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HealthMe – A Health Management Application

SOEN 357 Mini-Project

Section V

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Blog post can be found here: <https://masspaol.github.io/>

Introduction

Problem

A study by the CDC, found that over 75% of Adults in the U.S. and Canada live with at least one chronic health condition, and more than 50% have two or more. For the millions of people with these conditions, there is a persistent, daily cognitive burden weighing them down. Managing these conditions requires recurring medical appointments, monitoring symptoms over time, and communicating effectively with healthcare providers, just to name a few of these recurring tasks. There needs to be reliable systems in place to support this massive sector of the population with such heavy duties. However, the tools most people currently rely on are fragmented: a pillbox on the kitchen counter, a paper calendar, a notes app, and a pharmacy's automated phone line. There isn't one single solution that ties these all together in an accessible and trustworthy manner.

Landscape Context

Most health management apps in the existing landscape have consistent shortcomings. They frustrate users by locking safety features behind paywalls or being far too complex for the average person. They also tend to overlook caregivers who are often juggling health data for both themselves and their families.

App Solution – HealthMe

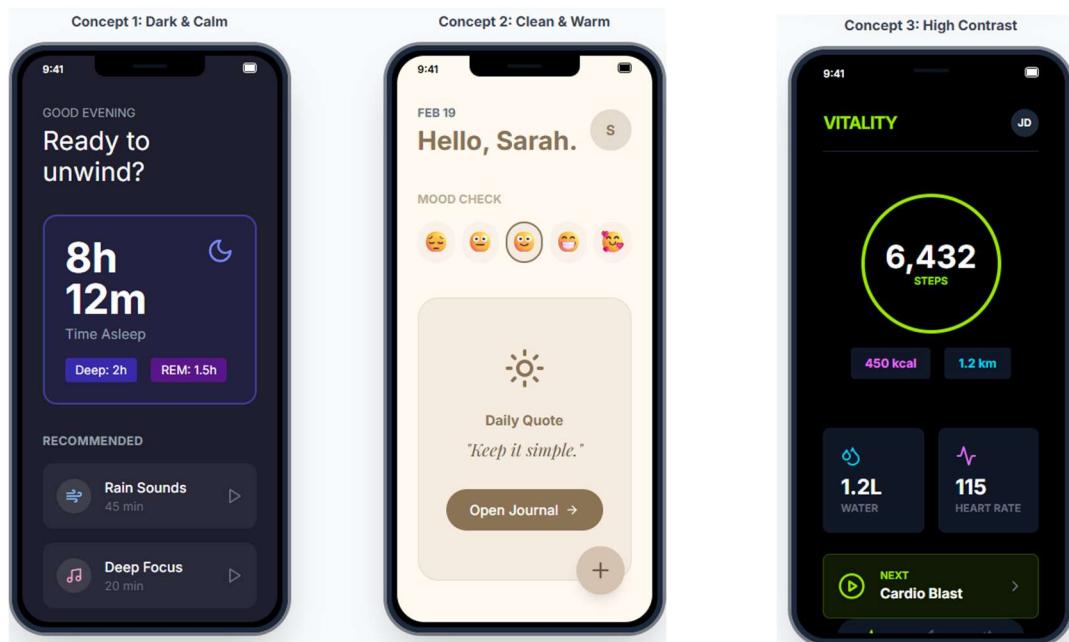
HealthMe is a companion mobile app that is designed to act as a unified, intelligent health management tool for the millions of people living with chronic conditions. The app is specifically designed for a huge range of demographics, targeting Gen Z users who are digitally native but want health management to remain discreet and unobtrusive; Millennials and Gen X who are often managing their own health alongside the health of a dependent and need efficiency above all else; and Boomer users who may have lower digital fluency but the greatest medical need, and for whom app clarity is a must.

Initial Design

To get started some initial design ideas were done on Figma. Direct inspiration was taken from the Apple Health Tracker, social media, and some other common apps found on most smartphones today. The idea was to keep the status-quo of UI/UX design, for ease-of-use by new users, who would be able to carry over their existing UI navigation knowledge.

Figma was a great tool for this as many libraries allowed for quick pick-and-place designs, while still delivering a modern feel. The card-based layout is hugely influential as almost every app uses it in some form, so the initial mock-ups below used the layout to compartmentalize information. Generally, for a health app, the home page should have some sort of critical information or statistic for quick information. This idea was carried out through the sleep helper and the fitness tracker mock-ups, while the journal mock-up aimed to picture what a health log entry would look like.

Overall, these initial designs were great guiding posts for the direction to take the UI/UX design of the app. Even though the final design turned out way different, the ideas, such as the high contrast and the card-based layout carried through.



User Research and Persona Creation

User Research

Possible Methods

Understanding user needs and behaviors requires the use of multiple user research methods, each with its own strengths and constraints.

One possible avenue for research is surveys. These are quite common and can oftentimes be seen while using apps where the creators are looking for reviews or feedback. The main advantage of using surveys is that they can be easily compiled with as many questions as desired, and just as easily be sent out. There also exist many services that automatically compile and graph the answers you receive saving you time. However, many times the limiting factor for this is achieving significant outreach. They often times don't get answered or reach enough people to draw reasonable conclusions. Another huge issue is self-report bias where people will answer based on how *they feel they should* rather than answering honestly.

A separate avenue is interviews. This method requires finding specific people that would be able to be representative of the target user base and interviewing them. This has the main advantage of being able to go more in depth into specific pain points or interesting ideas. It would also not require a significantly sized sample, as just 4 or 5 interviews with different groups (based on age, gender, experience, etc.) within the target audience should be a good enough information source. One main issue of this approach is that if you choose people who don't actually represent the users well, the information can lead to significant time wasted on incomplete or sample-biased data.

Finally, secondary research such as analyzing existing research, forums, or user reviews on existing competitor products. This approach allows insights to be gathered efficiently without the need for direct user recruitment, and can reveal common user needs, recurring pain points, and established behavior

patterns. However, a key limitation of secondary research is that the data was collected for different objectives, meaning it may not fully align with the specific goals of the project or accurately reflect the target user population.

Interviews

The user research conducted for this project uses both interviews and secondary research to gain knowledge and insight into the target user base. Ten real people, each having some form of chronic condition, were interviewed, aged 17, 17, 21, 22, 23, 45, 47, 54, 73, and 75.

The interviews questions were organized in such a way to target specific areas of interest to directly inform decisions.

The first group was targeting demographics and context, asking 3 main questions

1. "Can you describe a typical day when you have to manage your health or medications?"
2. "What are the three apps you use most on your phone? What do you like about them?"
3. "How comfortable do you feel using your phone for important tasks compared to pen and paper?"

The second group was targeting pain points and challenges, asking another 3 questions

1. "Have you ever forgotten a dose or an appointment? What happened, and how did you feel?"
2. "When you need to talk to your doctor, what is the most annoying part of that process?"
3. "Where do you currently keep track of your health info? (e.g., a physical folder, notes app, calendar on the wall?)"

The third group was targeting needs and feature validation, asking the next 3 questions

1. "If an app sent you a notification to take medication, what information would you need to see on the screen immediately?"
2. "What information do you want to have ready right before you walk into a doctor's office?"
3. "If you were feeling unwell, how would you expect an app like this to help you in that moment?"

The final group of questions targeted the specific age groups

1. Gen Z: "How would you want this to fit into your social/work life without being intrusive?"
2. Millennials/Gen X: "As someone likely balancing work/family, how can this app save you time rather than add a chore?"
3. Gen X/Boomers: "What makes a screen hard for you to read or interact with? How do you feel about sharing health data digitally?"

After the interviews the key answers were recorded. For brevity, only the answers that are directly actionable are recorded below. As a note the answers have been cleaned up so as to clearly get the meaning of what each participant was saying.

First group of questions key answers

Participant Age 23 > "A typical day is a series of 'remind me later' taps. I use Instagram and Notion the most because they are visual and flexible ... I feel 100% comfortable with my phone for tasks ... paper isn't as useful because I can't 'search' it or set an alarm on it ... digital notifications are my main guide ..."

Participant Age 45 > "... I check my own vitals ... text my dad to see if he took his medications. I mainly use Outlook and Teams for work ... I use my phone for 'important' things because of the sync. I need to see my schedule on my laptop and my phone simultaneously ... Paper is too slow and cumbersome for me ..."

Participant Age 75 > "My health management is all physical reminders: the pillbox in the kitchen, the calendar on the desk ... I use WhatsApp for family, but for health, I prefer my pen and paper ... I don't trust my phone, and it isn't really a big part of my life ..."'

Second group of questions key answers

Participant Age 17 > "The most annoying part of seeing a doctor is having to communicate with them constantly by phone. Oftentimes I have to wait for a receptionist to call me back during class, and I can't talk then ... I've missed doses before simply because the notification looked like a random app update ... I felt 'notification blind' and then guilty for being irresponsible ..."

Participant Age 45 > "The 'Mental Load' is the killer. I'm managing two sets of appointments. The most annoying part is the lack of transparency ... I have to call the doctor just to find out if a prescription was actually sent to the pharmacy ... It's a 15-minute chore that should be a 5-second status check ..."

Participant Age 73 > "I've forgotten appointments because I wrote them on a scrap of paper that got thrown away. It makes me feel unreliable ... When I talk to the doctor, I feel rushed ... I can't remember the names of the three different white pills I take, and I feel like they think I'm 'losing it' because I don't have the info ready ..."

Third group of questions key answers

Participant Age 22 > "If I'm feeling unwell, I don't want to type a journal entry. I just want icons for 'Nausea' or 'Fatigue.' ... On my lock screen, I need the notification to be high-context, like, 'Take Blue Pill - With Food.' Don't make me unlock the phone to see the instructions."

Participant Age 45 > "... A report that summarizes trends of my health would be perfect ... I don't want a simple list; I want to show them a graph that says, 'Blood pressure spiked on Tuesdays.' It needs to back up my symptoms and claims ..."

Participant Age 75 > "I need to see a photo of the medication on the screen. Names like 'Lisinopril' mean nothing to me, but I know the 'round pink pill.' ... If I'm unwell, I expect the app to have a 'Call Daughter' or 'Call Doctor' button right there on the home screen so I don't have to hunt through contacts ..."

Fourth group of key questions, focused on each generation

Gen Z (17-23): > "It needs to look like a 'lifestyle' app, not a 'sick person' app ... If my phone is on the table during a meeting or date, the notification shouldn't broadcast something embarrassing ... It should be discreet but persistent."

Millennials/Gen X (45): > "Save me time by automating the boring stuff. If the app can track my pharmacy refills and tell me before I run out, that's one less thing on my mental to-do list ... It has to be a tool, not another 'pet' I have to feed with data entry ..."

Boomers (70+): > "Stop using thin, light-grey fonts on white backgrounds. I need high contrast and large tap targets ... I'm fine sharing data with my doctor, but I don't want it 'shared' with advertisers ..."

Secondary Research

For the secondary research Reddit was the main source of information, specifically subreddits such as r/ChronicIllness, r/adhdwomen, and r/UXDesign.

Key insights found were

The "Subscription Fatigue" Barrier: Many users expressed frustration with popular apps (like Medisafe) moving features like "refill reminders" behind a paywall. This suggests that for a "Health Companion," basic safety features should remain accessible to ensure user retention and trust.

The "Mental Load" of Appointment Scheduling: A major pain point identified was the lack of asynchronous scheduling. Users (particularly those with ADHD or chronic fatigue) find "phone-only" booking systems a significant barrier to care. They specifically requested features that allow them to book or request appointments "after-hours" when they actually have the mental energy to handle admin tasks.

Notification Desensitization: Chronic illness patients often "ignore" standard reminders if they are too frequent or lack context. Secondary research highlighted a need for "snooze" functionality that is smarter, allowing a user to say "remind me in 20 minutes" rather than just dismissing an alarm they aren't ready to act on.

Privacy & "The Paper Backup": There is a notable segment of the population (especially seniors and privacy-conscious Gen Z) who still distrust cloud-syncing for sensitive medical data. This insight suggests a design requirement for local data storage options or an easy "Export to PDF" feature so users can bring a physical copy to their doctor.

The "Caregiver" Persona: Research showed that many users are not just managing their own health, but also a relative's. This points toward a need for "Multi-Profile" support or a "Shared Access" feature in the app's Information Architecture.

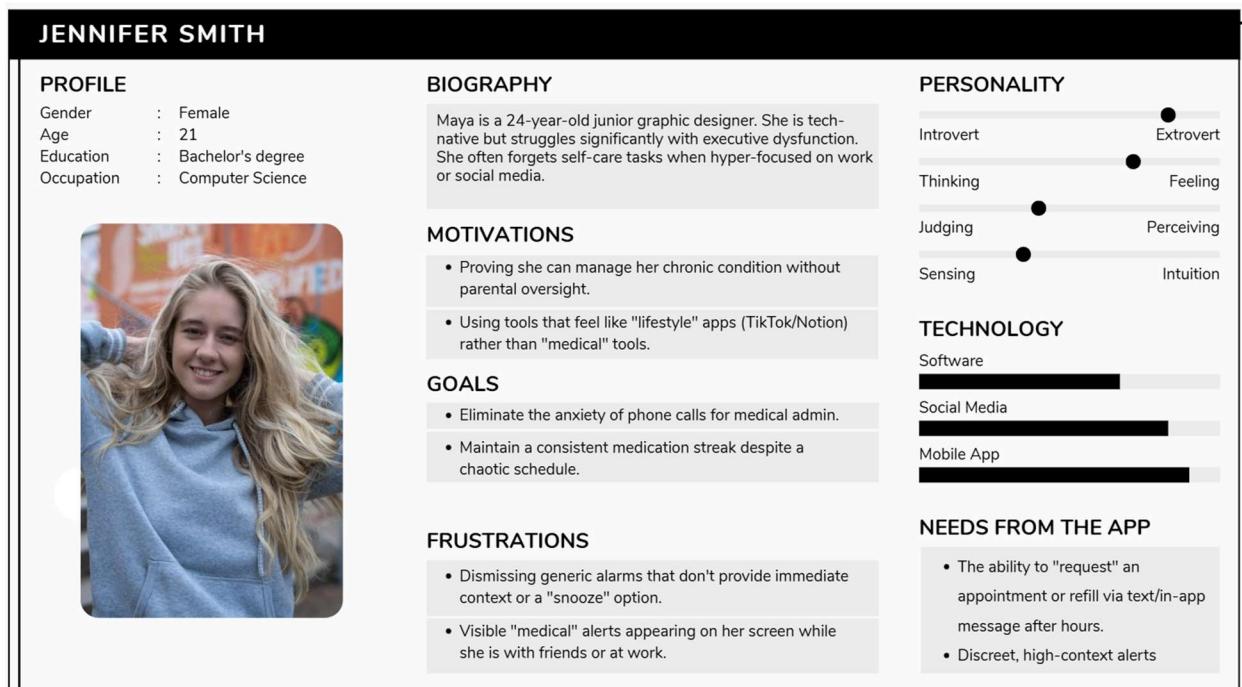
User Personas

Based off the research conducted, three primary personas come to mind in order to translate all the collected information across the internet and real-life interviews.

Jennifer Smith (Gen Z)

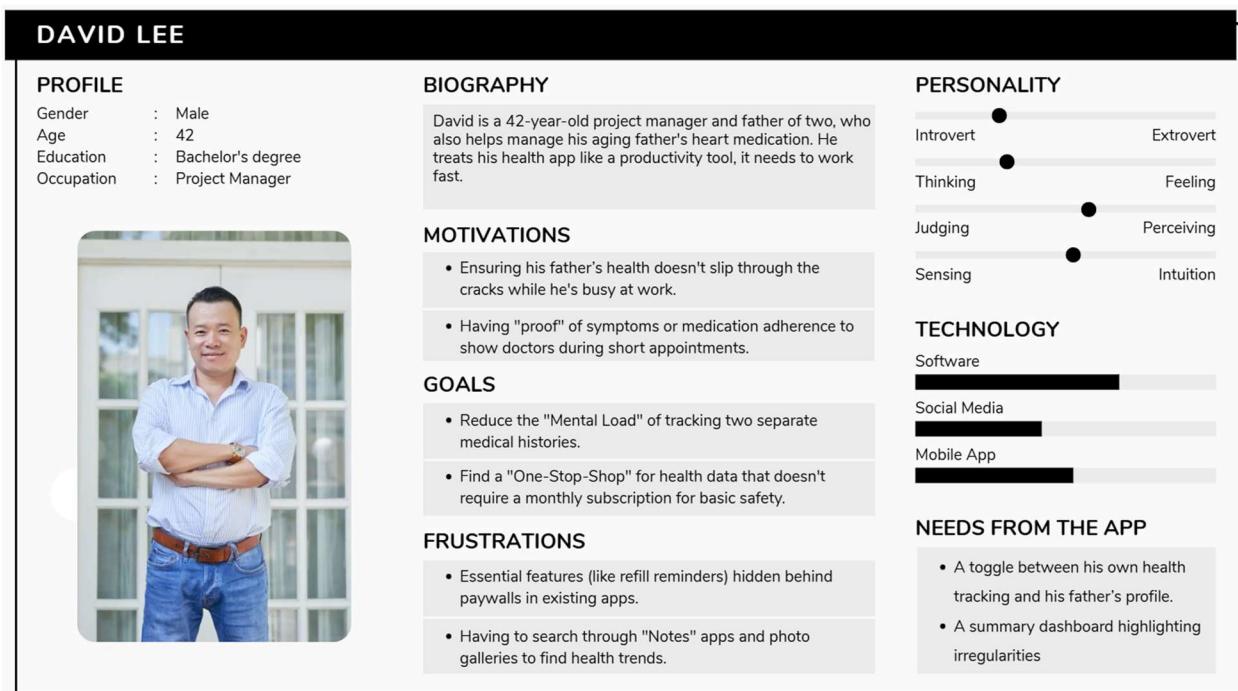
The first persona is one that could represent Gen Z. This persona is mainly informed based on the three Gen Z people that were interviewed and the secondary research conducted on reddit. This demographic

seems to be heavily reliant on “phone-only” communication and management, despite this, they hate having to make phone calls. Also, this demographic seems to be overwhelmed by notifications due to the high interconnectivity between their daily life and social pastimes.



David Lee (Millennial/Gen X)

The second persona is one that could serve to represent late millennials and early Gen X's. This persona is mainly informed by the interview conducted, but there are also some reddit posts, of which they mention their age, that are useful for additional information. This demographic is generally extremely busy, being at the height of their work life, and generally look for “straight-to-the-point” tools that directly help manage their stress load.



Elena Pucci (Boomer)

The third, and final, persona is one that can represent the Boomer generation. This is arguably the most important demographic as elderly people generally need much more medication and medical attention. This persona is mainly informed by the interviews conducted, but there were two or three reddit posts that were from the perspective of a Boomer which can help serve as insight as well. This demographic is significantly less adept with a mobile phone than the previous two, making printable files extremely important. Another huge impact is the app usability, as elderly people are less likely to have the “UI/UX intuition” that younger generations gained from experience, so the app interface must be both intuitive and simple.

ELENA PUCCI

PROFILE

Gender : Female
Age : 73
Education : Bachelor's Degree
Occupation : Retired (Teacher)



BIOGRAPHY

Eleanor is a 73-year-old retired teacher. She uses a smartphone for Facebook and texts, but she currently uses a physical folder and a wall calendar to manage her health. She is skeptical of "the cloud."

MOTIVATIONS

- Knowing her information is safe and won't be "deleted" by a software glitch.
- Understanding exactly what her medications are and why she is taking them.

GOALS

- To feel prepared and "heard" during doctor appointments.
- To transition from a physical folder to a digital one without losing a sense of control.

FRUSTRATIONS

- Small, low-contrast text and "hidden" navigation menus that are hard to tap.
- Deep-seated distrust of sensitive medical data being stored on remote servers.

PERSONALITY



TECHNOLOGY

Software

Social Media

Mobile App

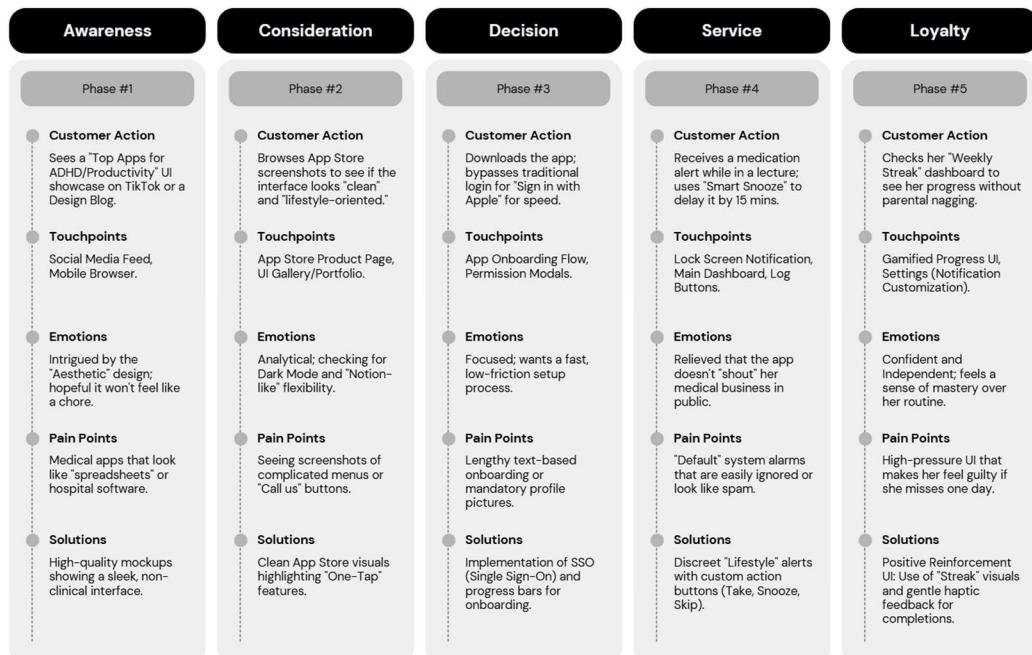
NEEDS FROM THE APP

- An "Export to PDF" feature
- A pill-image library that shows a photo of the medication

User Journey Mapping

In order to connect user feedback into actionable UI/UX design, user journey maps are used to help better understand the target user base. Each persona is given a user journey map so as to get a clear picture of user needs and pain-points.

Jennifer Journey Map



David Journey Map

Awareness	Consideration	Decision	Service	Loyalty
<p>Phase #1</p> <p>Customer Action Searches "Tool to help manage chronic health condition" on Google.</p> <p>Touchpoints Search results, landing page feature-grid.</p> <p>Emotions Stressed by his current "messy" system of notes and screenshots.</p> <p>Pain Points Landing pages that don't clearly state which features are free.</p> <p>Solutions Create a "Core Features" section on the landing page with a "Free Forever" badge.</p>	<p>Phase #2</p> <p>Customer Action Compares the app's "Free Tier" feature list against competitors like Medisafe.</p> <p>Touchpoints App Store screenshots of the Dashboard and Settings.</p> <p>Emotions Analytical; looking for a "no-fluff" productivity tool.</p> <p>Pain Points UI screenshots that look too "lifestyle" and not enough like a tool.</p> <p>Solutions Utility-First UI: Use clean, high-density dashboard screenshots in the store to show "at-a-glance" data.</p>	<p>Phase #3</p> <p>Customer Action Initiates the "Add a Dependent" flow to link his father's profile.</p> <p>Touchpoints Profile Switcher icon, Onboarding "Role" selection (Caregiver/Self).</p> <p>Emotions Relieved that "Refill Reminders" are clearly marked as free UI elements.</p> <p>Pain Points Friction in the UI when trying to switch between personal and father's data.</p> <p>Solutions Implement a persistent "Account Toggle" in the main menu.</p>	<p>Phase #4</p> <p>Customer Action Uses the "One-Tap Log" to record a symptom during a work break.</p> <p>Touchpoints Main Dashboard, Medication Progress Bars, Notification Center.</p> <p>Emotions Productive; feels a sense of "task completion" for the day.</p> <p>Pain Points Busy UI that requires too many taps to log a single event.</p> <p>Solutions Use simple "Quick Action" buttons for logging, hiding complex details behind a "More" tap.</p>	<p>Phase #5</p> <p>Customer Action Reviews the "Monthly Trend Dashboard" before a doctor's appointment.</p> <p>Touchpoints "Insights" Tab, Data Visualization Graphs, PDF Export Button.</p> <p>Emotions Confident; feels he has the data "proof" needed for the doctor.</p> <p>Pain Points Raw data lists that are hard to interpret at a glance during a 15-minute visit.</p> <p>Solutions Replace lists with color-coded line graphs and "Averages" cards (e.g., "Avg. Blood Pressure: Normal").</p>

Elena Journey Map

Awareness	Consideration	Decision	Service	Loyalty
<p>Phase #1</p> <p>Customer Action Searches for tools to replace her physical health folder on a tablet or computer.</p> <p>Touchpoints Web Browser, Tablet App Store.</p> <p>Emotions Hopeful but wary of "tech" complexity.</p> <p>Pain Points Search results with cluttered, high-density UI.</p> <p>Solutions Use 18pt+ font sizes and AAA color contrast ratios.</p>	<p>Phase #2</p> <p>Customer Action Browses the app store/landing page to see if the interface is legible.</p> <p>Touchpoints App Gallery Screenshots, Feature List.</p> <p>Emotions Skeptical; worried about seeing "tiny text."</p> <p>Pain Points Screenshots showing low-contrast "grey-on-white" text.</p> <p>Solutions Use bold icons and large "Card" layouts instead of text lists.</p>	<p>Phase #3</p> <p>Customer Action Downloads the app and looks for "Privacy" or "Local" settings.</p> <p>Touchpoints Onboarding Flow, Privacy Settings Toggle.</p> <p>Emotions Relieved to see safety controls.</p> <p>Pain Points Ambiguous wording regarding where data is stored.</p> <p>Solutions A prominent UI switch for "Local Device Storage Only" in settings.</p>	<p>Phase #4</p> <p>Customer Action Logs her morning medication and records a symptom during a flare-up.</p> <p>Touchpoints Home Dashboard, Medication Log, Symptom Tracker.</p> <p>Emotions Satisfied by the visual recognition of her pills.</p> <p>Pain Points Navigation menus hidden behind "hamburger" icons (three lines).</p> <p>Solutions A UI library of high-res medication photos next to the corresponding medication.</p>	<p>Phase #5</p> <p>Customer Action Exports her monthly data to bring a physical copy to her specialist.</p> <p>Touchpoints "Export" Menu, PDF Preview Screen.</p> <p>Emotions Confident and prepared for her doctor's visit.</p> <p>Pain Points Small "Save" buttons that are difficult to tap accurately.</p> <p>Solutions A large "Export to PDF" icon right near the data's location.</p>

Storyboard

To get a better understanding of how a typical user would interact and incorporate the product into their everyday life, a storyboard was created with the persona Elena Pucci. This persona was chosen as the demographic most likely to have a chronic condition are the elderly.

PERSONA: Elena Pucci



Clinical names create a barrier.
Elena feels anxious because
she can't match a name to a pill.

USER STORY/SCENARIO: Pill Images and Analytics



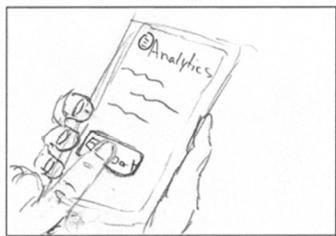
The pill image in her 'current medications' clarifies it for her. She can match the UI to her medication, without memorization.



At home, she suddenly feels dizzy.
She opens the analytics page and
records the dizzy spell immediately.



A few days later, she reviews the
'Analytics' screen. She notices the
trend between her dizziness and her
new medication.



She prepares her 'evidence'. The
'Export to PDF' is a bold button that
removes the stress of compiling her
own notes.



Success. Elena uses the data to advocate
for herself with a doctor. The
doctor adjusts the prescription.

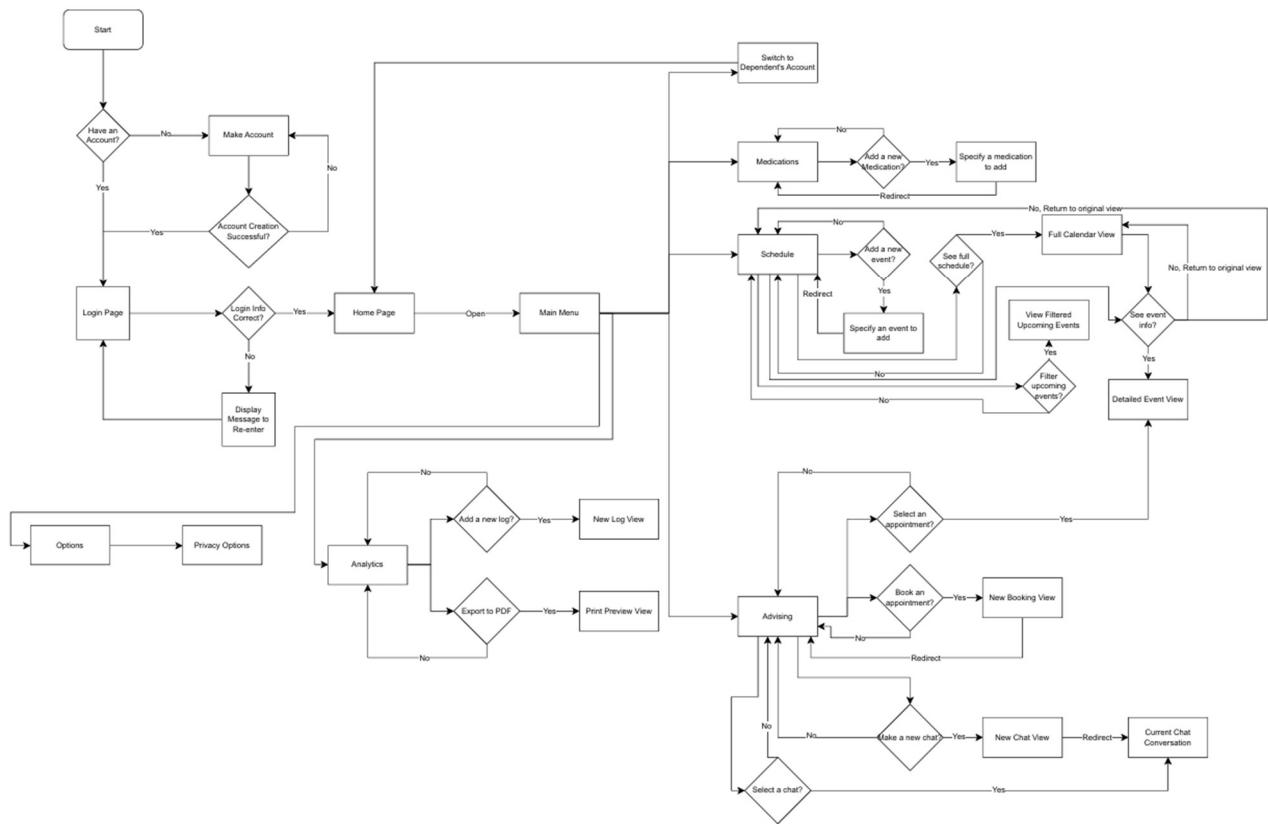
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PROJECT/TEAM: HealthMe

DATE: Feb. 17, 2020 STORYBOARD NNGROUP.COM

User Flow Diagram

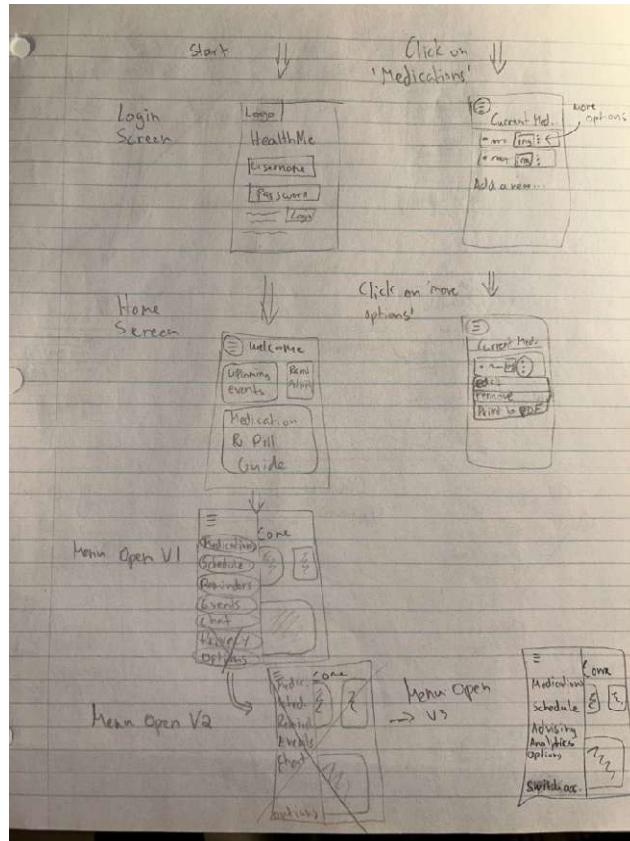
Once a general idea of the application is developed, further planning can be done relating to the functional flow of the app itself. The general purpose can be expressed in the form of a user flow diagram, which can effectively communicate the step-by-step process a user would go through when interacting with the app. This user flow diagram is visualized below.

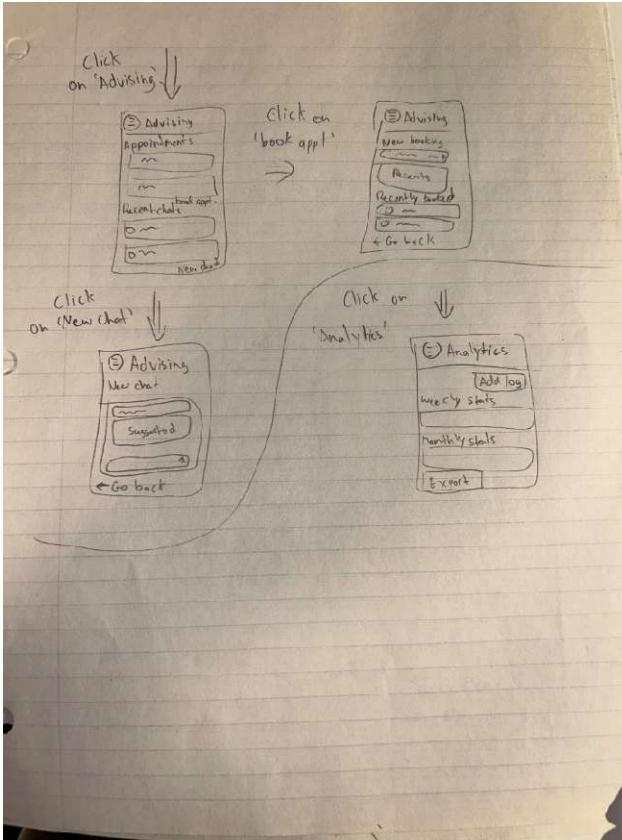
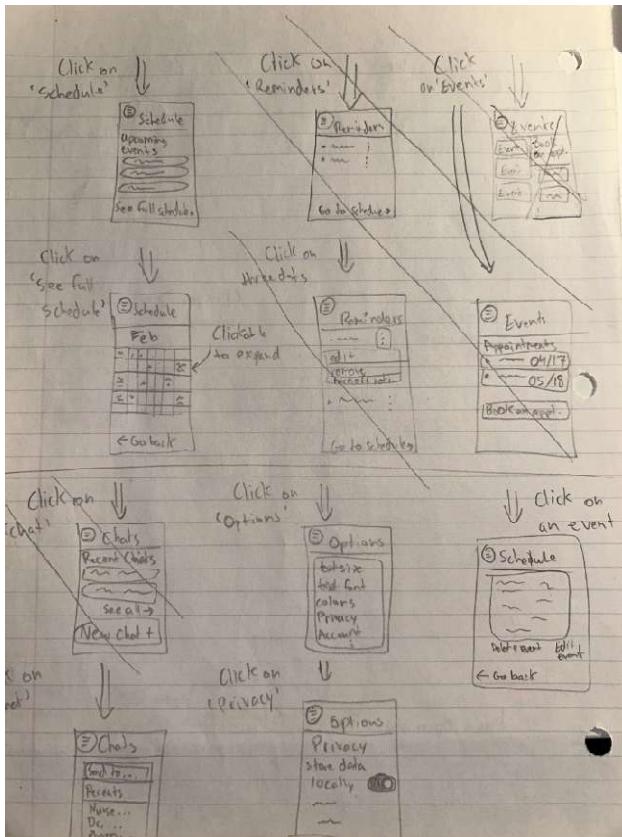


Sketching, Wireframing, Prototype Design

Sketching

Sketches were roughly drawn in order to quickly get an idea of what the layout of the app should be. They are easy to draw-up and still give great visual feedback. Despite not being the clean and organized version of the UI that one would expect from wireframes or a prototype, they serve their purpose well.





Wireframes

Based off the sketches, it is possible to flesh out a more complete idea of the flow and UI of the application.

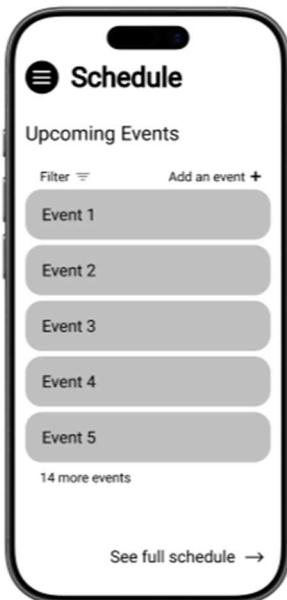
Wireframes serve to focus more on the UX and functionality of the application than the aesthetics. These early wireframes serve to put in place the groundwork that ensures the app is easy-to-use, intuitive, and seamless.



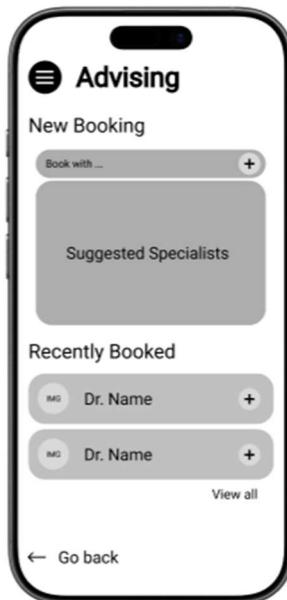
'Medications' Screen (With 3 dots clicked)



'Schedule' Screen



'Book an Appointment' Screen



'Schedule' Screen (See full schedule)

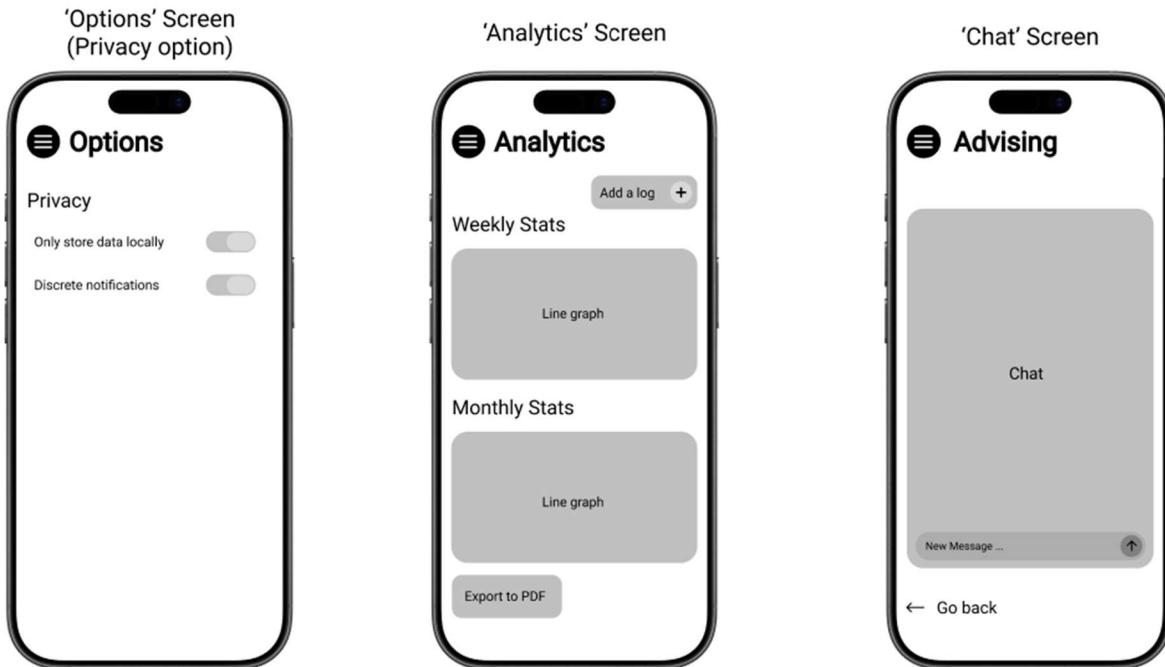


'Schedule' Screen (Clicking an Event)



'Options' Screen





Prototype

A clickable prototype was built, with user needs in mind. It doesn't encompass all possible functionalities of the app but with 15 screens implemented, it gives a good idea of the main flow and how the user experience is. The main menu in the clickable prototype always routes back to the same menu screen with the home page in the back, this was for improved navigability without having to duplicate all the current screens.

The prototype itself can be found here:

<https://www.figma.com/proto/PJvrrFXozbUmV1JNzR9KpU/Prototypes?node-id=3-262&p=f&t=dNxoxgFW7Ip3RDsh-1&scaling=min-zoom&content-scaling=fixed&page-id=0%3A1&starting-point-node-id=3%3A262>, Password is 'Soen357_prototype'.

Some features to highlight, that directly affected the design:

1. A ‘AAA’ color scheme was implemented, signifying high contrast; this is for improved accessibility (primarily for elderly users). The color hexes used are listed in the table below:

Element	Color Name	Hex Code	Usage	Ratio (vs. White)	Ratio (vs. Cloud Gray)
<i>App Background</i>	Pure White	#FFFFFF	Main page canvas	N/A	N/A
<i>Card Background</i>	Cloud Gray	#F0F2F5	Containers/Sections	1.1:1	N/A
<i>Primary Text Action / Secondary Color</i>	Near Black	#1A1A1B	Headers & Body	18.7:1 (AAA)	16.6:1 (AAA)
<i>Success</i>	Deep Sea Blue	#004B87	Buttons & Highlights	8.7:1 (AAA)	7.7:1 (AAA)
<i>Warning Card Border</i>	Forest Green	#006837	Plus-sign buttons, other highlights	7.5:1 (AAA)	6.7:1 (AA)
	Ruby Red	#B30000	Delete buttons	7.1:1 (AAA)	6.3:1 (AA)
	Medium Gray	#595959	Card borders	7.1:1 (AAA)	6.3:1 (AA)

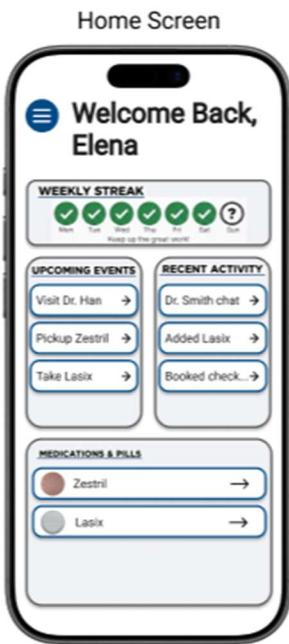
2. An option was added in the menu for switching between users, primarily for people who act as caretakers to someone else. They can then view the app from their dependent’s account.
3. A streak counter was added to encourage a Gen Z audience to stay on top of their medications and ensure they stay loyal to the application.
4. An ‘Analytics’ page was added for the Gen X and Boomer users so they can easily track both their metrics that they log, and those of their dependents.
5. A modern card-based layout was used for a less complex but still informative design, this helps everyone as it looks nice which is good for Gen Z, its very functional good for Millennials/Gen X and is much easier to interact with than a text-based layout which is good for Boomers.
6. A sign-in with apple button is added as a login option, this is to decrease the friction of signing up and onboarding, particularly targeted towards Gen Z.

7. A font size of above 18pt was prioritized and all buttons have a high contrast; this is for better accessibility targeting Boomers.
8. A feature allowing chatting was also added to cater to Gen Z who much prefer to text asynchronously than call directly.

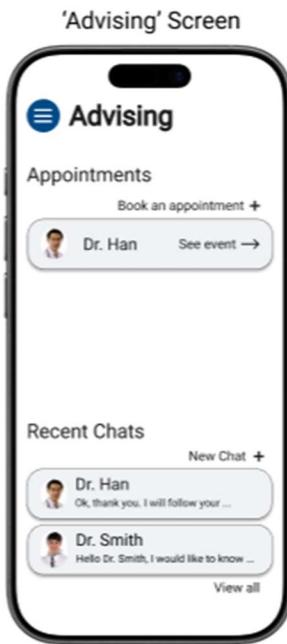
Login Screen



Home Screen



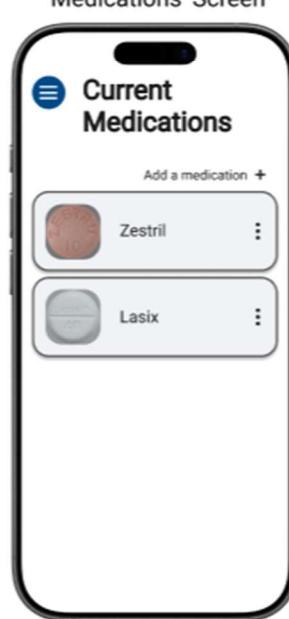
Advising Screen



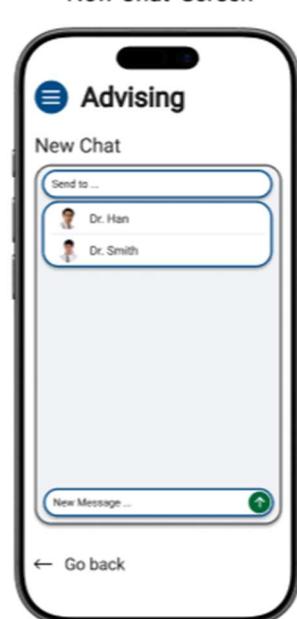
Home Screen (Menu Op...



Medications Screen



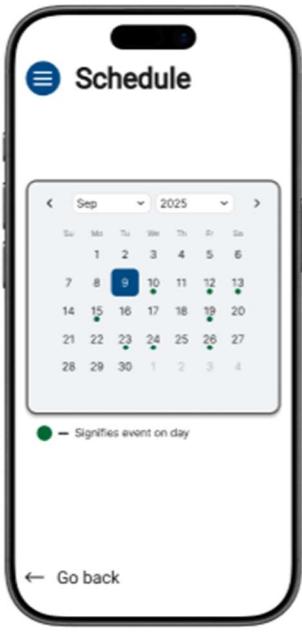
New Chat Screen



Medications Screen (With 3 dots clicked)

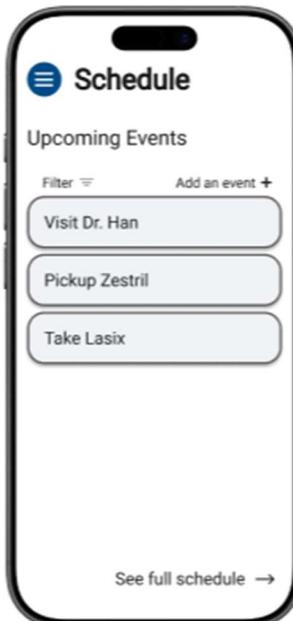


Schedule Screen (See full schedule)

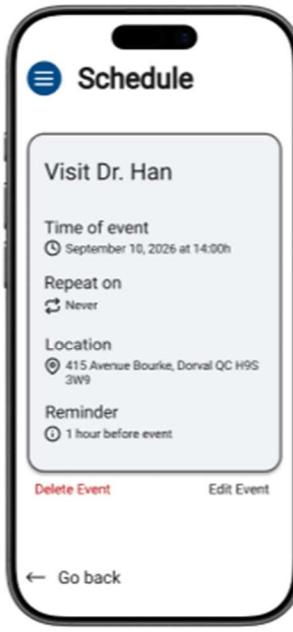


Schedule Screen

'Schedule' Screen

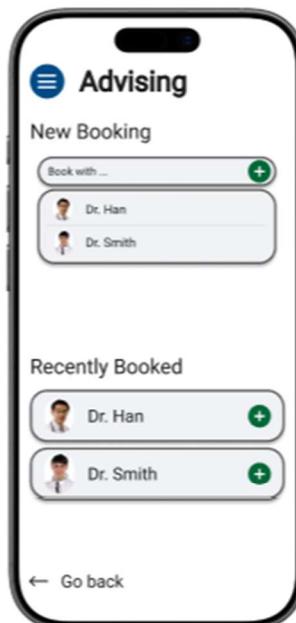


Schedule Screen (Clicking an Event)



Book an appointment sc...

'Book an Appointment' Screen



Options Screen

'Options' Screen



Options Privacy Screen

'Options' Screen
(Privacy option)



Analytics Screen

'Analytics' Screen



Chat Screen

'Chat' Screen



Usability Testing Plan

At this point in the process a usability test would be conducted to get actual hands-on feedback which would help in avoiding making an app that would miss the mark. Usability testing would ensure that the original pain-points and requirements, from the actual people that were researched, were not lost along the way. However, since this assessment does not require a usability and just wants one to be planned out, in the following paragraphs a potential usability test for this project will be outlined.

Goals

The main goal, keeping in theme with the original idea, would be to test how effectively the HealthMe prototype supports real users across the distinct generational groups. Specifically, the usability test would aim to check four main goals that are critical to the core idea of the app. The first goal, which if failed would require critical rework, would be to determine whether users can independently complete core tasks without confusion or error. The second goal, considering the elderly are most likely to have chronic illnesses, would be to assess whether the app's visual design, contrast, and layout meet accessibility expectations. The third goal, relating to Gen Z's desire for privacy, would be to validate that the tone and discretion of notifications is acceptable. The fourth, and final, goal, relating to the Gen X and Millennial pain-points, would be to identify friction points in navigation such as switching between user profiles or logging a symptom.

Participants

At least 6 participants should be recruited, two per persona group, mirroring the demographic breakdown from the user research. These participants should have some form of experience in managing a chronic condition and should have no prior exposure to the prototype. Each session would be conducted individually and would last approximately 30 minutes.

User Tasks

There would be four user tasks to be carried out by participants. Each aiming to cover a core pain-point or functionality of the application interface. Tasks should be intentionally presented in a realistic way so as to avoid leading on the participant, keeping data accurate.

Task 1: Medication Reminder

- “You just received a notification to take your medication. Please interact with it as you normally would and confirm that you have taken it.”

Task 2: Log a Symptom

- “You’re not feeling well. You have some nausea and fatigue. Please log how you’re feeling in the app.”

Task 3: Switch User Profile

- “You are also managing your mother’s medications. Please navigate to her profile and check whether she has taken her morning dose.”

Task 4: View Analytics

- “Your doctor has asked about trends in your blood pressure over the last month. Find where you would go in the app to show them this information.”

Feedback Collection Methods

A dual feedback collection method would be employed to capture both quantitative and qualitative data. The first collection method would entail a supervisor overseeing a participant clicking through the app upon receiving task prompts. Their job would be to record any moments of hesitation, incorrect navigation, or confusion, as well as time taken per task. Participants would also be encouraged to verbalize what they see,

expect, and feel as they interact with the prototype. This collection method would allow for insight into the mental model of how a user expects the app to work and can reveal misalignments with the designed behavior.

The second collection method would come later as a post-test questionnaire after the user tasks. This would include a 5-point System Usability Scale (SUS), which is a standard questionnaire used by UX researchers to measure the usability of a product or service. Some questions may be adapted for the current app context, but at the end two to three open-ended questions would be included, such as “What was the most confusing part of the app for you?” and “What feature did you find most useful and why?”.

Analyzing Feedback and Iterating on the Design

Once all participants have completed their tasks and the feedback has been compiled, the analysis would proceed in two parts: the qualitative results and the quantitative results. For the first part, the qualitative sections of the user test, such as the think-aloud notes and open-ended interview responses, would be reviewed. The goal would be to organize the results into thematic categories, aiming to reveal patterns that may represent systemic issues.

For the second part, the quantitative sections of the user test, such as the SUS scores and task completion rates/times, would be averaged and broken down by persona group. This would, once again, reveal patterns and whether any specific demographic struggled more than others.

The resulting findings would then be organized into a prioritized list of design changes, ranking them by severity. The main issues, such as a participant being unable to locate the export to PDF button, would be addressed in the prototype immediately. Moderate issues, such as notification wording being unclear to one demographic, would be explored in a second round of targeted A/B testing. Minor issues, such as cosmetic preferences, would be logged for a future iteration.

Reflection

Using a structured UX process for the Health Companion app fundamentally changed my perspective. I initially envisioned a simple medication tracker, but research quickly revealed that users needed something much deeper. The journey from research to prototyping acted as a reality check, bridging the gap between my assumptions and actual user needs.

Interviews with ten participants, aged 17 to 75, provided the most vital insights. One 75-year-old participant described her system as just "a pillbox and a desk calendar." This reframed my entire approach: the app couldn't just be "easy to use"; it had to gently guide users through a significant behavioral shift from physical to digital tools.

Because of this, I prioritized features that might have otherwise been overlooked. Such as AAA high-contrast colors and large tap targets for better legibility and photo-based medication identification to reduce errors.

A major challenge was designing for three distinct generations. My early ideas were too "trendy," I was thinking of using more modern UI with thin and "flowy" components. By treating AAA accessibility as a hard requirement, I developed a card-based layout that satisfied everyone. It felt modern to Gen Z, organized to Millennials and Gen X, and spatially clear to Boomers. Using real data rather than stereotypes allowed me to find this middle ground.

Ultimately, this project taught me that good design isn't about intuition; it is about disciplined listening. The UX process provides the structure to turn user reality into a functional tool. It ensures every decision is grounded in truth, creating an interface for an app that isn't just "nice to have," but truly useful.