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# UI/UX case study: a step-by-step guide to the process of designing a Health Companion Super App



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## Introduction

In the context of my class for SOEN 357, we were tasked to research people with chronic health illnesses. We needed to determine their needs and frustrations, to design an app for them that will be their companion and second-brain.

Initially, we were given the task to incorporate the following features in our app:

- Manage their medication intake by setting reminders and tracking their usage

- Communicate with healthcare professionals directly from the application

## The Challenge of Target Users

People with chronic health illnesses often face numerous challenges in their day-to-day lives, which can significantly impact their physical, emotional, and social well-being. Daily, their symptoms of pain, fatigue, mobility and fear provoke exhaustion that limits their ability to work, socialize, or engage in hobbies. Most of them need frequent medical appointments and treatments that can be hard to remember and be quite disruptive to their lives. Emotionally, living with a chronic condition may lead to feelings of isolation, anxiety, or depression, particularly if others struggle to understand their experiences. Many of them describe their lives as akin to living “on the edge,” where taking even a single dose of their medication could potentially be lethal.

However, the rise of technology and its widespread accessibility today offers a powerful solution to help countless individuals in this situation. By employing user-centred design principles, we can address these challenges effectively and create a mobile app that integrates all essential features into one seamless platform. This app would simplify their daily struggles, making it easier for users to manage their needs and improve their quality of life.

## Research Methods

### The Interview

In the research phase of my project, I wanted to get closer to my users and fully dive into their daily problems. I judged that the best way to do so is by communicating with my potential users face-to-face. Thus, I decided to start by interviewing a person from my target group. In my entourage, I have a

close friend that struggled with bronchial asthma since a very young age, and in my opinion, she is an ideal candidate to represent the target population and give me insights into their reality.

The details of the interview can be found in the following pictures:

#### 1. User Needs and Pain Points

- What chronic health conditions are you managing, and how do they impact your daily life?

Dara's reply: At the current moment, Dara suffers from bronchial asthma. This condition entities that on the daily it is hard to take big breaths, it is hard to run for an extended period of time (usually more than 10 min) and it is very hard, even sometimes painful, to sleep in a dry or humid climate.

- What challenges do you currently face in managing your medications and appointments?

Dara's reply: Dara needs to calculate the time it takes for the medication to take effect, and how long it lasts. She takes her doctor appointments when she wants, but she always forgets. Thus, it would be nice to have a reminder to take an appointment.

- How do you currently track your medications and appointments? (e.g., paper, calendar, other apps)

Dara's reply: Dara does not track them, and hopes to remember them one day

- Have you used any medication management apps before? If so, what did you like or dislike about them?

Dara's reply: No

- What features would make managing your health easier or more convenient?

Dara's reply: Reminders to refill medications online, reminders when your prescription expires

#### 2. Medication Management

- How many medications do you take daily, and how often do you take them?

Dara's reply:

- 3 pumps per day, morning, day, night
- Asthma pills 2 times per day (day, night)

- Do you have trouble remembering to take your medications on time? If so, why?

Dara's reply: Your body reminds you that you cannot breathe, so no. But, it is painful to use the pain as a reminder on a daily.

- Do you need reminders to refill prescriptions or pick up medications from the pharmacy?

Dara's reply: Yes, in my regular mobile calendar app

#### 5. Data Tracking and Insights

- Would you like the app to track your symptoms, mood, or other health metrics alongside your medications?

Dara's reply: Yes

- Do you want to see trends or insights about your medication adherence or health over time?

Dara's reply: Yes

- Would you like the app to provide educational resources about your condition or medications?

Dara's reply: I do not care much about it, but I would not mind if it is there.

#### 6. Usability and Design

- How comfortable are you with using technology or apps for health management?

Dara's reply: I am very comfortable

- What kind of interface or design would make the app easy and enjoyable to use?

Dara's reply: Big buttons and icons, different colours per categories, happy colours to distract from health condition problems and make the process more enjoyable, contain cute emojis and icons.

- Do you have any accessibility needs (e.g., larger text, voice commands)?

There are no accessibility needs but voice over command possibility would be great to have, have a small health card on phone screen in case of emergency.

- What concerns do you have about using a health-related app?

No

## The Survey

After interviewing my friend, I gained a deeper insight into the realities of my users, which sparked numerous ideas I was eager to implement. To identify the most effective solutions, I decided to conduct an online survey. This approach allowed me to fast-forward the data collection process and gather a wide range of perspectives, ensuring a more comprehensive understanding of the users' needs.



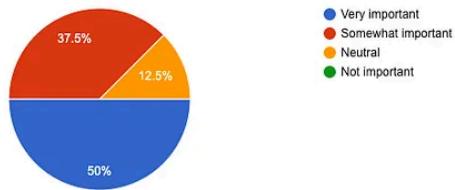
What kind of information would you like to share with your healthcare provider through the app? (Check all that apply)

7 responses



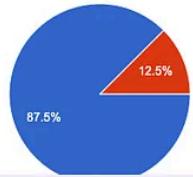
How important is it for the app to provide insights or trends about your health over time?

8 responses



Would you like the app to track your symptoms, mood, or other health metrics alongside your medications?

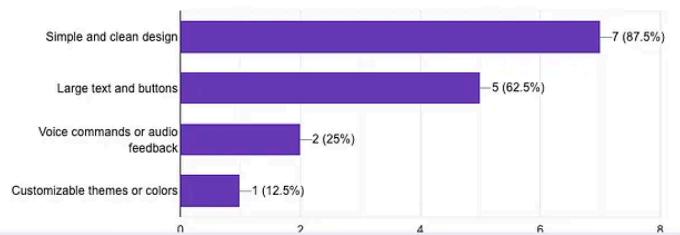
8 responses



[Copy chart](#)

What kind of interface or design would make the app easy and enjoyable to use? (Check all that apply)

8 responses



[Copy chart](#)

## Personas

Both the interview and the survey that I have conducted previously suggested that many different age groups will be using my application. Thus, I decided to create 3 different personas from 3 completely different age groups, to have maximum coverage of all the different views reflected in my data collection phase.

# Ginette Dagenais



*"I do not need fancy gadgets - just give me something that will make my life easier"*

Age: 65  
Work: Retired school teacher  
Family: Widow with no kids  
Location: Lanaudiere, QC  
Character: Opinionated

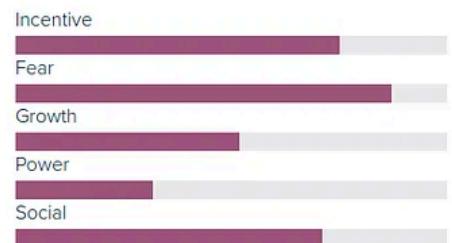


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Social

## Goals

- Stop missing her doctor appointments
- Have an easy way to track her medications intake and never forget to take it
- Communicate with her health professional and share her health logs without having to remember everything



## Frustrations

- It is tough to focus and read.
- it is hard to understand how intelligent phones work.
- Interact with small buttons and icons is difficult due to low motor precision.

## Brands



Telephone

Notes

Calendar

## Bio

Ginette is a retired primary school teacher who has spent her life around young kids who were able to help her understand and use any emerging innovations. She prides herself on her independence and strong will, but since her husband passed away, she has had difficulty tracking all the medication that she needs to take at precise times to control her Type-2 diabetes. Ginette needs a quick, simple and minimalistic interface that will quickly get her to her desired functionalities.

DO NEXT ➡ Customer Journey Map

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# Patricia Lambert



*"I would like to spend time with my kids without thinking about my illness."*

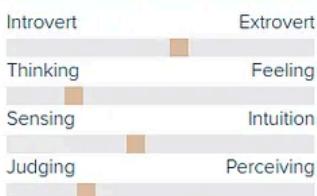
Age: 40

Work: Accountant at a law firm

Family: Married with 2 kids (7 and 13 years old)

Location: Kansas City, Missouri

Character: Methodical

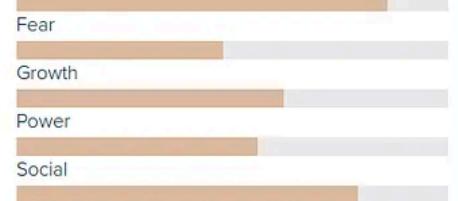


Caring Empathetic Resilient Organized

## Goals

- Manage her health inquiries effectively without disrupting her busy schedule.
- Track her pain and medication in a simple, hands-free way.
- Never miss a doctor's appointment or medication dose.
- Stay in control of her health while caring for her family and performing well at work

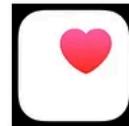
Incentive



## Frustrations

- Encounters difficulties while using apps with small buttons or complex navigation due to her hand pain
- Finds it frustrating to track her health data and appointments across multiple apps.
- Feels frustrated when her pain flares up unexpectedly and disrupts her work or family time

## Brands



## Bio

Patricia is a law firm accountant, a mother of two kids, and a selfless person that puts the needs of others first. She was diagnosed with Rheumatoid Arthritis in her finger joints 3 years ago. Since then, she faces daily challenges with pain and fatigue, making even simple tasks like typing or using her phone difficult. Despite her condition, Patricia juggles a demanding job at a law firm, her children's schedules, and her health management with patience. She dreams of a solution that can help her track her pain, manage her medications and doctor appointments, and relieve stress from this process - all in one. Patricia needs an app that is as thoughtful and efficient as she is, helping her stay in control of her health while keeping her family and career on track.

Jean Coutu App

Health App

Calendar App

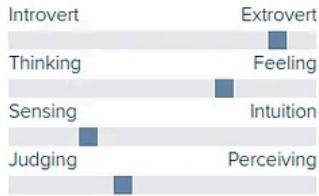
Try Xtevio

# Maxime Carter



*"I just want to live my life like a normal guy. Make it quick and fun, and I'll use it."*

Age: 14  
Work: High School Student  
Family: Living with his parents and younger sister  
Location: Mississauga, Ontario  
Character: Competitive

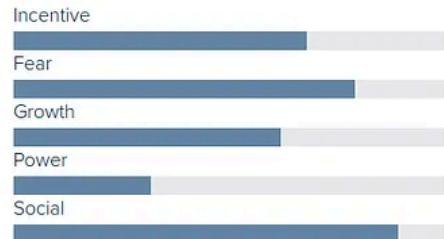


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Energetic  
Compassionate  
Impatient  
Tech-Savvy

## Goals

- Stay healthy and active without worrying about asthma attacks.
- Make taking medication as quick and easy as possible.
- Feel in control of his health without it feeling like a chore.
- Prioritize his health concerns while managing his busy school and training schedule.



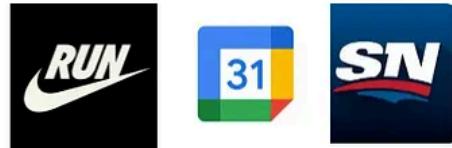
## Frustrations

- Hates the taste and routine of taking his daily medication
- Finds traditional tracking methods (i.e. journals or calendars) boring
- Feels embarrassed when his asthma limits him during sports or physical activities.

## Bio

Maxime Carter is a young sports enthusiast with a competitive mindset. At a toddler age, he was diagnosed with severe asthma. Since then, he got used to monitor his health daily, but he often finds it frustrating and boring. Alex dreams of playing soccer professionally one day, but forgetting his medication can leave him breathless, or worse. Despite his impatience with routines, he's determined to stay on top of his health concerns and continue playing. Maxime needs an app that fits his energetic lifestyle, keeps him accountable, and makes managing his asthma feel less like a chore and more like a game.

## Brands



Nike Run Club

Google Calendar

Sportsnet



DO NEXT ↗ Customer Journey Map

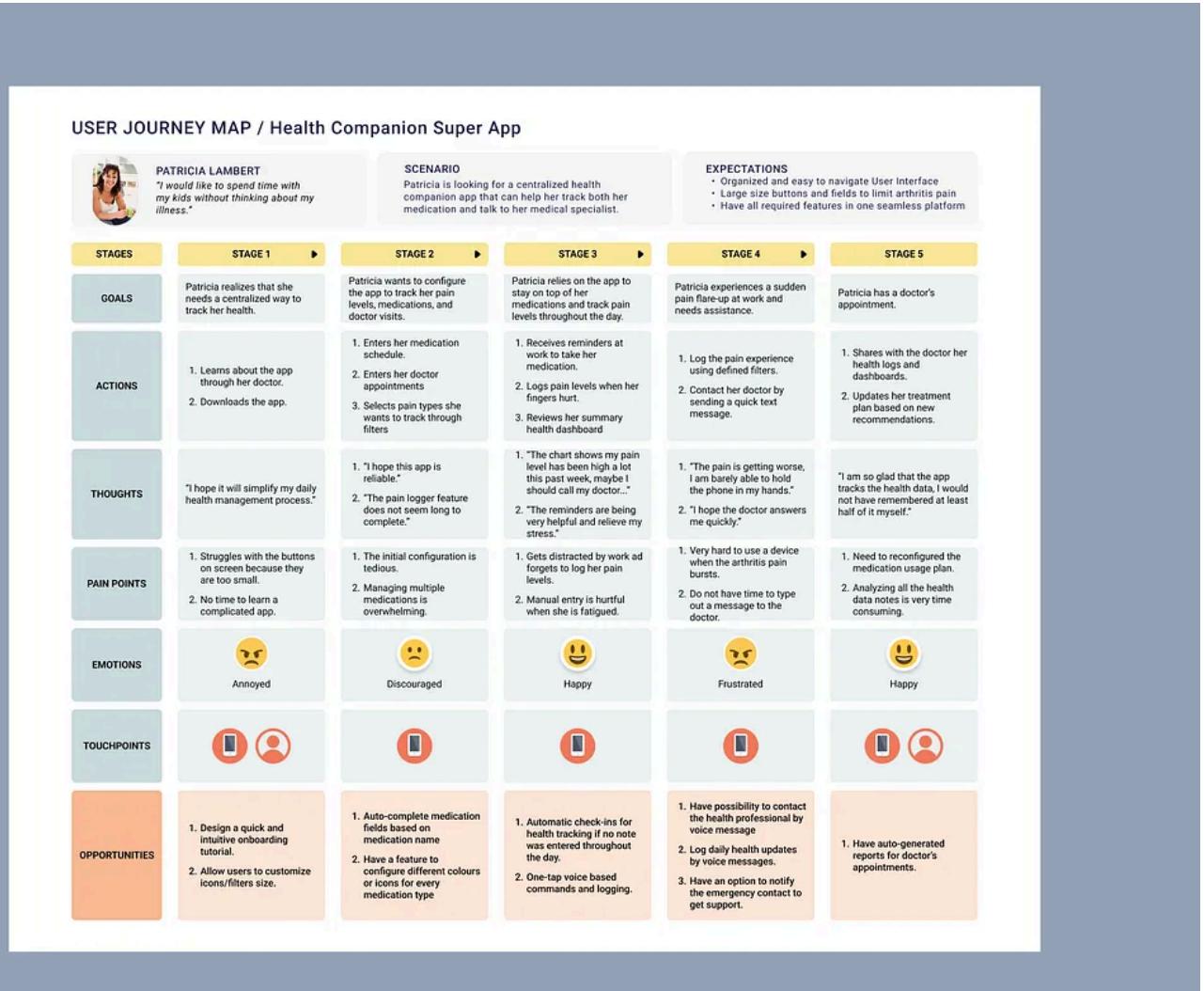
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## User Journey

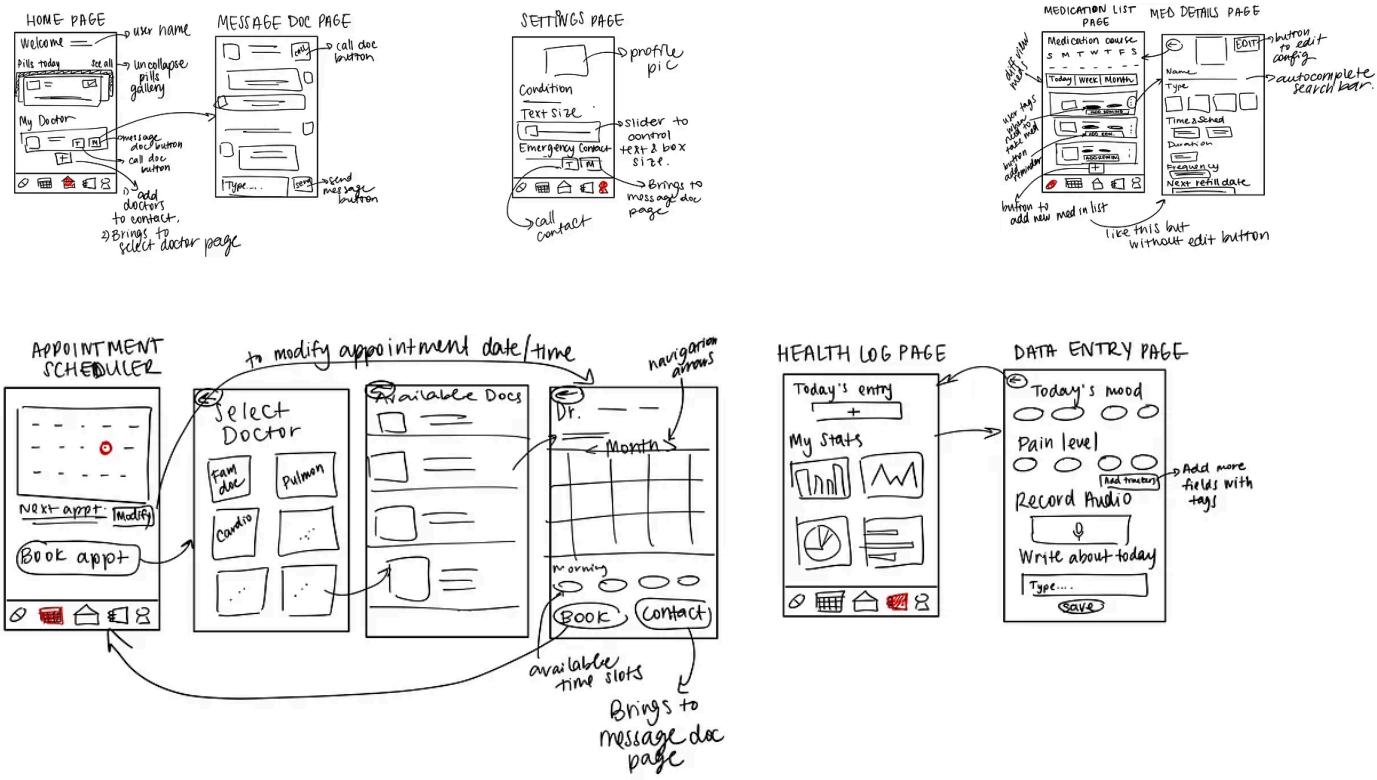
After developing my personas, I mapped out the potential steps a user might take when interacting with my application. This process helped me identify possible pain points and frustrations the user could encounter, allowing me to address and mitigate these issues effectively.



## User Flowchart

## Sketches

To have a better understanding of the desired layout, I decided to sketch the main screens of my application and modulate the information between them.



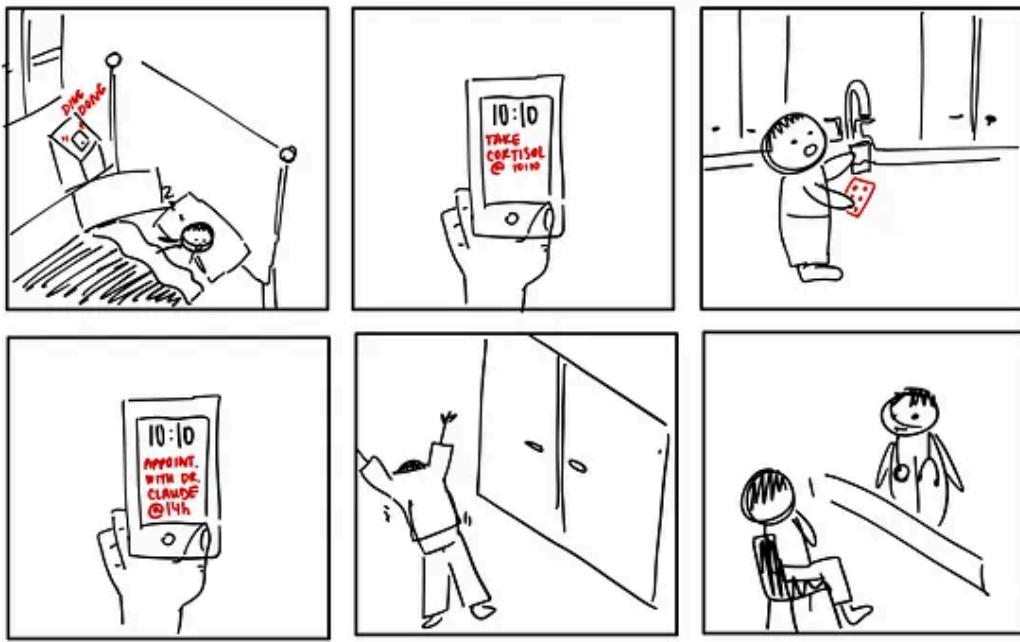
## Wireframes

Next, I expanded on the sketches I had created earlier by transforming them into digital wireframes using Figma, a design software tool. This step allowed me to develop a clear blueprint for my mockups, providing a concrete understanding of the various components and how they would interact within my application.



## Storyboard

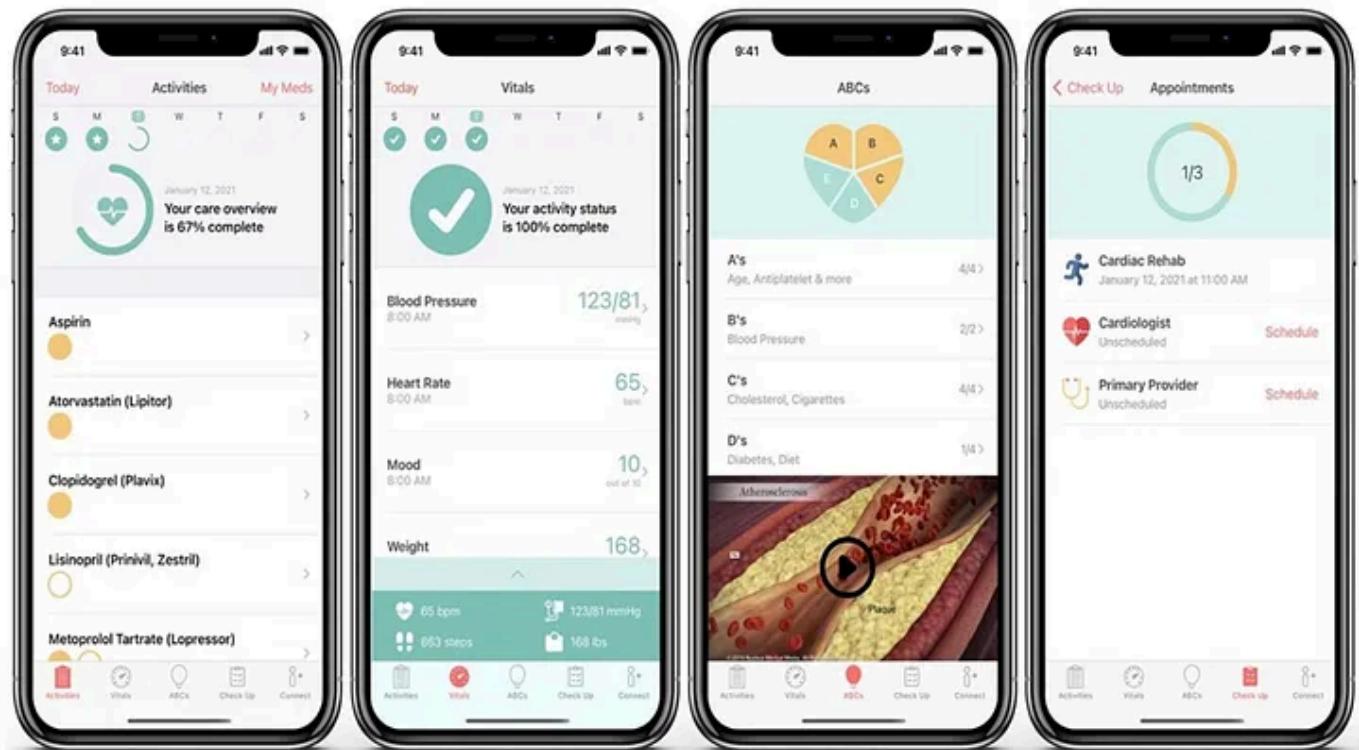
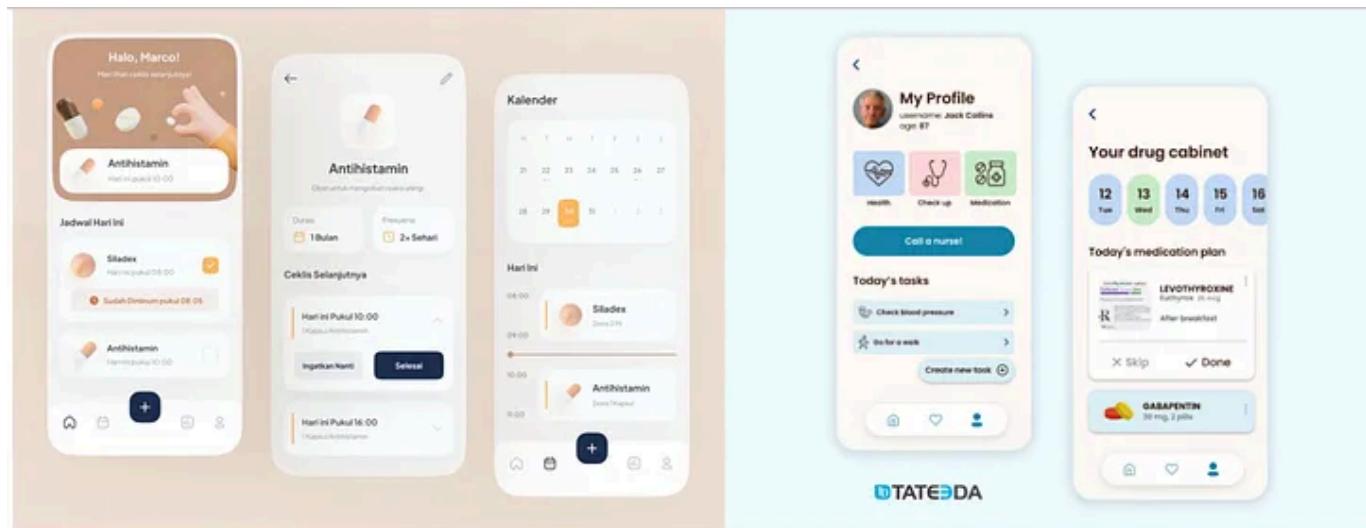
At this stage, I aimed to gain a broader perspective on how users would engage with my application in their daily lives. To achieve this, I created a storyboard, similar to a comic strip, to visually depict and capture the various ways users would interact with my app. This approach helped me better understand the overall user experience and how my product would fit into their routines.

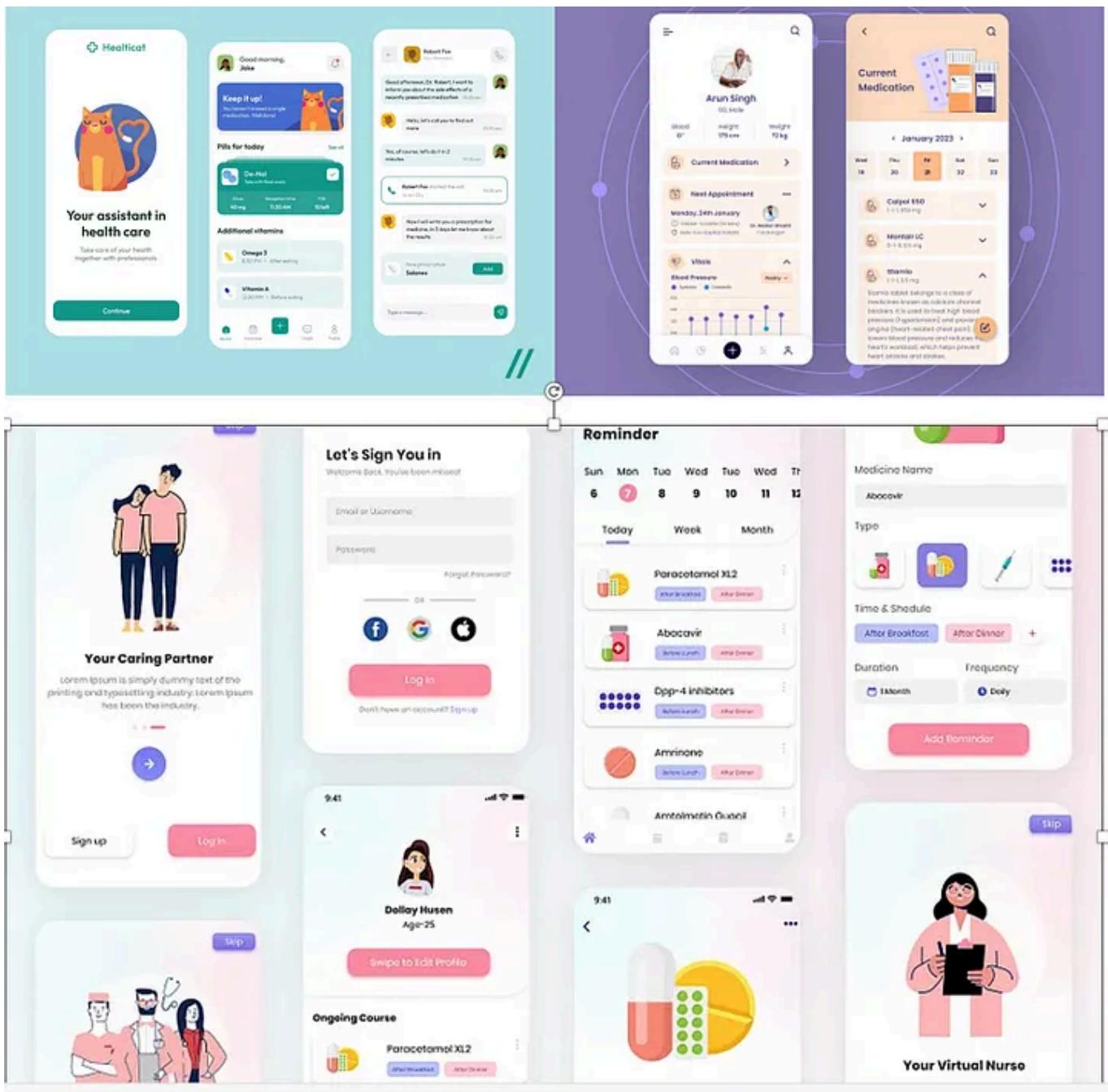


## Visual Research Results

### Inspiration Board

Once I finalized the app's structure with wireframes, I began exploring ways to enhance its visual appeal through colors and design elements. During this phase, I researched online, examining similar health app designs that resonated with me. I drew inspiration from their layouts, colour schemes, and font choices to refine the aesthetic of my app.







## Color Palette

For my application, I chose to use bright colors based on feedback from the survey, where many users expressed a desire for a youthful and joyful design to help distract them from their pain. I opted for a simple color scheme that avoids overwhelming the user, incorporating bright and contrasting colors. This approach ensures that the design remains accessible, even for individuals with visual impairments like color blindness, as the distinct shades remain easily distinguishable.



## Typography

Kadwa stood out as the best font choice for me. Its letters are well-spaced and clearly defined, offering both readability and elegance. While it may appear simple at first glance, the subtle Serif details add a touch of artistic flair to the application. Additionally, Kadwa performed exceptionally well across various sizes and formats, whether used in lists, buttons, or other elements, maintaining its clarity and visual appeal.



## Icons & Illustrations

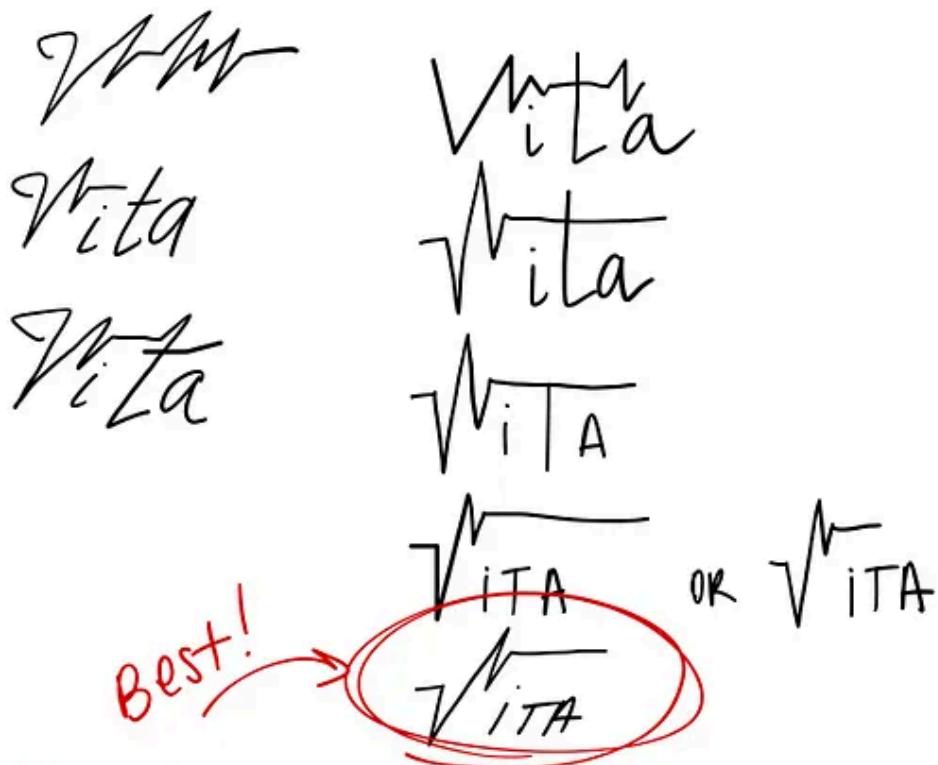
The icons I decided to pick for my application are taken from the iOS development kit in Figma. My choice was impacted by the simplicity and clearness of these icons. They also look very good when they are enlarged. This helped me make the icons bigger on the display without clamping the User Interface too much, and give an appealing and accessible experience to the older age groups.

## Application name & Logo

When choosing the name, I tried to avoid “health-related” keywords in the name such as health, doctor, tracker, aid, etc. Also, I wanted it to be very short and simple to remember. Often, we recall the best things we do not encounter in real life. Thus, I decided to go with a word in Latin, which is now a dead language. The name I picked is “Vita” which directly translates to

“Life”. I think that it brings a symbol of hope, which is perfect for a companion app. In the design of the logo, I added a heart pulse symbol in the letter “V”, to represent “life”.

Chosen app name: Vita → life in Latin



With color:



## Animations

The last thing I did after I finished my final mockups was create little animations of my pages in Figma to get a visual representation of how the pages will interact between them.

```
<iframe style="border: 1px solid rgba(0, 0, 0, 0.1); width="800" height="450" src="https://embed.figma.com/proto/8OOZWV547BwXSvq3ZCKLm2/357---Health-Companion-App?node-id=8-400&p=f&scaling=min-zoom&content-scaling=fixed&page-id=8%3A292&starting-point-node-id=8%3A400&embed-host=share" allowfullscreen></iframe>
```

## Final Mockups Design

In my final design, the application features four main pages accessible through a navigation bar at the bottom of each screen: Home, Settings, Medication, and Daily Journal. Based on survey feedback, I prioritized these pages for easy access, as users highlighted their importance. On the Home page, I included the two most requested features from user reviews: medication tracking and healthcare professional contact. Here, users can view a list of their “favourite” doctors, making it simple to call or message them directly. Additionally, the medication section displays the next refill date for each medication, a feature many users specifically asked for, ensuring they do not forget to refill their prescriptions.

**Home Page**

**Messaging Page**

**Settings Page**

**Appointment Scheduler Page**

**Appointments**

**January 2020**

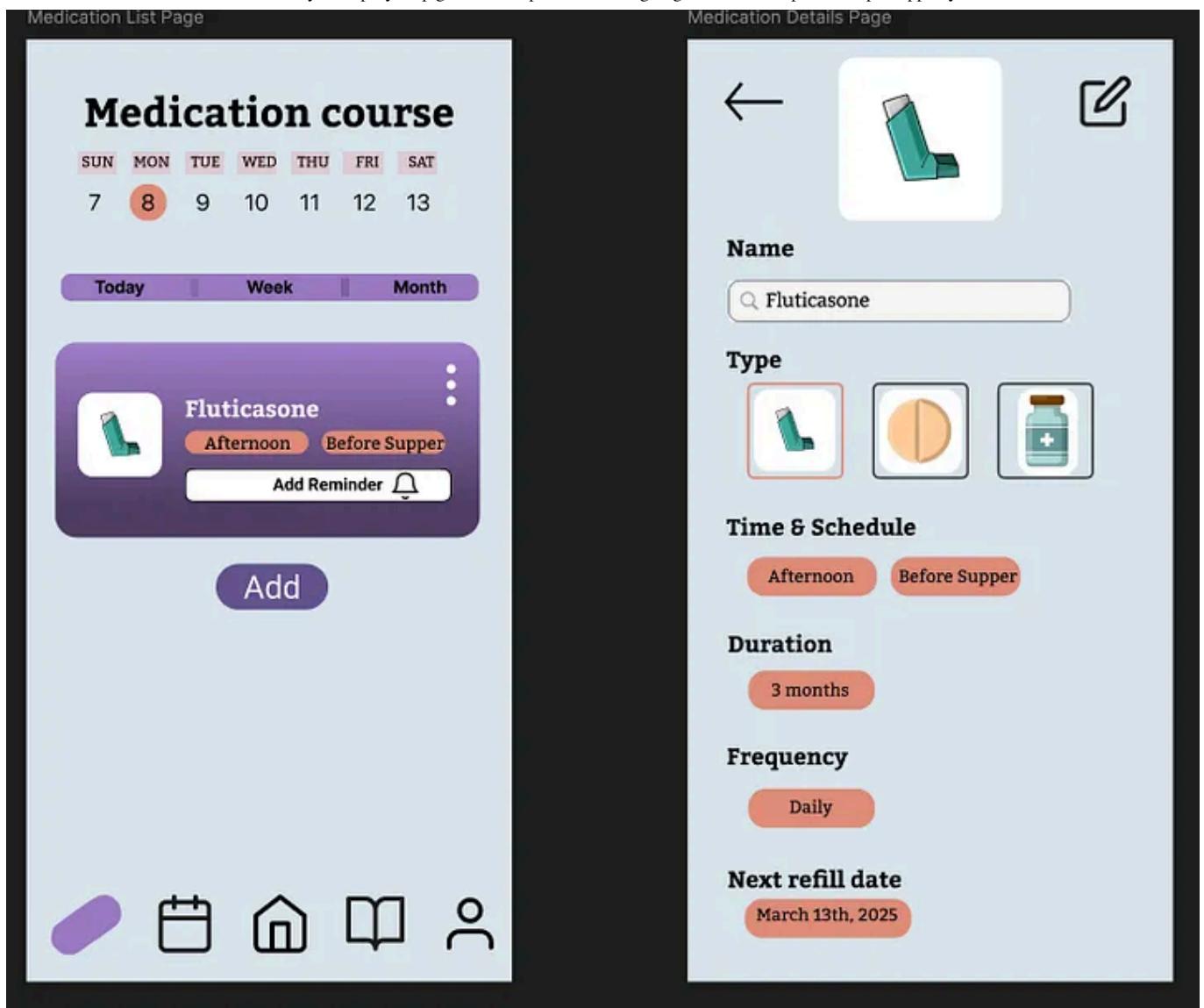
SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	
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14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

**Next Appointments:**  
January 11th, 2026      **Modify**

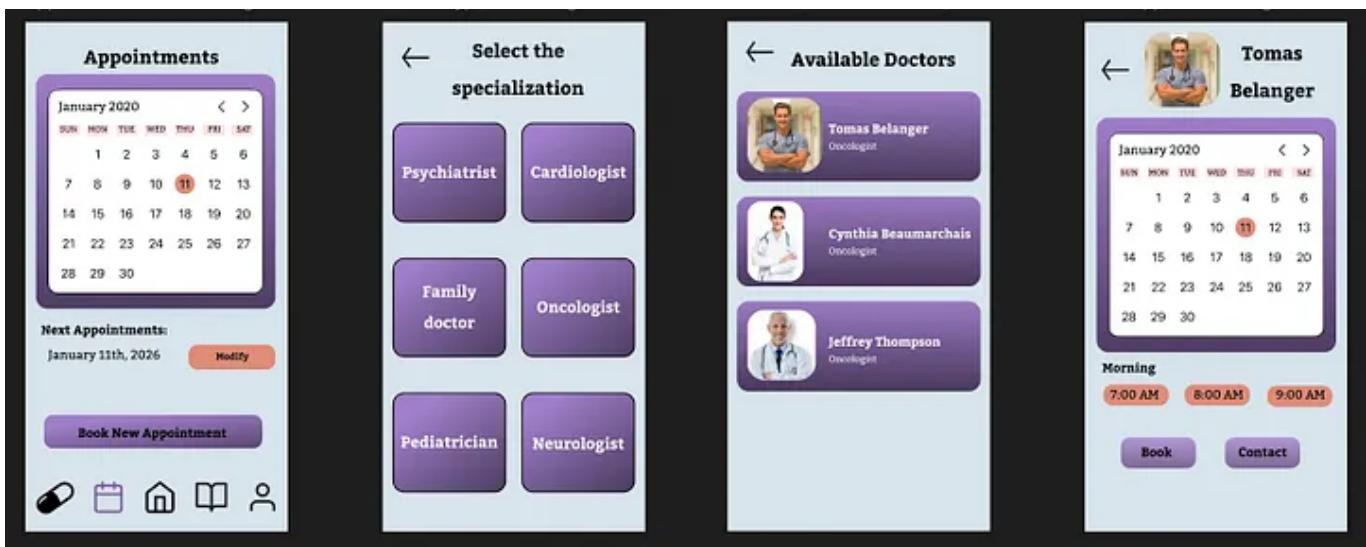
**Book New Appointment**

The image displays two screenshots of a mobile application interface. The left screenshot shows the 'Medication List Page'. It features a weekly calendar at the top with days from Sunday to Saturday. A specific day, Tuesday, is highlighted with a red circle containing the letter 'B'. Below the calendar is a purple card for a medication named 'Fluticasone', which includes a small icon of a inhaler, a time indicator 'Afternoon', and a 'Before Supper' tag. There is also a 'Add Reminder' button with a bell icon. A large blue 'Add' button is positioned below the card. At the bottom of the screen are five navigation icons: a capsule, a calendar, a house, an open book, and a person. The right screenshot shows the 'Health Dashboard Page'. It has a header 'Health Dashboard Page' and a sub-header 'Today's entry' with a 'Enter a new log +' button. Below these are four purple rounded square cards labeled 'My Stats', each containing a different type of chart: a line graph showing an upward trend, a bar chart with several blue bars, a 3D bar chart, and a pie chart divided into several colored segments. At the bottom of this screen are five navigation icons: a black capsule, a calendar, a house, an open book, and a person.

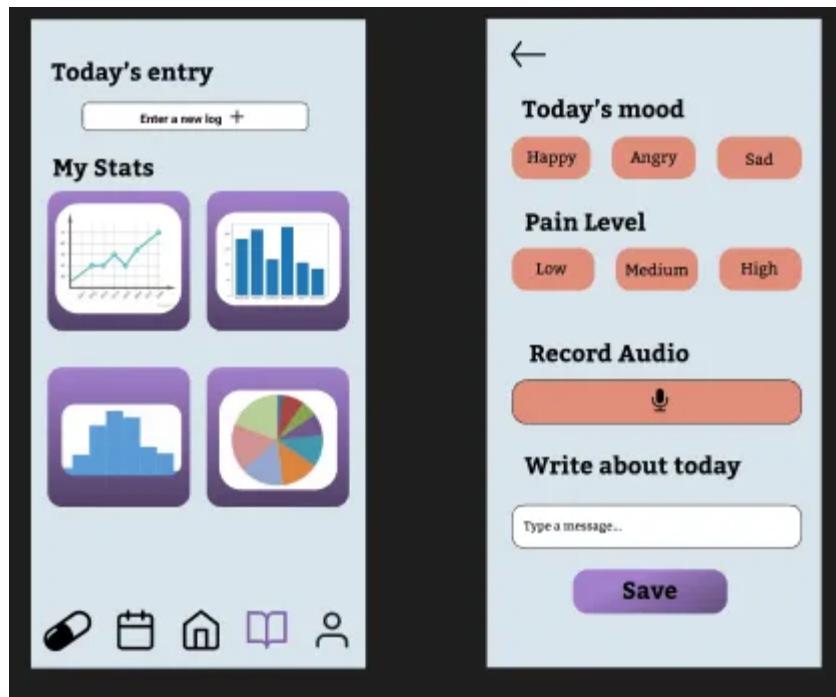
For the medication management section, my design includes a feature that displays a daily list of all medications the user needs to take, with customizable tags attached to each one. Users can add filters, edit the names and types of medications, and, most importantly, set individual reminders for each medication. The design offers complete flexibility, allowing users to add and configure as many medications as they require, ensuring the tool adapts to their specific needs.



The user can also access a calendar with all his scheduled appointments. Directly from the app, it is possible to modify the existing appointment or book a new one.



In my application, I included an additional feature that enables users to track their daily health status by either recording or writing about any health challenges they experience that day. This feature allows users to store their health notes alongside other health management details in one place, while also providing them with statistics and metrics about their health over time. This tool is particularly useful for doctor's appointments, as users can easily refer to their health logs instead of trying to recall details from memory. They can simply share these logs directly with their healthcare professional, making consultations more efficient and accurate.



## Usability Testing

### Product under test

Health Companion Super App designed to help people with chronic health conditions to manage their medication intake and doctor appointments. The goal of the product is to allow users to set reminders, track their medication usage, and communicate with healthcare professionals.

### Business Case

The following tests are going to be conducted to verify the functionality of the designed application. It is necessary to ensure it satisfies the requirements set by the users themselves in the research part of the project. Moreover, the tests will help to determine if the application has a useful impact in the daily lives of the target group. In the case where the product is released without any tests conducted upon it, there is a risk of having no actual users that will utilize the app.

### Test objectives

- Determine how easily users can navigate through the app and complete their key tasks
- Identify all pain points or confusion in the user interface/workflow
- Gather feedback on implemented features and their usefulness
- Ensure the app is accessible and intuitive for all age groups and different levels of tech-savviness

### Participants

Participants of this usability testing will be people with chronic health illnesses and family members and caregivers assisting them.

### Equipment

A functional, high quality version of the designed application, mobile phones of different operating systems (android, iOS...), and a Google Forms were users can give their feedback.

### Test Tasks

1. Onboarding
  - a. Generate a new account and set up a profile
  - b. Input the health condition, medication(s), doctor appointment(s), add doctor(s) to the favorite list in Home page
2. Medication management
  - a. Verify the gallery list of medications tracked in the Home page, ensure it lists the right information.
  - b. Ensure the user can modify and save new medication data.
  - c. Ensure the reminders system works well.
3. Appointment tracking
  - a. Verify the input doctor appointments are properly displayed on the calendar
  - b. Verify the user can make new appointment reservations with different healthcare professionals
4. Communication with healthcare professionals
  - a. Verify the user can call and message their doctor from the Home and Messaging pages.
5. Daily Health Journal
  - a. Ensure the user can input new health logs, and that tags, audio, and typing inputs work
  - b. Verify the health metrics after data entry, it needs to display the proper data
6. Accessibility Features
  - a. Ensure that the text size slider changes the text and icons to make them bigger everywhere in the app and make it more accessible to required user groups.

### Feedback analysis

The feedback of users will be collected in a Google Form that will be sent out with the newest version of the app. The test tasks written above will be transformed into clear and concise questions to guide the users through all the functionalities of the app and collect their opinion on all features. In parallel, I will conduct a second interview with my friend Dara and go over the application with her by showcasing her all the functionalities and collecting her feedback into a Google document. Once all the data is collected, I will take the comments that came back the most and see how I can integrate them into the application and make it useful for all groups.

After talking to my interviewee, she told me that most of her recommendations and important features were present in the final design I demonstrated to her. She had very few improvement lines to give me, but she told me it would have been better to have an onboarding flow when the user first signs in to the application which I agree with her about. Unfortunately, I did not have the time to implement it in my Mockups.

## Conclusion

This project turned out to be an incredibly rewarding experience, allowing me to fully immerse myself in the world of a User Experience developer. Through this process, I realized how technology has the potential to be life-changing in so many ways. The UX design process played a crucial role in helping me gain a deeper understanding of the user. By analyzing survey results, transforming them into personas, and creating user journey maps, and storyboards, I was able to go beyond just interpreting data — I could empathize with it and truly put myself in the shoes of my target audience. One of the biggest challenges was learning to use Figma, a software I had no prior experience with. Despite this, the learning process was enjoyable, and I had a lot of fun experimenting with the tool and discovering its capabilities.

Finally, this project highlighted how much remains to be explored, designed, and built, inspiring me to continue pushing the boundaries of what technology can achieve!



Health App Development

I

Written by Irina Zhukova

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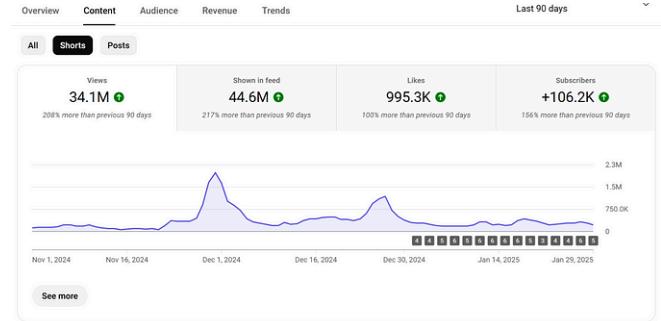
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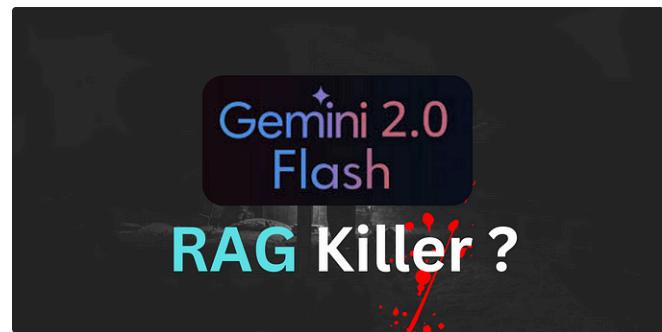
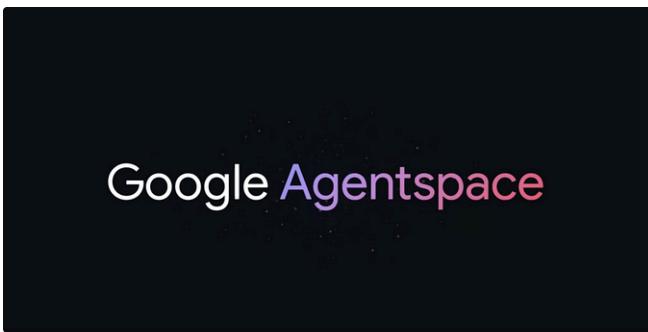
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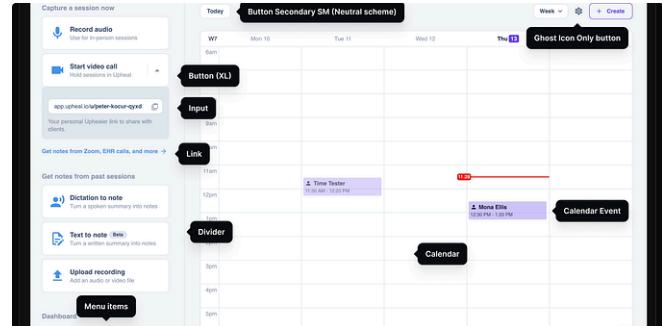


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