

# Assignment

- **Introduction**
- **Ideation and lo-fi prototyping**
- **Interactive states**
- **User flows**
- **High fidelity professional prototype**
- **Persona (include an explanation of how it was considered in the design process)**
- **Design principles considered**
- **Consistency and accessibility (WCAG AA, colour checker).**
- **References**

# Introduction



# Introduction

In this project, we were tasked with designing a mobile app that supports users recovering from shoulder injuries. The app, called **Healio**, helps users track their physical progress, log daily habits, complete physiotherapy exercises, and reduce stress through guided meditation.

Our goal was to create a user-centered experience that motivates recovery while also collecting valuable data for medical research. The design process included defining a detailed user persona, mapping out information architecture and user flows, and developing both low- and high-fidelity prototypes for key features.



# Ideation and lo-fi prototyping

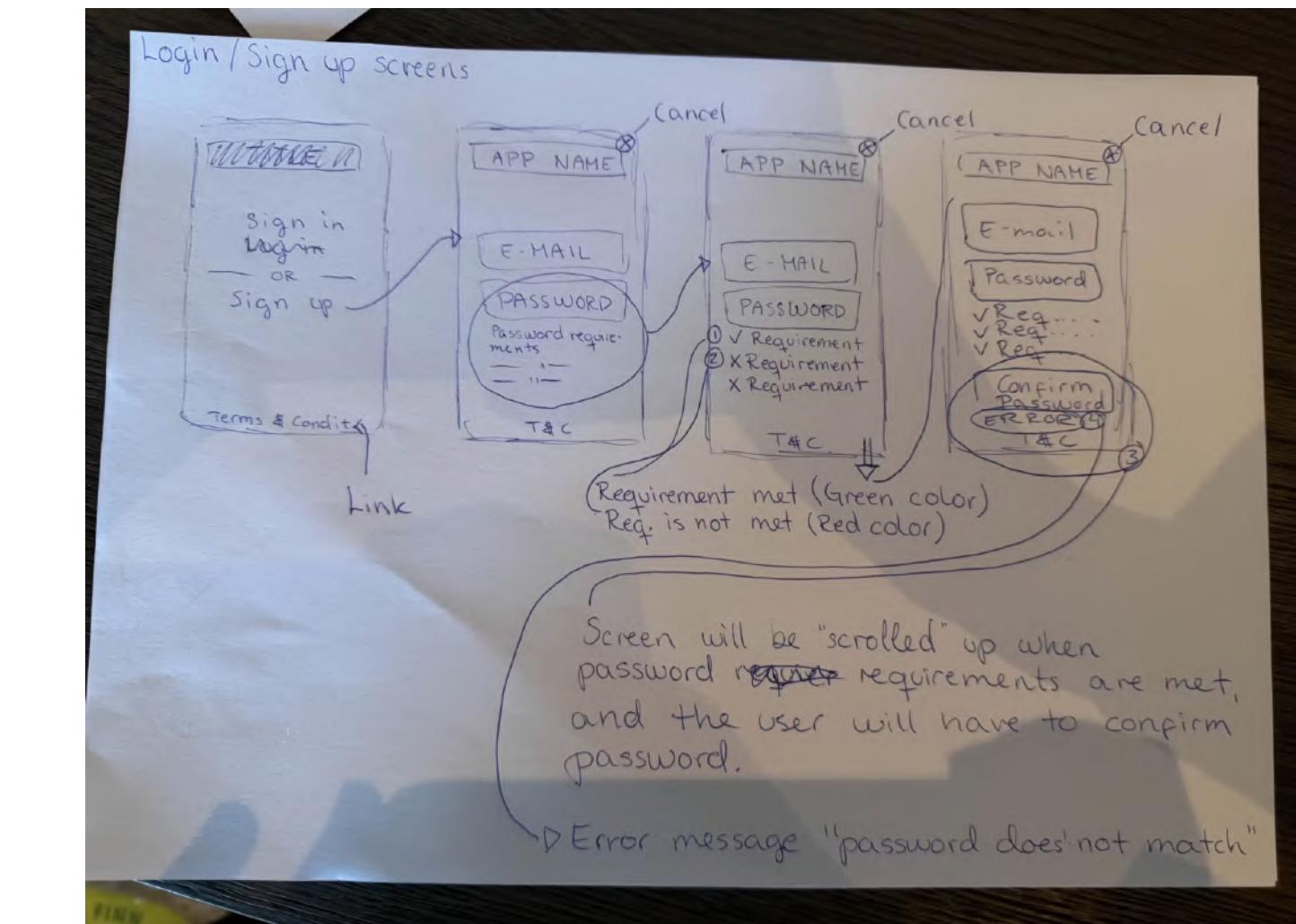
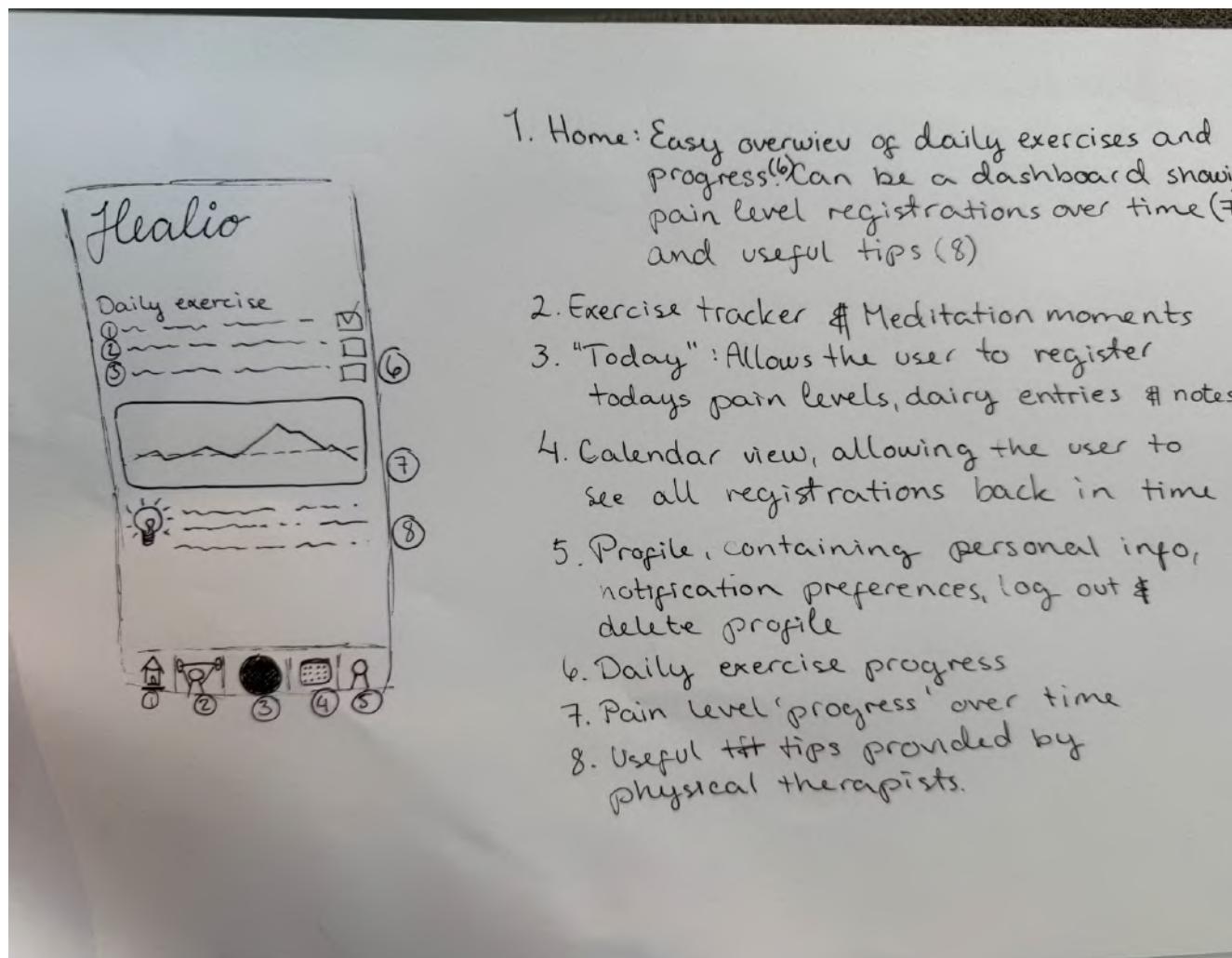
# Ideation - Competitive Analysis

Name	Strengths	Weaknesses	Opportunities	Threats	URL
<b>Recover Athletics</b>	<ul style="list-style-type: none"> <li>- Designed for athletes</li> <li>- Personalized recovery plans</li> <li>- Integration with Strava</li> </ul>	<ul style="list-style-type: none"> <li>- Not tailored for non-athletes</li> <li>- Limited to lower-body injuries</li> </ul>	<ul style="list-style-type: none"> <li>- Expand to broader injury types</li> <li>- Partner with clinics</li> </ul>	<ul style="list-style-type: none"> <li>- Competing recovery apps</li> <li>- Niche target group</li> </ul>	<a href="https://recoverathletics.com/">https://recoverathletics.com/</a>
<b>Injurymap</b>	<ul style="list-style-type: none"> <li>- Developed by doctors</li> <li>- Adaptive exercise plans</li> <li>- Good for shoulder rehab</li> </ul>	<ul style="list-style-type: none"> <li>- UI can feel clinical</li> <li>- Lacks motivation features</li> </ul>	<ul style="list-style-type: none"> <li>- Improve UX/UI</li> <li>- Add gamification</li> <li>- Expand analytics</li> </ul>	<ul style="list-style-type: none"> <li>- Low engagement from non-tech-savvy users</li> <li>- Duplicated by free YouTube content</li> </ul>	<a href="https://injurymap.com/">https://injurymap.com/</a>
<b>Daylio</b>	<ul style="list-style-type: none"> <li>- Simple mood &amp; habit tracking</li> <li>- Customizable goals</li> <li>- Friendly UI</li> </ul>	<ul style="list-style-type: none"> <li>- Not specific to injury recovery</li> <li>- Lacks medical guidance</li> </ul>	<ul style="list-style-type: none"> <li>- Could expand into health/recovery tracking</li> <li>- Add physical therapy modules</li> </ul>	<ul style="list-style-type: none"> <li>- Too generic compared to niche apps</li> </ul>	<a href="https://daylio.net/">https://daylio.net/</a>
<b>Physiotools</b>	<ul style="list-style-type: none"> <li>- Used by professionals</li> <li>- Large exercise library</li> <li>- Custom rehab plans</li> </ul>	<ul style="list-style-type: none"> <li>- Dated interface</li> <li>- Not designed for self-directed users</li> </ul>	<ul style="list-style-type: none"> <li>- Improve user experience</li> <li>- Add progress tracking for patients</li> </ul>	<ul style="list-style-type: none"> <li>- Limited appeal to casual users</li> <li>- Competes with modern consumer apps</li> </ul>	<a href="https://www.physitrack.com/physiotools">https://www.physitrack.com/physiotools</a>
<b>Kaia Health</b>	<ul style="list-style-type: none"> <li>- AI-driven physical therapy</li> <li>- Clinically validated</li> <li>- Focus on chronic pain</li> </ul>	<ul style="list-style-type: none"> <li>- Requires commitment</li> <li>- Not designed for injury-specific recovery</li> </ul>	<ul style="list-style-type: none"> <li>- Expand into post-injury recovery</li> <li>- Partner with insurance &amp; clinics</li> </ul>	<ul style="list-style-type: none"> <li>- High competition from AI/telehealth apps</li> </ul>	<a href="https://kaiahealth.com/">https://kaiahealth.com/</a>

Overall, the market shows a gap for a personalized, motivating, and user-friendly app focused on injury recovery, especially for shoulder rehabilitation. This insight shaped Haelio's value proposition: to empower users with clear visual feedback, simple routines, and consistent motivation throughout recovery.

# Ideation

After identifying the needs of the target group—people recovering from shoulder injuries who want a simple way to track their healing journey—we began the ideation phase by brainstorming and sketching out different solutions for how recovery data could be visualized clearly and encouragingly.



# Low-fi prototypes

[CLICK HERE TO SEE \*\*LOGIN\*\* LOW-FI PROTOTYPE](#)

[CLICK HERE TO SEE \*\*SIGN IN\*\* LOW-FI PROTOTYPE](#)

[CLICK HERE TO SEE \*\*DIARY\*\* LOW-FI PROTOTYPE](#)

[CLICK HERE TO SEE \*\*PAIN LEVEL PROGRESS\*\* LOW-FI PROTOTYPE](#)

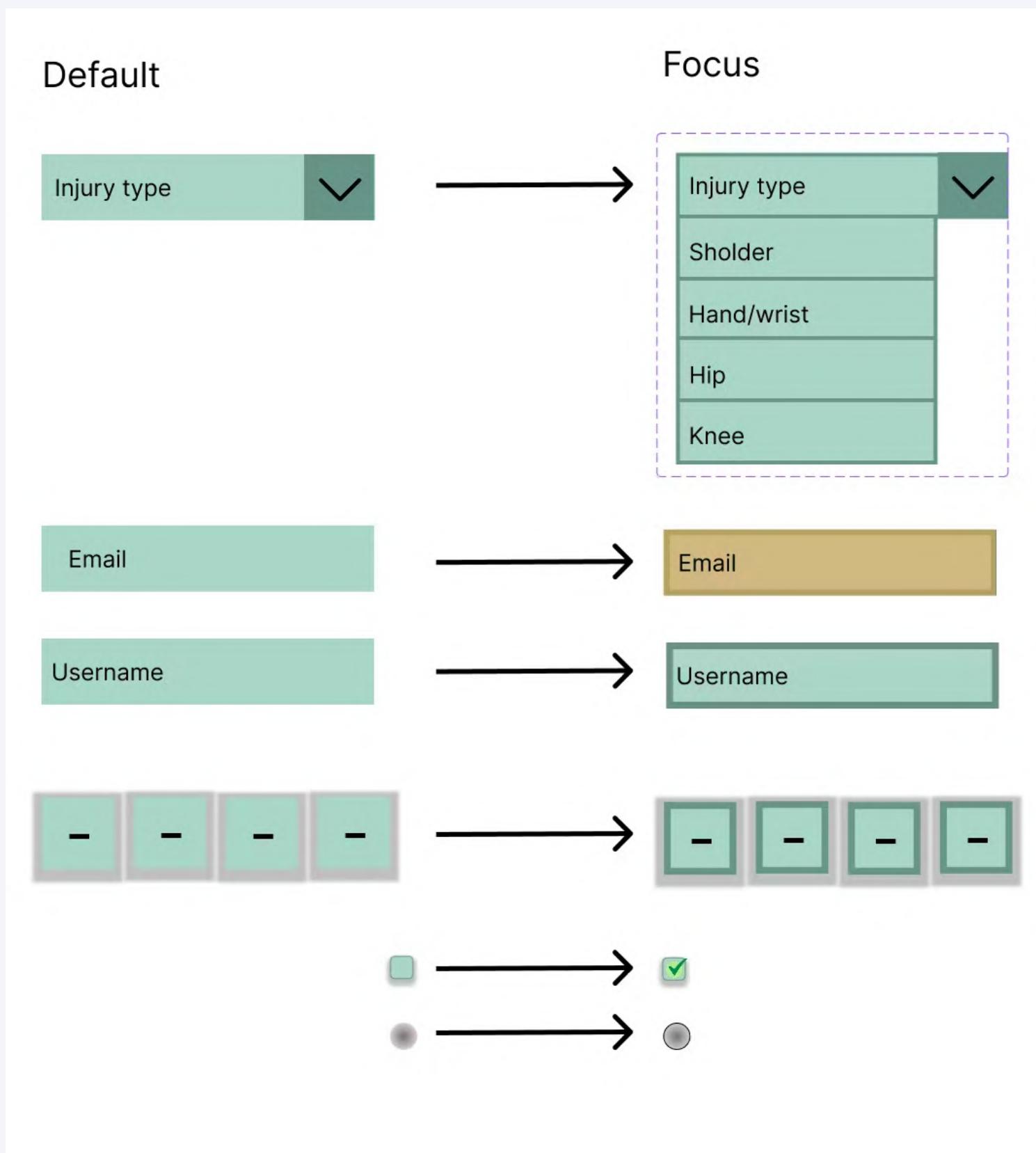
[CLICK HERE TO SEE \*\*MEDITATION\*\* LOW-FI PROTOTYPE](#)

[CLICK HERE TO SEE \*\*EXERCISE\*\* LOW-FI PROTOTYPE](#)

[CLICK HERE TO SEE \*\*CALENDAR\*\* LOW-FI PROTOTYPE](#)

# Interactive states





To ensure good usability and visual consistency, we have defined interactive states for key UI components in the app. These states provide clear feedback to the user and make navigation easier.

# Standard input field (reusable component)

This field is consistently used throughout the app for email, username, password, and other text inputs.

- **Default:** Light green background with a clear label.
- **Focus:** A darker border appears to indicate that the field is active.
- **Error:** The field displays a yellow background to indicate a validation error (e.g., invalid email).



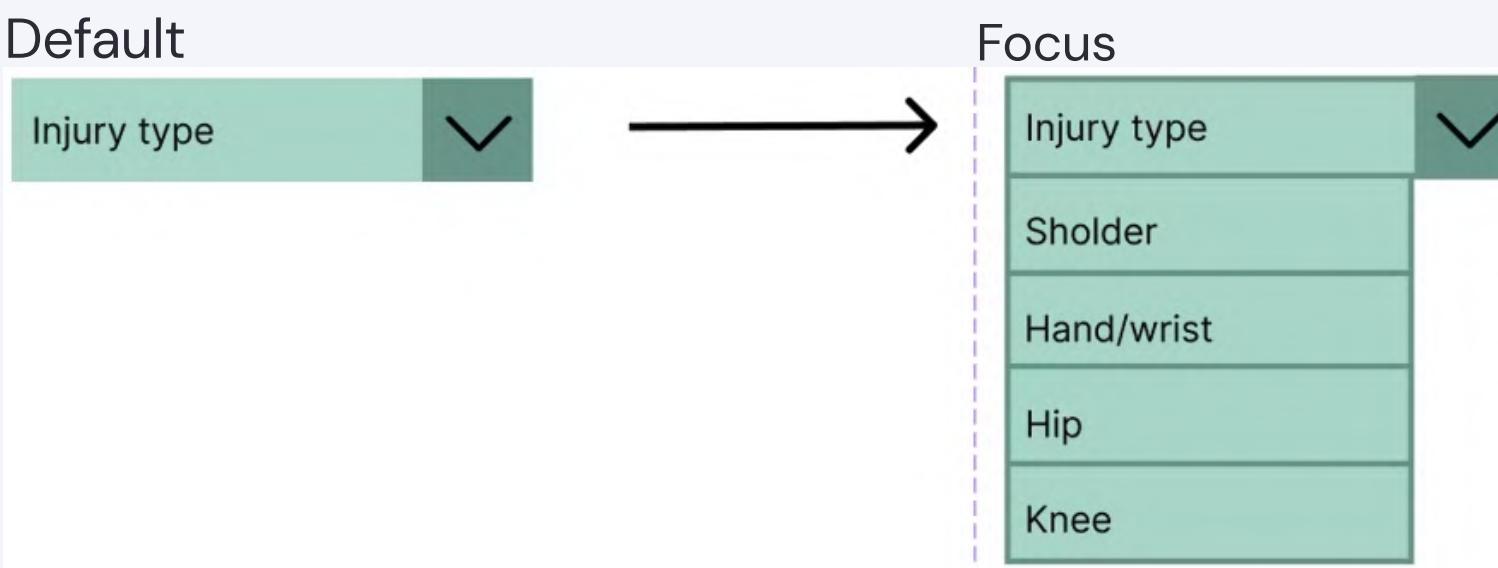
# Dropdown menu and code fields

Dropdown menu is used for selecting predefined options.

- **Default:** Compact view with an arrow indicating that the field can be expanded.
- **Focus (open state):** Displays a dropdown list of selectable options, outlined with a dotted line to indicate active status.

Code fields are used in steps where the user needs to enter multiple digits or characters.

- **Default:** Multiple uniform square fields with a subtle shadow.
- **Focus:** A clear border highlights the field the user is currently typing in.



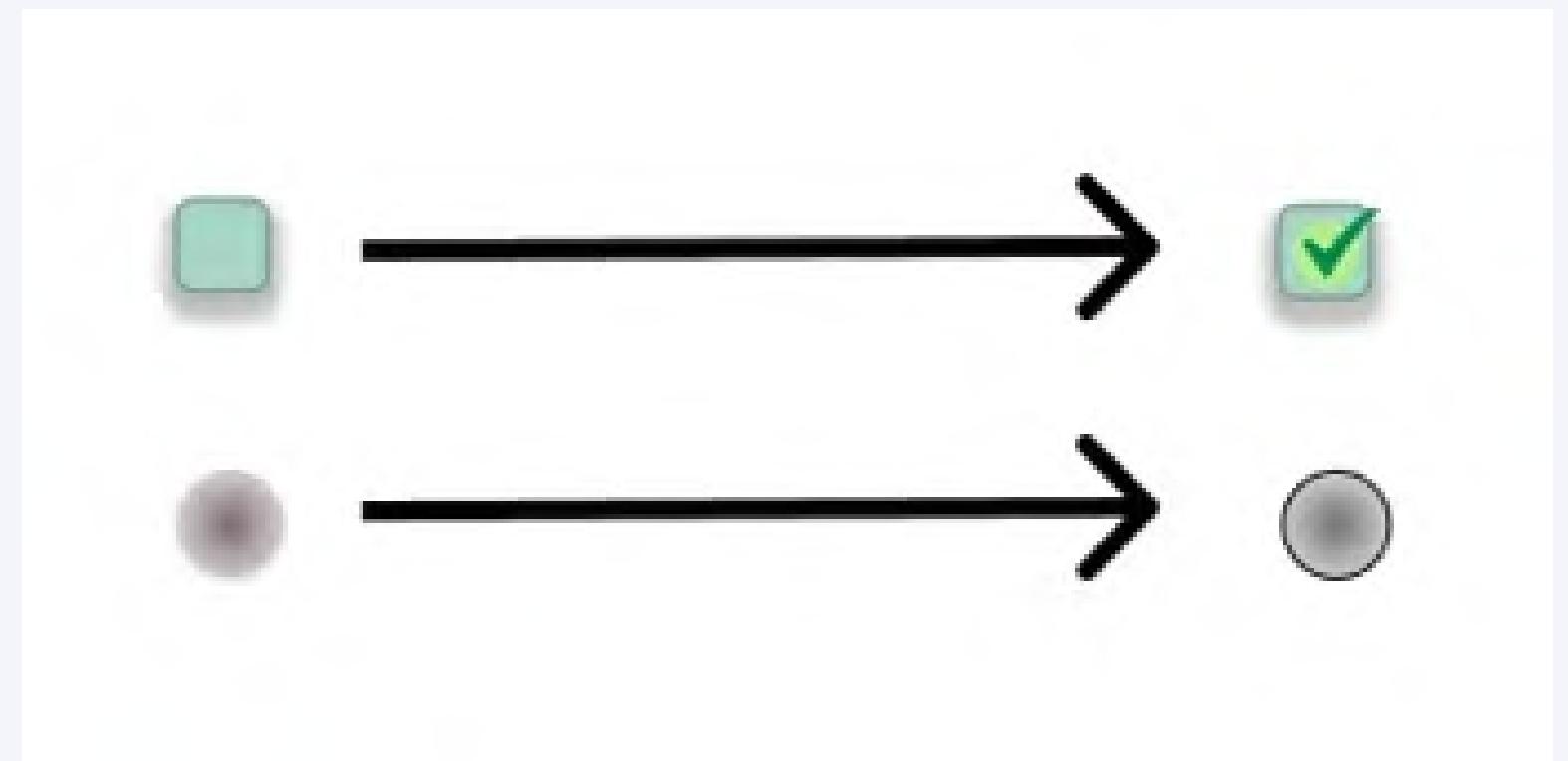
# Checkbox and buttons

Checkbox is used for consent or selections that can be toggled on or off.

- **Default:** Empty square.
- **Selected:** Displays a green checkmark when selected.

This gray little button is used when the user needs to drag a button horizontally along a fixed line to indicate satisfaction.

- **Default:** Circle with a radial gradient fading to gray and then black in the center.
- **Selected:** Circle with a radial gradient fading to gray and then black in the center, with a black border around the circle.

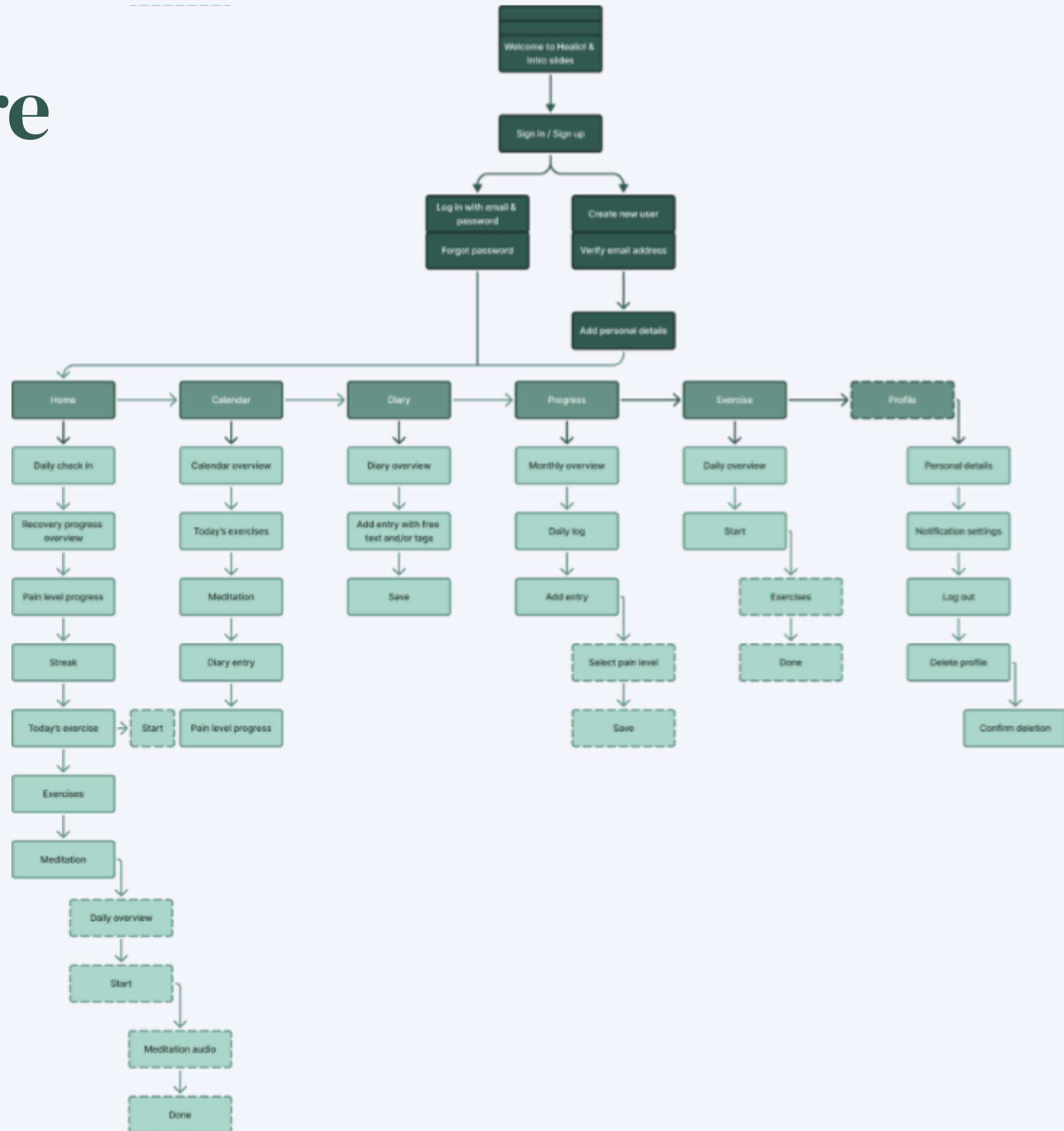


# Userflows



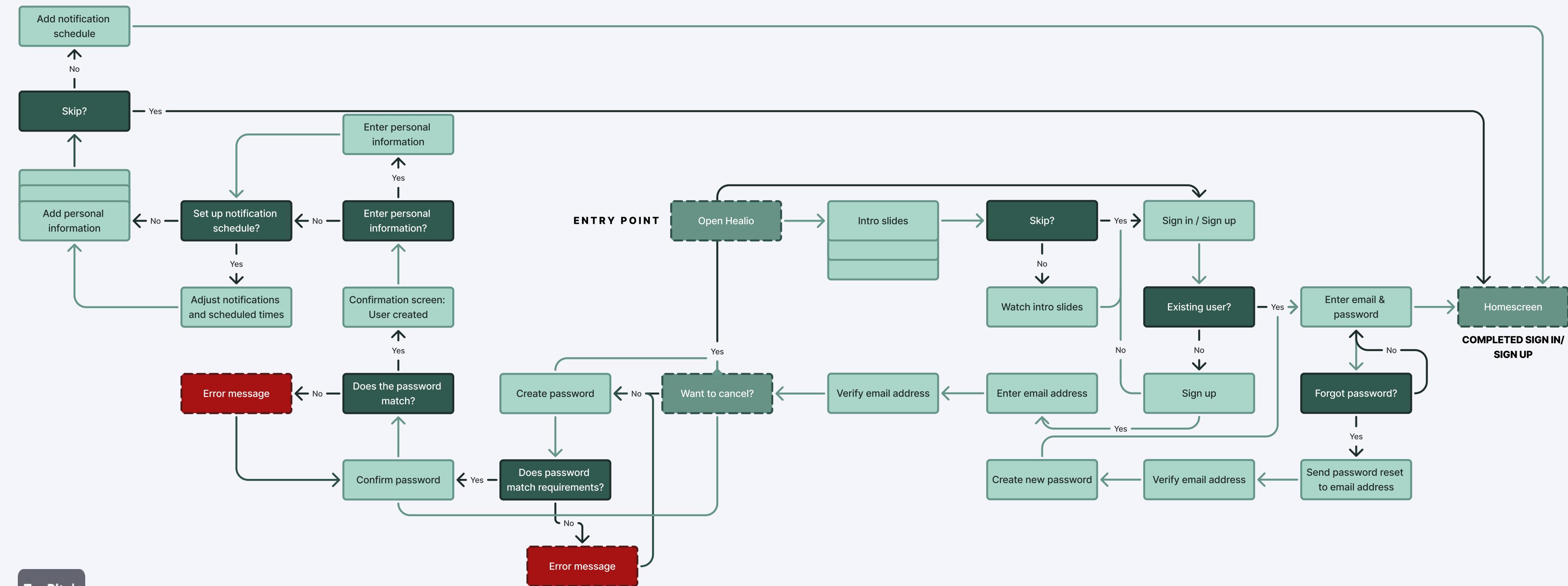
# Information architecture

To ensure a clear and intuitive user experience, we created an Information Architecture (IA) for the Heilio app. The IA outlines how the app's key features and content are structured and connected. This helps guide both navigation design and content prioritization, making it easier for users to move seamlessly through the app — whether they are signing up, tracking their progress, or managing their daily recovery routines.



# User flow: Sign in/Sign up

We created this user flow to visualize the steps a user takes when accessing the app for the first time, as well as returning later as an existing user. The flow helps us understand the full login and onboarding experience, ensuring a smooth and intuitive journey for both new and returning users.



# High fidelity professional prototype

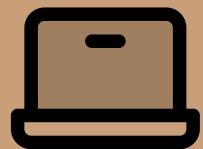


Click here to see our prototype

# Persona

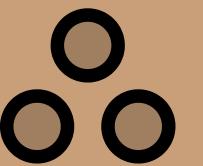


### Digital literacy



- Tech-savvy
- Likes to try out new apps

### Habits



- Uses apps for daily mood
- Exercises regularly

### Personality



- Motivated and goal-oriented
- Can get frustrated by lack of progress but tries to stay positive

## Chris Harper

**Age:** 37 years old

**Occupation:** Designer

**Background:** Former national competitive swimmer, recently suffered a shoulder injury and underwent surgery



### Goals & motivations:

- Recover full shoulder function as quickly as possible
- Have a simple and clear way to track his progress
- Receive reminders to help him remember his physiotherapy exercises

### Challenges & frustrations:

- Often forgets to do exercises in a busy daily routine
- Feels frustrated by the uncertainty of how fast he is recovering
- Shoulder pain makes it difficult to work efficiently
- Stressed by the long rehabilitation process

***"I wish I had a simple way to keep track of my exercises."***

# Design principles considered

# Design principles considered

## ... in Heilio



### Accessibility (POUR & WCAG AA)

- Perceivable, Operable, Understandable, Robust
- Passed color contrast checks (WebAIM)
- *Supports users with motor or visual impairments*



### Clarity & Simplicity

- Minimal, calm design
- Clear actions and intuitive navigation



### Empowering UX

- Track progress, set reminders, establish routines
- Designed to motivate and support independence



### Consistency

- Unified icon style, fonts, and color palette
- Predictable layouts improve usability



### Emotional Design

- Friendly illustrations and positive language
- Encouragement during difficult recovery stages



### Mobile-First

- Touch-friendly elements
- Optimized for small screens and accessibility

# Consistency and accessibility



# Consistency

Consistency enhances usability by creating predictable interactions and familiar visuals. Heilio maintains a cohesive and user-friendly experience throughout its full onboarding flow—from welcome screens to injury data input. Consistency across visuals, language, and layout allows users to focus on *content*, not figuring out how the app works.

## 01 Colors & Typography

A calming green palette, legible white and black font, and flat illustrations are consistently used across all screens.

## 02 Iconography

Visual cues like checkmarks, locks, sliders, and dropdowns use a consistent minimal style that matches the app's tone.

## 03 Bottom navigation bar

The bottom navigation bar is designed with clear icons and labels to ensure intuitive, consistent navigation throughout the Heilio app.

## 04 Input Fields

Text fields, dropdowns, and validation messages have consistent styles and spacing, supporting form clarity.

# Consistency

## 01 Colors & Typography

We tested color contrast with a WCAG AA checker to ensure readability, especially for buttons, text fields, and warnings. While most screens meet the required standards, a few input fields and placeholder texts need slight contrast adjustments.

### INTRO SCREEN

#### Contrast Checker

Home > Resources > Contrast Checker

Foreground	Hex Value #FFFFFF	Color Picker	Alpha 1
Background	Hex Value #30594F	Color Picker	Lightness

Contrast Ratio **7.87:1**

[permalink](#)

#### Normal Text

WCAG AA: **Pass**  
WCAG AAA: **Pass** The five boxing wizards jump quickly.

#### Large Text

WCAG AA: **Pass**  
WCAG AAA: **Pass** The five boxing wizards jump quickly.

#### Graphical Objects and User Interface Components

WCAG AA: **Pass** ★ Text Input

### SIGNUP / FORGOT PASSWORD

#### Contrast Checker

Home > Resources > Contrast Checker

Foreground	Hex Value #000000	Color Picker	Alpha 1
Background	Hex Value #A9D6C8	Color Picker	Lightness

Contrast Ratio **13.13:1**

[permalink](#)

#### Normal Text

WCAG AA: **Pass**  
WCAG AAA: **Pass** The five boxing wizards jump quickly.

#### Large Text

WCAG AA: **Pass**  
WCAG AAA: **Pass** The five boxing wizards jump quickly.

#### Graphical Objects and User Interface Components

WCAG AA: **Pass** ★ Text Input

Passed

### HOME SCREEN ++

#### Contrast Checker

Home > Resources > Contrast Checker

Foreground	Hex Value #000000	Color Picker	Alpha 1
Background	Hex Value #66968A	Color Picker	Lightness

Contrast Ratio **6.29:1**

[permalink](#)

#### Normal Text

WCAG AA: **Pass**  
WCAG AAA: **Fail** The five boxing wizards jump quickly.

#### Large Text

WCAG AA: **Pass**  
WCAG AAA: **Pass** The five boxing wizards jump quickly.

#### Graphical Objects and User Interface Components

WCAG AA: **Pass** ★ Text Input

### ERROR / INCORRECT PASSWORD

#### Contrast Checker

Home > Resources > Contrast Checker

Foreground	Hex Value #A71212	Color Picker	Alpha 1
Background	Hex Value #E8AA54	Color Picker	Lightness

Contrast Ratio **3.76:1**

[permalink](#)

#### Normal Text

WCAG AA: **Fail**  
WCAG AAA: **Fail** The five boxing wizards jump quickly.

#### Large Text

WCAG AA: **Pass**  
WCAG AAA: **Fail** The five boxing wizards jump quickly.

#### Graphical Objects and User Interface Components

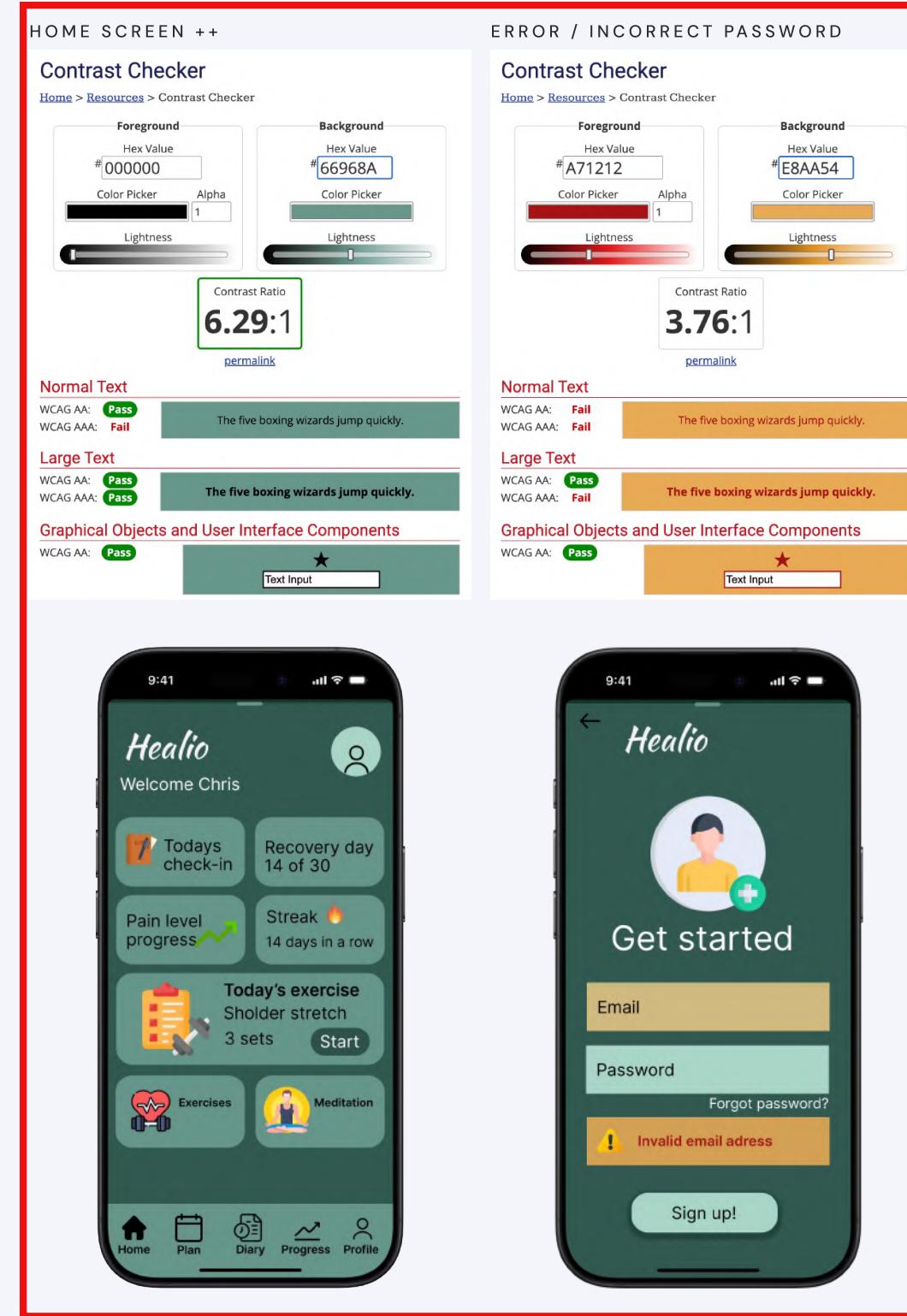
WCAG AA: **Pass** ★ Text Input

Failed

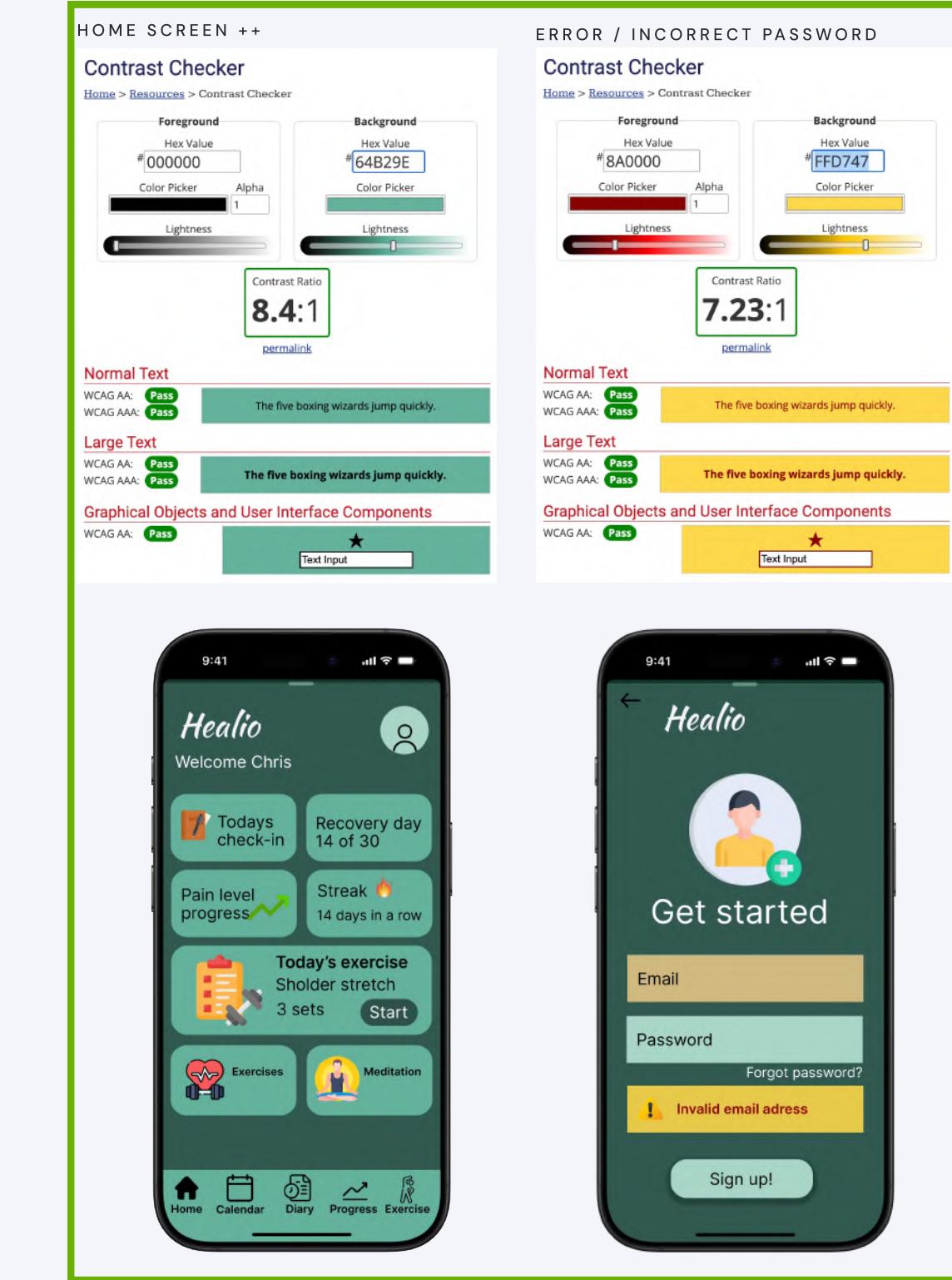
# Consistency

## 01 Colors & Typography

Before



After



# Consistency

## 02 Iconography

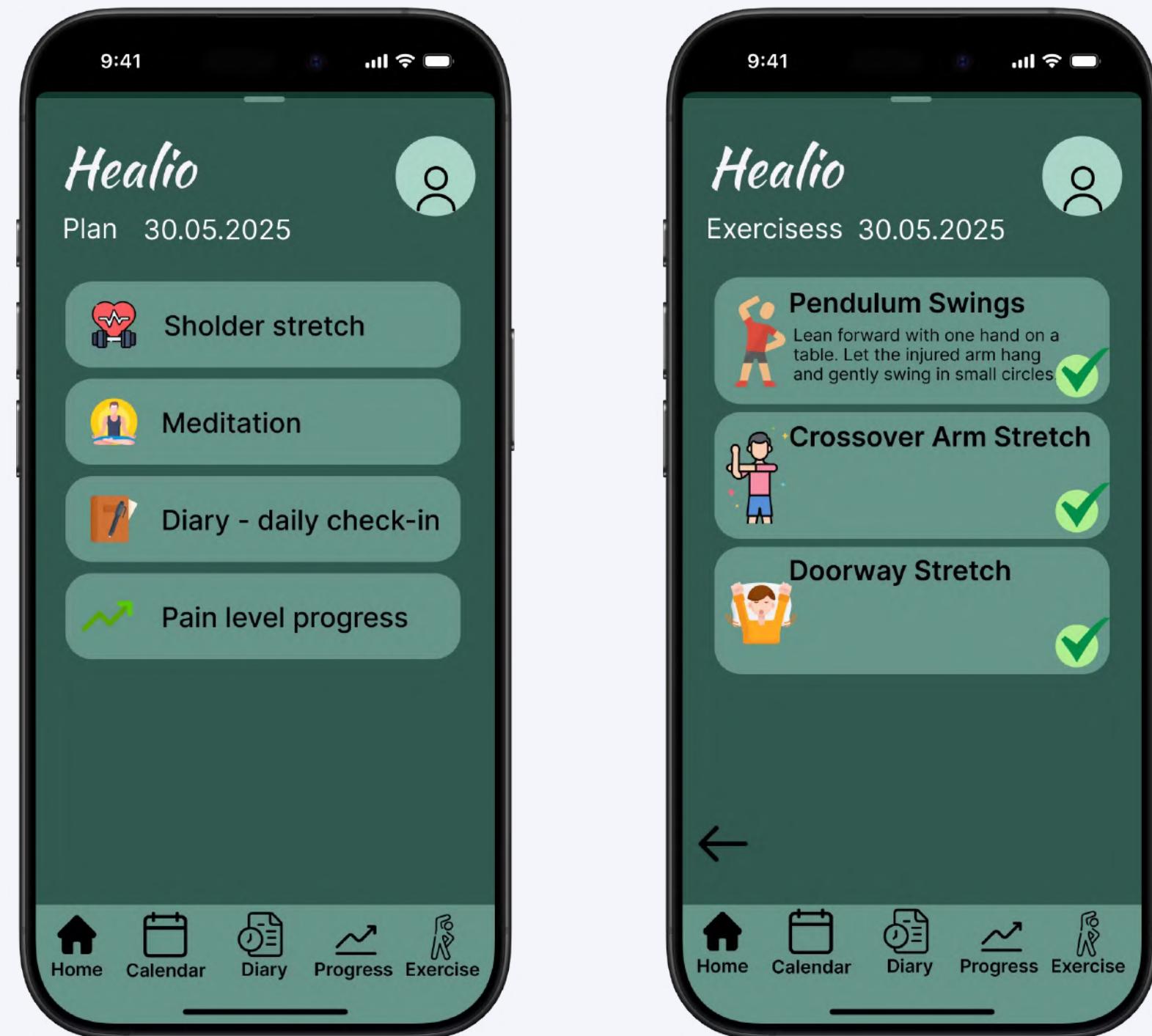
We chose this icon set to ensure visual consistency, clarity, and accessibility throughout the Heilio app. All icons share a cohesive flat or semi-flat design style with bold outlines, rounded edges, and vibrant colors that are easy to distinguish—even for users with visual impairments. Their consistent visual language supports quick recognition and intuitive navigation, which is essential for users recovering from injury or pain. By aligning icon choices with accessibility best practices and maintaining a friendly, human-centered aesthetic, the icons contribute to a clear, motivating, and inclusive user experience.



# Consistency

## 02 Iconography

Examples of how Heilio use icons for motivating and engaging app content.

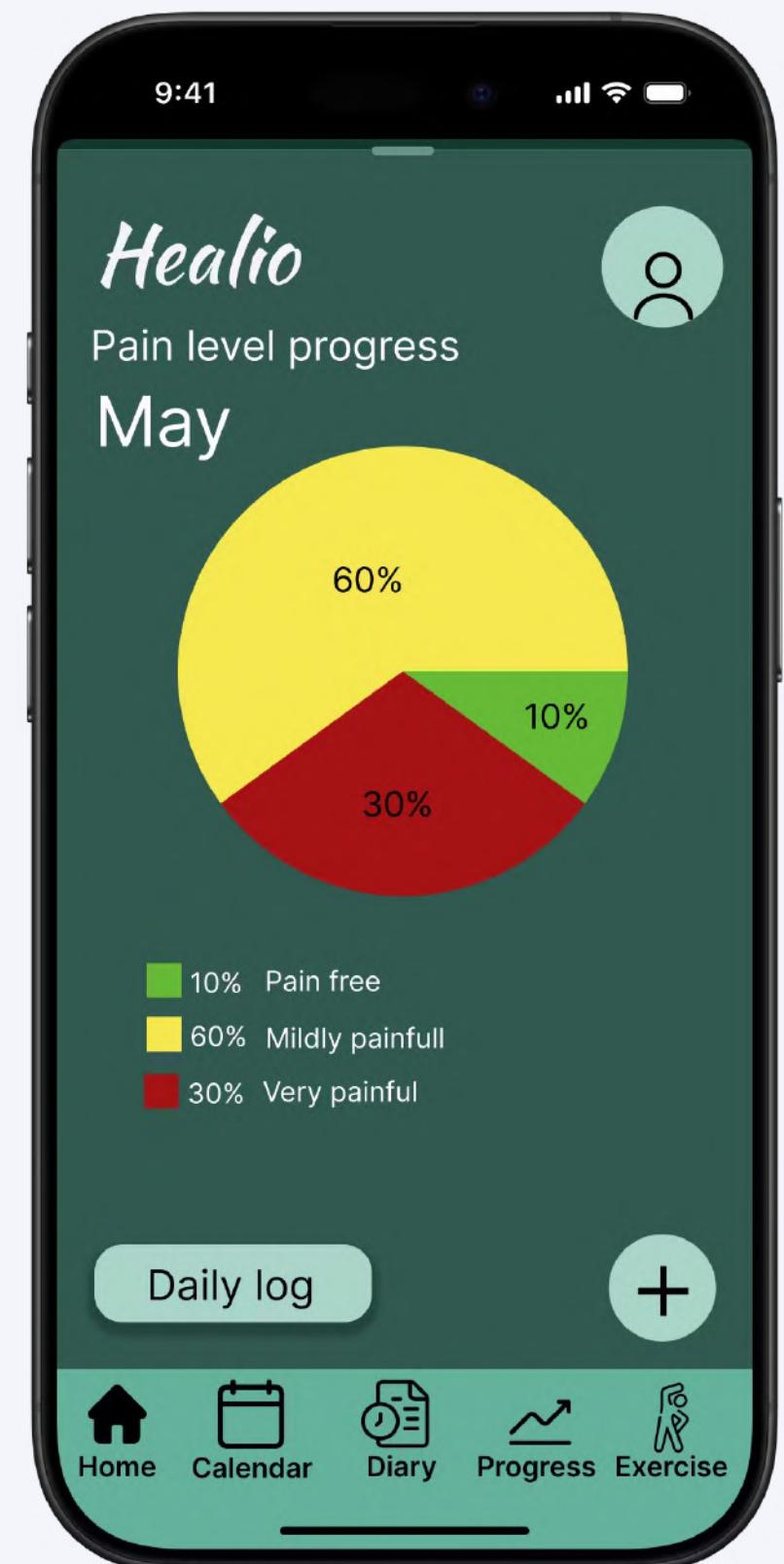


# Consistency

03

## Bottom navigation bar

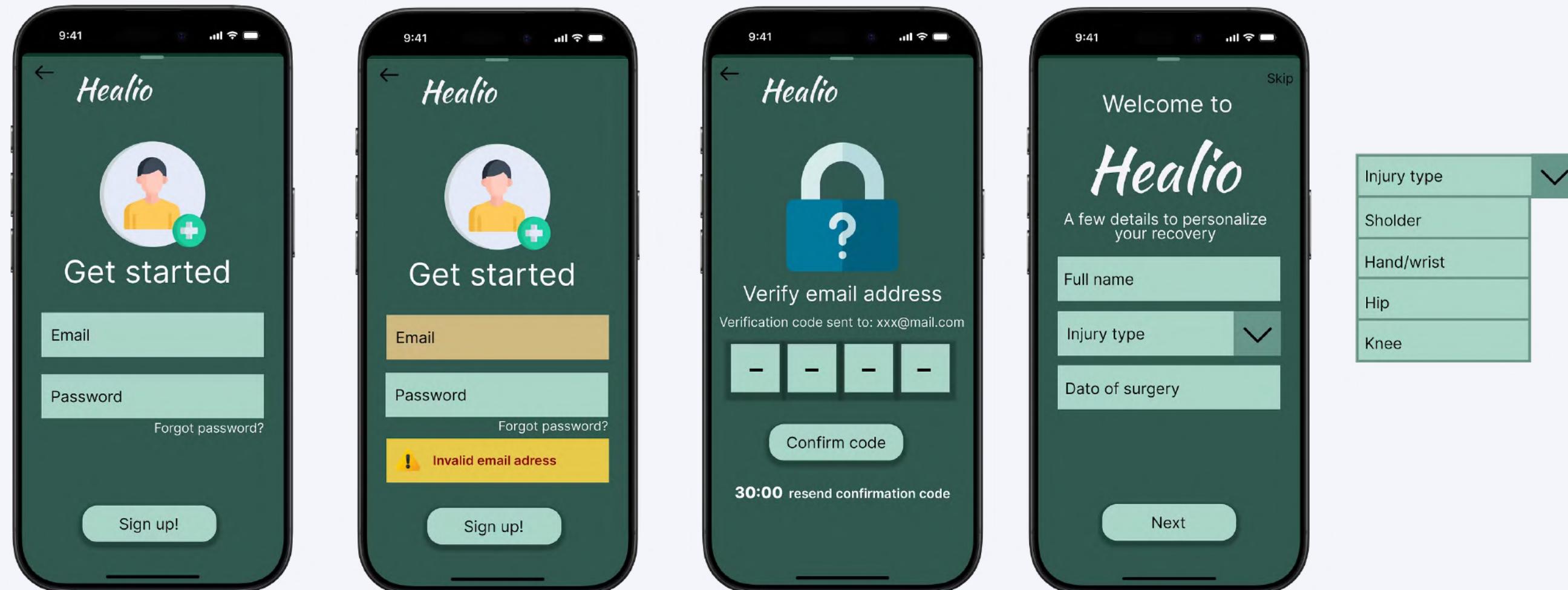
To ensure consistency throughout the Heilio app, we designed the bottom navigation bar using universally recognized icons paired with clear, descriptive labels such as *Home*, *Calendar*, *Diary*, *Progress*, and *Exercise*. The soft green background and clean black icons maintain visual harmony with the overall color scheme, while the consistent placement of the tab bar at the bottom of the screen supports intuitive and predictable navigation across all sections of the app.



# Consistency

## 04 Input Fields

Throughout the onboarding flow in Haelio, we maintained consistent styling for all input fields—whether entering an email, selecting injury type, or setting reminders. Field shapes, spacing, font sizes, and colors follow the same visual language to create a smooth and intuitive experience. We also implemented clear feedback states—such as error messages for invalid input and confirmation cues—so users always know where they stand. Drop-downs and sliders are styled for easy mobile use, with accessible contrast and touch-friendly targets. This consistent design builds trust and reduces friction for users starting their recovery journey.



# Accessibility

Healio applies accessible design principles grounded in the WCAG's POUR framework, ensuring the app is Perceivable, Operable, Understandable, and Robust.

Its onboarding experience strikes a thoughtful balance between friendly, approachable design and best practices in inclusive UX.

By prioritizing accessibility from the start, Healio creates an experience that works for everyone—making it easier for users to engage, stay motivated, and succeed in their recovery.

POUR PRINCIPLES	HEALIO EXAMPLE
PERCEIVABLE	High-contrast buttons, clear icons, and readable fonts support users with visual impairments.
OPERABLE	Tap targets are appropriately sized; navigation is linear and simple.
UNDERSTANDABLE	Clear field labels, inline validation (e.g., password warnings), and progress cues aid comprehension.
ROBUST	Designs are screen-reader friendly

# References



# References

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