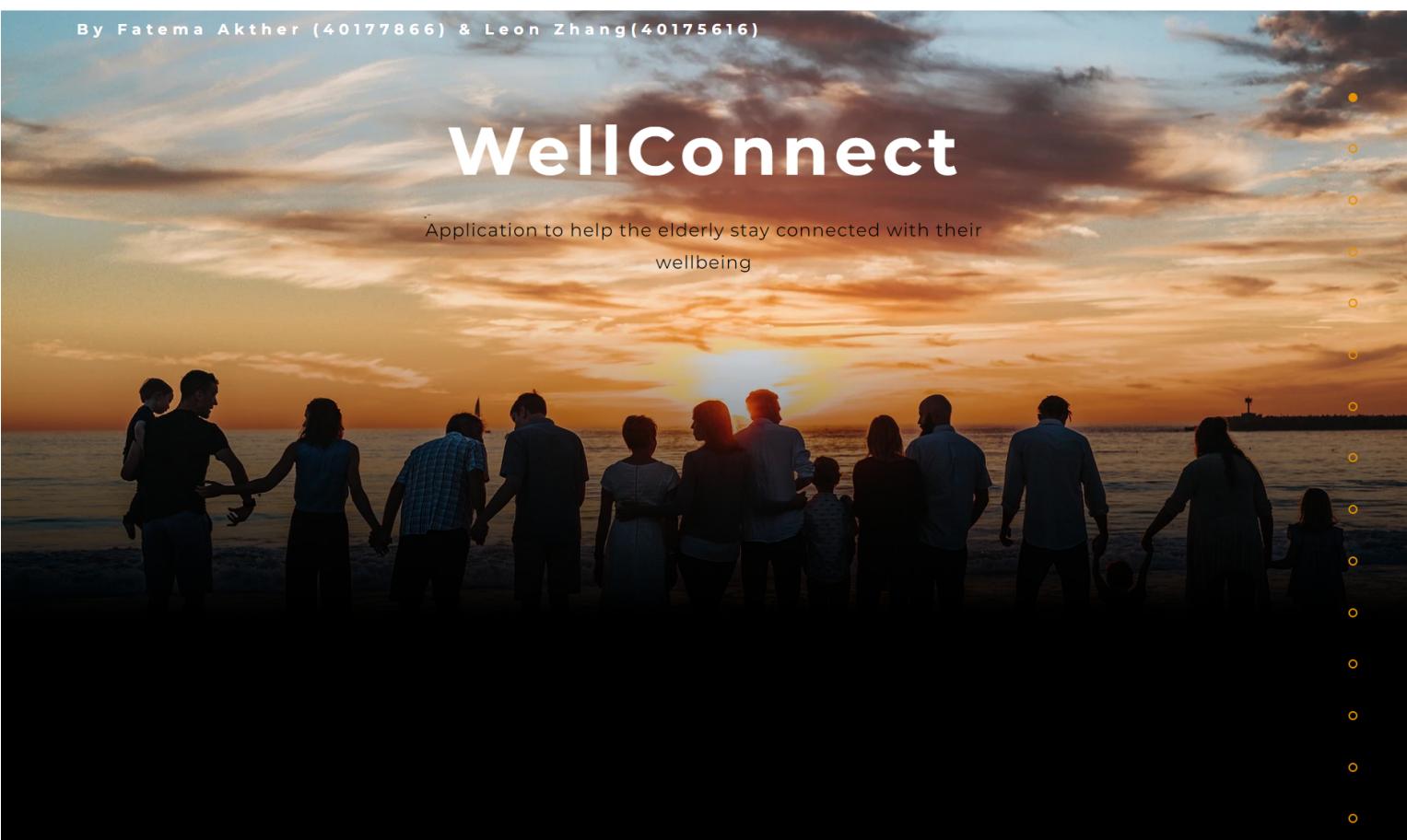


By Fatema Akther (40177866) & Leon Zhang (40175616)

WellConnect

Application to help the elderly stay connected with their wellbeing



Understanding the problem

As the population ages, there is an increasing need for technologies that support the physical and mental wellbeing of elderly individuals. To address this need, the Quebec Government has commissioned our design company to create an app that focuses on improving the quality of life for elderly users. Our goal is to design an app that is user-friendly, accessible, and tailored to the specific needs and challenges faced by elderly individuals. Our ultimate aim is to create an app that helps elderly users live happier, healthier lives.

We understand the problem we are trying to solve for our intended population, which is to support the physical and mental wellbeing of elderly users, both those living at home and those in nursing homes.

The app aims to address several challenges that elderly individuals may face, such as social isolation, difficulties managing their health, and limited access to resources that support their physical and mental health.

Inclusivity

We are also mindful of the diversity of technological skills and possible physical and cognitive limitations that our elderly users may have. Therefore, the app will be designed with a simple and intuitive interface that is easy to navigate, with clear instructions and minimal steps required to perform tasks.

To ensure that the app is accessible to all users, including those with physical and cognitive limitations, we will also incorporate features such as large text and high contrast visuals to make the app easier to read, and we will ensure that the app is compatible with assistive technology such as screen readers and voice commands.

Research

In today's technology-driven world, there are countless apps designed to support physical and mental wellbeing, but not all apps are created equal. Some apps may work well for certain populations but may not be suitable for others.

In this analysis, we explore the strengths and limitations of popular apps such as SilverSneakers GO, BetterHelp, and Pill Reminder by Medisafe. While these apps have received high ratings from users, they also have potential downfalls that may impact their effectiveness for elderly users. By understanding these limitations, we can better design an app that meets the unique needs and challenges faced by this population.

SilverSneakers GO:

Why it works:

- it offers customized workout routines and nutritional advice.
- includes social features, such as online forums and a "buddy system" that pairs users with workout partners.

why it might not work:

- exercise routines may not be suitable for users with limited mobility or other physical limitations.
- community features may not provide sufficient support for users who require more personalized fitness guidance.

BetterHelp:

Why it works:

- it offers a convenient and accessible way to access mental health resources, with virtual counseling sessions that can be conducted from the comfort of the user's own home.

- includes features such as progress tracking and reminders, which can be helpful for elderly users looking to manage their mental health.

why it might not work:

The app's chat-based interface may not be suitable for all users, particularly those who prefer in-person therapy sessions.

Pill Reminder by Medisafe:

Why it works:

- designed to help elderly users manage their medications.
- app provides reminders to take medications, tracks adherence, and offers features such as drug interaction warnings and refill reminders.

why it might not work:

- The app's notifications may be overwhelming for some users, especially those with multiple medications to manage.
- The app requires manual input of medication details, which may be time-consuming for some users.

Know your needs

We will conduct user testing with a diverse group of elderly users to gather feedback and make adjustments to the app based on their needs and preferences. This will help ensure that the app is tailored to the needs of our intended population, regardless of their technological skills or physical and cognitive abilities.

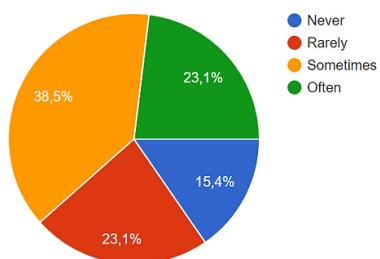
Survey

Conducted on 13 senior citizens ranging from 60 to 90 years old

When conducting this survey we saw our sample consisted of 46% of people being 70-79 and 53% of

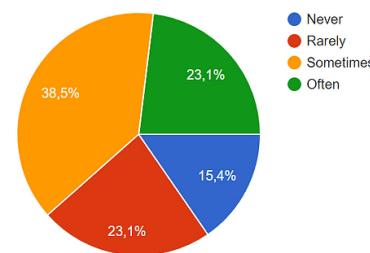
70.7%
81%
69%
61%
surveeys still lived at
home.

How often do you engage in physical activity?



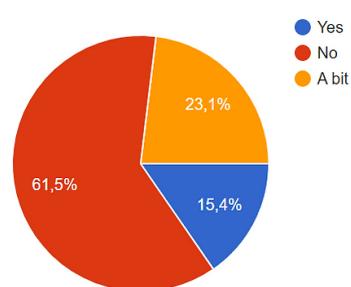
This chart shows us that those we surveyed are not as active as they should be.

How often do you engage in social activities or interactions?



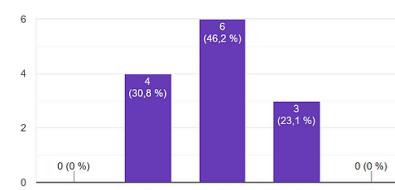
This chart shows us that surveyees are not as social as they should be.

Do you have any experience using mobile apps?



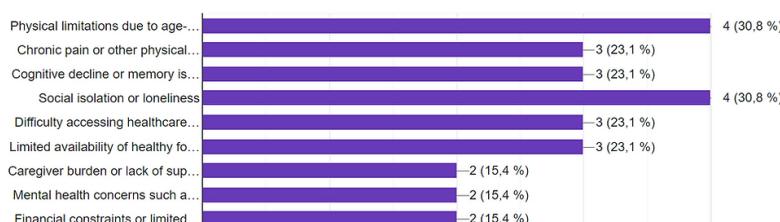
Here we see surveyees are not as knowledgeable in mobile apps and we should take that into consideration.

How would you rate your current level of satisfaction with your physical and mental wellbeing?



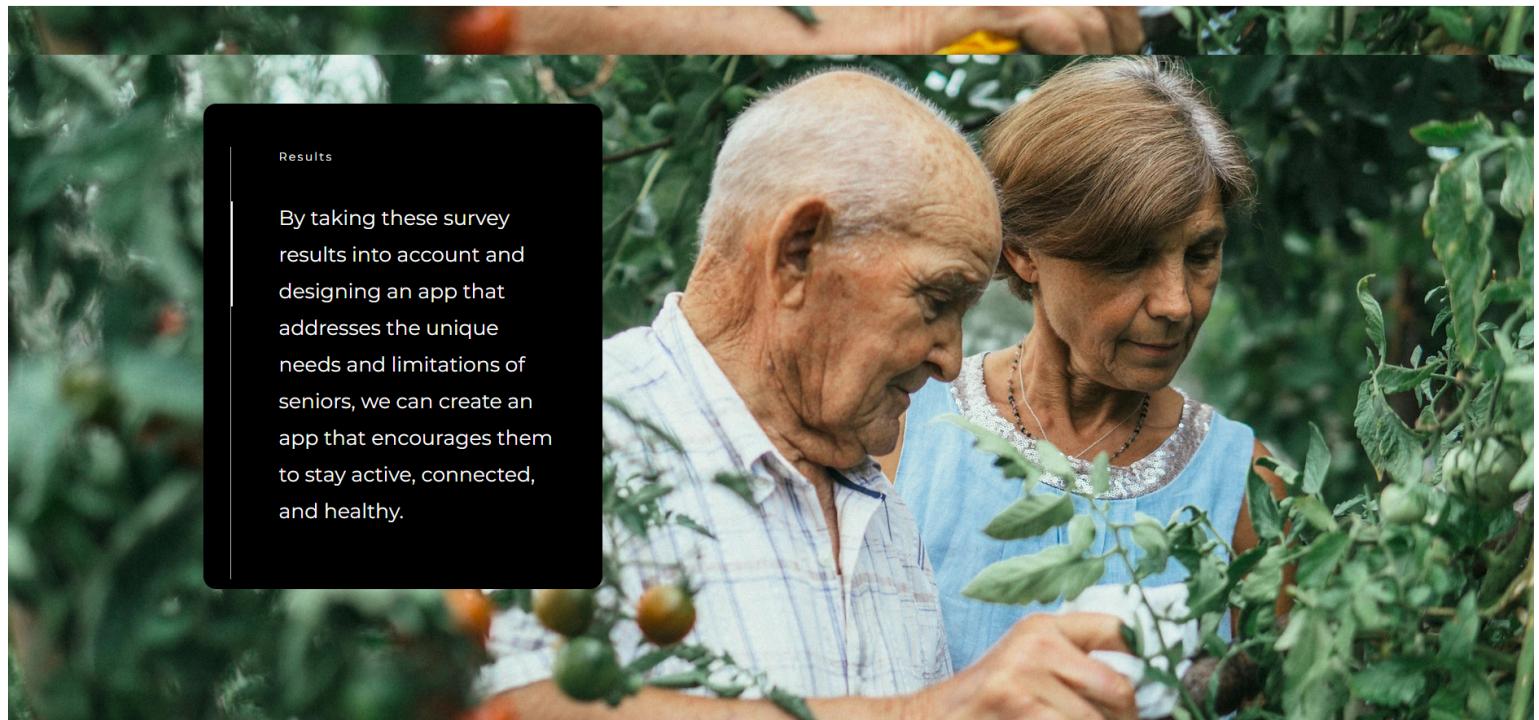
This shows us that surveyees are neutral with their current state so we should consider how we can make them satisfied instead.

Name 2 challenges or barriers you currently face in maintaining your physical and mental wellbeing





This is a telling bar graph as we see surveyees are limited in their physical activity and are also feeling isolated. We should consider this to know how we can help make them feel social without overextending their energy. We should also consider how we can make them more physically active.



Personas

By incorporating a demographics section in our survey, we could generate user personas for potential app users, based on the collected survey data. These personas consist of essential details, such as users' backgrounds, their goals and objectives for utilizing our app, and the challenges they face with regards to the current state of their well-being.



Maria Hernandez

75 Yrs – Retired Nurse

[reading](#) [walking in park](#) [playing games](#) [socializing](#)

Who is Maria?

Maria is a 75-year-old widow who lives alone in her apartment. She used to work as a nurse but retired a few years ago. She has two adult children and four grandchildren who live nearby.

Behaviours

- Maria likes to go for walks in the park, but she struggles with joint pain.
- She enjoys reading and playing games on her tablet.
- She is hesitant to try new things but is open to suggestions from friends and family.

Frustrations

- Maria gets frustrated when she is not able to do things she used to do, such as cooking for herself.
- She is also frustrated when she feels like she is a burden on her family
- She feels stuck and like she hasn't done anything new

“

"I want to stay active and healthy, but it's hard to find motivation to exercise at my age." "I don't want to be a burden on my family, but I also don't want to give up my independence." "I miss seeing my grandchildren, but I don't want to put myself at risk by leaving the house."

Key Goals

- Find methods to stay active and healthy
- be less reliant on others and maintain independence
- stay connected with friends and make new ones

Needs

- emotional support to manage any feelings of loneliness
- to be able to check on her health herself and not rely on her family
- help in maintaining a healthy and balanced diet to support her overall health and well being



Robert Lee

80 Yrs – Retired Engineer

[Playing chess](#) [Solving crossword puzzles](#) [Music](#) [Technology](#)

Behaviours

- Robert enjoys listening to music and audiobooks.

“

"My chronic pain makes it hard to do things I used to enjoy." "I feel like I'm not as sharp as I used to be." "I miss seeing my friends and family, but it's hard to get out of the house."

Key Goals

- Manage chronic pain by being more active

Who is Robert?

Robert is an 80-year-old retired engineer who lives in a nursing home. He has two adult children who live in another city. He has been living with chronic pain due to a back injury for the past few years.

- He likes to solve crossword puzzles and play chess.
- He tries to keep his mind active, but he struggles with concentration due to his chronic pain.

Frustrations

- Robert gets frustrated when he is not able to do things he used to do, such as go for long walks.
- He is also frustrated when he feels like he is not able to keep up with technology.
- He feels disconnected from the world

Needs

- Stay mentally stimulated
- Stay connected and inform loved ones about his life



Sarah Johnson

65 Yrs – Retired Teacher

Yoga Cooking Adventurous Meditation

Who is Sarah?

Sarah is a 65-year-old retired teacher who lives alone in her house. She has two adult children who live in another state. She has been feeling anxious and stressed due to the COVID-19 pandemic and the recent political climate.

Behaviours

- Sarah likes to try new things, such as cooking new recipes or taking online classes.
- She enjoys yoga and meditation.
- She is open to new experiences but sometimes feels intimidated by new technology.

Frustrations

- Sarah gets frustrated when she feels like she is not able to keep up with new trends or technology.
- She is also frustrated when she feels isolated from her friends and family.
- The world state is making her really anxious and wants to talk to more people

Key Goals

- Learn methods to manage stress and anxiety
- Stay active and try to go out more
- Use technology and not be behind

Needs

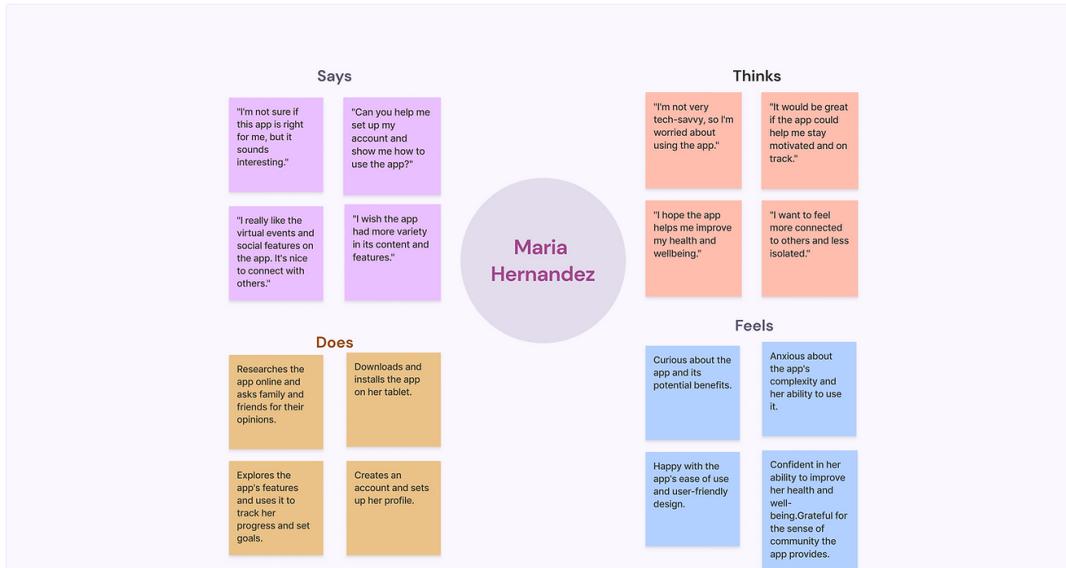
- Personalized care plan that takes into account her anxiety and stress management needs.
- Ways to stay physically active
- Assistance with tasks that may be difficult due to her age or anxiety

“

I feel overwhelmed by all the changes happening in the world. "I want to stay active, but I don't know where to start." I miss seeing my friends and family, but it's hard to make plans right now.

Empathy Maps

We created Empathy Maps of our 3 personas to have a better insight on what they say, think, do, and feel about our app. We used this to better understand our target audience



Says

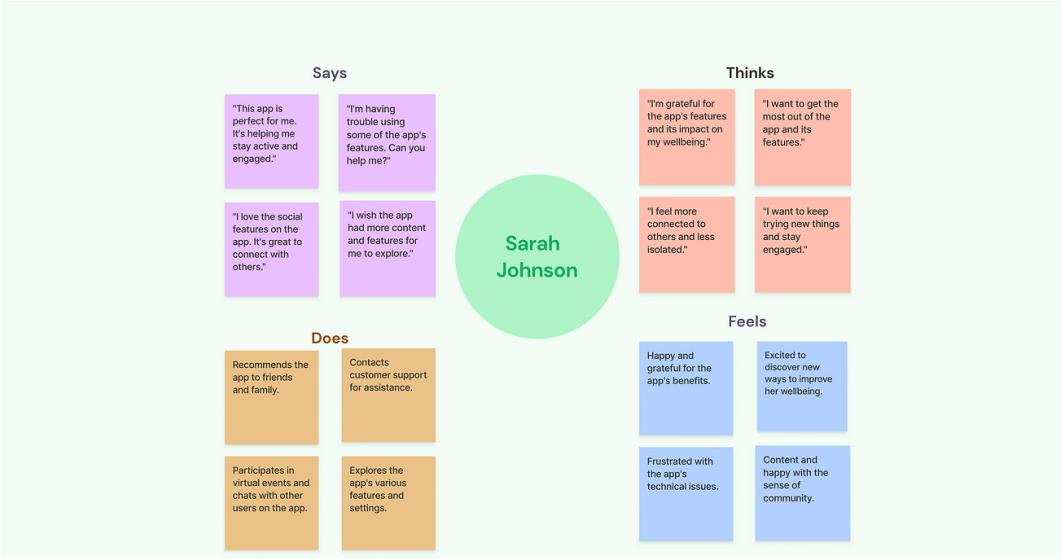
- | | |
|--|---|
| "I'm not interested in using this app. I prefer to exercise outdoors." | "Can you explain to me how the app works?" |
| "The app is easy to use and helps me keep track of my progress." | "I wish the app had more advanced tracking features and workout plans." |

Thinks

- | | |
|--|--|
| "I'm skeptical about the app's ability to help me improve my health." | "I want to learn more about the app and its potential benefits." |
| "The app is helping me stay motivated and on track with my fitness goals." | "I want to challenge myself and see better results." |

Does

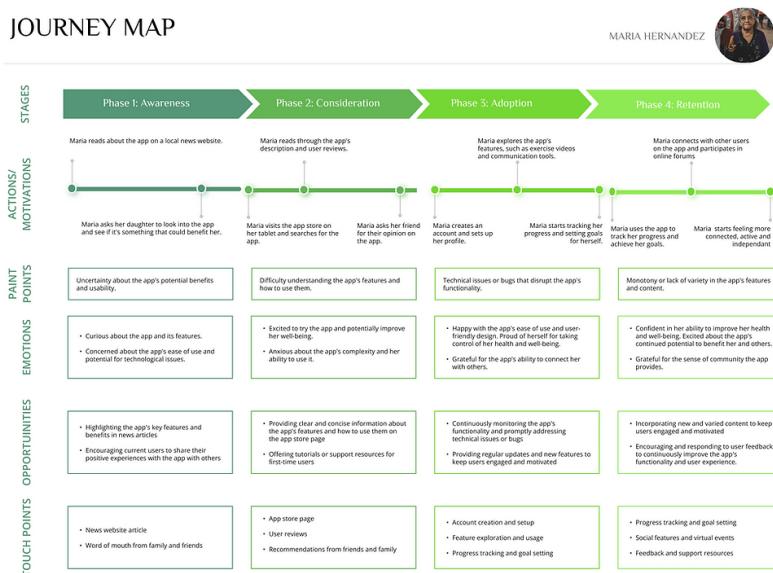
- | | |
|-------------|-------------------|
| Indifferent | Curious about the |
|-------------|-------------------|



Journey Map

Follow the journey Maria Hernandez takes throughout the use of our application. This will help us understand the concerns and roadblocks of our potential users.

JOURNEY MAP



Sketches

The preliminary sketches stage is an essential part of the design process that helps to visualize and explore different design options and solutions. In this section, we will provide an introduction to the preliminary sketches stage and describe how our team approached this phase of the app design process.

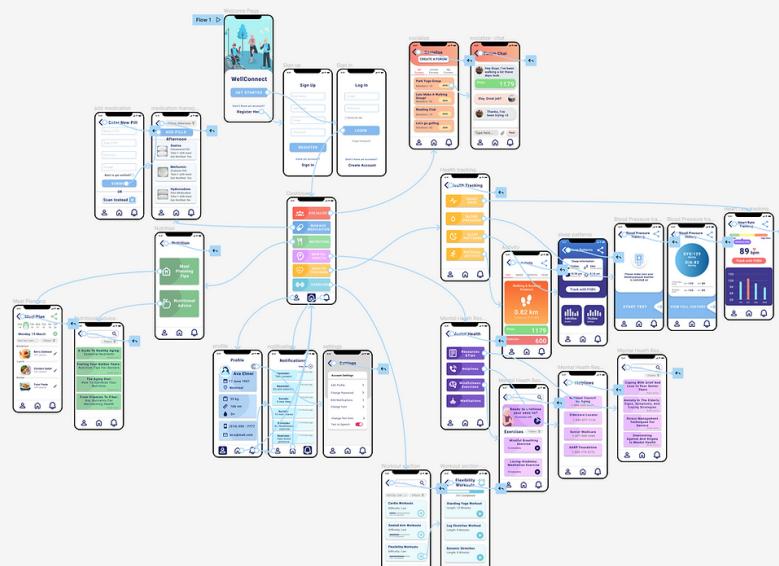
During the preliminary sketches stage, our team generated multiple design options for the app's user interface and features. These sketches served as a starting point for our design process and allowed us to explore various design options quickly and efficiently.

We began this stage by reviewing our research findings and user personas to understand the needs and preferences of our target audience. Based on this information, we developed a list of key functionalities and features that the app should include. We then generated several design sketches that depicted different layout options, visual styles, and interaction patterns.



Flow of Application

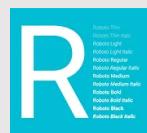
Showing the general flow the user can take to navigate throughout the application



Visual Design

Visual design is a crucial component of any app development process, and it will be especially important for the design of an app that supports elderly users' physical and mental wellbeing. The app's visual design must be user-friendly, intuitive, and aesthetically pleasing, as well as responsive to the unique needs of elderly users. The design should incorporate clear, legible typography, high-contrast color schemes, and large, easy-to-use buttons and icons. Additionally, the design should be adaptable to various device screen sizes, ensuring that the app remains accessible and easy to use on any device. Overall, the visual design must be aligned with the app's core functionalities, providing a cohesive and intuitive user experience that promotes user engagement and supports the app's overall goal of enhancing the wellbeing of elderly users.

Typography



When choosing typography for an app that targets elderly users, it's essential to prioritize legibility and readability to ensure that the text is easy to read and comprehend. It's important to select fonts that have clear, distinct letterforms and avoid overly decorative or ornate designs. In general, larger font sizes are better, as they are easier to read. This is why we chose Roboto, since it is readability and well received by elders.

Color Palette

When selecting a color palette for an app that targets elderly users, it's important to prioritize high contrast, as this can help ensure that the app's interface is easily distinguishable and navigable for users with visual impairments or reduced contrast sensitivity. A high-contrast color palette can also make the app's visual elements more accessible and easier to recognize, particularly for users with cognitive or memory impairments. Moreover, colors like blue and green are often associated with calmness, relaxation, and healing, making them popular choices for healthcare-related apps. This is why we chose the following colours:

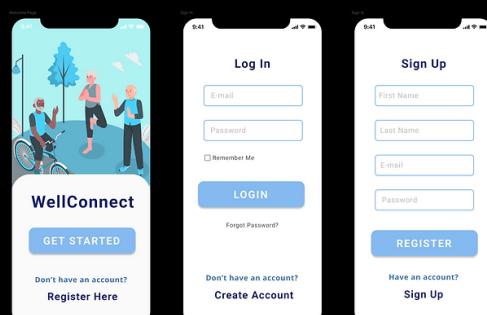


Prototype

These upcoming screenshots showcase the outcome of the extensive design process used to create the application's user interface. We reviewed several design concepts before arriving at this final look and feel. Below is an overview of the application.

First Thing First

The first frame welcomes the user into the application. The button "get started" directs you to the login page where the user can log in with their credentials.



Dashboard

The dashboard is the center point of the application and the frame that will be the most visited by the user. For this reason, the icons are clear and concise, and englobes the main features WellConnect has to offer.

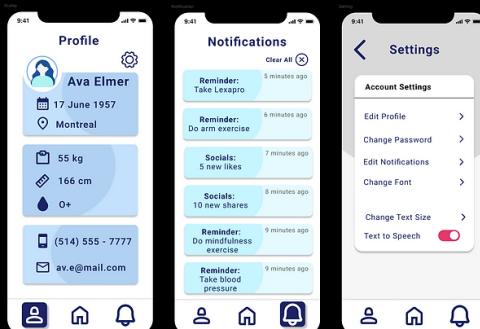
The bottom navigation bar redirects you to the user profile, the home page (which is the dashboard), and the notification center. The home icon being highlighted means this is the page the user is currently on.



The icons redirect the user to "SOCIALIZE", "MANAGE MEDICATION", "NUTRITION", "MENTAL HEALTH", "HEALTH TRACKING", "EXERCISE".

Profile, Notifications, Settings

The profile page shows all the important information about the user. The gear icon redirects the user to the Settings page.



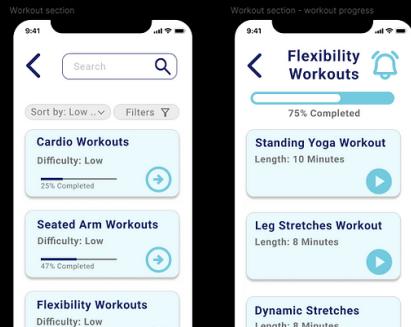
By clicking on the bell icon on the bottom bar, the user is redirected to the notification center where all the notifications such as reminders for medication and exercises, and social alerts from the forum will show up.

In the settings, the user can edit their profile, change their password, edit their notification. The font and size of the text can also be changed to accommodate the users' preferences. There is also an option for text to speech to help users with visual impairments using the app.

Exercise

The Exercise section consists of playlists of physical exercises that are curated for elderly people. The user will be able to filter and sort the content shown to cater to their preferences and specific types of exercises they are looking for. Each playlist shows the percentage of completion so the user can keep track of their progress.

Inside each playlist, there are several videos following the theme of the playlist. The length of each video is displayed so the user has an idea of how long an exercise will take. The bell icon allows the user to turn on notifications for this playlist. By doing so, the user will periodically receive notifications to remind them to do this workout.



Medication

The Medication section shows the user all the information on the medications they should be taking. Filters can be applied for example to know which pills should be taken during this afternoon. The cards show information on the medication such as the name, a picture of the medication, the type of medication, the instructions, and if notifications for it have been turned on or off.

Nutrition

The Nutrition section provides the user with meal planning tips & nutritional advice. The user can read more articles about ways their diet could be improved.

The Meal Plan allows the user to plan breakfast, lunch, and dinner everyday. This helps the user keep track of their eating habits and be more conscious of the nutritional values of their meal in order to promote a more balanced diet.

Mental Health

The Mental Health section provides the user with important content surrounding their psychological health. Resources &

Multiple meditation videos are offered, and the app keeps track of where the user left off so they can resume from

tips, helplines, mindfulness exercises, and meditation exercises can be accessed by the user.

Multiple helplines are at their dispositions in case they need someone to talk to.

where they were. These exercises can also be filtered for the user to have a customized experience.

Important resources & tips are there to help the user have a better understanding of themselves and ways difficulties can be managed. These resources, tips and articles can be filtered to cater to what the user is seeking for.

Health



The app will allow users to track their health, including their daily physical activity, sleep patterns, heart rate, and blood pressure (connection with fitbit). This data can be shared with their healthcare providers, allowing for better and more personalized care.

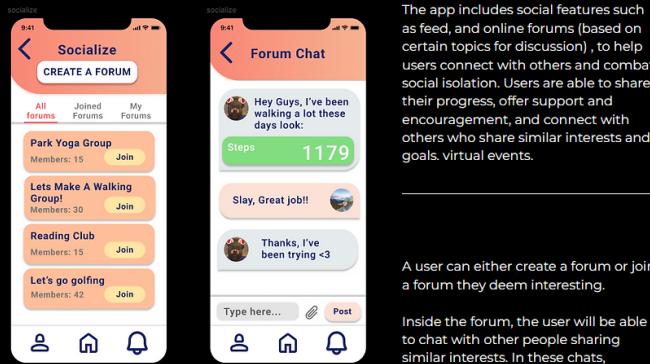
The Heart Rate Tracker, synchronized with Fitbit, allows the app to display how much risk the user may have according to their current heartbeat per minute. A history of previous measurements shows how the bpm progressed over time.

The Blood Pressure Tracker, also synchronized with Fitbit, allows the app to track the systolic and diastolic blood pressure of the user, and keep a history of it to see its progress.

The user's sleep patterns can also be recorded in order to be analyzed. Precise metrics such as the time they wake up, the duration of their sleep/deep sleep, awake time, can be measured by the FitBit if worn at nighttime.

The Activity page keeps track of the daily distance traveled by the user, the number of steps and the number of calories burned by it.

Socialize



The app includes social features such as feed, and online forums (based on certain topics for discussion), to help users connect with others and combat social isolation. Users are able to share their progress, offer support and encouragement, and connect with others who share similar interests and goals. virtual events.

A user can either create a forum or join a forum they deem interesting.

Inside the forum, the user will be able to chat with other people sharing similar interests. In these chats, attachments such as pictures or videos can be shared, as well as other metrics found throughout the application.

Conclusion

In conclusion, our team has designed an app prototype that addresses the physical and mental wellbeing needs of elderly users, whether they live at home or in a nursing home. Through a rigorous UX/UI design process, we conducted research, developed user personas, and identified

Key functionalities that would support the health and wellbeing of our target audience.

Our proposed functionalities, such as the daily physical activity tracker, mental health and wellness resources, medication reminders, social engagement, and emergency assistance, will provide users with a comprehensive and user-friendly app that supports their daily activities and promotes their overall health and wellbeing.

We believe that our app prototype has the potential to make a significant impact on the lives of elderly users and their caregivers, by providing them with a valuable resource that supports their health and wellbeing. We recommend further development and improvement of the app, based on user feedback and testing, to ensure that it meets the needs and preferences of our target audience.

Well Connect

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Leon Zhang 40175616

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