



# thyme

## **Low-fi Prototyping & Pilot Usability Testing**

Anna Gao, Becca Dia Crosse, Cyan DeVeaux, Hunter Zhang

# Team Pillionaires



**Anna**



**Cyan**



**Dia**



**Hunter**


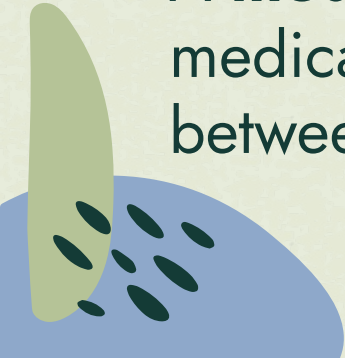


## Problem:

Communication gap between the medical professionals and the patients with limited knowledge about their medication

## Solution:

A **medication journal** that helps patients track their medication use and serves as a medical "translation" layer between patients and doctors

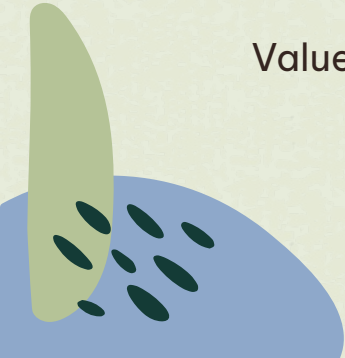




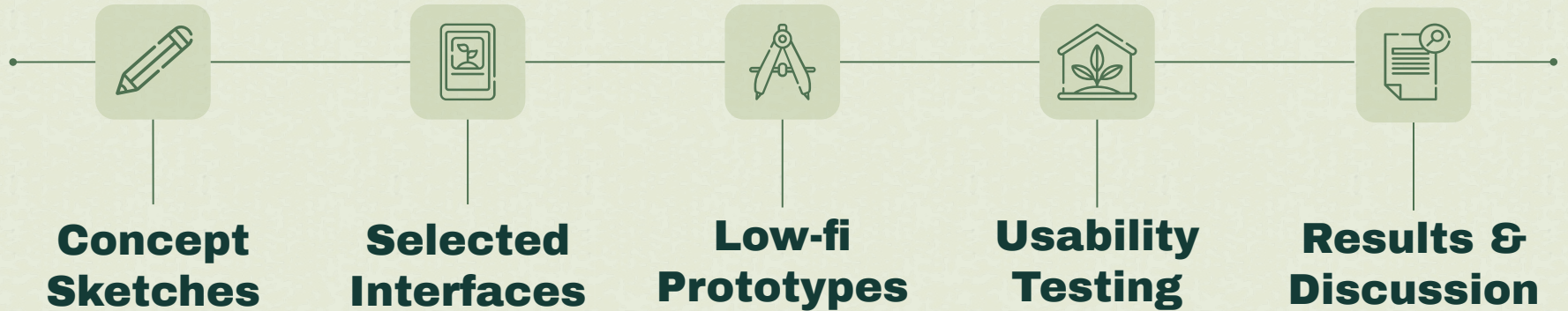
# thyme

**Take thyme. Be well.**

Value Proposition: To keep a “streak” that increases every time a user successfully fills out their medication journal or takes their medication for that day.



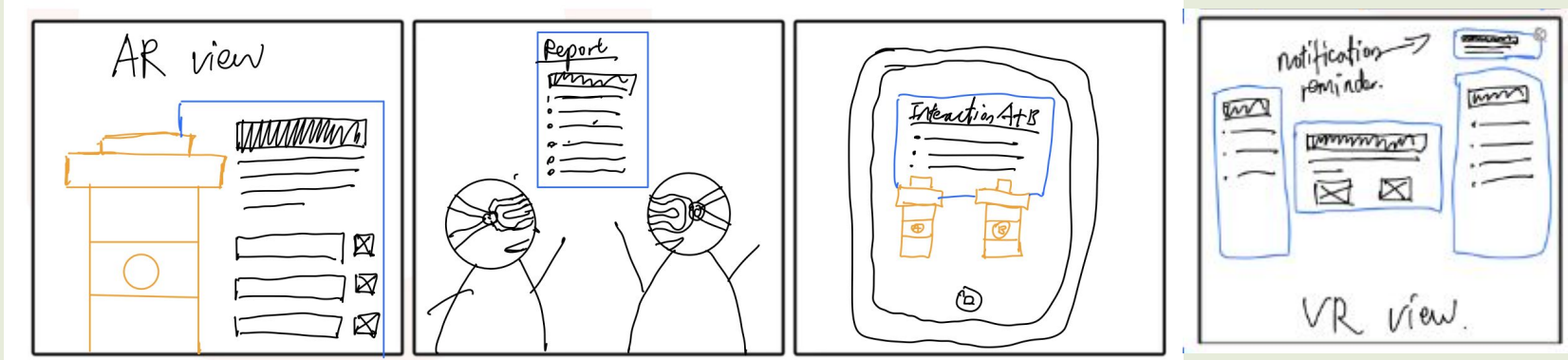
# Outline of Talk



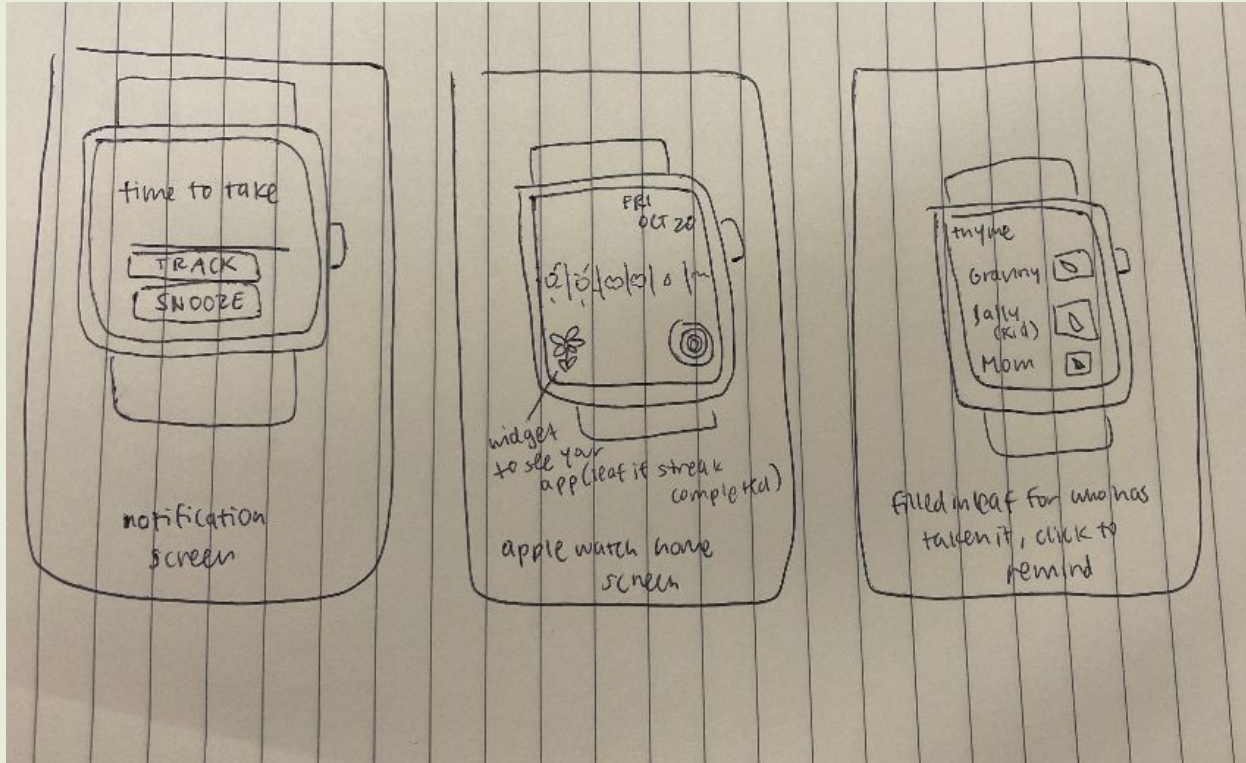


**01**

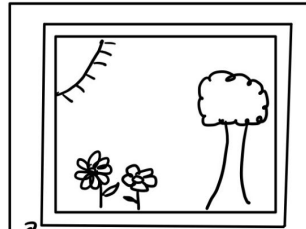
# **Concept Sketches**



# Concept 1: AR/VR



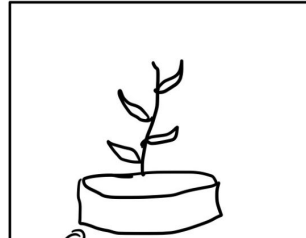
## Concept 2: Apple Watch



Ambient painting that updates imagery based on medication use and user goals



Corresponding App that tracks medication use



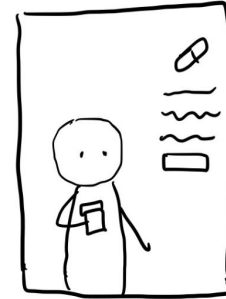
Voice assistant that looks like a plant, tracks medication use, & answers Q's



Plant that gradually grows based on medication goals

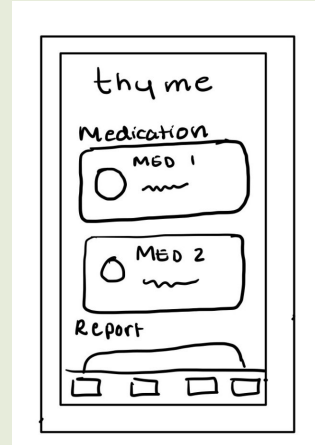


Projection of text reminding users to take medication

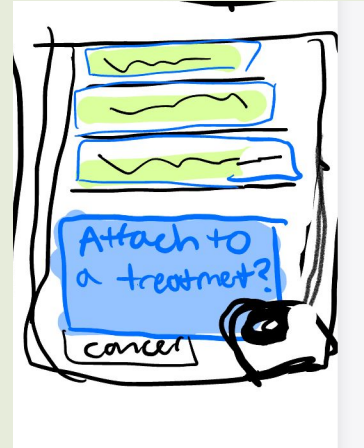


Smart Mirror Cabinet that tracks medication usage

## Concept 3: Ambient Computing

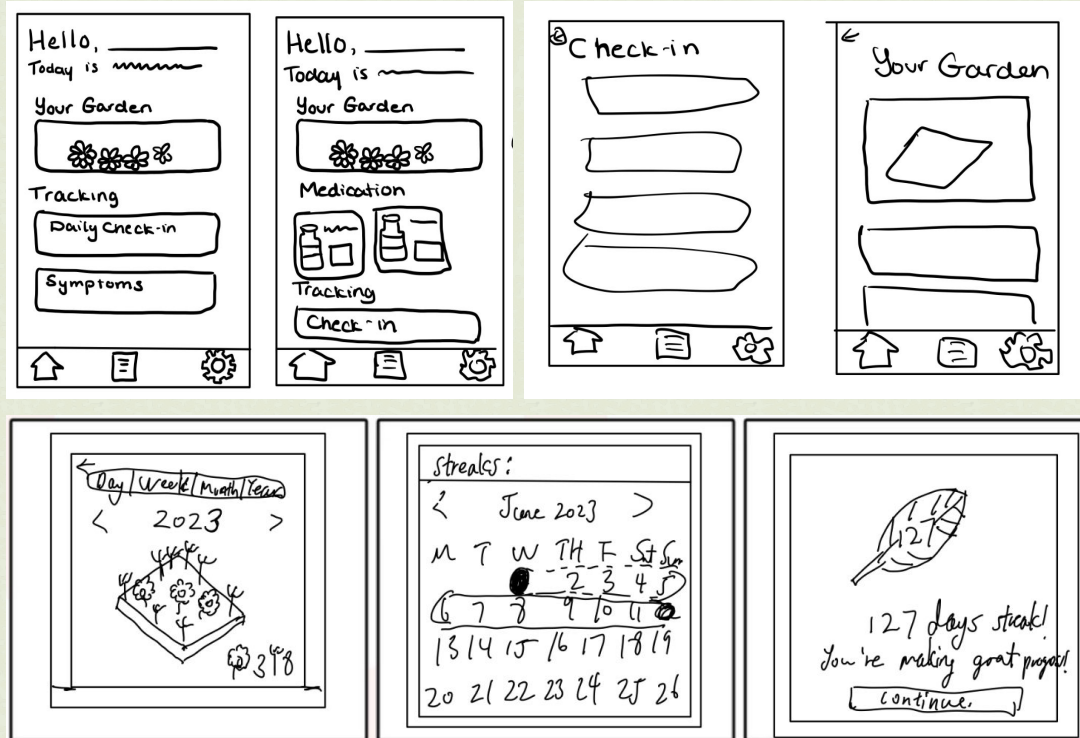


## Concept 4: Mobile App

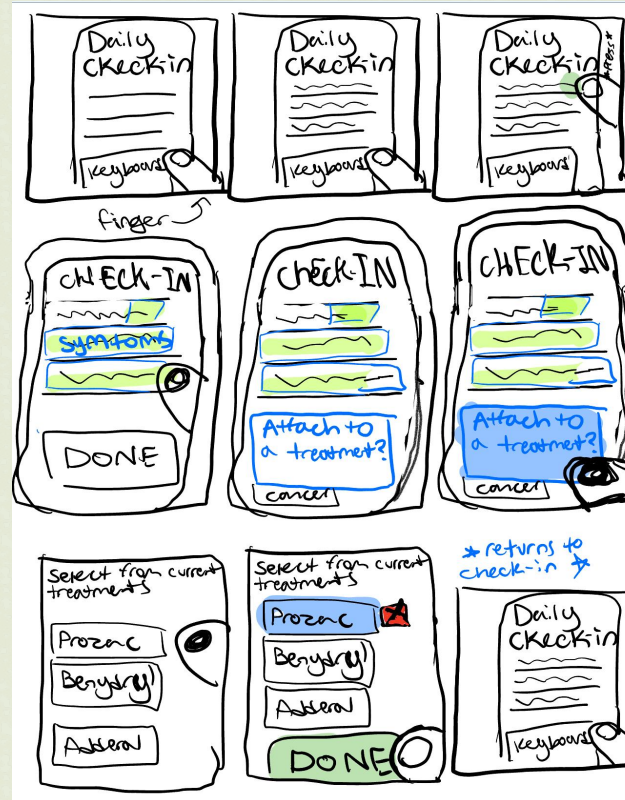


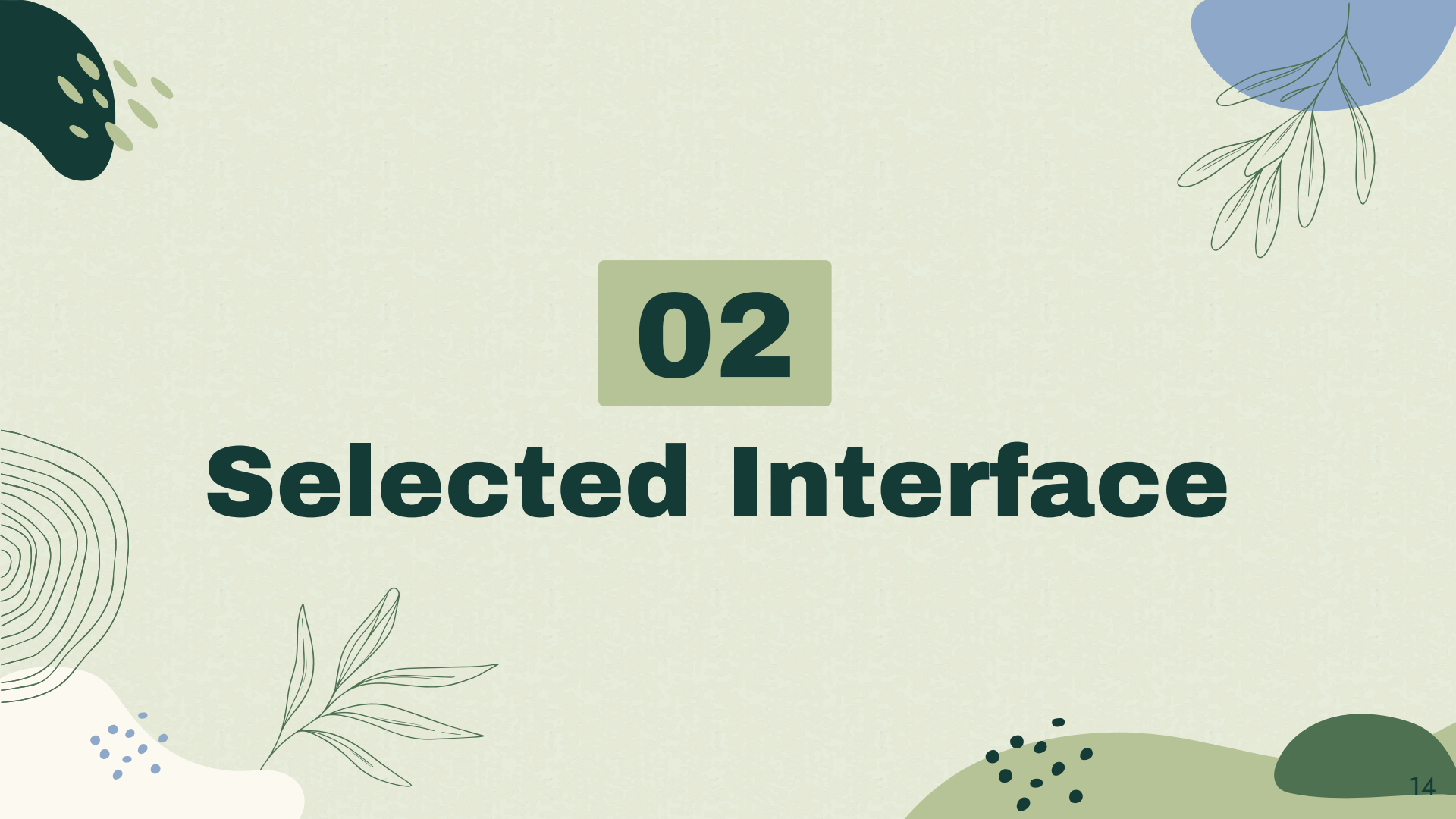
## Concept 4: Mobile App

# Garden Realization



# Symptom Tracking Realization





**02**

# **Selected Interface**

# Garden Realization

## Pros

### Visualized accomplishment:

Visual reward system shows the streak -> extra motivation

### Appealing to audience:

Users may find gamified feature engaging

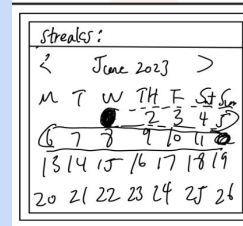
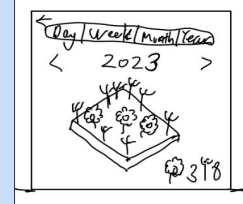
## Cons

### Easy to abuse:

Users may abuse gamified system

### Perception Limitation:

Prior tech experience may impact understanding of gamified elements



# Symptom Tracking Realization

## Pros

### Intuitive Design:

Way to understand, without extensive training.

### Easy Usability:

One-click track the streak.

### Professional report:

Bridges the communication gap.

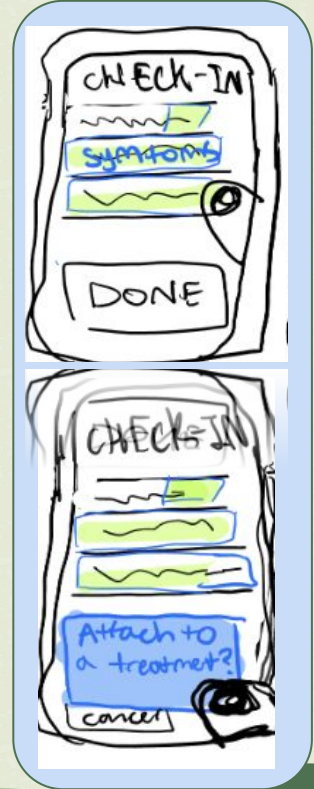
## Cons

### Requires manual input:

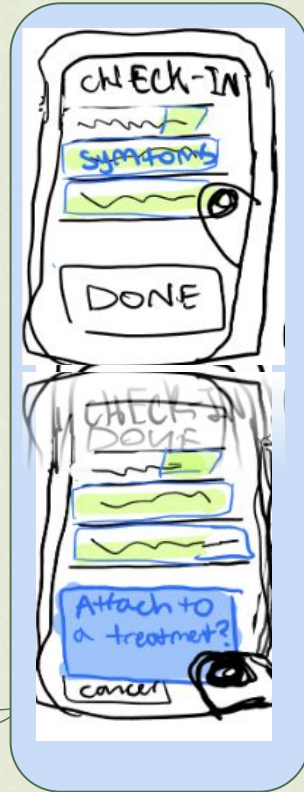
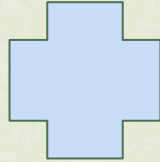
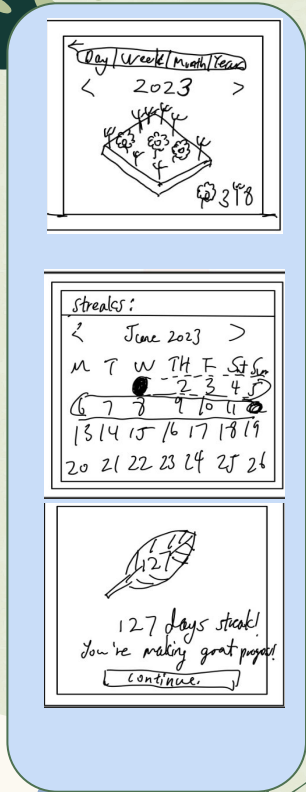
Users may find typing check-ins tedious

### Input Dependent:

Quality of report is dependent on user input.



# Final Realization



thyme :)



**03**

# **Low-fi Prototype**

## Simple Task

Check-in on medication use



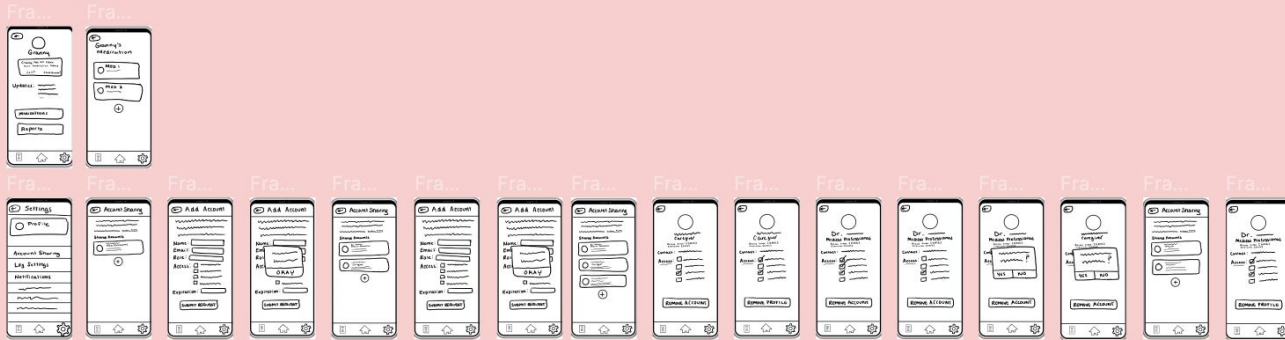
## Moderate Task

Logging symptoms and how a patient is feeling

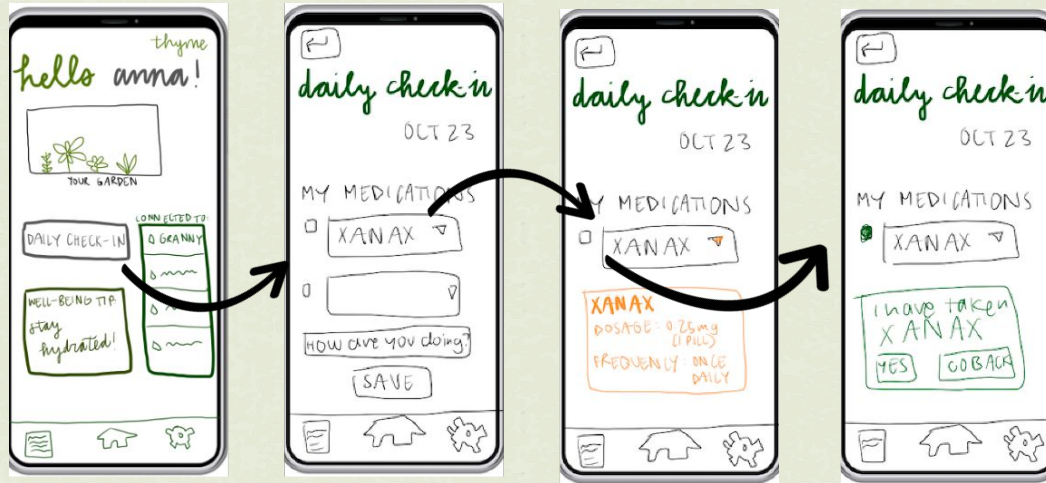


## Complex Task

Tracking and sharing medication usage with another person

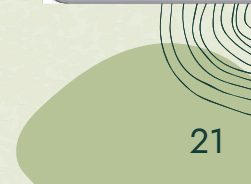
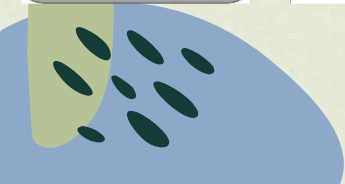


# Simple Task: Daily Check-in on Medication Use



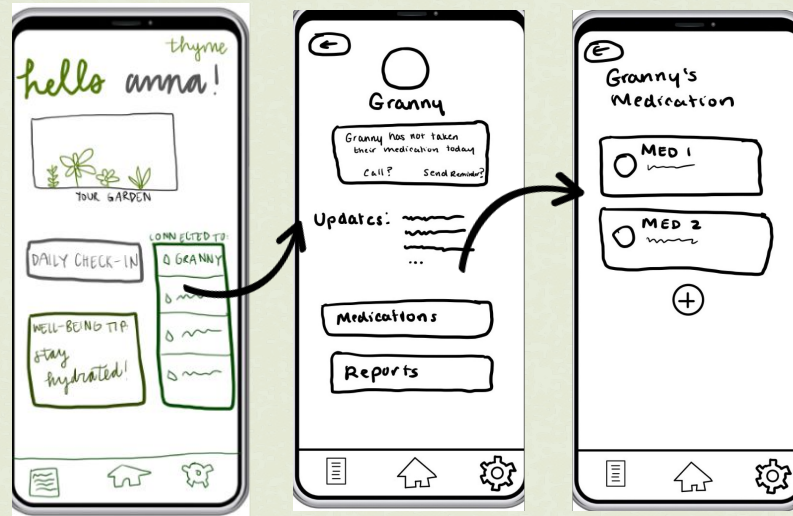
# Moderate Task:

Logging symptoms and how a patient is feeling



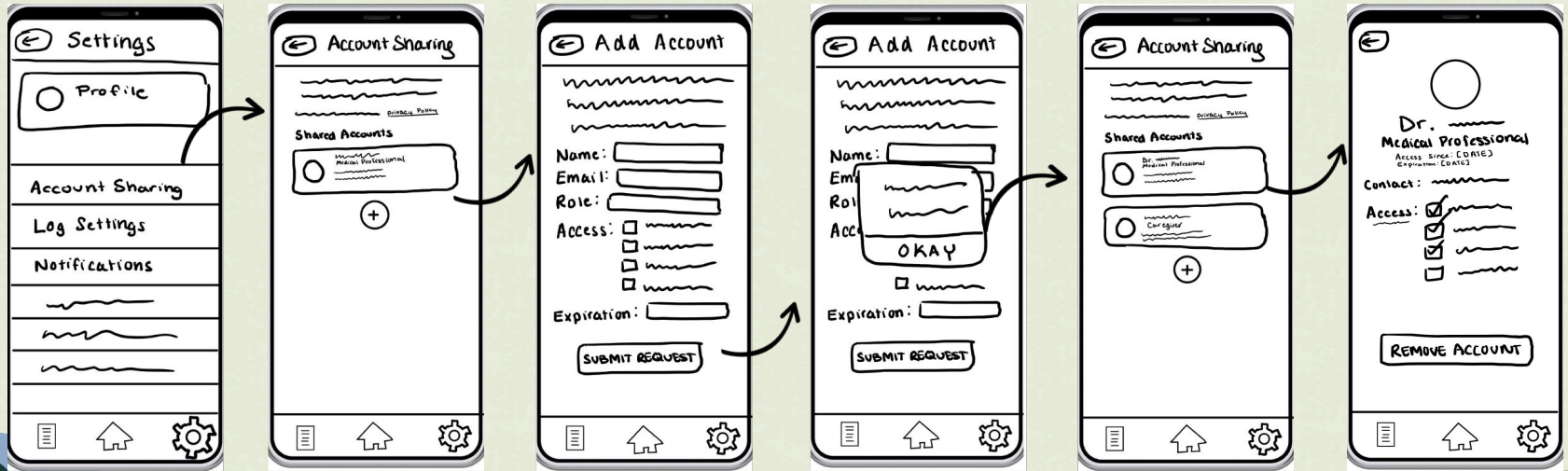
# Complex Task:


## Tracking and sharing medication usage with another person



# Complex Task:

Tracking and **sharing** medication usage with another person





**04**

# Usability Testing

# Participants



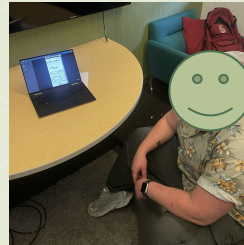
**Katrin**

Middle-aged  
Stanford Staff Member  
Met remotely  
Compensation: None



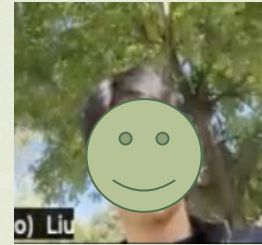
**Amaru**

21 years old  
Stanford student  
Met in person  
Compensation: None



**Mads**

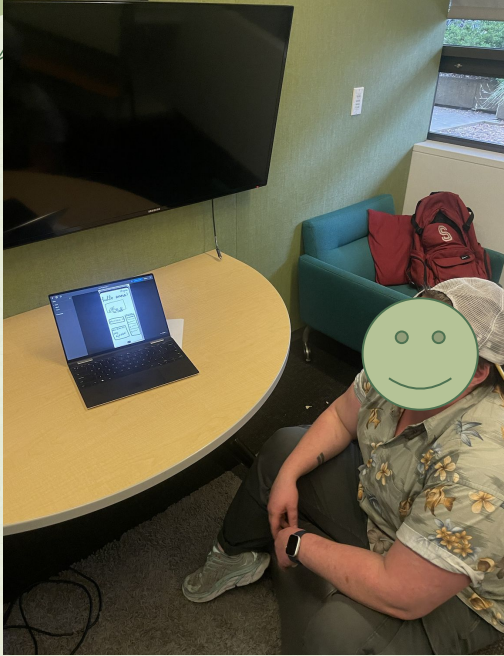
~30 years old  
Stanford Staff Member  
Met in person  
Compensation: None



**Leo**

23 years old  
Duke GSB Student  
Met remotely  
Compensation: None

# Environment and Apparatus

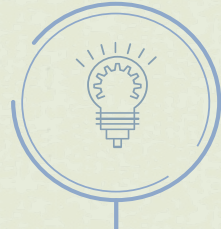


# Procedure and Process



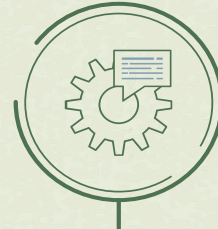
## Introduction

Greeted participants and introduced project



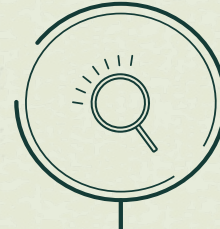
## Demo

Provided a demo of the prototyping system



## Test

Assigned three tasks for the participant to complete



## Questions

Asked follow-up questions about their experience

*Team roles varied by participant, everyone had the chance to serve as facilitator and notetaker/observer*

# Usability Goals + Key Measurements

## Pleasant

Measured through:

- Post-testing survey

## Efficiency


Measured through:

- Time per task completed

## Discoverable

Measured through:

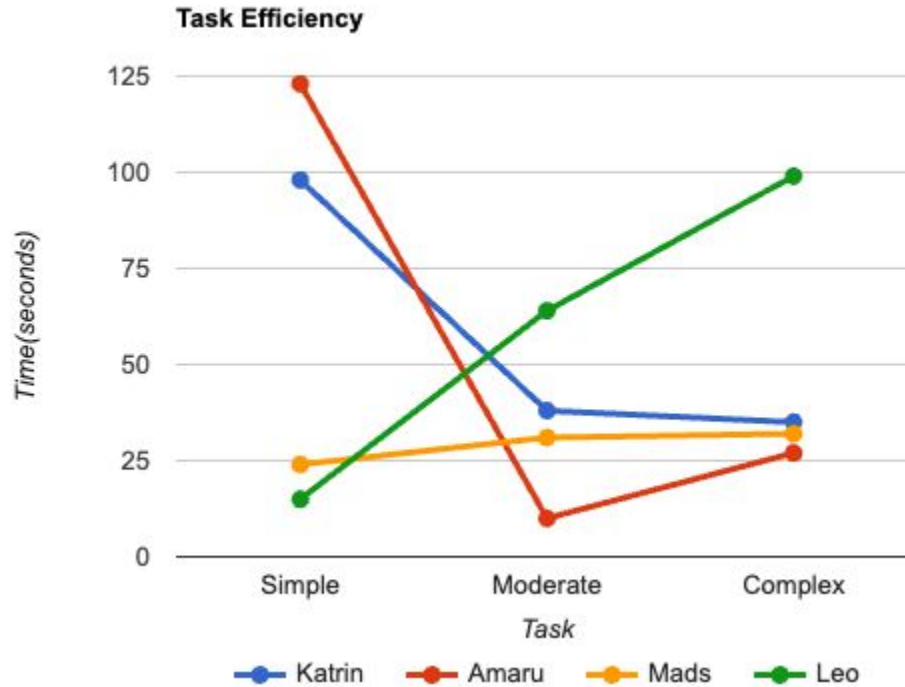
- Screens accessed



**05**

# **Results & Discussion**

# Usability Goal #1: Efficiency



# Usability Goal #2: Discoverability



## Task 1:

A couple of participants did not discover the feature to view more information about their medication



## Task 2:

No one discovered highlight feature



## Task 3:

A couple of participants did not discover the ability to modify the settings of a shared account

Other: Only one person discovered the garden, no one discovered account tracking

# Usability Goal #2: Discoverability



## Task 1:

A couple of participants did not discover the feature to view more information about their medication



## Task 2:

No one discovered highlight feature



## Task 3:

A couple of participants did not discover the ability to modify the settings of a shared account

Other: Only one person discovered the garden, no one discovered account tracking

# Usability Goal #3: Pleasingness



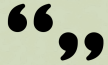
**“calm”**

**“clearly organized”**

**“intuitive”**

**“intentional”**

# Tensions



## Unclear Phrases

Uncertainty surrounding how certain prompts were phrased



## Accessibility

Issues with font size and visual clutter



## Access Points

Conflicting viewpoints on having multiple vs one way of accomplishing a task



## Unclear Iconography

Issues identifying the meaning and function of specific icons/buttons



*“What’s that doodad in the corner?” - Amaru*

*“I can understand why this page symbol would be a log. But that wasn’t 100% clear to me.”  
- Katrin*



# Implications +



## Findings

## Implications

1. Transparency with share feature
2. Appropriate gamification amount



Good design intentionality



# Implications +

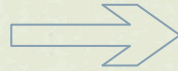


## Findings

1. Transparency with share feature
2. Appropriate gamification amount



1. Completion time ↓ after familiarized with screens
2. Tasks completed in short amount of time



## Implications

Good design intentionality

Intuitive design & learnability



# Implications +



## Findings

1. Transparency with share feature
2. Appropriate gamification amount



1. Completion time ↓ after familiarized with screens
2. Tasks completed in short amount of time



1. "Calm" and "casual" descriptions of experience
2. Multiple nature+happy emojis



## Implications

Good design intentionality

Intuitive design & learnability

Calming/ Pleasant overall experience  
Clear brand identity



# Implications -



## Findings

1. Confusion on clickability
2. Dislike of icon visuals



## Implications

Clearer iconography



# Implications -



## Findings

1. Confusion on clickability
2. Dislike of icon visuals

1. "How are you doing"
2. Small font / features



Clearer iconography



Functionality phrasing & access issues



# Implications -



## Findings

1. Confusion on clickability
2. Dislike of icon visuals

1. "How are you doing"
2. Small font / features

1. Tension: multiple access points
2. Cluttered home page



## Implications

Clearer iconography

Functionality phrasing & access issues

Design inefficiencies

# What's Left Unrevealed?

- **How possible is exploration in this context?**
  - Did having tasks reduce exploration?
- **What is the best UI layout for general users?**
  - Mixed responses to design components
- **Would an older demographic respond the same?**
  - All participants aged <60

# Results based Design changes

- **Make “Garden” feature more prominent**
  - Users didn’t explore, but liked it once found
- **Improve highlight feature / determine necessity**
  - No participants found, mixed opinions when shown
- **Clean up design + consistency**
  - Received feedback on the untidiness of lo-fi design





# Thanks!

**CREDITS:** This presentation template was created by [Slidesgo](#), and includes icons by [Flaticon](#), and infographics & images by [Freepik](#)

Please keep this slide for attribution



# Appendix

APPS	Pros	Cons!
<b><u>Garden Realization</u></b>	<ul style="list-style-type: none"> <li>- Users may enjoy the visual feedback of a garden growing when accomplishing their goals</li> <li>- The younger patients would love our gamified feature</li> <li>- The users can easily track the number of days of the steak and generate a report from it.</li> <li>- The user can easily generate a professional report with a single click.</li> </ul>	<ul style="list-style-type: none"> <li>- Older patients might not want to use the gamified feature.</li> <li>- The user may want to abuse the gamified system just to plant more thymes.</li> <li>- Users may find completing check-ins tedious</li> </ul>
<b><u>Symptoms Tracker Realization</u></b>	<ul style="list-style-type: none"> <li>- People who take notes would likely grasp the highlight feature easily</li> <li>- It's easy to cancel selections at any time</li> <li>- Features only pop up when certain actions are initiated instead of being there all the time (saves space on UI)</li> <li>- Users can easily return back to the screen they came from without losing progress</li> <li>- Users can easily track how a new medication is making them feel</li> <li>- Users can organize their understandings of different info</li> </ul>	<ul style="list-style-type: none"> <li>- Users may find completing check-ins tedious</li> <li>- user might form incorrect assumptions about their symptoms (maybe would need additional doctor insight here)</li> <li>- User might not provide enough information during their check-in that they can look back on</li> <li>- User might get overzealous with the highlight feature and highlight more than is accurate</li> <li>- User may convince themselves that they are feeling certain things idk</li> </ul>



## **Link to Low-fi Prototype on Figma:**

<https://www.figma.com/file/lheij36RBd3ONuOmxavTFB/Low-fi-prototype?type=design&node-id=0%3A1&mode=design&t=rka54OP9bhPy9D55-1>



# Script

**Greeting Script:** Hello, thank you again for participating in our session. Today, you will be testing out our medication journaling application. To do this, you will be clicking through our digitized paper prototype. We will be asking you to complete a series of tasks to test our application's usability. However, you're welcome to explore as you complete these tasks.

**Demo Script:** First, we will quickly demonstrate how to navigate through our application.

- [Demo how to click on Figma]

**T1 Script:** To begin, the first task you will complete is a daily check-in. Your goal is to log your daily medication use. Please think out loud (say what you're thinking) as you navigate through this task.

**T2 Script:** Thank you for completing the first task (yippee!), in this next task you will logging your symptoms and how you're feeling. Remember to think out loud as you complete this task.

**T3 Script:** Thank you for completing the first two tasks. In the next task, you will be add one additional medical-report sharing account.

**Wrap-up Script:** Thank you for completing all three tasks (yippee x3). After going through this experience, do you have any thoughts, feedback, or questions?

- Q1: How did the visuals make you feel?
- Q2: Are there any aspects you particularly liked?
- Q3: If you were designing this application, is there anything you would change?
- Q4: On a scale from 1-5, how much fun did you have?
- Q5: What emoji does this app remind you of?
- Q6: How intuitive was it to complete tasks/traverse the app?

# Testing Prep- Findings script

## Things to Observe:

- Positive incidents
- Critical incidents
  - usability incidents (not knowing where to go to start a task)
- Usability Goals:
  - Pleasing (high user satisfaction)/fun
    - **Measurables:** facial expressions/body language/tone of voice (how confident they are completing a task) - engagement
      - /qualitative through asking questions
  - Efficiency: How quick users can complete tasks
    - **Measurables:** Time/task completed
  - Discoverable - how many screens does the user go through (that are not part of a task explicitly), i.e. the garden screen
    - **Measurables:** Mark how many of the total screens the user accessed
- Process data (what is happening)
- bottom-line data (time spent per task or # of errors)

# Critical Incidents

Participant	Critical Incident	Severity Rating
Katrin	After selecting their first medication, they had trouble going back to answer the remaining questions/add an additional medication	2 - minor usability issue
Katrin	During Task 2, the participant was uncertain that the icon on the bottom was meant for a log and felt it should be changed to something more clear	1 - cosmetic issue
Leo	During Task 1, participant almost failed to complete the task because they only hit the accept button 1 of 2 times, a step which we added as another level of user confirmation	2 - minor usability issue
Leo	During Task 3, when asked to add a user, the participant removed a user instead. Added a user after instructions were restated	1 - goal misunderstanding

# Critical Incidents 2

Participant	Critical Incident	Severity Rating
Amaru	Participant struggled to complete task 1, said that the button they were meant to click was not obvious as a button	2 - minor usability issue
Amaru	Participant disliked that there were multiple ways to get to the same place	1 - cosmetic issue
Mads	During task 3, participant expressed that they liked the option to add/remove contacts, as well as the fact that contacts had information attached. Said it granted agency to users.	3 - major usability success
Mads	When shown highlighting feature, participant liked that it was discoverable but not obvious. Thought that if it was too obvious it might encourage users to highlight when they may not need to	2 - minor usability success