SOEN 357 – Mini Project

Medico – Chronic Health Companion App

Written by Hiba Talbi 40278717.

Table of Contents

1. Introduction

Medico is designed to support individuals living with chronic conditions that require regular medication intake and recurring medical appointments, such as diabetes, asthma, cardiovascular conditions, or long-term mental health treatment.

Managing chronic health conditions isn't only about taking medication, it's about consistency. Missing doses or forgetting appointments can have serious consequences. Although there are existing health-related applications, many of them feel overly complex, overwhelming, or impersonal. Instead of offering reassurance, they can add stress.

Medico was created to offer a simpler and more supportive alternative. The goal is to make medication and appointment tracking feel manageable rather than intimidating. Often, people enjoy gamifying their daily tasks, and when something feels too serious or rigid, they may avoid it altogether. In the context of health, this avoidance can lead to demotivation and eventually to users abandoning the app. For this reason, a mascot was introduced as a friendly companion within the app. The mascot is not the central feature, but rather a supportive element that delivers reminders and encouragement in a warm, human way, preventing users from feeling as though they're completing yet another boring task.

Ultimately, Medico's purpose is to help users stay consistent with their health routines through simplicity, personalization, and supportive design.

This study was hosted on the following site: **https://yuioytffhio.github.io/medico-ux-case-study/**

---

2. User Research and Methodology

2.1. Target Users

Medico is designed to accompany users of different age groups, such as:

- Teenagers or adults with chronic illnesses.
- Users who need to keep up with daily medications.
- Users managing regular doctor appointments.

Overall, the app targets individuals with busy schedules who need a simple, intuitive, and encouraging tool to help them manage their health routines. It is also designed to be accessible to users who may not be very comfortable with technology, prioritizing clarity, readability, and ease of use.

2.2. Survey

To better understand user needs and expectations, a short survey was conducted to collect insights on how the application should be structured and which features would be most valuable.

The survey was anonymous, conducted online through Google Forms, and took approximately 5–10 minutes to complete. It targeted individuals living with chronic health conditions or those close to someone managing such conditions.

Check out the survey here: https://forms.gle/4YT36XMRDRWoSY7MA

The survey contained the following sections:

- **Background Information:** aims to collect the respondent's age range, health condition, and number of medications taken regularly.
- **Current Behavior:** explores how users currently remember their medications, how often they forget doses, and how they track doctor appointments.
- **User Needs:** identifies difficulties in managing medications, frustrations with current health apps, desired features, and the importance of tone, simplicity, and personalization.

2.3. Results & Key Findings

Unfortunately, the survey did not receive many responses (only 7), resulting in a limited sample. It was primarily shared through Instagram and Reddit, which explains why most respondents were within a similar age range. While the sample is small, several relevant trends were identified.

Background Information Section:

This section aimed to collect the respondent's age range, health condition, and number of medications taken regularly.

Most respondents were between 18–24 years old, with 22% between 25–34. This age distribution reflects the channels through which the survey was shared. A broader recruitment strategy would have resulted in a more diverse age range and richer data.

There was a variety of health conditions among respondents. The answers were the following:

- Diabetes
- Celiac disease
- ADHD
- Vitiligo

- HSV2
- A leg Condition (unspecified)

The majority of respondents take 1-2 medications regularly, with only 11% taking 5 or more.

Current Behavior Section:

When asked how they currently remember their medications, most respondents rely on memory. Others use phone alarms, written notes, pill organizers, or occasionally forget doses altogether.

For doctor appointments, most respondents rely on calendar apps or memory, and some reported struggling to remember them altogether.

User Needs Section:

When asked about what they find the most challenging about managing medications, most users voted that they struggle to stay motivated and consistent.

When asked about frustrations with current health apps, users expressed that they find them to be too complex or that they simply didn't use any health apps.

When asked about desired features, users expressed the importance of having a simple and intuitive interface, clear medication reminders, and a way to track their health progress over time.

When asked about how important would a friendly and encouraging tone be to the user for a health app, 60% picked Somewhat important, with 30% picking very important and 10% picking not important.

Lastly, the last question asked was "What would make a medication reminder app truly helpful for you?" and the answers were the following:

- Notifications
- If it shows a yearly graph(improved health) real metrics to keep track of improvement
- Lock my screen with a big message have you taken your meds at the hours I appointe the app to remind me
- NFT tag connection from app to pill organizer that automatically clicks meds taken and what time
- Easy to use

Key Findings:

Overall, respondents emphasized the importance of a simple, personalized health application that delivers precise and relevant notifications. Users do not want to be overwhelmed with excessive alerts. Instead, they prefer clear reminders that specify exactly which medication to take and at what time.

One particularly influential suggestion was the idea of including a yearly progress graph to visualize health improvement over time. Although this feature was not originally planned, it was later incorporated into the wireframe designs to better support long-term motivation.

---

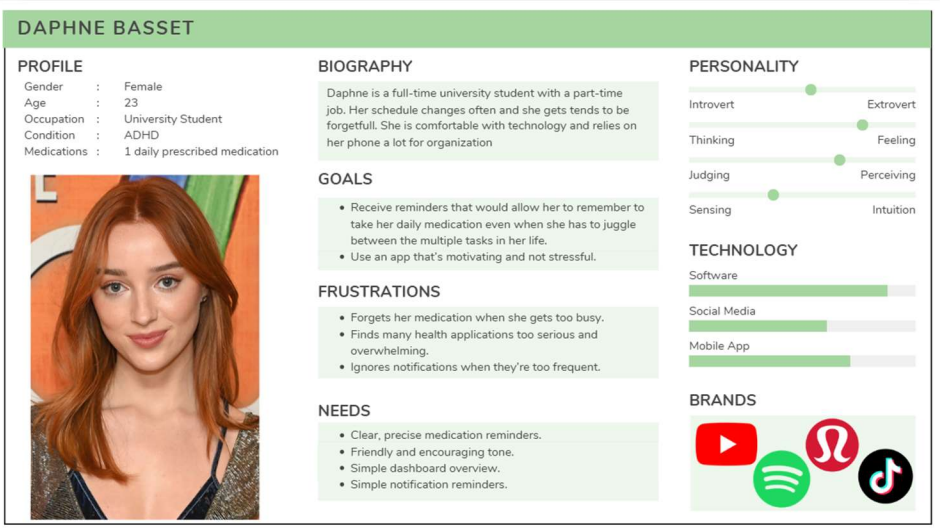
3. User Personas

Chronic health conditions vary greatly, and users therefore have diverse needs. Despite these differences, all users must be supported within a single application. In order to provide the best possible user experience, to a broad range of users, it is crucial to understand the different user needs and requirements. To do so, two personas were created based on responses collected from the survey. Creating these personas helps keep user needs in mind throughout the design process and ensures that design decisions remain user centered.

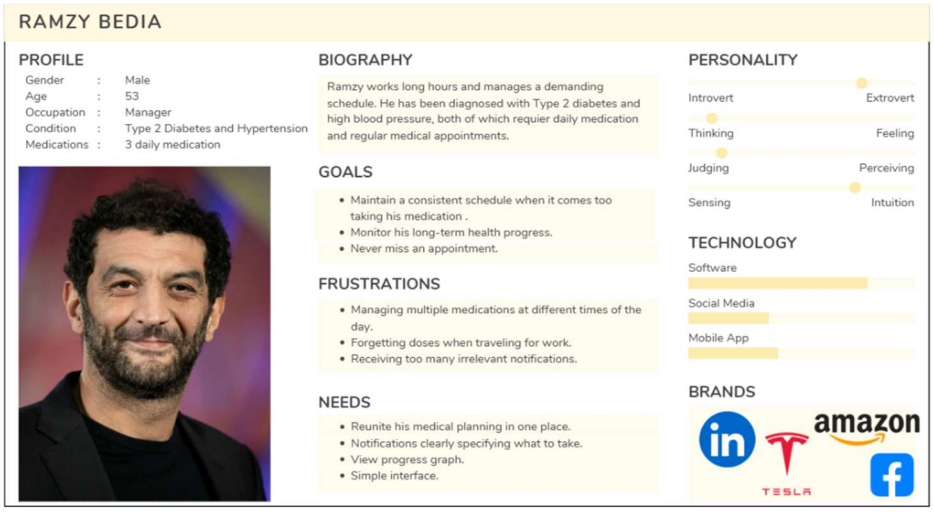
The user needs and requirements captured by the personas are the following:

- Provide clear medication reminders with notifications containing only relevant information
- Offer an easy and quick way for users to log their medication intake
- Offer a way to track and visualize health progress over time
- Offer an easy and quick way to keep track of their upcoming appointments
- Maintain a friendly and encouraging tone without compromising the seriousness of the app's purpose
- Ensure accessibility through readable fonts and a simple, intuitive interface

Persona 1 represents a younger user who is tech-savvy but struggles with consistency in medication intake due to a busy lifestyle.



Persona 2 represents an older adult who has a heavy schedule and requires a straightforward and easy-to-navigate application, that would indicate to him his progress and motivate him to stay consistent with his health routine.

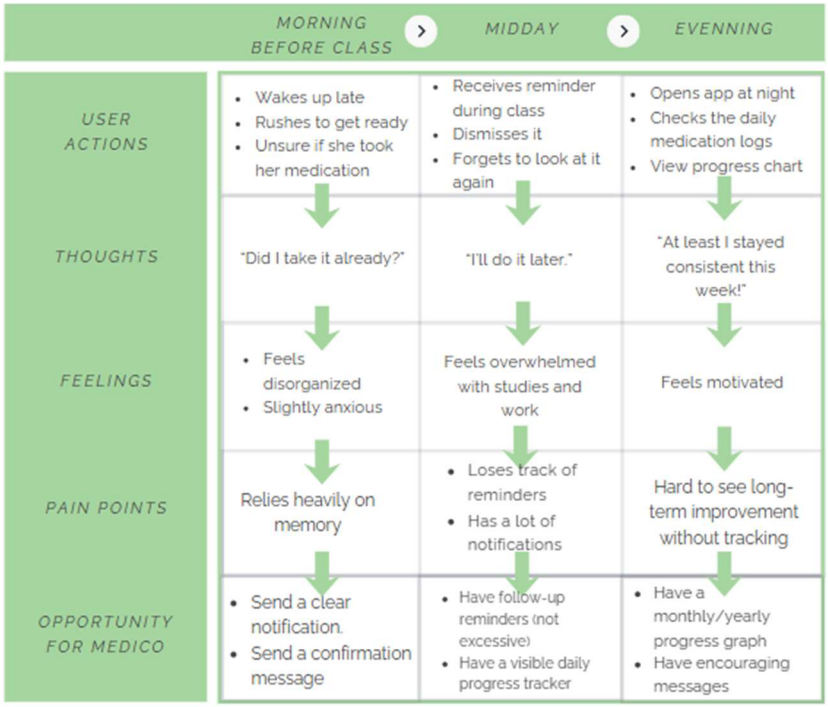


3.1. User Journey Mapping

To properly proceed with the design of the application, various use cases were identified. Two User journey Maps were created to visualize how the personas would interact with Medico throughout their daily routines.

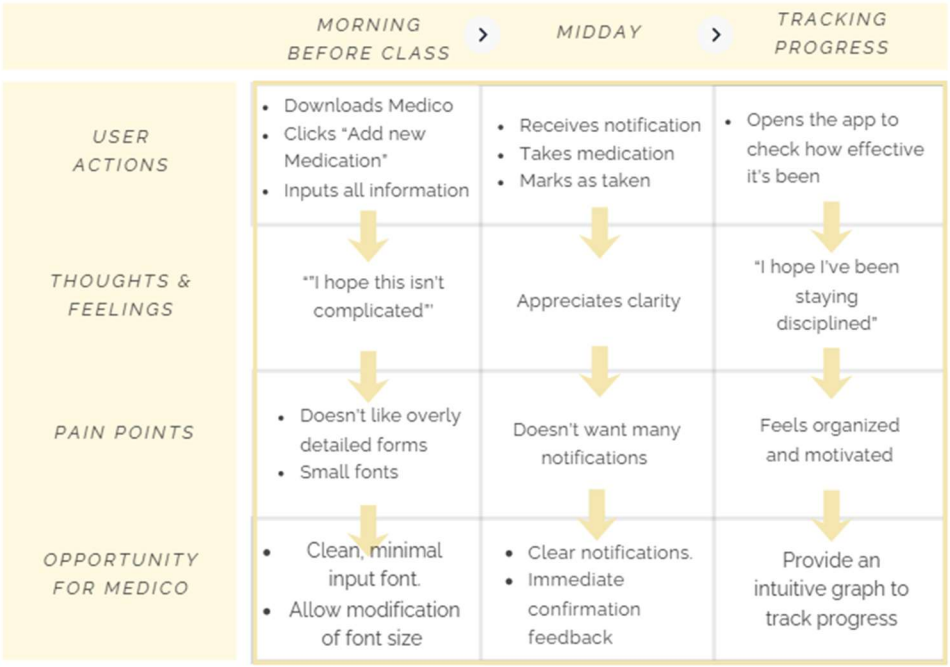
Journey Map 1 - Persona 1 (Daphne Basset)

USER JOURNEY MAP



Journey Map 2 – Persona 2 (Ramzy Bedia)

USER JOURNEY MAP



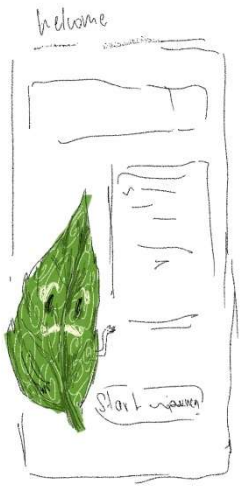
4. Design Process

Designing an application involves multiple steps, one of which is finding visual inspiration.

4.1. Sketches

The design process began with simple sketches that outlined the overall structure and functionality of the app.

Originally, the mascot was designed as a leaf. The intention behind this was to reference nature and wellness. However, a pill was found to be more intuitive and directly related to the purpose of the application.



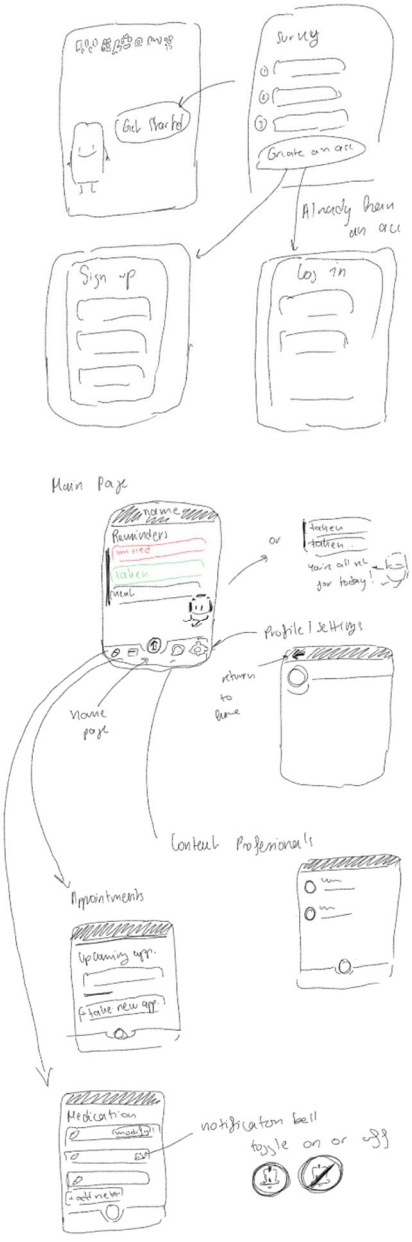
The inspiration behind the mascot comes from personal experience with applications such as Duolingo. Duolingo's mascot plays a major role in making the app engaging and memorable. While Medico does not aim to replicate Duolingo's frequent notification style, the idea of a friendly mascot that encourages users was a strong source of inspiration.

The mascot was hand-drawn by myself using Resprite, a pixel art software. The design was kept minimalistic to avoid overwhelming users and lose the meaning it's supposed to convey which is friendliness and warmth.

The original sketches included the following pages:

- Welcome page
- Survey
- Login / Sign-up
- Home page
- Settings
- Medications page
- Appointments page
- Messaging page

The sketches were intentionally kept simple and rough to focus on the overall concept and structure of the app rather than on visual details. This approach allows for quick iterations and adjustments based on feedback before moving into more detailed designs.



4.2. Wireframes

Once satisfied with the overall concept, low-fidelity wireframes were created. These wireframes helped define the layout and features of each page while keeping the design simple before moving into the high-fidelity UI/UX design phase in Figma.

4.3. Storyboard

A storyboard was created to illustrate how the application would be used in a real-life context. It captures one of the many possible scenarios in which Medico would support a user throughout their day.

The purpose of the storyboard was to ensure that the app fits naturally into a user's daily routine rather than feeling intrusive or disruptive.

4.4. Color Palette

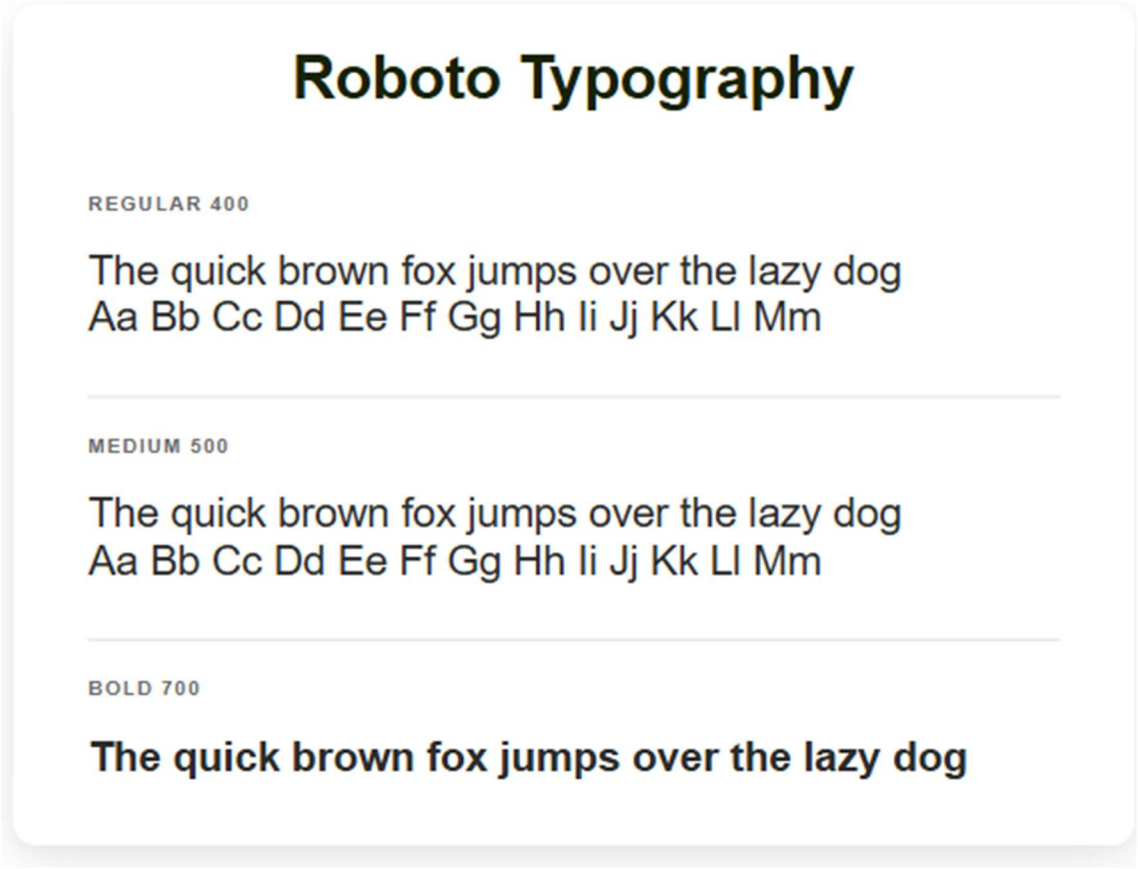
Initially, an orange color palette was explored to create a warm and welcoming feeling. However, it quickly began to resemble a pet-related application.

For this reason, a green color palette was chosen instead.

Green is commonly associated with health, balance, and calmness. It helps reinforce the app's purpose while making users feel at ease.

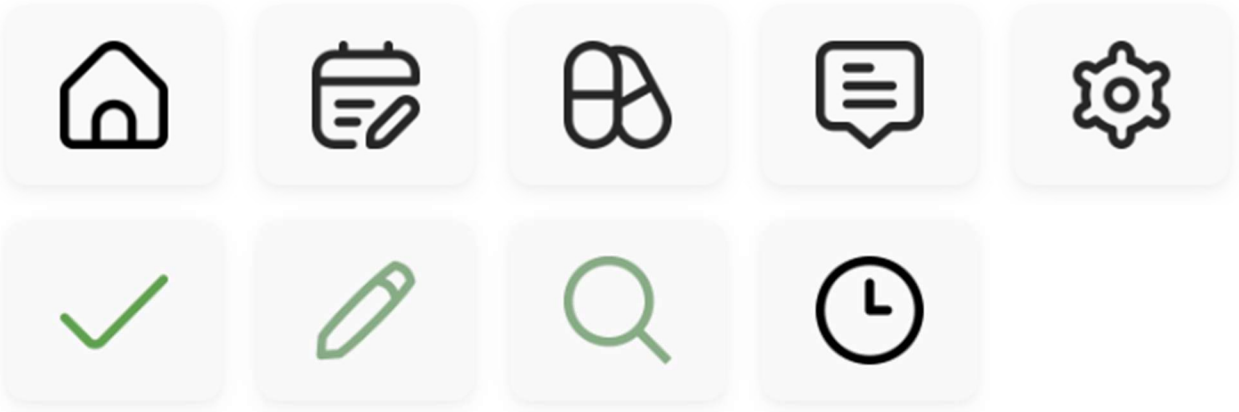
4.5. Typography

Medico is meant to be intuitive, clear, and visually consistent. For this reason, a simple and readable font was chosen: Roboto. Roboto is commonly used on Android devices, is highly legible, and does not distract from the content.



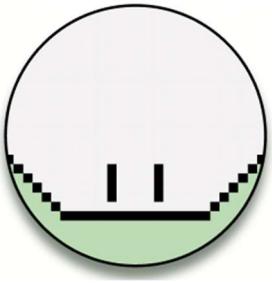
4.6. Icons and Illustrations

Icons were selected from Flaticon (https://www.flaticon.com) and used under their free license with attribution. I ensured that a consistent icon set was used throughout the application. Icons with thicker lines were chosen to match the visual style of the mascot that has thick bold lines.



4.7. Naming & Logo

The name of the app and the mascot were intentionally kept the same to reinforce brand recognition. The logo is simply the face of the mascot.



The name ***Medico*** was chosen because it is short, catchy, and directly related to health, without sounding overly serious or intimidating.

---

5. Prototype

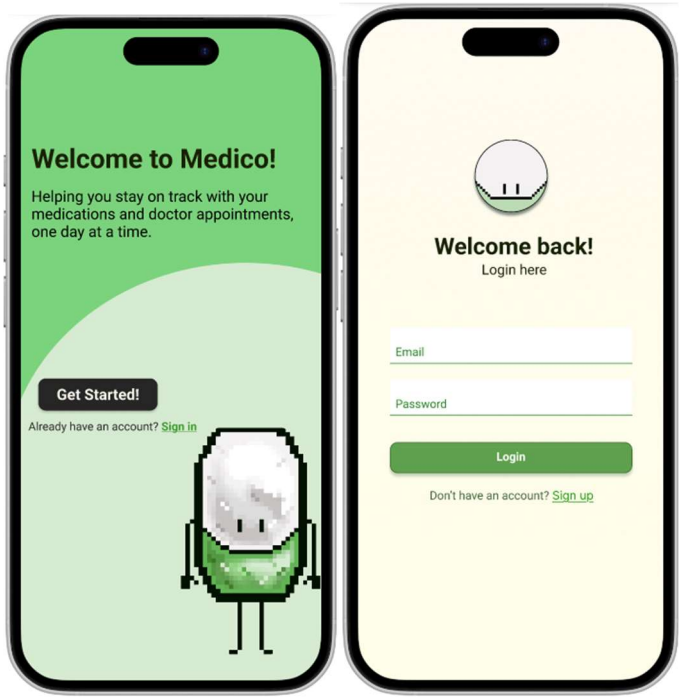
The final interactive prototype was created in Figma. It demonstrates the various interactions within the app and showcases its main features.

Try it yourself: https://www.figma.com/proto/d7uMEbJ9bt8JFxKxfDdplm/Medico-ux-case-study?node-id=37-198&t=p4zTyGxK9fCqa0PQ-1&scaling=scale-down&content-scaling=fixed&page-id=0%3A1&starting-point-node-id=37%3A129&show-proto-sidebar=1

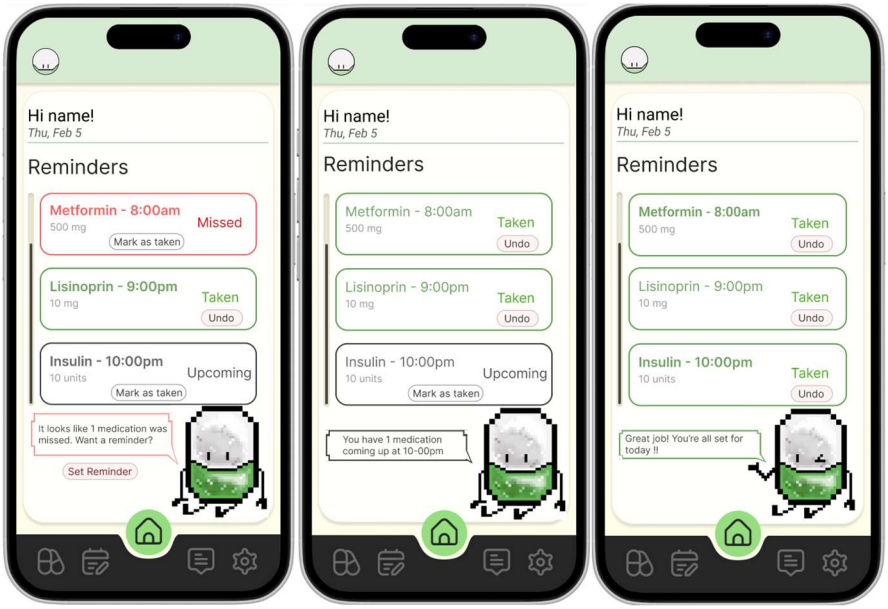
---

6. Final Design

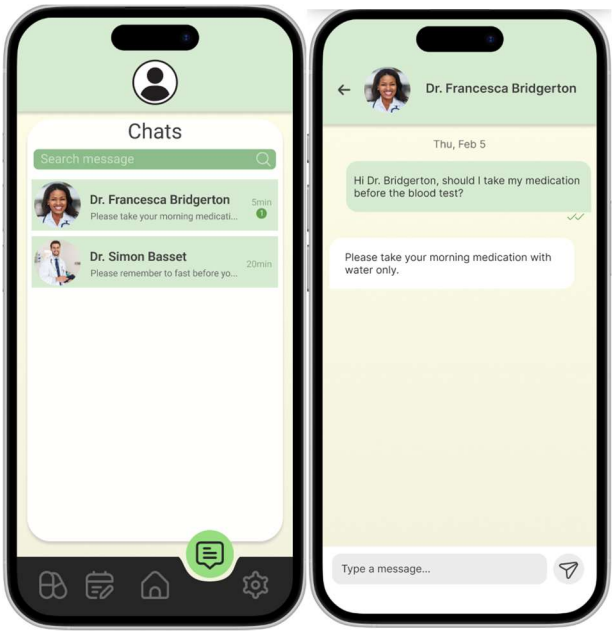
The application opens with a welcome page where the mascot, Medico, greets the user and briefly explains the app's purpose.



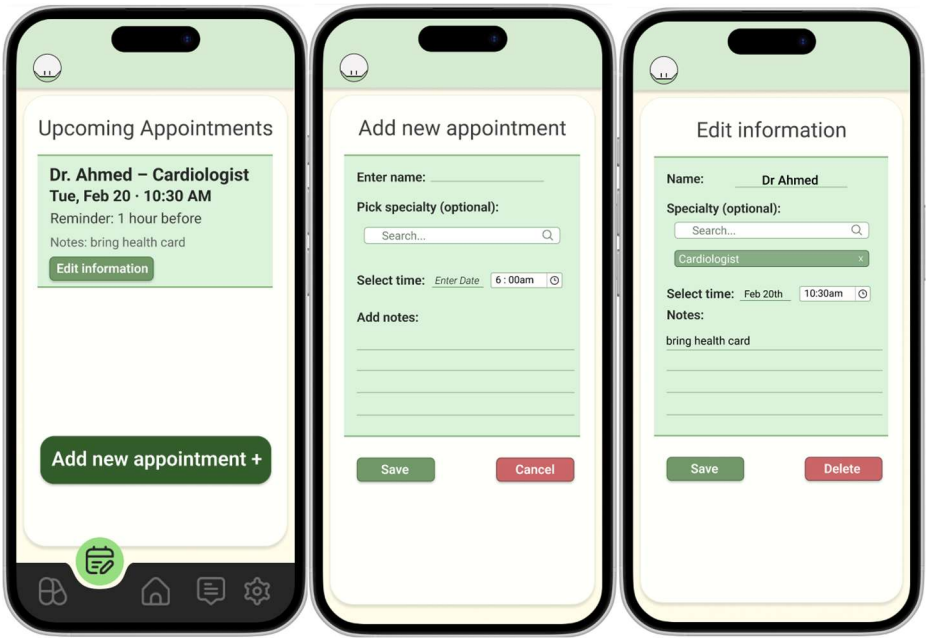
Once logged in, the user is directed to the Home page. This page acts as a daily dashboard, displaying the medications scheduled for the day along with their reminder times. Appropriate messages from Medico are displayed throughout the app to inform the user whether they have an upcoming medication, have missed a dose, or have successfully completed all medications for the day. These messages are designed to be clear and supportive rather than overwhelming, reinforcing consistency without creating unnecessary pressure.



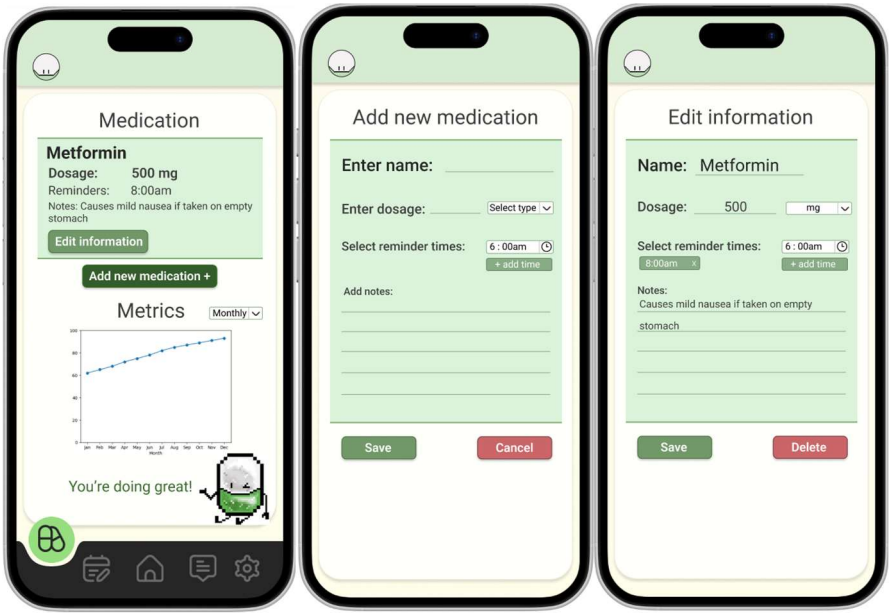
The Messages page provides a space for communication with healthcare professionals. The layout remains minimal and easy to navigate, ensuring that important conversations are accessible and not buried within complex menus.



The Appointments page provides a structured overview of upcoming visits. Users can add new appointments by entering relevant information such as the healthcare professional's name, specialty, date, and time. Existing appointments can also be edited if details change. The layout prioritizes clarity, ensuring that important dates are easy to view and manage.



The Medications page contains a structured list of all current medications. Each entry includes dosage information, scheduled reminder times, and optional notes. Users can easily edit or update information when needed. At the bottom of the page, a progress dashboard visualizes monthly or yearly health metrics, allowing users to track their consistency and improvement over time. This feature was directly inspired by survey feedback emphasizing the importance of measurable progress.



Finally, the Settings page allows users to manage personal information, customize notification preferences, and adjust accessibility features. Accessibility options include high-contrast mode, colorblind mode, and adjustable font sizes. These settings ensure that Medico remains inclusive and usable for individuals with different visual and accessibility needs.

7. Usability Testing

To evaluate Medico's usability and overall user experience, informal usability testing was conducted with ten participants. Participants were asked to explore the interactive prototype and provide honest feedback regarding navigation, clarity, visual design, and functionality.

The goal of this testing phase was to identify areas of improvement before finalizing the design.

7.1. Methodology

Participants were given access to the Figma prototype and asked to:

- Navigate through the main pages
- Add a medication
- Modify medication information
- Delete a medication
- View appointments
- Modify appointment information
- Delete an appointment
- Log out
- Provide general feedback on usability and visual design

Testing was conducted informally, and feedback was collected through written responses and verbal comments.

7.2. Key Feedback & Observations

1. Navigation & Clarity

Most participants agreed that the application was:

- Easy to navigate
- Intuitive
- Clear and structured

One participant mentioned that elderly users would likely find the app easy to use, which aligns with Medico's accessibility goals.

This confirms that the simplified layout and structured dashboard design were effective.

Visual Design & Typography

Several participants commented on the typography:

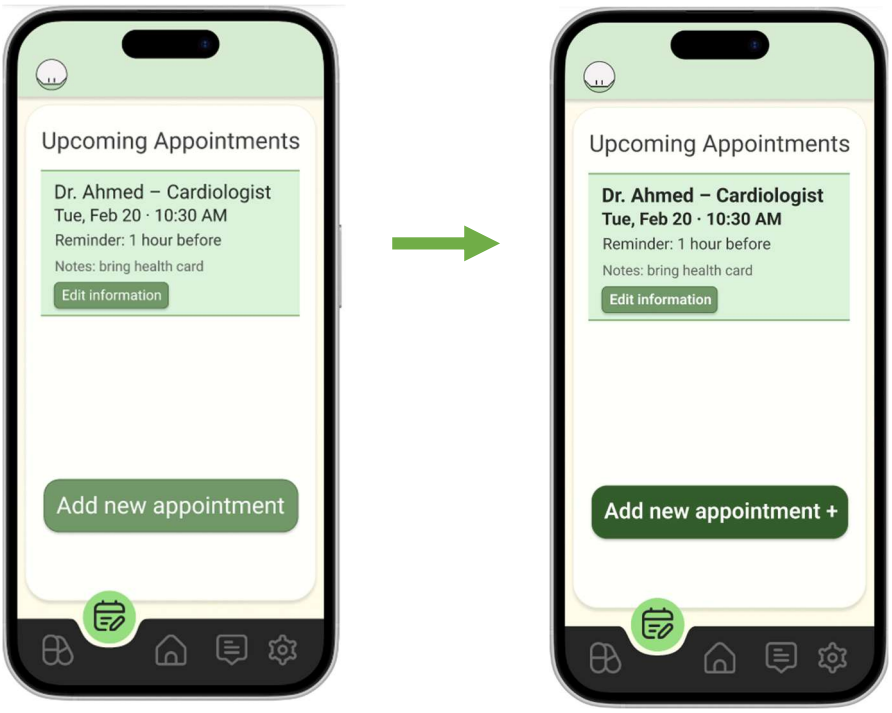
- The font felt repetitive or homogeneous
- Titles could be more distinct
- Section headings could be bolder or visually stronger

One participant suggested integrating more pixel-style elements to better connect the mascot's personality with the overall interface. Currently, the mascot appears present but somewhat visually separate from the rest of the UI.

This feedback suggests an opportunity to:

- Strengthen hierarchy through font weight variations
- Add subtle pixel-style accents (e.g., underlines or dividers)
- Better integrate the mascot's visual identity into the interface

Based on this feedback, improvements were made to strengthen visual hierarchy. Titles were made bolder and font sizes were adjusted to create clearer distinctions between sections. For example, changes were applied to the Appointments page headings. Although subtle, these refinements improve readability and structure.



The suggestion to incorporate additional pixel-style details was considered. However, due to time constraints and prioritization of core usability improvements, this idea was not implemented. In future iterations, further customization could include enhanced visual integration of the mascot, dynamic dark mode illustrations, or customizable color palettes to provide a more personalized experience.

Color Palette

Participants generally approved of the green color palette, noting that it aligns well with a health-related application.

One participant mentioned that the design feels somewhat like a “science textbook.” While this may reinforce the medical theme, it suggests that slight visual warmth or contrast could further balance professionalism and friendliness.

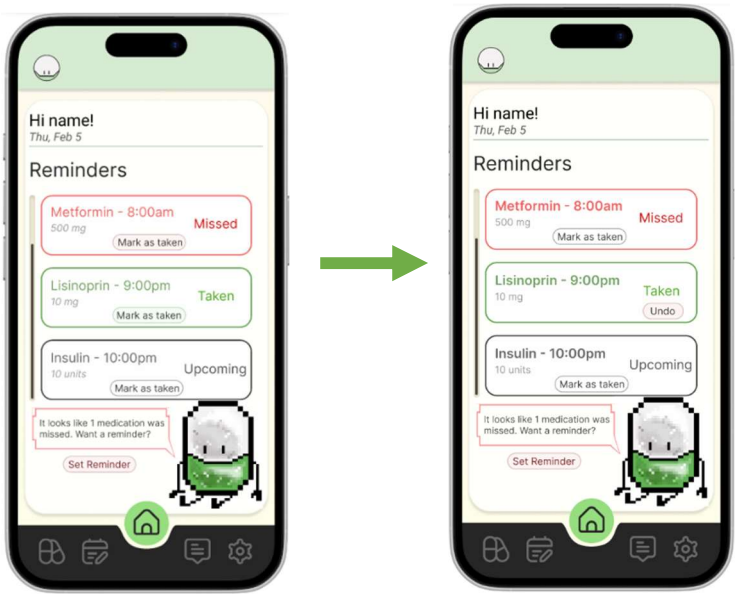
Functional Improvements

Several practical improvements were suggested:

- Add confirmation prompts when canceling appointments or medications
- Add an “Undo” option if a user accidentally marks a medication as taken
- Simplify or restructure the Settings page, which was perceived as slightly crowded

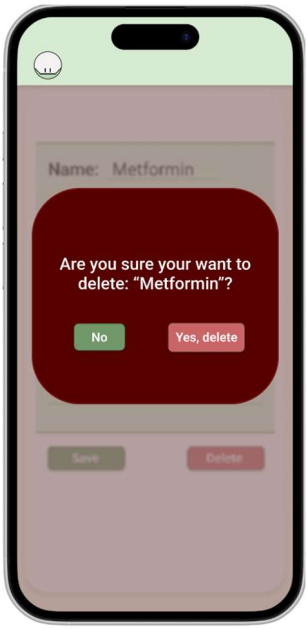
These suggestions were incorporated in the design.

An Undo button was added to medication cards on the home page to allow error recovery. This improves user control and reduces anxiety around accidental actions.

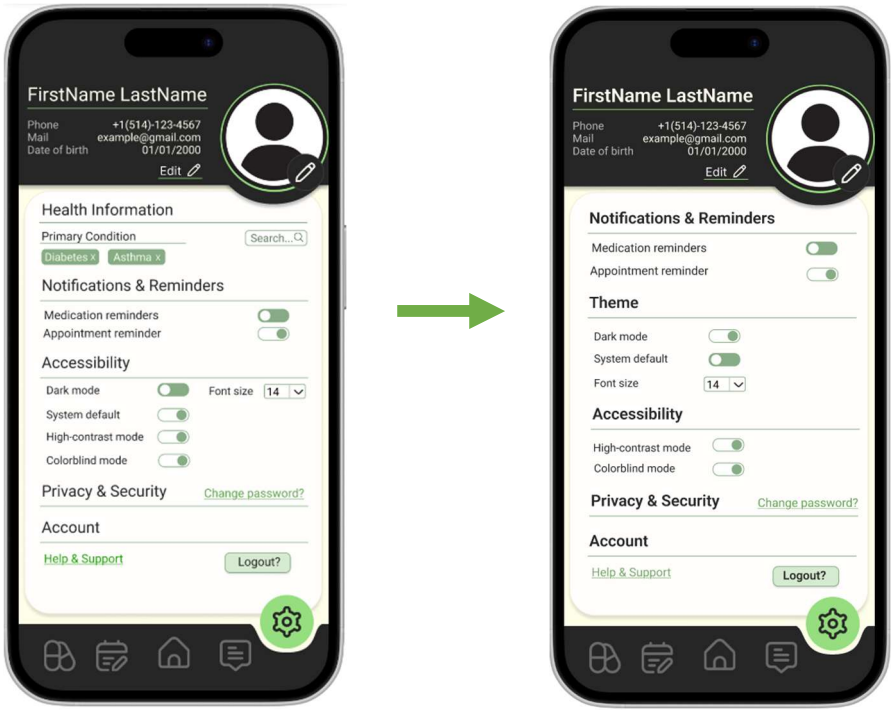


In addition, a design inconsistency was identified: green medication cards (which visually indicated that medication had already been taken) still displayed a “Mark as Taken” button. This mismatch was corrected to ensure that visual indicators and actions are logically aligned.

Confirmation pop-ups were also implemented on both the Appointments and Medications pages when users attempt to delete an item. This prevents accidental deletions and improves overall reliability.



The settings page was improved, and more sub-sections were added as suggested.



7.4 Overall Evaluation

Overall, usability testing confirmed that Medico is intuitive, accessible, and easy to navigate. Participants were able to complete tasks without confusion, which reinforces that the core structure of the app is effective. The main areas for improvement were related to strengthening visual hierarchy, adding clearer confirmation for certain actions, and better integrating the mascot's design language into the interface.

The feedback not only validated the app's strengths but also provided clear direction for meaningful refinements. Small adjustments, such as improving typography and adding confirmation prompts, significantly enhanced the overall user experience without changing the core concept.

While Medico successfully addresses medication and appointment tracking, future iterations could expand its scope by introducing caregiver integration or professional dashboards. Gathering feedback directly from healthcare professionals through structured surveys would provide deeper insight into their expectations and practical needs. Additionally, testing with a larger and more diverse sample size would allow for more informed and representative design decisions tailored to the intended audience.

Accessibility remains a central priority in the development of Medico. Future improvements could include a more refined dark and light mode, expanded high-contrast and colorblind options, adjustable font sizing, and full screen reader compatibility to ensure the app remains inclusive and adaptable to different user needs.

---

9. Conclusion

This project led to the design of a health companion application that supports individuals managing chronic conditions in a way that feels intuitive, motivating, and approachable. Medico combines structure with friendliness through its mascot, providing reminders and guidance without overwhelming the user.

By prioritizing clarity, encouragement, and thoughtful design choices, Medico aims to help users build consistency in their daily health routines. The design process, combined with usability testing and iterative improvements, demonstrates how user-centered design can transform a functional healthcare tool into a supportive and engaging experience.