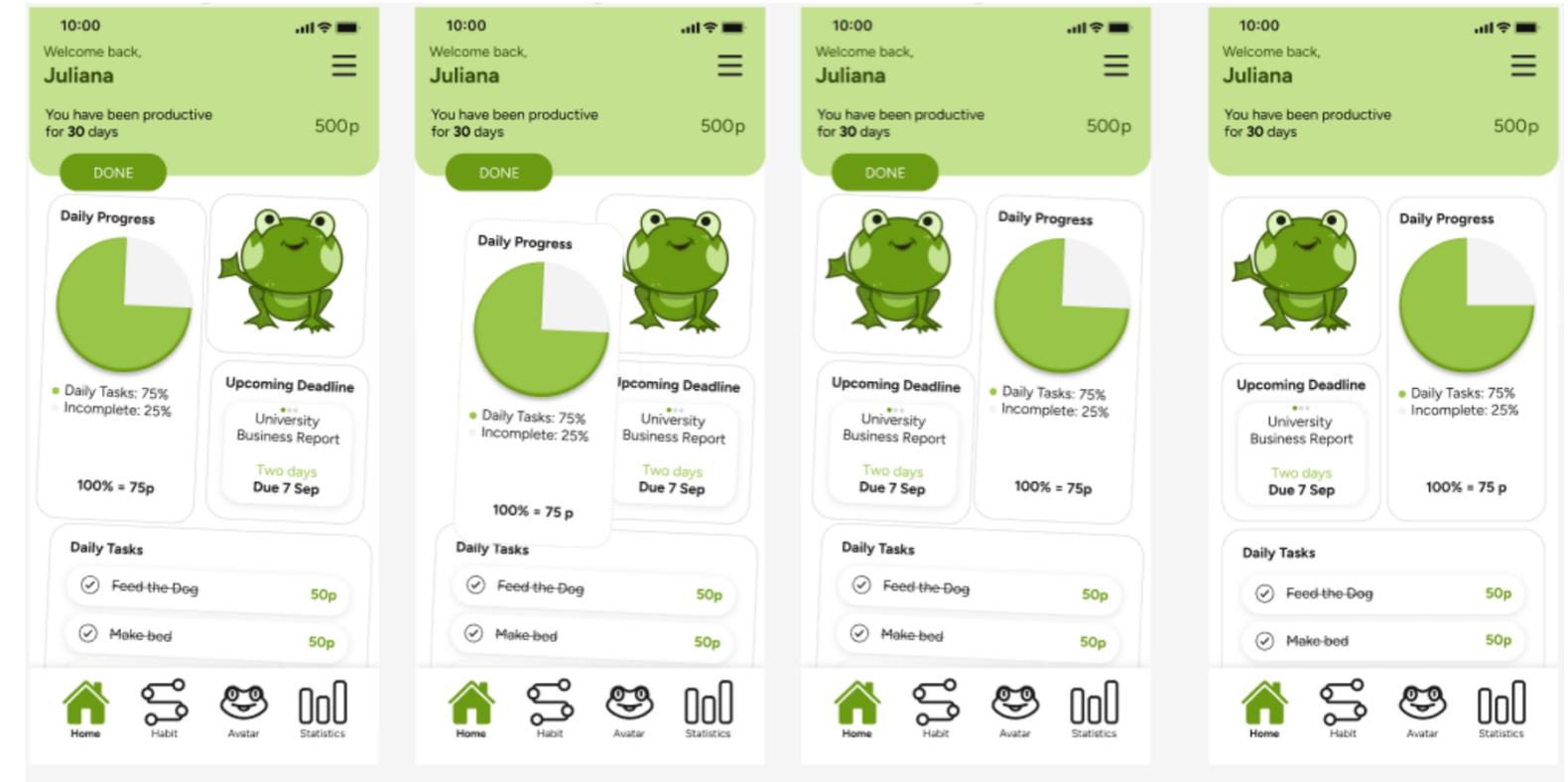
## C.5.1 Mobile

### C.5.1.5 Home page - add



Only changes in this section from iteration 2 to 3 was UI based changes with button icons now a grey instead of black

### C.5.1.6 Home page - move

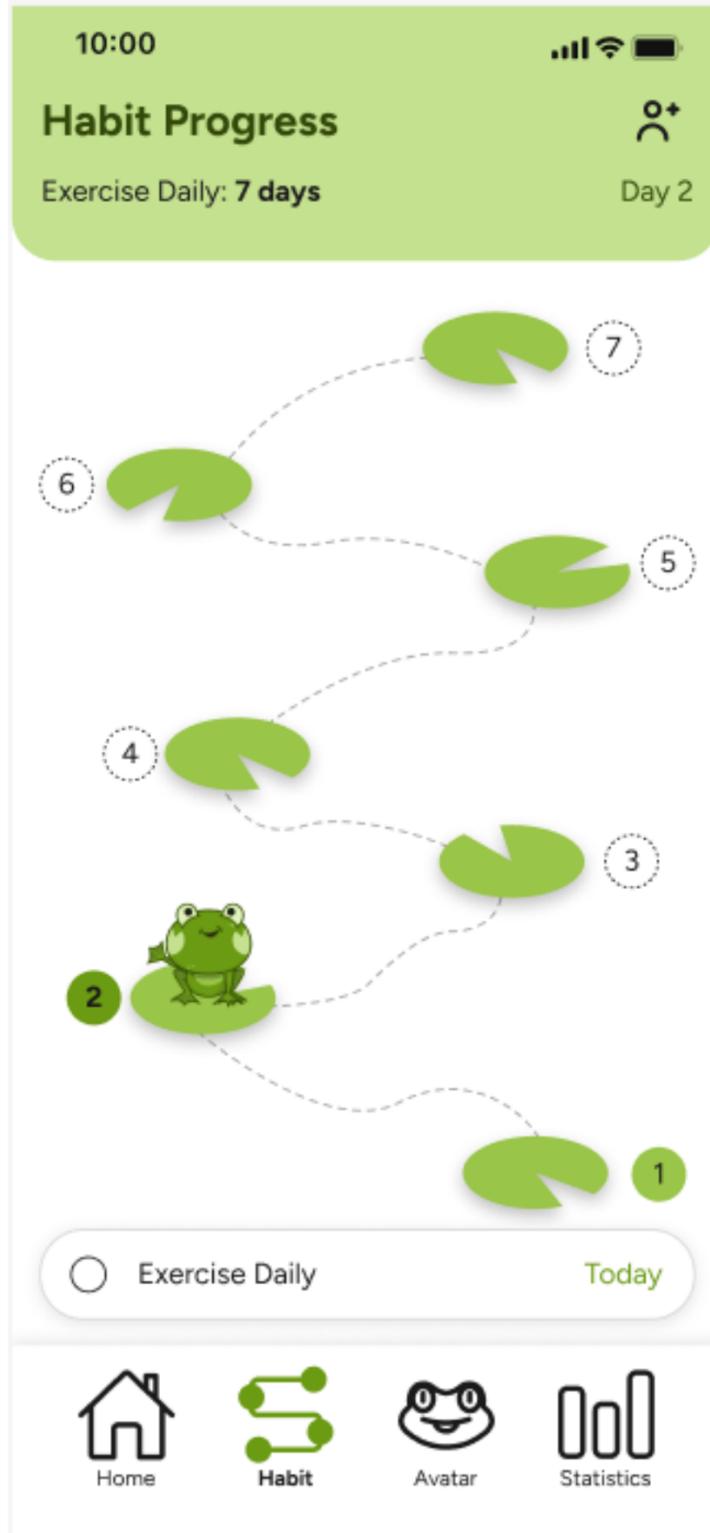


Removed the hand icon due to confusion from both users and experts. Added new 'Done' button when user has finished moving widgets

# C.5 Iteration 3 Mockups

## C.5.1 Mobile

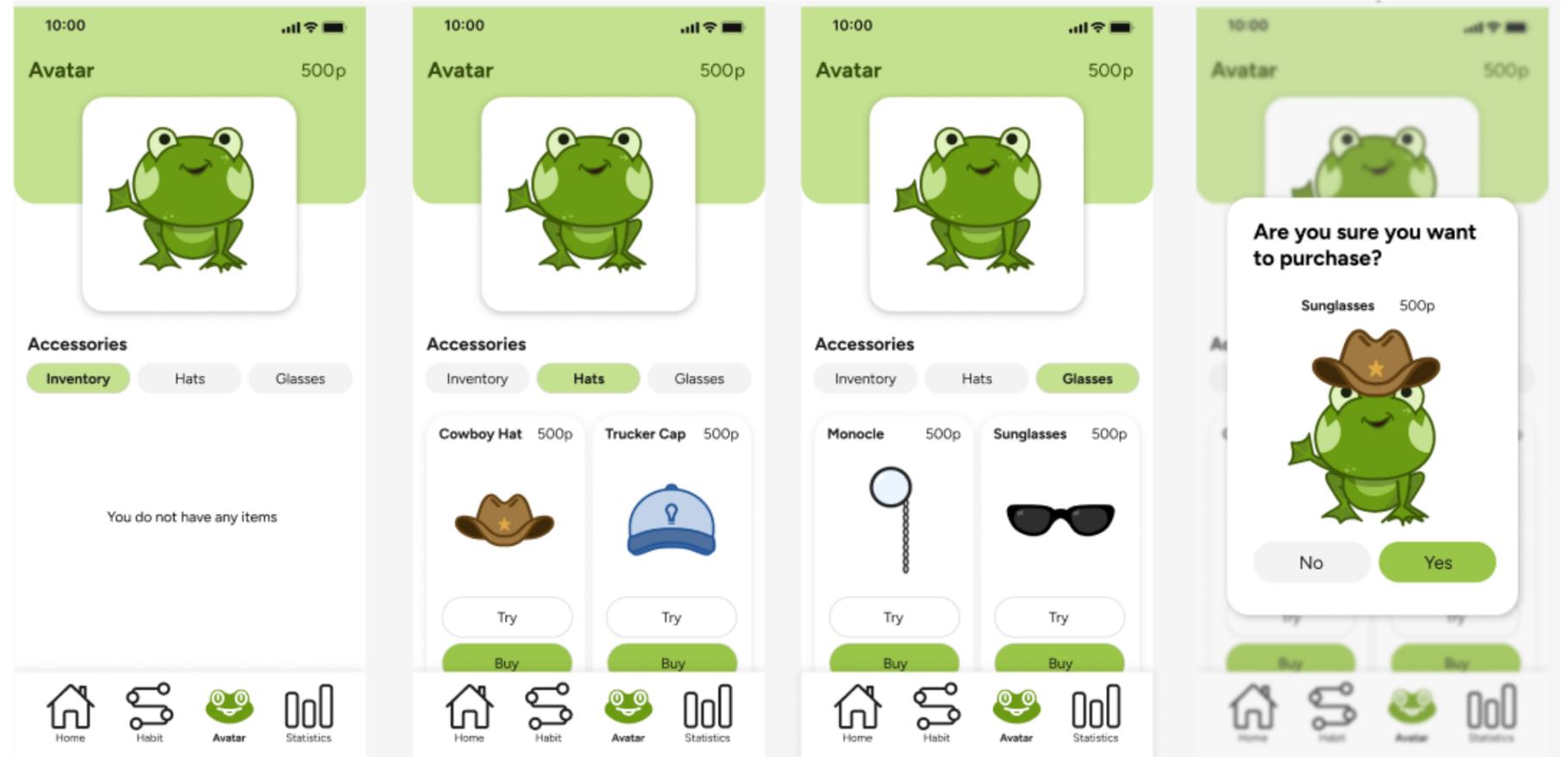
### C.5.1.6 Habit Progress page



Invite button was removed and replaced with a invite icon

Changed stroke on habit task box to grey

### C.5.1.7 Avatar page

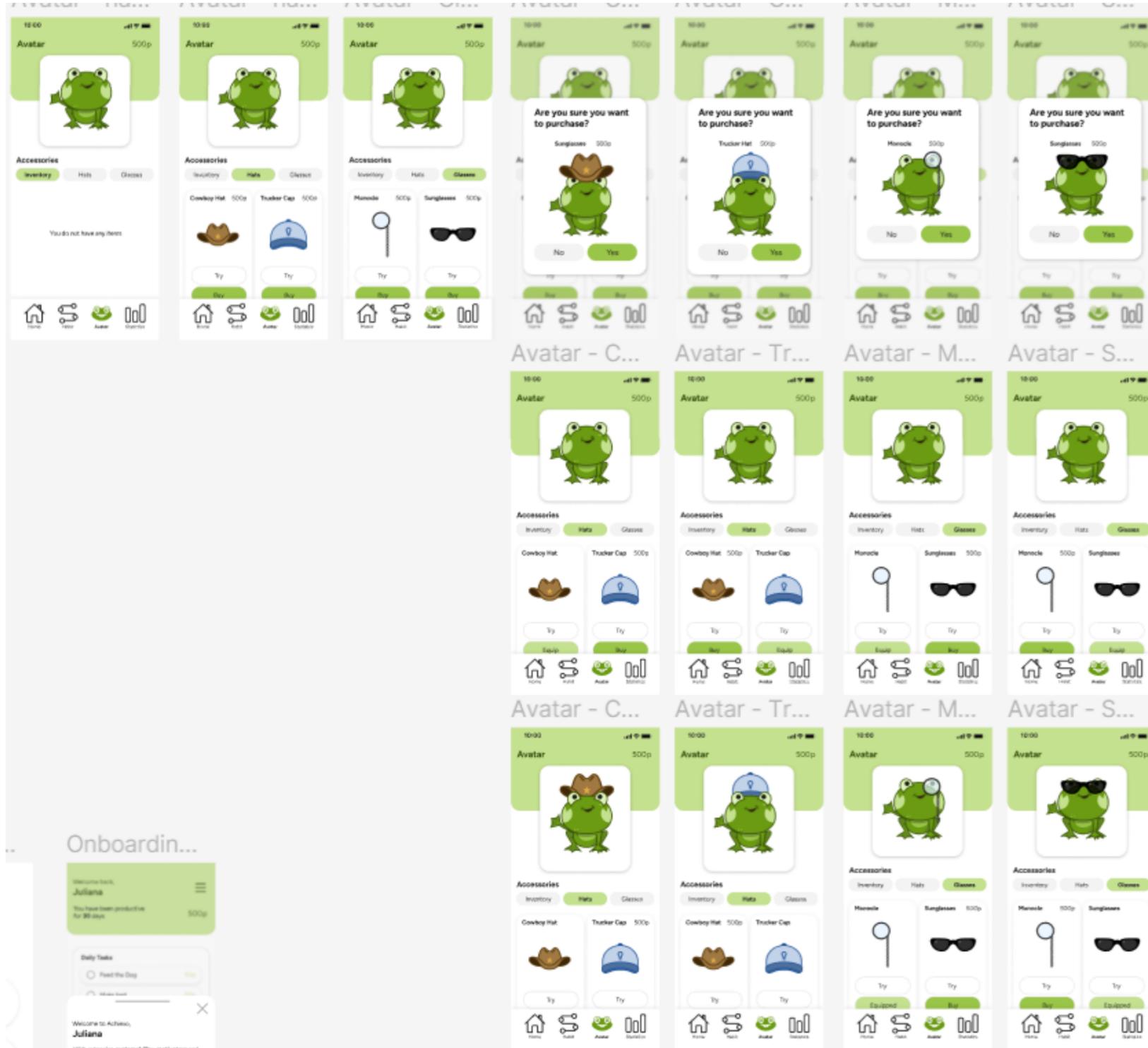


More UI changes with buttons. use of grey accent for secondary buttons or a grey stroke with white fill for others

# C.5 Iteration 3 Mockups

## C.5.1 Mobile

### C.5.1.8 Avatar frames - full



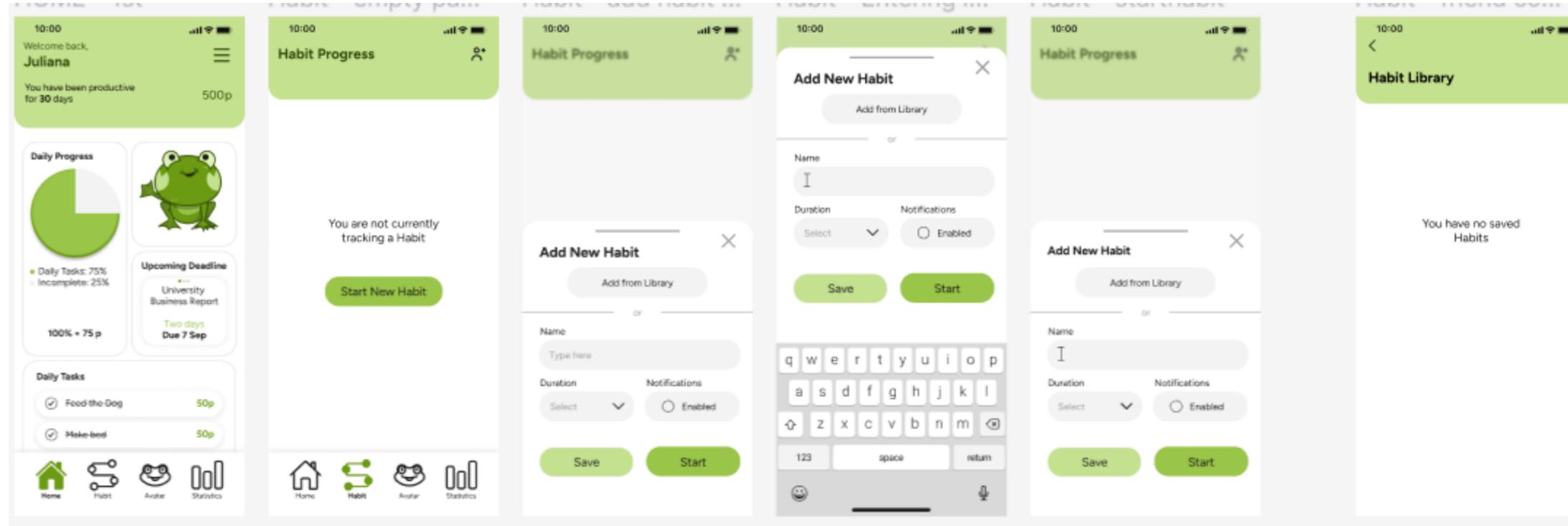
### C.5.1.9 Statistics



# C.5 Iteration 3 Mockups

## C.5.1 Mobile

### C.5.1.10 Habiiit configuration

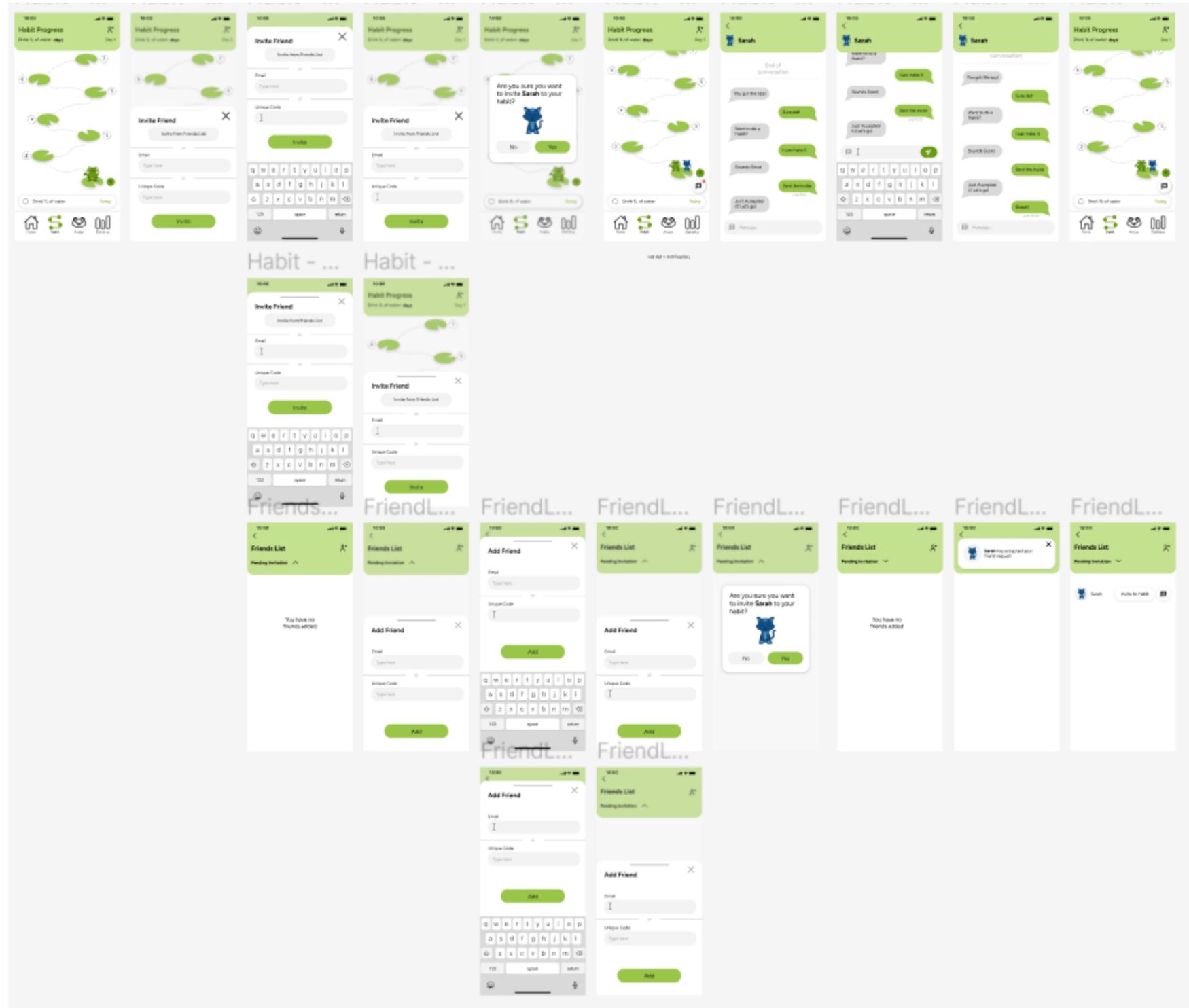


Added habit library page which is also accessible from settings + UI changes

# C.5 Iteration 3 Mockups

## C.5.1 Mobile

### C.5.1.11 adding friend to habit



Added messaging feature which is accessible in the friends list and directly on the habit page.

Red dot = notification

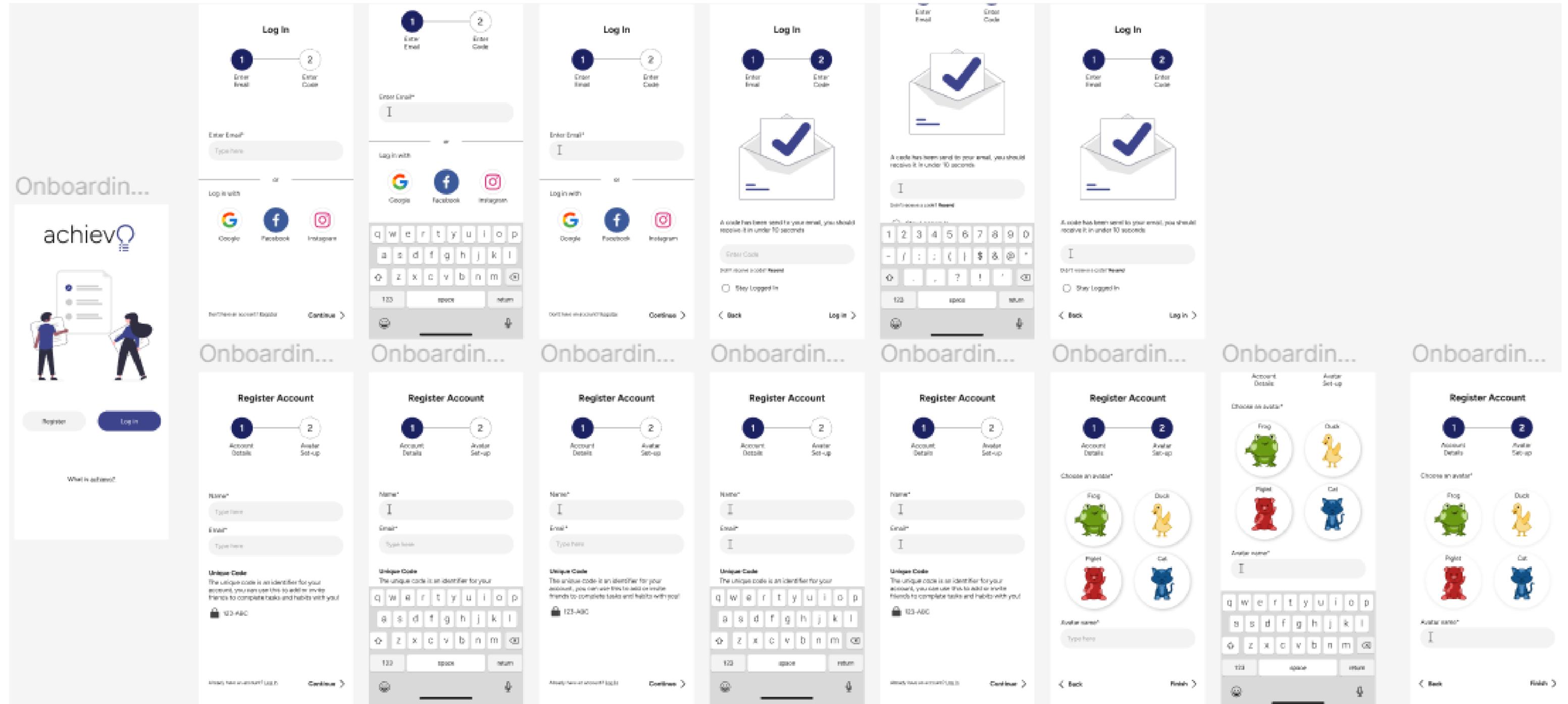
UI changes

# C.5 Iteration 3 Mockups

## C.5.1 Mobile

### C.5.1.12 Sign up / log in

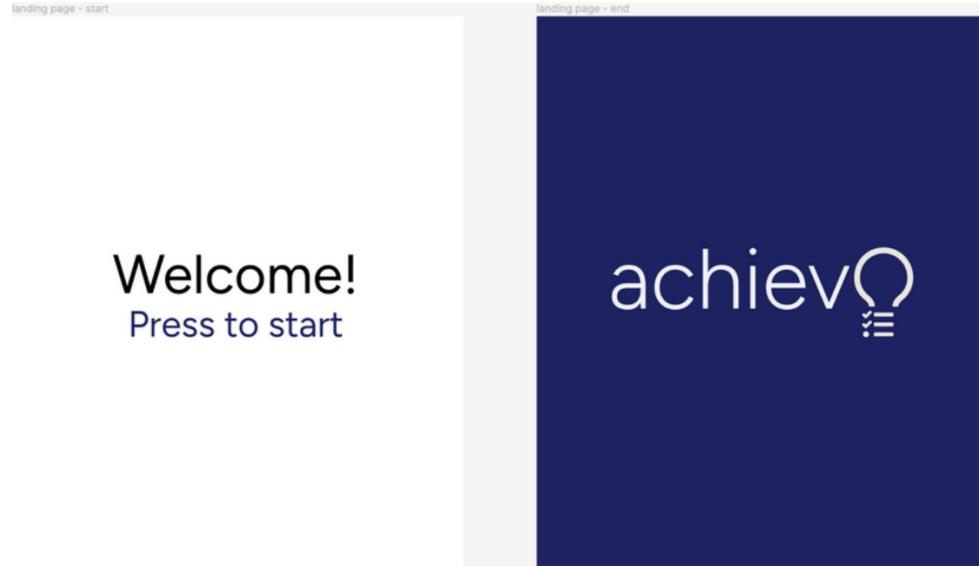
## UI changes



# C.5 Iteration 3 Mockups

## C.5.2 Watch

### C.5.2.1 Onboarding



**Welcome, Juliana!**  
Choose a character



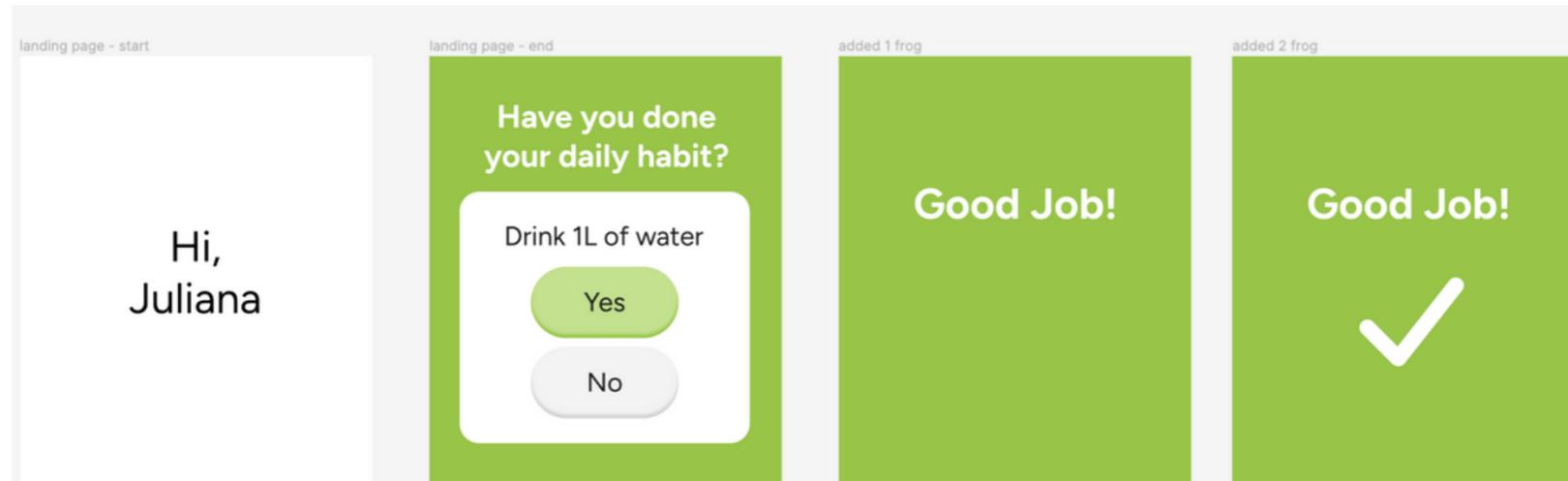
**Welcome, Juliana!**  
Name your character



**Congrats!**



*Log on after having set up profile:*



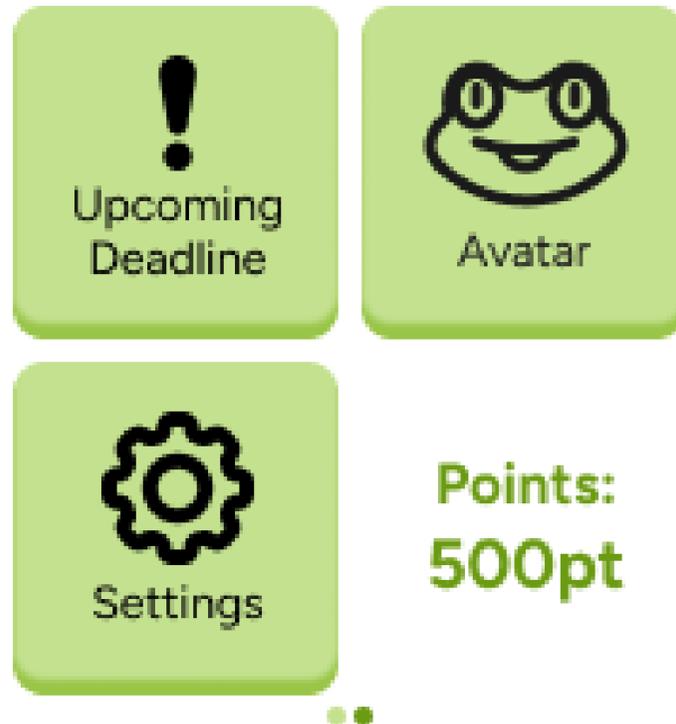
*Note: Frog green colour displayed, as features and functions are the same for other characters, just differing in colourways.*

# C.5 Iteration 3 Mockups

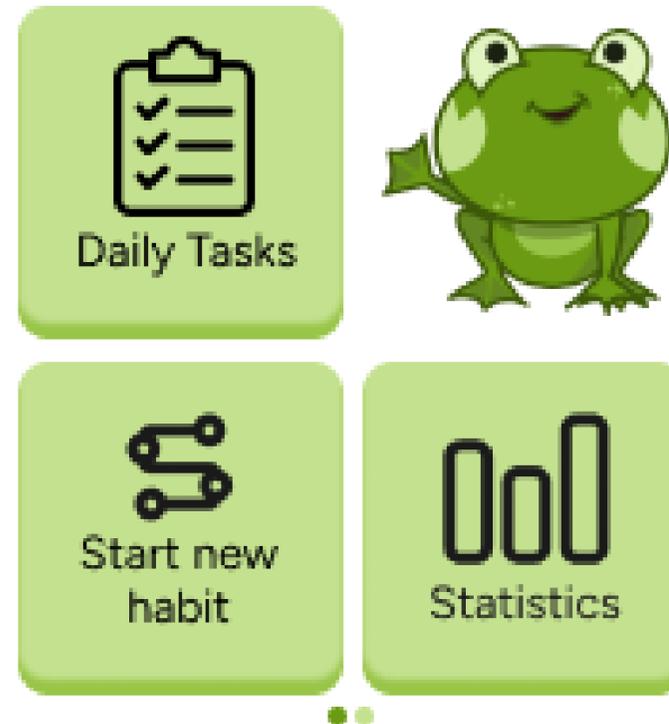
## C.5.2 Watch

### C.5.2.2 Hope page & sub-pages

Welcome, **Juliana**



Welcome, **Juliana**



**Upcoming deadline**

University Business Report

2 days  
Due 7 Sept

**Daily Tasks**

Only 2 left!

+ Add task

○ Walk the dog

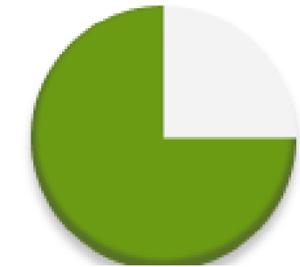
○ Eat 3 meals

○ Wake up before Sam

**Statistics**



**Today's progress**



**Avatar**

Open the app to customise your character!



**Sammy**

*Note: Frog green colour displayed, as features and functions are the same for other characters, just differing in colourways.*

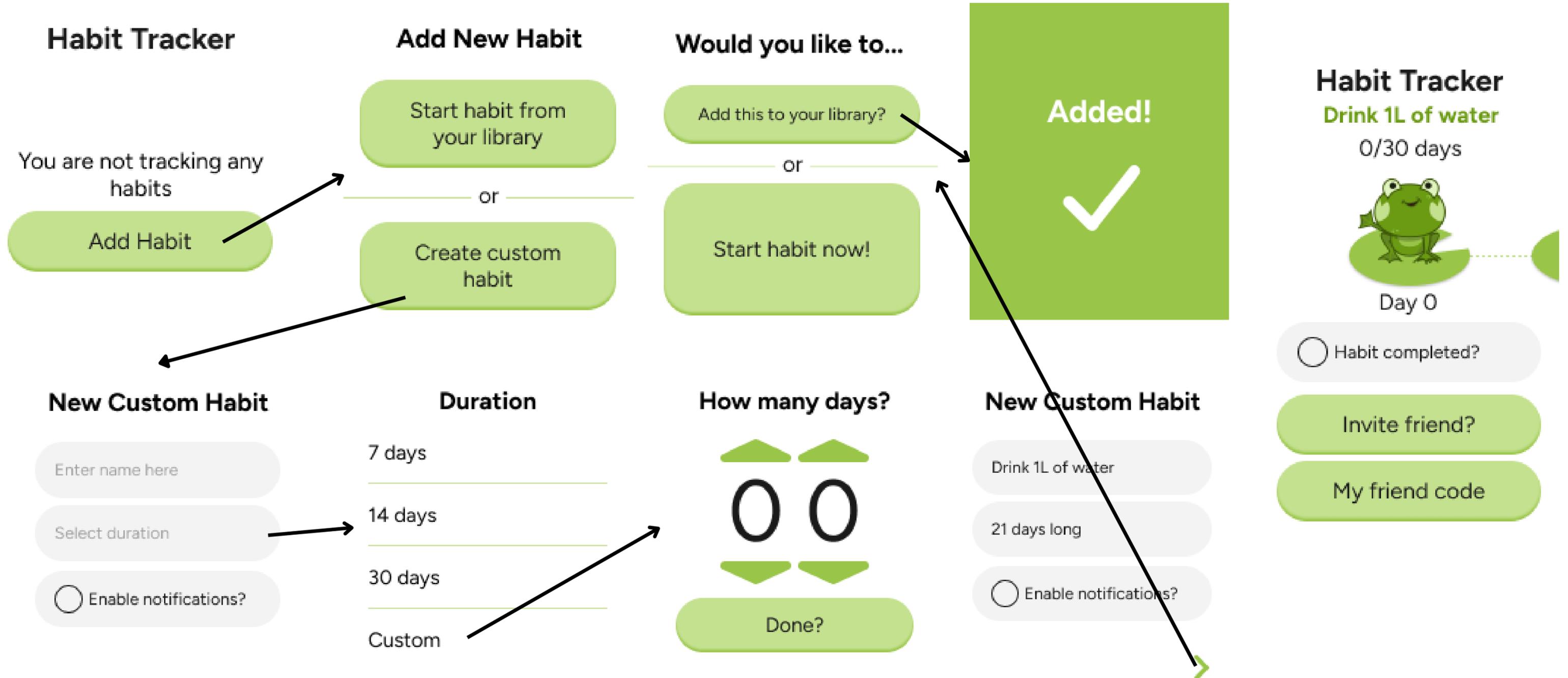
# C.5 Iteration 3 Mockups

## C.5.2 Watch

### C.5.2.3 Setting up a habit

Note: Frog green colour displayed, as features and functions are the same for other characters, just differing in colourways.

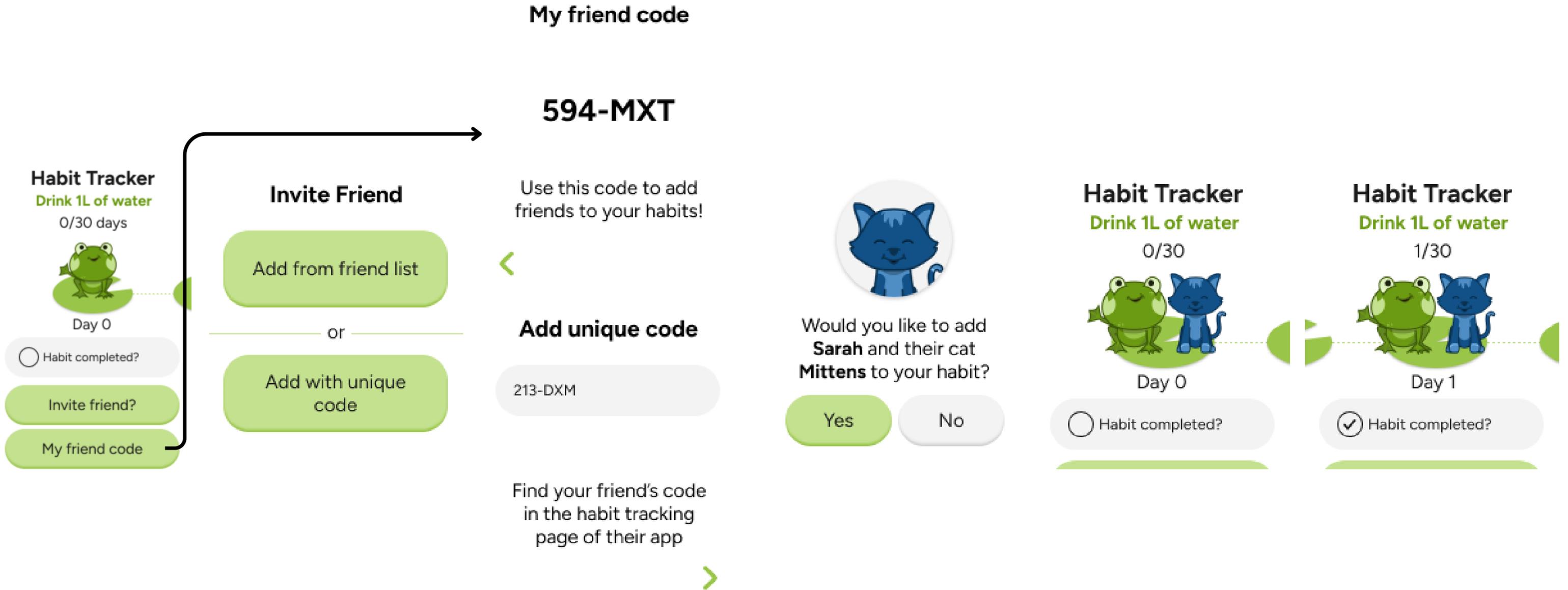
This page only appears after user has decided to add habit to library. From there, they are then taken back to "add new habit" page



# C.5 Iteration 3 Mockups

## C.5.2 Watch

### C.5.2.4 Adding a friend



*Note: Frog green colour displayed, as features and functions are the same for other characters, just differing in colourways.*

# C.5 Iteration 3 Mockups

## C.5.1 Mobile

### C.5.1.13 New design system



## Typography

<https://developer.apple.com/design/human-interface-guidelines/typography>

Font: Figtree

PHONE:

**H1 - Titles - Bold - 24pt (page title)**

**H2 - Subtitles - Bold - 20pt (headers)**

Body Text - Regular - 20pt (buttons and focal text)

**H3 - Subtitles - Bold - 16pt (Sub titles)**

Body Text - Regular - 16pt (all body)

## Buttons

24px radius, Height 50, Text size = 20px

Secondary

- Box fill = Light grey OR Light accent
- Text = Text Black

Primary

- Box fill = accent
- Text = primary white



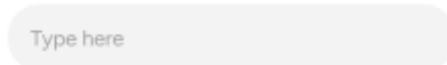
**Input Box**

24px radius, Height 50

Box fill = Light grey

Text = Dark grey

Text Size = 16px



## Icons



## Boxes

**Two variants**

24px Radius

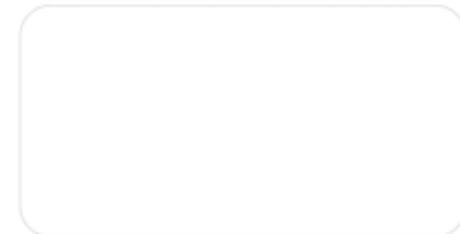
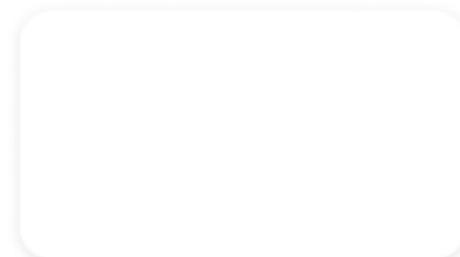
Fill = primary white

1. Variant 1

- Drop Shadow = y2, 10% opacity, 10% blur

2. Variant 2

- Stroke weight = 1
- Stroke colour = primary gray



## Keyboard



There were few UX changes to the final iteration but many UI changes, to make it easier to understand, a new design system was created specific for the mobile interface. Most notably, the buttons and boxes changes

# D. Usability Testing

D.1: Round 1 User Testing

D.2: Round 2 Expert Testing

D.3: Round 3 User Testing

# D. Testing

## D.1.1 Features list & Testing Plan

Features	Smartphone	Smart Watch	Desktop
Select and set up a character	✘	✘	✘
Add a new habit	✘	✘	✘
Invite a friend to join a habit	✘	✘	✘
Buy and equip items for the user's character	✘		✘
Edit and customise the homepage	✘		✘

Note; Less features were tested on the smart watch due to device affordances. This led to Yasmine testing the three features of the smart watch, and remaining two features on the smart phone

# D. Testing

## D.1.1 Features list & Testing Plan

### Testing

#### Tasks

1. Adding a new habit
2. Inviting a friend to a habit
3. Setting up a character
4. Buying and equipping a hat for character (character customisation)
5. Editing homepage and setting a weekly goal

#### Goals

1. Our goal is to see if the habit adding / customising features (goal 1,2)
2. To see how time the set up efficient (3,4)
3. To see how intuitive the user customisation options are (5)

#### Group member testing:

Yasmine - Phone + watch

Emma - Desktop

Emily - Phone

*Desktop + Mobile*

### User Testing

#### Think aloud:

Scenario: You just downloaded the app and want to start a habit with your friend. Your goal is to set up your profile, then create a new habit with a friend. (Tasks: 1, 2, 3)

Scenario: After meeting your goal of completing your habit 10 days in a row, you earned some coins! With these coins, buy and equip a hat for your character. Then edit your homepage to set yourself a goal for the week. (Tasks: 4, 5)

*Tell users to vocalise what they are thinking as they complete this task.*

#### Interview:

- How did the system for setting up a habit and inviting a friend feel? Was it easy
- Did the process for creating a new habit feel too long?
- Would you have liked to customise the environment (habit tracking page) of your character more?

### Expert Testing:

#### Cognitive walkthrough

- Adding a new habit
- Inviting a friend to a habit
- Setting up a character
- Buying and equipping a hat for character (character customisation)
- Editing homepage and setting a weekly goal

*Desktop + Mobile*

### User Testing

#### Think aloud:

Scenario: You just downloaded the app and want to start a habit with your friend. Your goal is to set up your profile, then create a new habit with a friend. (Tasks: 1, 2, 3)

*Tell users to vocalise what they are thinking as they complete this task.*

#### Interview:

- How did the system for setting up a habit and inviting a friend feel? Was it easy
- Did the process for creating a new habit feel too long?
- Would you have liked to customise the environment (habit tracking page) of your character more?

### Expert Testing:

#### Cognitive walkthrough

- Adding a new habit
- Inviting a friend to a habit
- Setting up a character

## d. Testing

### D.1.2 Mobile: Transcripts and Raw Data

#### D.1.2.1 User Testing Transcript 1

Klara

Task1

Issue with first page, press login. Tried to sign up with Google. Named easy.

Pressed continue instead of exit. New about scroll down but didn't

Task 2

Nothing to add

Task 3

Tried to go to avatar to invite friend

Task 4

Didn't have issues setting up habits, did first navigate around the main page to see if there was anything but found the nav bar easily

Task 5

Didn't know straight away how to add. The plus icon wasn't clear enough but the next pages were

Other notes

- edit home needs to be more obvious, on what to do to change

- Stuff in empty space

Interview

How did the system for setting up a habit and inviting a friend feel? Was it easy  
yes

Did the process for creating a new habit feel too long?

not really but i was confused

Would you have liked to customise the environment (habit tracking page) of your character more?

not sure, I think it would be nice

#### D.1.2.2 User Testing Transcript 2

Katy

Task 1

Did register successfully, first. Wanted to sign up with Google. Selected frog. Pressed x instead of continue

Task 2

Confused of how to start straight away. Looked around the main page, confused eventually went to habits page. Write name first. Hadn't selected 30 days but wanted to start

Task 3

Didn't know where to add a friend to your habit, said settings and then avatar. Invite successfully. Liked the idea of leveling up and aging characters

Task 4

Went to avatar straight away. Buy hat well. Liked the shop idea - using points as a motivator. Equip well. Wants the idea for trying on an idea

Task 5

Edited home straight away. Didn't know what the arrows. Really liked the idea of customising home page and wanted the app. Setting weekly goal, wanted to do a to do list. Knew how to place, liked the hand icon. Preferred the pop ups here as she is less inclined to close them

Notes;

- Wants a different way to show the habit progress that makes you feel like it's harder

- Or adding quotes or unlocking things at extra step

- Custom icon for your avatar

Questions

How did the system for setting up a habit and inviting a friend feel? Was it easy

Very simple and screenline,

Setting a habit was very easy, inviting a friend bit harder. She didn't know to invite a friend from habit page

Did the process for creating a new habit feel too long?

Not at all

Would you have liked to customise the environment (habit tracking page) of your character more?

Good amount, but wants to add clothes and such.

## D. Testing

### D.1.2 Mobile: Transcripts and Raw Data

#### D.1.2.3 User Testing Transcript 3

OK so I'm using the phone now. I'll just click the avatar button. OK and then now I will pick out the hat, I guess? OK. So after I clicked "buy", I can see that now I can equip it, so I'll click the equip button that popped up under it. OK and now it says that it's been equipped, and I can see that it says in my avatars box also, that the hat has been equipped.

OK so now to set a weekly goal. I'm gonna click back on the homepage. OK so then I can see always where can I edit the home page? Oh OK. So, I'll click the little button in the top. And now that I'm in the edit view, I can see that I can move all of the objects around and that there's a plus button that's popped up on the bottom. So, I guess I'll hit that to add a new weekly goal. OK yeah so, I'll set weekly goals I can only set 1. The button makes it seem like I can set multiple goals. But I'll enter the goal there in the text box. Cool and then I'll place it. So then once I let go of it then it's the edit view is done? OK cool, I can see it on my homepage now.

#### D.1.2.4 User Testing Transcript 4

OK so now I'm on the home page of the app so is there a shop icon I should be looking for or maybe I'll click I'll click the avatar button OK and now I can see the items, so I'll go ahead, and I'll click the hat. OK and now that I own it, I will hit the equip button. Cool so I can see that now it's been equipped

OK so now I'll click the home icon again to go back to my homepage. Um, to edit my homepage I'll click the edit home button in the top. Now I can see now a big + has popped up at the bottom, and I can also see that I can move the stuff around on the home page. OK and so then now I know that I want to add weekly goals, right? OK and so now I'll set a weekly goal, so I'm only setting one goal, but the button says set weekly goals OK so now I can see my one goal that I've set, and I can see that I can move it around so I'll just OK cool so I can see that now it's there.

Note; These user test were done in conjunction with the watch testing, therefore, they only test the buy/equip item feature, and edit homepage features



# D. Testing

## D.1.3 Watch: Transcripts and Raw Data

### D.1.3.1 User test 1

OK so I'm on the homepage I guess I'll just tap anywhere to move forward because I'm not too sure where to tap. OK so now I can choose a character. OK I'll just pick any character. And so now I can name the character. I wish that there was a way to see what character I had picked, just so that I was sure. But I'll tap the text box to name it. OK. And then I'll click confirm. Cool, so I'll click next, and now I can see the character that I've picked and so I'll just tap to start tracking then I guess. Ok so after I tapped, I got taken to my homepage where I can see all the different things I can do.

OK so to create a new habit, I'm going to guess that I need to click on the habits page. So I can see that I'm not tracking any habits so I'll go ahead and click the add habit button. OK woah, so I can see that there's a lot of different things here. I guess I'll just work down the list- I'll ignore the "add from library"? OK. So first I'll enter the name, so I'll just click the enter name here text box. OK and then I'll click confirm. OK so I can see that what I've entered popped up and now I'll set the duration, so I'll do 30 days. OK and then for notifications I'll do weekly. Cool so now I can see that I can click the invite and save button um I guess I'll just hit invite?

[for the sake of the wireframes, the user should hit start at this stage]

OK so I'll start the habit and then... OK I can see the habit that I added is there so now I'll click invite friend. OK so now that I've hit [invite friend], I can see a new menu popped up. I'll enter the code that you gave me. OK so when I click the text box, I get given the keyboard to enter the code. I'll just click confirm. Ok cool, so now I'll add my friend. Cool so now I can see that my friend has been added to my habit.

#### Interview questions:

- How did the system for setting up a habit and inviting a friend feel? Was it easy
- Did the process for creating a new habit feel too long?
- Would you have liked to customise the environment (habit tracking page) of your character more?

I think that it was ok, but at first, I was a bit confused as to what button I should press.

The process for creating a habit felt like a good amount of time, considering that the user would only focus on one habit at a time. I think because you're only focusing on one habit at a time, its ok for the process to take a little longer.

I think that since the UI is pretty packed as it is, it doesn't really need more visual customization.

## D.1.3 Watch: Transcripts and Raw Data

### D.1.3.2 User test 2

Ok so first I can see I'm on like, the main page of the app. Um, OK so now I can choose the character. I have to pick out the frog right? So, I'll go with the frog and then I'm on the next page. OK so I'll type here [in the text box] to name my character. So now that I've named it, I'll click the "next button". I'm worried that maybe if it was on an actual watch screen, the next button might be a bit too small for me to tap, but I can clearly see that it's popped up now. Now I'll just tap anywhere yeah?

OK so now that I know I'm on the main page, I can see that there's a button that says "habits", so I'm going to guess that that's where I go to make a new habit. OK so I'm not tracking any habits I'll click the button to add a habit. I'll enter the name the same way I did with the character name and then I'll set the duration. Is the duration just like how long the habit is for? OK and then how often do I want notifications? What's the difference between save and start? or do I invite a friend here?

[make the task first and then invite the friend]

OK then so then to make the task I'll hit the start button. OK and now I can see that I can invite a friend so I will click "invite friend".

OK so now that I'm inviting a friend, I can see I can either invite from my friends list or enter a code. I know that I'm supposed to enter a code because you gave me the code, so I'll tap the text box to do that. OK and so now I'll hit confirm. Cool, I can see that the code I entered is there, so I'll just click add! Cool so now I can see back on the habit page that I've added a friend.

#### Interview questions:

- How did the system for setting up a habit and inviting a friend feel? Was it easy
- Did the process for creating a new habit feel too long?
- Would you have liked to customise the environment (habit tracking page) of your character more?

I think that it was pretty easy to set up a habit. I was a bit confused with a lot of the buttons on the setting up habit page, because it felt like there was a lot of buttons I needed to use. Especially after I had finished putting in the notifications and duration. I just wasn't sure what to click to start the habit.

I don't think the process would feel so long if I could just have chosen from my custom habits but if I was setting up a custom habit, I think that I was initially overwhelmed at the amount of buttons on one page. Otherwise, I don't think the process felt too long as I only had to do it once.

I don't feel like it needs to be more customised because on the watch especially there's not much space to do more customization.

# D.1.3 Watch: Transcripts and Raw Data

## D.1.3.3 Cognitive walkthrough - Task 1

**Task 1**  
**Task: Creating a character**

**Roles**  

<b>Facilitator:</b>	<b>Other evaluator(s):</b>
Yasmine	Iman
<b>Recorder:</b>	
Leanna	

**CW Template - Step**  
**Action step: Get to the character selection page**

	Action success	Action failure
Will the user try to achieve the right result?	Yes <small>Team experience</small> the system tells them to	No
Will the user notice that the correct action is available?	Yes <small>Team experience</small> they would see a call to action	No
Will the user associate the correct action with the effect they're trying to achieve?	Yes <small>Team experience</small> a prompt/label matches action	No
After the action is performed, will the user see that progress is being made toward the goal?	Yes <small>Team experience</small> there's a connection between the system response and user goal	No

**CW Template - Step**  
**Action step: Choose the frog as your character**

	Action success	Action failure
Will the user try to achieve the right result?	Yes <small>Team experience</small> the system tells them to	No
Will the user notice that the correct action is available?	Yes <small>Team experience</small> they would see a call to action	No
Will the user associate the correct action with the effect they're trying to achieve?	Yes <small>Team experience</small> a prompt/label matches action	No
After the action is performed, will the user see that progress is being made toward the goal?	Yes <small>Team experience</small> there's a connection between the system response and user goal	No Not necessarily, as there is no image of a frog, instead jumps straight into name without knowing what character looks like.

**CW Template - Step**  
**Action step: Name your character Sammy**

	Action success	Action failure
Will the user try to achieve the right result?	Yes <small>Team experience</small> the system tells them to	No
Will the user notice that the correct action is available?	Yes <small>Team experience</small> they would see a call to action	No
Will the user associate the correct action with the effect they're trying to achieve?	Yes <small>Team experience</small> a prompt/label matches action	No
After the action is performed, will the user see that progress is being made toward the goal?	Yes <small>Team experience</small> there's a connection between the system response and user goal	No The confirmation page the user off on continuing, as the name the message is blocked, even after entering the name.

**CW Template - Step**  
**Action step: Finalise your character selection**

	Action success	Action failure
Will the user try to achieve the right result?	Yes <small>Team experience</small> the system tells them to	No
Will the user notice that the correct action is available?	Yes <small>Team experience</small> they would see a call to action	No
Will the user associate the correct action with the effect they're trying to achieve?	Yes <small>Team experience</small> a prompt/label matches action	No
After the action is performed, will the user see that progress is being made toward the goal?	Yes <small>Team experience</small> there's a connection between the system response and user goal	No Yes, as after hitting the next button, they will be taken to the next screen immediately.

**CW Template - Step**  
**Action step: Navigate to your homepage**

	Action success	Action failure
Will the user try to achieve the right result?	Yes <small>Team experience</small> the system tells them to	No
Will the user notice that the correct action is available?	Yes <small>Team experience</small> they would see a call to action	No They were necessary to know the action is available in having seen and a confirmation, as there is no image of button to indicate progress to the homepage.
Will the user associate the correct action with the effect they're trying to achieve?	Yes <small>Team experience</small> a prompt/label matches action	No While they correctly inputted experience on the screen to progress but that is not set as such, they didn't necessarily know that that would navigate to the homepage.
After the action is performed, will the user see that progress is being made toward the goal?	Yes <small>Team experience</small> there's a connection between the system response and user goal	No This step the goal was completed as they were able to see their home screen.

# D.1.3 Watch: Transcripts and Raw Data (pt 2)

## D.1.3.4 Cognitive walkthrough - Task 2

**Task 2**

**Task:** Create a new custom habit

**Roles:**

- Facilitator: Youssine
- Recorder: Louisa
- Other evaluator(s): Ines

**CW Template - Step**  
Action step: Get to "Habit" page

Yes	from experience	No
Yes	the system tells them to	No
Yes	they would see a call to action	No
Yes	prompt/label matches action	No
Yes	there's a connection between the system response and user goal	No

**CW Template - Step**  
Action step: Name your new habit

Yes	from experience	No
Yes	the system tells them to	No
Yes	they would see a call to action	No
Yes	prompt/label matches action	No
Yes	there's a connection between the system response and user goal	No

**CW Template - Step**  
Action step: Set the habit duration to "daily"

Yes	from experience	No
Yes	the system tells them to	No
Yes	they would see a call to action	No
Yes	prompt/label matches action	No
Yes	there's a connection between the system response and user goal	No

**CW Template - Step**  
Action step: Set your new habit notifications to "daily"

Yes	from experience	No
Yes	the system tells them to	No
Yes	they would see a call to action	No
Yes	prompt/label matches action	No
Yes	there's a connection between the system response and user goal	No

**CW Template - Step**  
Action step: "Start the new habit"

Yes	from experience	No
Yes	the system tells them to	No
Yes	they would see a call to action	No
Yes	prompt/label matches action	No
Yes	there's a connection between the system response and user goal	No

**CW Template - Step**  
Action step: "Start the new habit"

Yes	from experience	No
Yes	they would see a call to action	No
Yes	prompt/label matches action	No
Yes	there's a connection between the system response and user goal	No

# D.1.3 Watch: Transcripts and Raw Data

## D.1.3.5 Cognitive walkthrough - Task 2

### Task 3

**Task:** Invite a friend to start your habit with you

#### Roles

**Facilitator:**

Yasmine

**Other evaluator(s):**

Iman

**Recorder:**

Leanna

#### CW Template - Step

**Action step:** Navigate to the "Invite friend" page

Action success Action failure



	Yes	No
	from experience	the system tells them to
Will the user try to achieve the right result?	Yes, as the system prompts them with a button at the bottom of the page.	

	Yes	No
	from experience	they would see a call to action
Will the user notice that the correct action is available?	Yes, as they would clearly see the "invite friend" button available.	

	Yes	No
	from experience	a prompt/label matches action
Will the user associate the correct action with the effect they're trying to achieve?	Yes, as the prompt on the button matches the action they are trying to achieve.	

	Yes	No
	from experience	there's a connection between the system response and user goal
After the action is performed, will the user see that progress is being made toward the goal?	Yes, as they will be taken to the next page.	

#### CW Template - Step

**Action step:** Enter your friend's profile code

Action success Action failure



	Yes	No
	from experience	the system tells them to
Will the user try to achieve the right result?	Yes, as the "enter code" text box becomes available on the next page.	

	Yes	No
	from experience	they would see a call to action
Will the user notice that the correct action is available?	They will notice the correct action as it is clearly visible and labelled accordingly.	

	Yes	No
	from experience	a prompt/label matches action
Will the user associate the correct action with the effect they're trying to achieve?	They will associate with the correct action as after inputting the friend code, they will see their input before confirming when redirected to the invite friend configuration page.	

	Yes	No
	from experience	there's a connection between the system response and user goal
After the action is performed, will the user see that progress is being made toward the goal?	They will see the progress as they will see the code inputted.	

#### CW Template - Step

**Action step:** Confirm adding your friend

Action success Action failure



	Yes	No
	from experience	the system tells them to
Will the user try to achieve the right result?	Yes, as there is a button clearly available after inputting a code, that says "yes"	

	Yes	No
	from experience	they would see a call to action
Will the user notice that the correct action is available?	They will notice that it is available, as prior to inputting a code, the same button was shaded lighter - indicating it can't be clicked.	

	Yes	No
	from experience	a prompt/label matches action
Will the user associate the correct action with the effect they're trying to achieve?	They will associate the correct action with the effect they are trying to achieve, as they will see a notification after clicking the button that a friend has been added.	

	Yes	No
	from experience	there's a connection between the system response and user goal
After the action is performed, will the user see that progress is being made toward the goal?	They will see that they had completed the goal as they will be redirected to the habit page, with the notification letting the user know that they had added a friend.	

# D.1.4 Analysis

## D.1.4.1 phone analysis usability insights table

Severity Rating	Severity Rating: LOW	Severity Rating: LOW	Severity Rating: HIGH		Severity Rating: MEDIUM	Severity Rating: MEDIUM	Severity Rating: HIGH
Frequency of use	Frequency of use: LOW	Frequency of use: LOW	Frequency of use: HIGH		Frequency of use: MEDIUM	Frequency of use: HIGH	Frequency of use: HIGH
Impact when unsuccessful	Impact when unsuccessful: LOW	Impact when unsuccessful: LOW	Impact when unsuccessful: MEDIUM		Impact when unsuccessful: MEDIUM	Impact when unsuccessful: MEDIUM	Impact when unsuccessful: MEDIUM
Broader purpose of the solution	Broader purpose of the solution: LOW	Broader purpose of the solution: MEDIUM	Broader purpose of the solution: HIGH		Broader purpose of the solution: MEDIUM	Broader purpose of the solution: MEDIUM	Broader purpose of the solution: HIGH
Usability Improvements	Make the register into a separate button for easier use (Learnability)	The functions need to be more clear, make it more obvious that 'continue' relates to tutorial. This could be done with a separate button, or changing the text (Learnability)	The home page should involve a CTA towards the habit page to make it easier for user's to start a Habit. This is necessary as it is one of the main features (Learnability)		The invite feature should be included better into the system, include a homepage widget for social. (Learnability) Also add the invite function to when you configure a habit (Efficient)	Make it so users can try on an item and add clothing (utility). Also can it easier to navigate and customize specific features (Environment + Avatar) (Utility/ Memorability)	Make edit home easier to see as a CTA (Learnability)
Feature	Feature: Create Account	Feature: Create Account	Feature: Add new Habit		Feature: Invite friend to Habit	Feature: Buy and equip hat for your character	Feature: Edit home page and add weekly goals
Task	Task: Register an account	Task: Go to home page	Task: Go to Habit page		Task: Go to Habit page to invite friend	Task: Equip the hat	Task: Edit Home
Test Goals	Is the sign up process easily recognizable and fast and efficient for users to use? (Efficient)	How effective is the final account creation summary at informing the user of options? (Effective)	How easy is it for a new user to navigate and schedule a new habit? (Learnability)	Understand if the home page provides enough utility to users in using the application (Utility)	Can user's remember to go back to Habit page and recognise the invite button? (Memorability)	Are user's provided with enough utility in the customisability of their avatar? (utility)	Is it clear to users how to edit home and the features that are available? (Learnability)
Data	"I didn't see the register" (Klara)	"I thought the continue button would bring me to the home page, not the tutorial" (Klara)  "I was used to clicking continue for the account sign up pages, so I did it on instinct" (Expert Testing)	<b>OBSERVATION:</b> User looked around the home page for a while, trying to find out what would be clicked to navigate and find out how to add a habit (Katy)	<b>OBSERVATION:</b> User assumed the habit summary and adding a habit would be accessible from the homepage (katy)	<b>OBSERVATION:</b> User (Katy) didn't see the invite on the habit page from previous Step. Looking around home page, clicked settings than avatar before habit page  <b>OBSERVATION:</b> User (Klara) didn't see the invite on the habit page from previous Step. Went around home page, to avatar page and then habits  "I'm not sure where to go, I think maybe settings?" (Katy)	I think it would be best if you could try on the item before you buy it, with an eye icon or something similar (Expert testing)  I wish I could try on the item before I buy (KATY)	<b>OBSERVATION:</b> Didn't know what the arrows over the widgets meant (Katy)  <b>OBSERVATION:</b> Didn't know straight away how to add. The plus icon wasn't clear enough but the next pages were (Klara)  "Edit Home button should maybe be changed." "It should also say DONE when it is activated, not EDIT HOME" (Expert testing)

Note;  
 Grey: Data  
 Yellow: Task goals and Task  
 Red: feature  
 Green: UI improvements  
 Purple: Serverity Rating

# D.1.4 Analysis

## D.1.4.2 watch analysis bottom-up

Feature: Creating a character

Does the layout and size of choice of button/elements make the design easy to use? (Accessibility)

Is the progression towards the feature's goals clear to users (Utility)

To see how intuitively designed the UI is (intuitive)

**Pos**

- Yes as the next button becomes available after selecting a name
- They will notice the correct action as the next button has an arrow icon - indicating the users to move forward in their set-up process
- Since the each button for character selection takes up 1/4 of the screen, users will easily notice that the action is available
- They will know to tap the text box and use the keyboard, as the text box says "Enter name here" in light text.

**Neg**

- I'm worried that maybe if it was on an actual watch screen, the next button might be a bit too small for me to tap,
- The confirmation page may come off as confusing, as the same top message is displayed, even after entering the name.

**Pos**

- They won't necessarily know the action is available if having never used a smartwatch, as there is no explicit button to indicate a progression to the homepage
- I wish that there was a way to see what character I had picked, just so that I was sure.
- They knew the goal was completed as they were then take to their homepage/dashboard.
- They would be able to see that progress is being made as they are shown a screen that says "choose a character"
- Yes as after hitting the next button, they will be taken to the next screen immediately.

**Neg**

- Not necessarily, as there is no image of a Frog. Instead jumps straight into name without knowing what character looks like.

**Pos**

- Once the process is finished, they will know from experience to just tap the screen as no button is available
- But I'll tap the text box to name it.
- OK so I'll type here [in the text box] to name my character.
- They would associate the correct action with the effect as on a smartwatch, to move through pages, you generally tap or swipe.
- The would intuitively tap the text box, and know that they correct action is available as the keyboard will automatically pop up
- Was able to navigate to the page as it felt intuitive to tap the screen to move off the landing page
- Knew to the correct action as it felt the most intuitive. Had done it that way in other apps

**Neg**

- While they correctly tapped anywhere on the screen to progress (as that is what felt intuitive), they didn't necessarily know that that would navigate to the home page.
- They will know from experience that the next button will allow them to progress however, the button does not explicitly state that the process is finished/ the character has been finalised.

Feature: Inviting a friend to your habit

Can users remember how to use certain features (Memorability)

Is the progression towards the feature's goals clear to users (Utility)

To see how intuitively designed the UI is (intuitive)

Does the layout and size of choice of button/elements make the design easy to use? (Accessibility)

**Pos**

- OK so when I click the text box, I get given the keyboard to enter the code like earlier.
- I know that I'm supposed to enter a code, so I'll tap the text box to do that like before. OK and so now I'll hit confirm.
- OK I can see the habit that I added is there so now I'll click invite friend.
- They will see the progress as they will see the code inputted.
- Cool so now I can see that my friend has been added to my habit.
- Cool so now I can see back on the habit page that I've added a friend.
- They will associate the correct action with the effect they are trying to achieve, as they will see a notification after clicking the button that a friend has been added.

**Neg**

- While they correctly tapped anywhere on the screen to progress (as that is what felt intuitive), they didn't necessarily know that that would navigate to the home page.
- They will know from experience that the next button will allow them to progress however, the button does not explicitly state that the process is finished/ the character has been finalised.

**Pos**

- I can see that the code I entered is there, so I'll just click add!
- The will notice the correct action as it is clearly visible and labelled accordingly.
- The prompt on the button matches the action they are trying to achieve.
- They will associate with the correct action as after inputting the friend code, they will see their input before confirming when redirected to the invite friend configuration page.

**Neg**

- They will see that they had completed the goal as they will be redirected to the habit page, with the notification letting the user know that they had added a friend.
- Yes, as the system prompts them with a button at the bottom of the page.
- Yes, as they would clearly see the "invite friend" button available.
- Yes, as there is a button clearly available after inputting a code, that says "add"

**Pos**

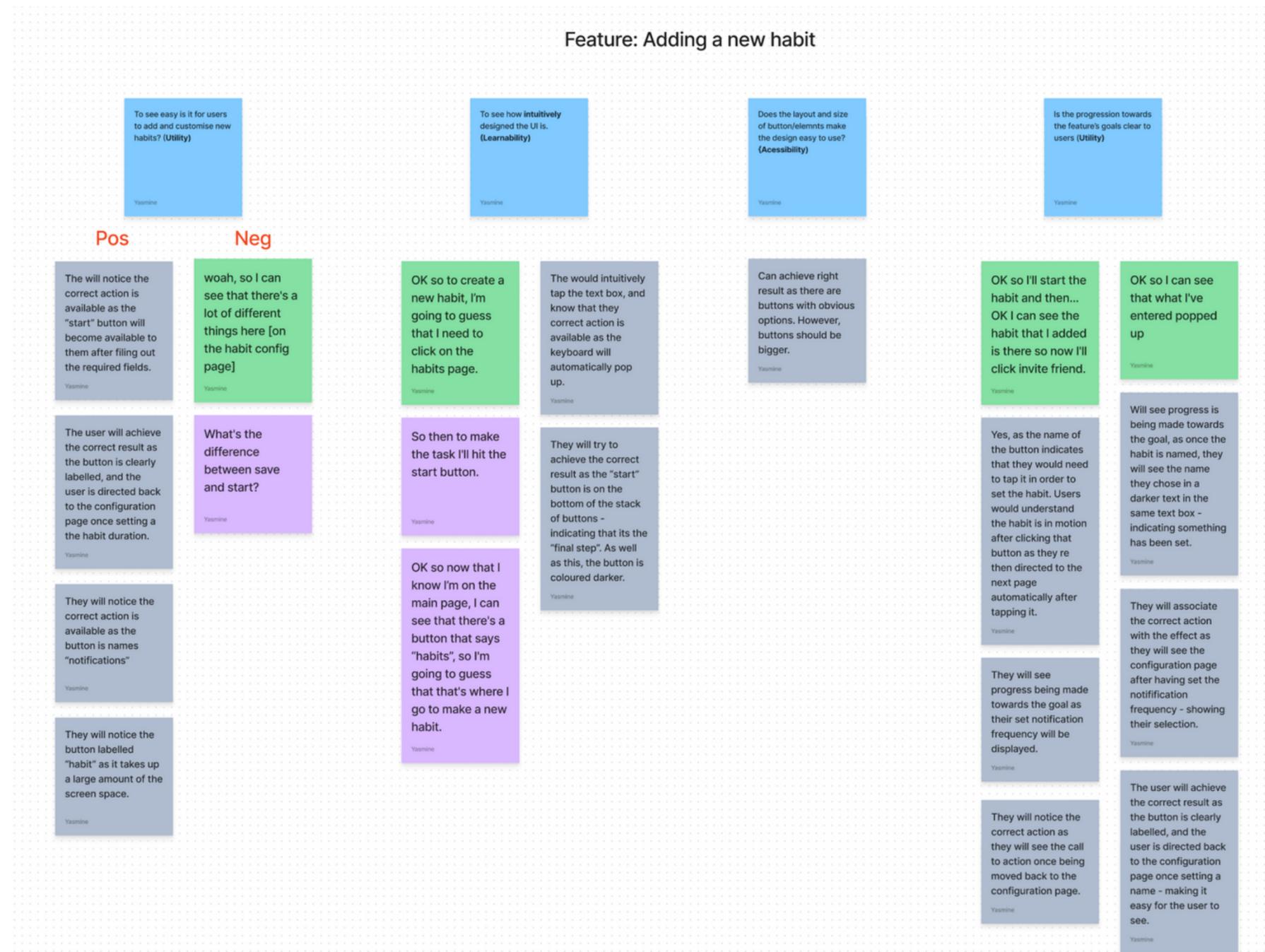
- now I can see that I can invite a friend [button became available] so I will click "invite friend".
- The "enter code" text box becomes available on the next page.
- They will notice that it is available, as prior to inputting a code, the same button was shaded lighter - indicating it cant be clicked.

Note: Not so much intuitive, but more system based

Note;  
Grey: expert test  
Green: user test 1  
Purple: user test 2

# D.1.4 Analysis

## D.1.4.2 watch analysis bottom-up



Note;  
Grey: expert test  
Green: user test 1  
Purple: user test 2

# D. Usability Testing

## D.2.1 Round 2+3 Usability Testing Plan

### User & Expert Testing Plan

Methods of testing

Heuristic evaluation (EXPERT)

Pre and Post testing interviews (EXPERT + USER)

SUS Survey (USER)

Think Aloud (USER)

### Metrics

First click

Time taken to complete a task

Success rates

Number of mistakes in user flow

### Target users

2 experts (1 expert testing session)

3 users

### Required:

Young adult demographic 18-25

Desirable but not necessary:

Students who also work jobs

Individuals that have learning difficulties

Individuals with low productivity and issues building healthy habits

Moderate technological literacy

Individuals with a busy and active life

### Recruitment Plan

For Experts:

Use SUEDE socials to try recruit Expert participants

Find peers in DECO2200 or other design classes to participate

For Users:

Find individuals that fit the target audience that do not study design

Use a screening survey with Loop11 and post the link around to get offline user testing.

Expert Test Guide	User Test Guide
<ul style="list-style-type: none"><li>• Introduce the application and scenario</li><li>• Allow experts to test 5-6 of the most important features</li><li>• Heuristic Evaluation</li><li>• Track 1 form of quantitative data (first click, mistakes, time taken on feature, etc)</li><li>• Post HE interview</li></ul>	<ul style="list-style-type: none"><li>• Introduce the application and scenario in the introduction</li><li>• Think Aloud Feature testing</li><li>• Assess first click, success rates, time taken and number of mistakes metrics</li><li>• Post-testing interview (2-3 questions)</li><li>• SUS Survey</li></ul>

# D. Usability Testing

## D.2.2 Round 2+3 Usability Testing Plan - Mobile specific

### MOBILE

#### Scenario 1

Task 1: Sign up

Task 2: Create Habit (need to make the library button functional)

Task 3: Invite friend to habit

#### Scenario 2

Task 4: Sign in

Task 5: Explore homepage

Task 6: Add weekly goals to home page

Task 7: Move progress widget to top right

Task 8: Progress to the next step in your habit progress page

Task 9: Buy and equip an accessory for your character

Task 10: Explore statistics page

### Goals

Ease of use for the habit page (Task 2, Task 3, Task 8)

Ease of use in the onboarding and sign up progress (Task 1, Task 4)

Ease of use of home page (Task 5-7)

Learnability of the home page (Task 5)

Utility in the statistics page (Task 10)

Learnability of the avatar page (Task 9)

Memorability of how to use habit page (Task 8)

### **Expert Testing Plan**

2 experts ( 1 session)

### **Steps**

1. Introduce the application and scenario
2. Allow Experts to go through scenario 2 feature tests
3. Heuristic Evaluation
4. Track how long it takes them to complete each task
5. Track number of mistakes
6. Post HE interview

### **Introduction for Scenario 1 (Expert Testing)**

The application you will be testing today is called Achievo. It is a gamified habit tracker with a reward incentivised system, you are able to complete tasks to earn points to upgrade your character. It is designed to be highly customisable for users with the home page as the main access point for tracking and completing tasks. This leads us to the scenario:

### **Introduction for Scenario 1 (Expert Testing)**

You have been using Achievo for a few months and want to log in to track your progress! (

1. Log in and complete all your daily tasks
2. add some weekly goals to your home page
3. And move the daily progress widget to the top right.
4. Once you complete your daily tasks, complete your daily habit
5. Using the points you earned, buy and equip an accessory for your avatar
6. Go to the statistics page and explore the features

Post HE Interview Questions

What do you think could be improved or is missing from the sign in process?

Did you feel like you were too limited in the user flow and accessible features?

What feature felt the most refined and which needed the most improvement?

Is there any way we could improve how we facilitate this expert testing session?

### **User Testing Plan**

3 users

### **Steps**

Introduce the application and scenario in the introduction

Think Aloud Feature testing Scenario 1 + 2

Use first click, success rates, time taken and number of mistakes

SUS Survey

### **Introduction for Scenario 2**

The application you will be testing today is called Achievo. It is a gamified habit tracker with a reward incentivised system, you are able to complete tasks to earn points to upgrade your character. It is designed to be highly customisable for users with the home page as the main access point for tracking and completing tasks. This leads us to the scenario:

You are a new user to Achievo, Create an account, configure a habit and invite a friend Log in and complete all your daily tasks

1. Sign up
2. Configure Habit
3. Invite friend to habit

Post Walkthrough Interview + SUS Survey

# D. Usability Testing

## D.2.3 Round 2+3 Usability Testing Plan - watch specific

### All Features:

1. Log on (tick whether or not habit had been completed - landing page ver.)
2. Character selection
3. Character naming
4. View daily tasks
5. View focused habit
  - o Add a new, custom habit
  - o Start a new habit from user library
6. View statistics
7. View upcoming deadline
8. View avatar
9. Settings
10. Create a habit to add to library (add back button to add to library/start habit - watch)
11. Invite a friend to join a habit with a unique code
12. Add a friend from user's friend list

### User tasks to test:

1. Set up a new characters
2. Check off a daily task
3. Navigate to statistics page
4. Navigate to avatar page
5. Navigate to upcoming deadline page
6. Add a new, custom habit
7. Invite a friend to join a habit with a unique code
8. Edit habit to remove the friend
9. Tick habit

### Expert tasks to test:

- Setting up a character
- Check off a daily task
- Creating a new, custom habit
- Invite a friend to join a habit with a unique code
- Tick habit

[TURN OFF DEVICE]

- Tick habit from new habit landing page

### Goals

- Ease of use in the onboarding and sign up progress (Task 1)
- Ease of use for the habit page (Task 6, )
- Ease of use of home page (Task 5-7)
- Learnability of the home page (Task 5)
- Utility in the statistics page (Task 10)
- Learnability of the avatar page (Task 9)
- Memorability of how to use habit page (Task 8)

# D. Usability Testing

## D.3.1 Round 2 Usability Testing Results - Expert - Mobile - Data Summary

Homepage freedom and exploration

- H3: User control and freedom
- Improvement: Add in the components to allow users to navigate and get familiar with the systems and functions
- Severity: 2

CTA on home page to habit page

- H5: Error prevention
- Improvement: Improve UI and increase hierarchy of text to improve CTA
- Severity: 1

Freedom to input custom days

- H3: User control and freedom
- Improvement: Add variable and components to keyboard and connect to string to display a custom duration
- Severity: 2

Freedom to click other buttons and options

- H3: User control and freedom
- Improvement: add a frame which shows an empty library page
- Severity: 2

Freedom to input and click other buttons and options

- H3: User control and freedom
- Improvement: allow users to add friend from email and from friends list
- Severity: 2

Expand prototyping features to test new social aspects like messages

- H3: User control and freedom
- H1: Visibility of system status
- Improvement: Make the messages accessible and add an additional step in adding a friend which requires the user to wait for their friend to accept, this should be prototyped with a time and small notification like pop-ups when a friend accepts or declines an invitation
- Severity: 3

Unable to scroll and some features are behind others

- H7: Flexibility and efficiency of use
- Improvement: need to make it scrollable, allow users to see how far the end is. The messages is blocking off part of the lily pad and character, so scrolling will allow them to see more
- Severity: 4



# D. Usability Testing

## D.3.3 Round 2 Usability Testing Transcript - Expert Discussion

Unknown Speaker 0:03

Okay

Speaker 1 0:07

so just to go over the question I asked again so you guys touched on a bit but what else needs to be improved in the signup process

Unknown Speaker 0:19

status of like like it was like the but if I have to like maybe having like a stable

Speaker 2 0:33

I guess like when the keyboard comes up and I put my email in, I found it's like my that as well. When I hit return, I don't want that to be the button to get me to the next page or have it not there at all. Like when he returned, and then I hit continue. I feel like that's a step that needs to be that can be avoided. You can just like yeah, have you ever returned equals I guess the only other thing. I guess I talked about this a little bit in my notes as well. Just like the whitespace and the visualisation. Like it doesn't really communicate the same vibe as the rest of them based on like colour and what the apps have got, like the branding could be a little bit more consistent with the rest of it.

Unknown Speaker 1:20

I think it's both like the logos

Speaker 3 1:22

of the other company are very different and they take up a lot of space, maybe like doing another logo, your style guide your branding, but like obviously that logo

Speaker 2 1:38

is that I guess just noticing now, I guess we should be looking at as if I'm at this they don't have an account register is a little small

Speaker 1 1:51

so the next question I have for you guys today both features are what you guys saw tested, most refined

Unknown Speaker 2:06

throughout the whole lot.

Unknown Speaker 2:09

Sign up

Unknown Speaker 2:18

the moving stuff is pretty good. But

Speaker 2 2:25

also the avatar. The Avatar pages Yeah, really easy to go through. Like yeah, it's integrated well, gives them like it really shows the reward for your progression within the app

Unknown Speaker 2:38

as well. Because like I don't have a tonne

Unknown Speaker 2:43

of on that. What do you think is the most?

Speaker 2 2:49

I guess like this role has been like the page layouts, a little bit hard to follow. There's a lot going on in them a lot of content, a lot of small writing I feel like it's still good content, but maybe it's like visualising where you're at, or like I'm not really sure if it's needed. Like decluttering a little bit

Speaker 3 3:14

even having like your avatar like appeal instead of a setting somewhere else. And then once you can get rid of that well. Yeah, I find it hard to kind of have like a lot of widgets, especially if it's like something that I'm going to use every day to take things off. Even though you'd have moved around. I think it's going to be

Speaker 1 3:36

a lot of Yeah, that's like like there's a different scenario which like I'm not gonna test you guys on but it like shows with like a face here. But this is just meant to show I guess, like an expansion of like a bunch of stuff. But I do get and yeah, especially what do you think about this process because like I know the guys come into the name just ended up being too lazy to do

Speaker 2 4:02

I guess it depends like what's based on like, like your user bases, like what type of tasks but like weekly goals or larger goals, and I wouldn't be adding like three at one time.

Speaker 1 4:11

Yeah, I got similar feedback. My main goal is more customizable those like you have the option

Speaker 3 4:18

I think with the frequency though I wanted to like be able to select the days like say like, because it's like says like weekly. Like if I would have to settle on Tuesday and then select repeat weekly for to repeat on Tuesdays. I like to wait for the day to come around. So I think having like a checklist on what goes on once

Speaker 1 4:39

I get me I think part of the weekly BOCES is like more so you have a week to complete it. Then it's like you have more tasks on a Wednesday every week. That makes sense. Yeah, that's fair. That's fine.

# D. Usability Testing

## D.3.2 Round 2 Usability Testing Results - Expert - Watch - Heuristic Evaluation

Severity scale:	0 = Non issue	1 = Minor issue	2 = Somewhat of an issue	3 = Issue that needs to immediately be fixed	4 = Major issue that needs to be fixed
-----------------	---------------	-----------------	--------------------------	--	--

	H1: Visibility of system status	H2: Match between system and the real world	H3: User control and freedom	H4: Consistency and standards	H5: Error prevention	H6: Recognition rather than recall	H7: Flexibility and efficiency of use	H8: Aesthetic and minimalist design	H9: Help users recognize, diagnose, and recover from errors	H10: Help and documentation		Reccomendation	Severity Rating
Task 1: Setting up a character													
Issue: Potentially unsure where to tap to continue							Make more clear that users can tap anywhere to proceed to the next step					Add some text to say "tap anywhere to continue"	1 = Minor issue
Task 2: Check off a daily task													
Issue: Homepage is very text heavy						UI should include more symbols to indicate the different fucntions						Add some symbols to each button to indicate their function (eg: settings = cog)	2 = Somewhat of an issue
Issue: Unsure as to whether or not I successfully checked off task		System did not show tick										Ensure that the system reflects the user input by making sure the tick is shown in the system's response	4 = Major issue that needs to be fixed
Task 3: Cretaing a new, custom habit													
Issue: Unsure what homepage button would let me create new habit						Button make it clearer that by clicking it, a new habit can be created						Rephrase the button on it's first showing to say "create new habit" or something similar	3 = Issue that needs to immediately be fixed

# D. Usability Testing

## D.3.2 Round 2 Usability Testing Results - Expert - Watch - Heuristic Evaluation

Task 4: Inviting a friend to join habit with unique code													
Issue: Initially hard to find where to add friend	Scroll required to see "add friend" button"											Add prompt that indicates to users that they can scroll if they haven't interacted with the page for however long	1 = Minor issue
Issue: Unsure where I would find code to input										Unsure where on this device (as well as a friend's device) where the code to input would be.			3 = Issue that needs to immediately be fixed
Task 5: Check off whether habit had been completed													
Issue: Character progress didn't show when I check off that I had done the habit		Character should move forward a liypad to show that the user had check that they had completed the habit										Ensure that the system is responsive to clicking the check button by moving the character forward	4 = Major issue that needs to be fixed
Issue: Number at the top didn't change after showing I had completed a task		Number should change at the top to indicate however many days the user had completed their task (after ticking)										Ensure that the system is responsive to clicking the check button by changing the number at the top	4 = Major issue that needs to be fixed
Issue: A lot of navigating required to tick of a habit (the app's main function)	Ticking off a a habit should be one of the first frames the user sees.											Add a page that shows on first log on that prompts users to tick their habit.	3 = Issue that needs to immediately be fixed

# D. Usability Testing

## D.3.2 Round 2 Usability Testing Results - Expert - Watch - Post Heuristic interview

Yasmine: Tester, Sienna & Elly: Experts

Yasmine: So now that you've tested the features of the application, I'll just ask a few more questions about each feature for you guys to elaborate on your feedback if that's alright.

Elly: Yeah sure.

Yasmine: So with the setting up character feature, I just wanted to ask how we could make it clearer for users to know where to tap next?

Elly: Yeah so we said that it might be better if it was stated that users could click anywhere to continue. Even if it was something as simple as just saying "click anywhere to continue". It's only a small note because the mock up moved forward no matter what I clicked anyway.

Sienna: Yeah

Yasmine: Cool. And then for the checking off of the daily task, what did you feel like could be improved?

Sienna: Yeah well the system didn't show when we tried to tick the bubble so I think for your next round of testing, it would be good to make sure that that works haha.

Elly: We also put in a note about the homepage, and how it might be good to add more icons to the buttons, because as of right now, it's very text heavy

Yasmine: Cool, and then what was your feedback for creating a new custom habit?

Sienna: I think we just said that the button that leads you to the habit page should make it clearer that you can create a new habit by going to that page. Even if after a habit has been set, the text on the button defaults back to what you had originally.

Sienna: I think we just said that the button that leads you to the habit page should make it clearer that you can create a new habit by going to that page. Even if after a habit has been set, the text on the button defaults back to what you had originally.

Yasmine: Yeah, and so then what feedback did you have for the inviting friends feature?

Elly: We said that it was initially hard to actually see the "add a friend" button, since you had to scroll down to see it. But also, we know that because it's a watch, it's kinda hard to fit all the elements in the page so we had this as a minor issue.

Yasmine: Cool, and then so finally, how did you find the "checking off habit" feature?

Sienna: So I think for this one we had the most issues, but they mostly pertained to the system's responsiveness. I think the main thing that we think would be cool to add would be to add a frame once the user logs on, asking if they had finished their habit for the day, so that it's the very first thing they see when they open their watch.

# D. Usability Testing

## D.3.2 Round 2 Usability Testing Results - Expert - Watch - Expert Analysis



# D. Usability Testing

## D.4.1 Round 3 Usability Testing Results - User - Mobile - SUS

jack user testing		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
$16 + 18 = 34$ $34 \times 2.5 = 85$		SUS				
1.	I think that I would like to use this website frequently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.	I found the website unnecessarily complex.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	I thought the website was easy to use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.	I think that I would need the support of a technical person to be able to use this website.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	I found the various functions in this website were well integrated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.	I thought there was too much inconsistency in this website.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	I would imagine that most people would learn to use this website very quickly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.	I found the website very cumbersome / awkward to use.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	I felt very confident using the website.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10.	I needed to learn a lot of things before I could get going with this system.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

rose user testing		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
$15 + 20 = 35$ $35 \times 2.5 = 87.5$		SUS				
1.	I think that I would like to use this website frequently.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	I found the website unnecessarily complex.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	I thought the website was easy to use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.	I think that I would need the support of a technical person to be able to use this website.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	I found the various functions in this website were well integrated.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	I thought there was too much inconsistency in this website.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	I would imagine that most people would learn to use this website very quickly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.	I found the website very cumbersome / awkward to use.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	I felt very confident using the website.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10.	I needed to learn a lot of things before I could get going with this system.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

eleanor user testing		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
$17 + 15 = 32$ $32 \times 2.5 = 80$		SUS				
1.	I think that I would like to use this website frequently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.	I found the website unnecessarily complex.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	I thought the website was easy to use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.	I think that I would need the support of a technical person to be able to use this website.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	I found the various functions in this website were well integrated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.	I thought there was too much inconsistency in this website.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	I would imagine that most people would learn to use this website very quickly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.	I found the website very cumbersome / awkward to use.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	I felt very confident using the website.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10.	I needed to learn a lot of things before I could get going with this system.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# D. Usability Testing

## D.4.2 Round 3 Usability Testing Results - User - Mobile - Observation Data + Score

### User 1 = 85

#### Feature Test 1:

user failed a few times in the intro, clicking the wrong buttons which lead them to the log in page (as the button is under the keyboard pop-up, consider removing this.

User thought there needed to be more visual que for selecting the avatar, the advise was for it to expand and make the other options invisible, and when you de-select it shrinks to original size showing the other avatars again.

#### Feature Test 2

To navigate to habit page they clicked the nav bar, didn't recognise the CTA  
When trying to configure a habit they went to click library first (ADD A EMPTY LIBRARY PAGE)

#### Feature Test 3

No clear issues in this section (I did notice an error with one of my components, I haven't been able to fix this yet but for some reason the string will reset to it's empty state)

He clicked the invite from friends list button instead of the other options, he recognised that he only needed to click either email or unique code to invite them, also was able to recognise and interact with the pending invitation button before quickly proceeding and completing the test

### User 2 = 87.5

#### Feature Test 1:

After learning from mistake in user testing 1 I informed users properly of the limitations of the program and that it is only interactive by clicking. User did not have much issue with sign up but got confused with how to get rid of the keyboard.

User did not like only being able to select one avatar, also thought the error message could look better visually

#### Feature Test 2:

Navigated the home screen for a moment then clicked the CTA button. Also tried to click the library button (reoccurring issues) but quickly realised she can't click it and manually entered everything. She felt the dropdown's felt 'off' (maybe change the notifications to enable / disable and input for duration for habits to a text box or something else)

Tried to save the habit first before they clicked start.

#### Feature Test 3

Didn't notice the invite straight away but did within a few seconds. Entered the unique code as an option

### User 3 = 80

User didn't have any clear issues in registering account, did try to click keyboard on screen for naming and got the error message when they selected a different character but overcame this swiftly.

#### Feature Test 2

Clicked the CTA and navigated to habit page easily, configured a habit but also clicked habit library first.

#### Feature Test 3

Clicked invite straight away, went to invite friends library than went back and clicked email for input.

## Average Sus Score:

# A: 84.16666 (recurring)

# D. Usability Testing

## D.4.3 Round 3 Usability Testing Results - User - Mobile - Analysis

### Usability insights table

Severity Rating	Severity Rating: LOW	Severity Rating: LOW	Severity Rating: MEDIUM	Severity Rating: MEDIUM
Frequency of use	Frequency of use: LOW	Frequency of use: LOW	Frequency of use: MEDIUM	Frequency of use: MEDIUM
Impact when unsuccessful	Impact when unsuccessful: LOW	Impact when unsuccessful: LOW	Impact when unsuccessful: LOW	Impact when unsuccessful: MEDIUM
Broader purpose of the solution	Broader purpose of the solution: LOW	Broader purpose of the solution: MEDIUM	Broader purpose of the solution: MEDIUM	Broader purpose of the solution: MEDIUM
Usability Improvements	Make the keyboard automatically close instead of required them to press enter (Efficient) (Learnability)	User wanted the selected avatar to be more clear by expanding so other ones cant be selected (utility) and wanted the error message to be more clear (learnability)	A habit library page should be created and be empty as it is for a new user scenario (learnability) (utility) and change notifications button to a slider or checkbox instead of dropdown (learnability)	Due to the habit library button being non-functional and looking similar to the friends list button, user assumed it doesn't work, to fix this add habit library (learnability)
Feature	Feature: Create Account	Feature: Create Account	Feature: Add new Habit	Feature: invite friend to Habit
Task	Task: Register an account	Task: Select Avatar	Task: Configure Habit	Task: invite friend with different options
Test Goals	Is the sign up process easily recognizable and fast and efficient for users to use? (Efficient)	How effective is the final account creation summary at informing the user of options? (Effective)	Is it easy to customise and configure a new habit? (Utility) (Effective) (Learnability)	Can user's remember to go back to Habit page and recognise the Invite button? (Memorability)
Data	<p><b>Observation User 1:</b> user failed a few times in the intro, clicking the wrong buttons which lead them to the log in page ( button is under the keyboard pop-up)</p> <p><b>Observation User 3:</b> Did try to click keyboard on screen to input name.</p> <p><b>Observation User 2:</b> User did not have much issue with sign up but got confused with how to get rid of the keyboard.</p>	<p><b>Observation User 2:</b> User did not like only being able to select one avatar, also thought the error message could look better visually</p> <p><b>Observation User 1:</b> User thought there needed to be more visual que for selecting the avatar, the advise was for it to expand and make the other options invisible, and when you de-select it shrinks to original size showing the other avatars again.</p> <p><b>Quote User 1:</b> "I didn't realise I had already selected an avatar"</p>	<p><b>Observation User 1:</b> When trying to configure a habit they went to click library first (ADD A EMPTY LIBRARY PAGE)</p> <p><b>Observation User 3:</b> Clicked the CTA and navigated to habit page easily, configured a habit but also clicked habit library first.</p>	<p><b>Observation User 2:</b> Also tried to click the library button (reoccurring issues) but quickly realised she can't click it and manually entered everything.</p> <p><b>Quote User 2:</b> "The notifications box doesn't feel right and blocks off the other button"</p>

# D. Usability Testing

## D.4.4 Round 2 Usability Testing Transcript - Expert Discussion

Speaker 2 4:53

Yeah, so maybe a differentiation between daily goals and weekly. Yeah. I guess that's also on his page while we're here. The drop down as like something that people have seen before. Probably also probably easier. Also easy to use, maybe a slider or a toggle button, rather than a drop down. dropdowns use us for a lot information and when you've only got two options, it might sort of have an offer or something like that. Just like to just like to simplify what's on the screen.

Unknown Speaker 5:25

Yeah, I completely understand I'm

Speaker 3 5:27

also having like weekly goals after we've already like you haven't battled. So maybe it will need to have one. Always sorry to continue

Speaker 2 5:39

down a little bit about it. Because you add weekly goals. That for me is the user adding them to the screen and then adding them again.

Speaker 1 5:46

So do you think it should just simply once you complete it, it just appears at the bottom of what it was?

Unknown Speaker 5:51

Did it was there another button

Unknown Speaker 5:56

I don't know what that's talking about now.

Speaker 2 6:03

I feel like I know he tried to communicate with this. You can drag it and put it wherever you want. Which it was I guess it's hard to communicate.

Unknown Speaker 6:12

Yeah. Maybe drag it around like

Speaker 2 6:16

that's where like I've seen maybe just make it appear or have it on here greyed out and then he can and then it becomes fully gold or whatever. Yeah, I noticed something, something like that.

Speaker 3 6:29

So I get the daily cost as well. That was like putting your completed costs. At the bottom. Yeah, we're gonna have to scroll down.

Unknown Speaker 6:40

Okay, yeah, okay. Good. I also got that

Unknown Speaker 6:50

you're gonna hate how much data

Speaker 1 6:54

Okay, so that's all the questions I had. But if you guys want to kind of discuss, I guess,

Unknown Speaker 6:59

information, I'm really sure how do we want to just quickly

Speaker 3 7:11

log in with other ways. The status of welding process Mr. Logan noxion Oh

Speaker 2 7:22

yeah, I feel like I had someone know like, status in the US like maybe visualise that that verification has been sent. Like, I was just like visualising the steps, that progression that I've taken. It's better for the user to feel like that progress. Yeah, little bit of text size and then yeah, just the hierarchy on the homepage.

Speaker 3 7:49

quite big. And we have something already quite small. Like I feel like the pie chart is too big. So

Speaker 1 7:54

that looks slightly smaller. Yeah, because the margins are good. Yeah.

Unknown Speaker 8:03

stuff. I think the weekly goals what patients do you have

Speaker 3 8:11

I think I misinterpreted it sounds like it was like more of like a repeat weekly thing rather than like your goals for the week. So it's like taking pricing.

Speaker 2 8:18

Yeah, maybe have a pop up that might be explaining. Doing maybe something a little bit more supportive, like that. avoids confusion. And then just

Speaker 3 8:28

like, maybe like concerning that they've added teaching and that's hard to like communicate almost

Unknown Speaker 8:39

the same thing as well.

Unknown Speaker 8:41

Just having more information about what you're adding.

# D. Usability Testing

## D.4.4 Round 2 Usability Testing Transcript - Expert Discussion

maybe like, more like an animation that's like arrows or like throughout like showing

Unknown Speaker 9:03  
was actually

Speaker 3 9:10  
the settings were hard, but I feel like if I saw that I would assume but like rooting around like change the visuals and how people work. But then like seeing it at home I was like okay, that makes sense.

Speaker 2 9:28  
Yeah, the same thing is like the title might be I said maybe could use symbols to add stuff. Maybe have a plus button instead the ad and then we'll have the Edit home in another drop down menu

Unknown Speaker 9:43  
in my earlier tested

Speaker 2 9:47  
right, but that's maybe it could have been like a larger different colour Yeah. But yeah, something to consider, I guess. For it was pretty simple, just that identifying things quickly and make sure that you're not making errors

Speaker 2 10:14  
Yeah, the only point I had was like visualising your money, like the money is the incentive. So maybe like it's very, like, Find Funders not that bowl. And this is like, this is what we're trying to achieve. We're trying to get these models larger and larger in the hierarchy. Maybe some sort of like when you complete a task, some sort of visualisations showing you that you like getting more

Unknown Speaker 10:50  
went upside of like that, because that was my guess. Most pages. Is there anything else like very specifically?

Unknown Speaker 10:58  
I think it was pretty well, actually.

Speaker 3 11:00  
Accessories maybe should be like a big just because it's the same font as the buttons or even a little small.

Unknown Speaker 11:09  
It's just like, I only use like bold or not bold and then it's like 20 for like

Unknown Speaker 11:23  
the titles could be larger.

Speaker 3 11:25  
I think this book is like yes, semis medicals on that sides there on that size. I put like one more like differentiations like what

Speaker 1 11:40  
I think I guess I didn't want to just know in general at the last page No, there wasn't really any like problem or anything because

Unknown Speaker 11:53  
there are fields

Speaker 1 12:00  
so it is like I guess I didn't develop the torch populace really know exactly what

Unknown Speaker 12:05  
to do. I think like sounds like a good like, I don't need any. It was just like the pie chart was a bit confusing. Okay. I'm assuming it means like your daily tasks and

Speaker 3 12:25  
the daily completion rate, I find it a bit weird that starts on Friday. That's a very significant I feel like I just need to start on Monday or Sunday. And then because this one I feel like especially for the sponsor is smaller and like in a lighter colour. It should be it's a real so maybe like making it like each day like a Sunday

Unknown Speaker 12:49  
or even the percentage

Speaker 3 12:52  
or even both, but just having like the percentage like the date and the text and like say block and then there's like the background changes shape

Speaker 2 13:02  
or even simplify. Have an average of how you do just like a boss and the only other thing I had was full time points like a little bit of confused full time is not like a common way of telling your points I would say total points. Yeah, that's right. Yeah. That's just

Unknown Speaker 13:30  
I mean, that was all

Unknown Speaker 13:41  
screwed up.

Transcribed by <https://otter.ai>

# E.1 References

Anders Toxboe, & Anders Toxboe. (2020). Design patterns. Ui-Patterns.com. <https://ui-patterns.com/patterns>

Assistant Secretary for Public Affairs. (2013, June 30). Contextual Interview. Wwww.usability.gov. <https://www.usability.gov/how-to-and-tools/methods/contextual-interview.html#:~:text=In%20a%20usability%20test%2C%20you>

Flora. (2023, April 7). Flora - Green Focus. App Store. <https://apps.apple.com/us/app/flora-green-focus/id1225155794>

Ghazarian, A. (2014, September 29). The UX Challenges of Smart Watches. Web Design Views. <https://webdesignviews.com/the-ux-challenges-of-smart-watches/>

Habitica. (n.d.). Habitica: Gamified Taskmanager. App Store. <https://apps.apple.com/us/app/habitica-gamified-taskmanager/id994882113>

Harley, A. (2017, October 29). Ideation in Practice: How Effective UX Teams Generate Ideas. Nielsen Norman Group. <https://www.nngroup.com/articles/ideation-in-practice/>

Hayes, A. (2022, January 24). The Shortening Human Attention Span. Wyzowl. <https://www.wyzowl.com/human-attention-span/#:~:text=According%20to%20research%2C%20our%20attention>

Moran, K., & Gordon, K. (2023, June 25). How to Conduct a Heuristic Evaluation. Nielsen Norman Group. <https://www.nngroup.com/articles/how-to-conduct-a-heuristic-evaluation/>

Neilson, J. (1993). Usability Engineering : Book by Jakob Nielsen. Nielsen Norman Group. <https://www.nngroup.com/books/usability-engineering/>

Nielsen, J. (2012, January 15). Thinking Aloud: The #1 Usability Tool. Nielsen Norman Group. <https://www.nngroup.com/articles/thinking-aloud-the-1-usability-tool/>

Nir&Far. (2015, March 3). The Psychology of Notifications: How to Send Triggers that Work. Nir and Far. <https://www.nirandfar.com/notifications-that-work/>

Sáez, F. (2019). Micro-Tasks. The Pleasure of Checking Off. Facilethings.com. <https://facilethings.com/blog/en/micro-tasks>

Salazar, K. (2022, February 13). Evaluate Interface Learnability with Cognitive Walkthroughs. Nielsen Norman Group. <https://www.nngroup.com/articles/cognitive-walkthroughs/>

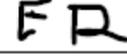
Strong, R. (2022, September 19). Your Habits Matter More Than You Might Think — Here's Why. Healthline. <https://www.healthline.com/health/mental-health/why-are-habits-important>

## E.2.1 Team Charter

Name	Responsibilities
Emily	Mobile prototyping Mobile user testing (3 minimum) Mobile expert testing (2 minimum) Mobile iterations Record / Help Promotional Video Set up visual report Add relevant info in the visual report
Yasmine	Watch prototyping Watch user testing (3 minimum) Watch expert testing (2 minimum) Watch iterations Edit Promotional Video Add relevant info in the visual report
Emma	Desktop prototyping Desktop user testing (3 minimum) Desktop expert testing (2 minimum) Desktop iterations Record / Help Promotional Video

### Our Commitment to the Charter

We agree with the answers in our charter and will try our best to uphold them.

Name	Signature
Emily	
Emma	
Yasmine	

Date signed: 12/10/23

## E.2.2 Team Charter

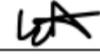
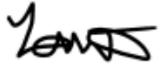
This was a more in-depth team charter developed due to issues with Emma, she said she couldn't sign it due to email issues but said she agreed to the terms.

To note: she did not finish or contribute to any of the listed responsibilities

Name	Responsibilities
Emily	Mobile prototyping Establish usability testing protocol. Mobile user testing (3 minimum) Mobile expert testing (2 minimum) Mobile iterations (2 minimum) Plan our promotional video. Record in-person scenes for promotional video Set up visual style for final report. Complete Introduction and Reflection section Set up Testing & Iterating template. Set up Usability testing protocol pages for each round of testing. Work on pages dedicated to representing mobile data analysis + iterations + final product, Setup Appendix template and add A1+A2 work into the appendix. Add individual work into appendix
Yasmine	Watch prototyping Establish usability testing protocol. Watch user testing (3 minimum) Watch expert testing (2 minimum) Watch iterations (2 minimum) Plan our promotional video. Edit + Produce + Submit Promotional Video Complete Concept development section in visual report Work on pages dedicated to representing watch data analysis + iterations + final product. Add individual work into appendix
Emma	Desktop prototyping Desktop user testing (3 minimum) Desktop expert testing (2 minimum) Desktop iterations (2 minimum) Work on pages dedicated to representing watch data analysis + iterations + final product. Add individual work (+A2 work we don't have access to) into appendix

### Our Commitment to the Charter

We agree with the answers in our charter and will try our best to uphold them.

Name	Signature
Emily	
Emma	
Yasmine	

Date signed: 2/11/23.

Emma did not sign this but said she read through it when I emailed it to her (she said she had issues with email)