

**KEY
WISE**

**PASSWORD
HYGIENE
COACH**

INTRODUCING 'KEYWISE'

KeyWise is a mobile application designed to help users understand and improve their **password safety practices**.

It combines **educational content** with **practical tools**, thus helping users develop safer online habits.

WITH THE MAIN GOAL OF...

**MAKING STRONG PASSWORD MANAGEMENT
SIMPLE. ENGAGING, & ACCESSIBLE TO ALL!**



**KEY
WISE**

PROJECT DEFINITION

- +
-
-

WHAT KEYWISE DOES

A mobile app that improves password safety awareness via learning and hands-on practice.

WHO IT'S FOR

From everyday users with limited cybersecurity knowledge, to, students looking to develop better online safety and password management habits.

REAL-WORLD PROBLEM

Many users remain unaware of online threats (e.g. phishing and social engineering), which are becoming more sophisticated with the rise of AI.

OUR GOAL

To help users recognise and prevent these risks through education and secure password practices.

**KEY
WISE**

PROJECT OBJECTIVES

Our objectives are to:



Generate secure passwords



Provide strength feedback & explanations



Deliver short password safety lessons



Include interactive quizzes



Each objective aligns with our overall aim: **to make password safety easier to understand and apply.**

KEY
WISE

PERSONAS & USER SCENARIOS



JESSICA
(21, UNI STUDENT)

1

PERSONA

- Uses many study platforms needing accounts and passwords.
- Wants quick, strong password generation.
- Frustrated by remembering multiple passwords.
- Finds **KeyWise** to generate and copy secure passwords



TOM
(76, RETIREE)

2

PERSONA

- Recently started using email, worried about scams.
- Wants to learn how to recognise phishing and protect data.
- Struggles with new tech and overly convincing scammers.
- Uses the lessons on **KeyWise** to identify phishing attempts and feel confident online



MARK
(12, GAMER)

3

PERSONA

- Loves online games, reuses the same simple password.
- Wants to understand why strong passwords matter & how to make them.
- Finds complex passwords hard to remember.
- Learns through lessons and password strength test feature on **KeyWise**



USER STORIES

(1) *PASSWORD GENERATION*

As a user, I want to generate a strong password for my account, so that I can feel confident my passwords are difficult to guess or leak.

(2) *OFFLINE ACCESS*

As a user, I want to learn how to create and evaluate strong passwords without an internet connection, so that I can improve my security practices even when I'm offline.

(3) *SECURITY TIPS / MICRO-LESSONS*

As a user, I want to receive short, practical tips on creating and managing strong passwords, so that I can avoid common mistakes like reusing or simplifying passwords.

(4) *PHISHING AWARENESS*

As a user, I want to learn how to recognize phishing attempts, so that I can avoid being tricked into giving away my login details or clicking malicious links.

(5) *PASSWORD STRENGTH FEEDBACK*

As a user, I want to see clear feedback on my password's strength, so that I understand how secure it is and can make improvements.

KEY FEATURES & JUSTIFICATIONS



OFFLINE PASSWORD GENERATOR

Reduces user effort and risk of reuse.



PASSWORD STRENGTH FEEDBACK

Turns security feedback into learning.



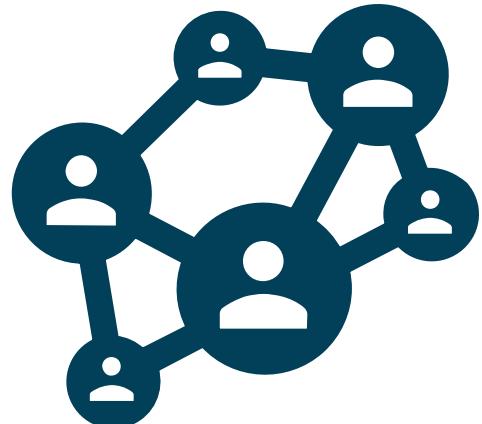
MICRO-LESSONS AND MINI QUIZZES

Makes cybersecurity education engaging



EDUCATIONAL AND SECURITY BENEFITS

Reinforce learning through interaction



CODE OF CONDUCT

“Every team member contributes equally, communicates openly, and upholds academic integrity at all times.”



— KeyWise Development Team. COC 2025



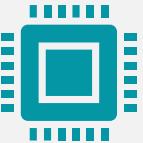
LEGAL CONCERNS

- Compliance with GDPR for any user-related data.
- Avoiding the storage of real user passwords or sensitive information.
- Secure handling of all temporary data.

ETHICAL CONSIDERATIONS

- Prioritising transparency and data protection.
- Designing for accessibility (clear text, simple navigation, etc.)
- Maintaining an educational tone rather than fear-based messaging.

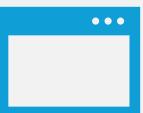
LITERATURE REVIEW



LastPass / Bitwarden: Great for managing passwords but lack user education features.



Google Jigsaw / Cyber Aware / CyberSprinters: Focus on awareness and quizzes but lack practical password tools.



Gap Identified:

No single app currently combines *learning* and *practical password strengthening*.

KeyWise fills that gap.

SYSTEM ANALYSIS / REQUIREMENTS SPECS

Hardware & Software Needs:

- Device: Mobile (Android/iOS)
- Framework: Flutter
- Database: Firebase or SQL
- Version Control: GitHub

Functional Requirements:

- Password generation, strength feedback, micro-lessons, and quizzes.

Non-Functional Requirements:

- Secure, responsive, intuitive, and easy to maintain

EARLY DESIGN / IMPLEMENTATION PROGRESS

These tools were chosen for their flexibility, scalability, and collaborative capabilities.

Framework:

Flutter (for cross-platform app development)

Language:

Dart (frontend and logic), SQL (for structured data)

Database:

SQLite (offline data storage)

Version Control:

GitHub with structured branches and commits

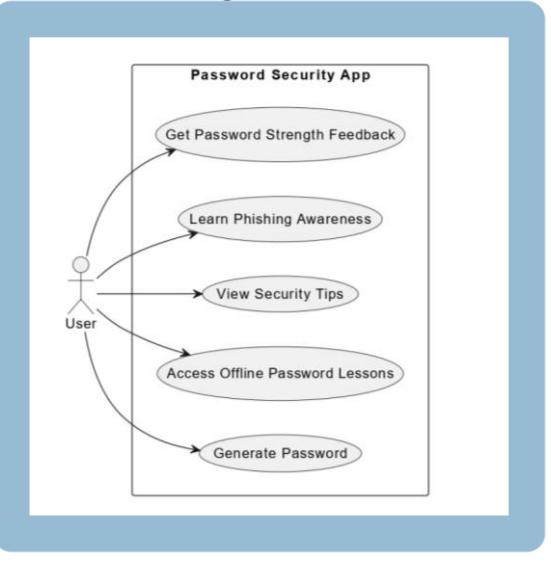
Documentation:

Word Document, PowerPoint, Markdown Files, etc.

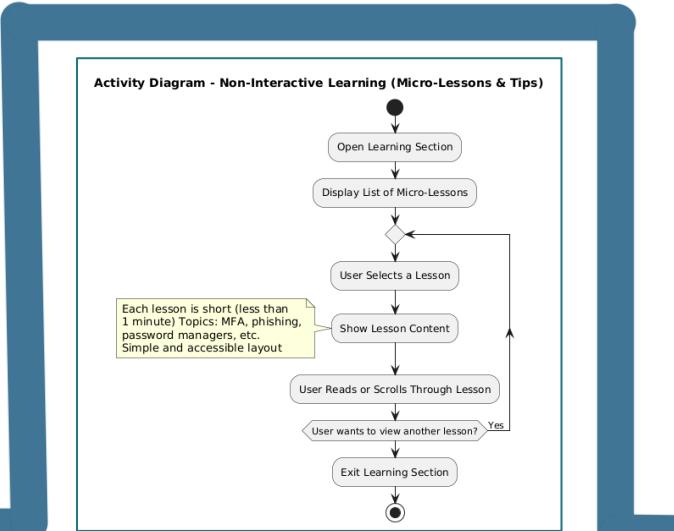
CONTINUED...

EARLY DESIGN / IMPLEMENTATION PROGRESS

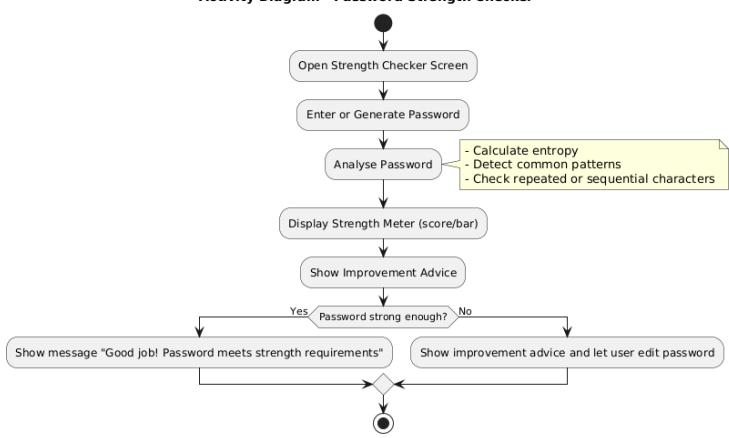
Use Case Diagram



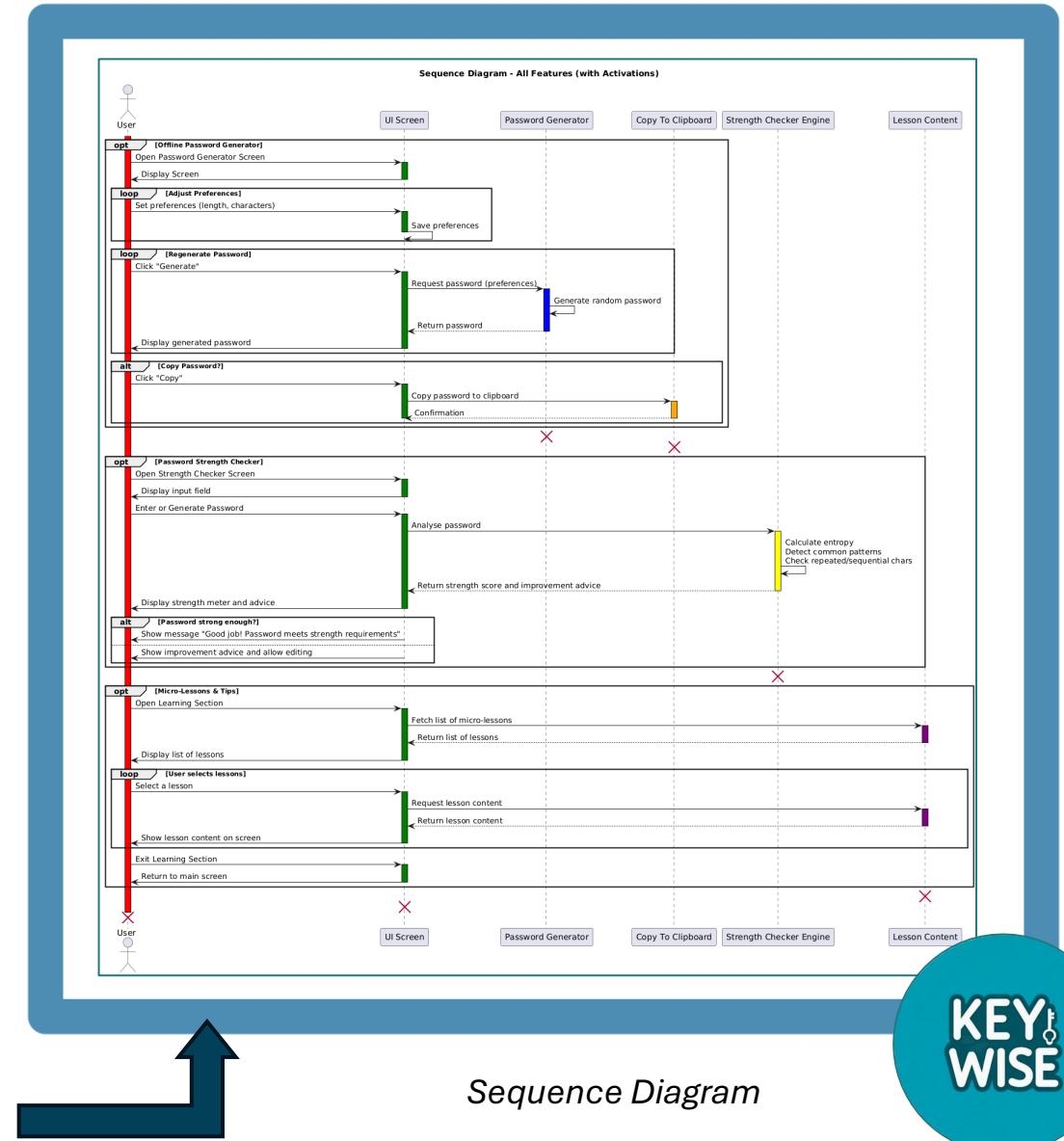
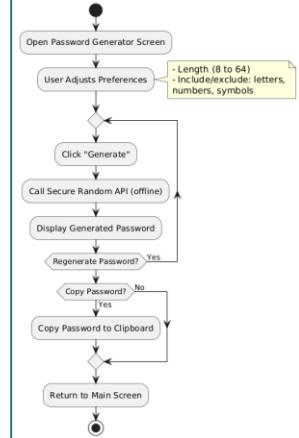
Activity Diagrams



Activity Diagram - Password Strength Checker



Activity Diagram - Offline Password Generator



Sequence Diagram

KEY
WISE

WIREFRAMES - HOMEPAGE

The image displays two wireframe prototypes of a homepage for 'Password Hygiene Coach'. Both prototypes are set against a light blue background and feature a white header bar at the top.

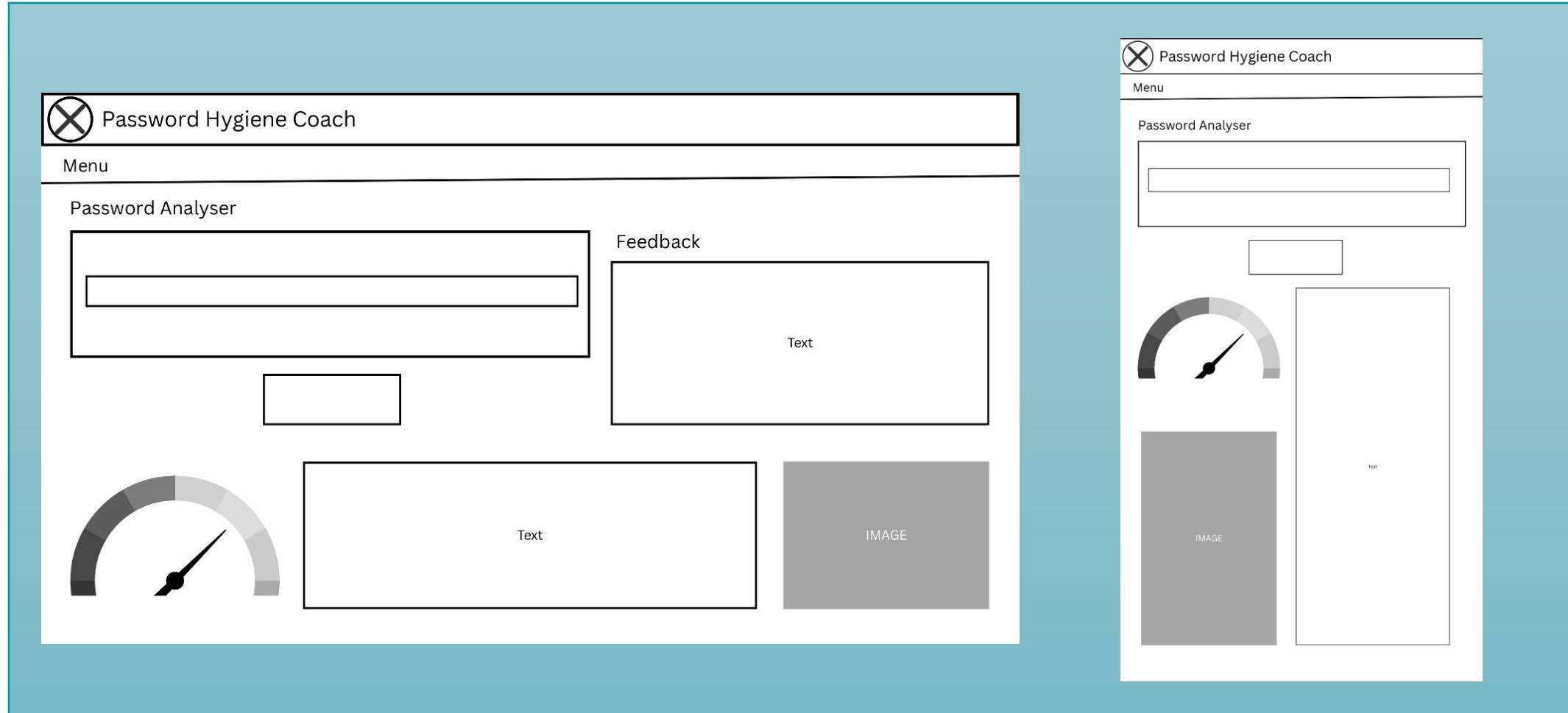
Header Bar: Both prototypes include a logo icon (a circle with a diagonal cross) and the text 'Password Hygiene Coach' on the left, and 'Homepage' on the right.

Left Prototype (Left): This prototype includes a 'Menu' link below the header. The main content area contains a large circular icon with a thick black diagonal cross inside. To its right is a rectangular box labeled 'Text'. Below these elements are three small rectangular boxes arranged horizontally. At the bottom is a row of five gray stars.

Right Prototype (Right): This prototype also includes a 'Menu' link below the header. It features a large circular icon with a thick black diagonal cross inside. Below it is a rectangular box labeled 'Text'. At the bottom is a row of five gray stars.

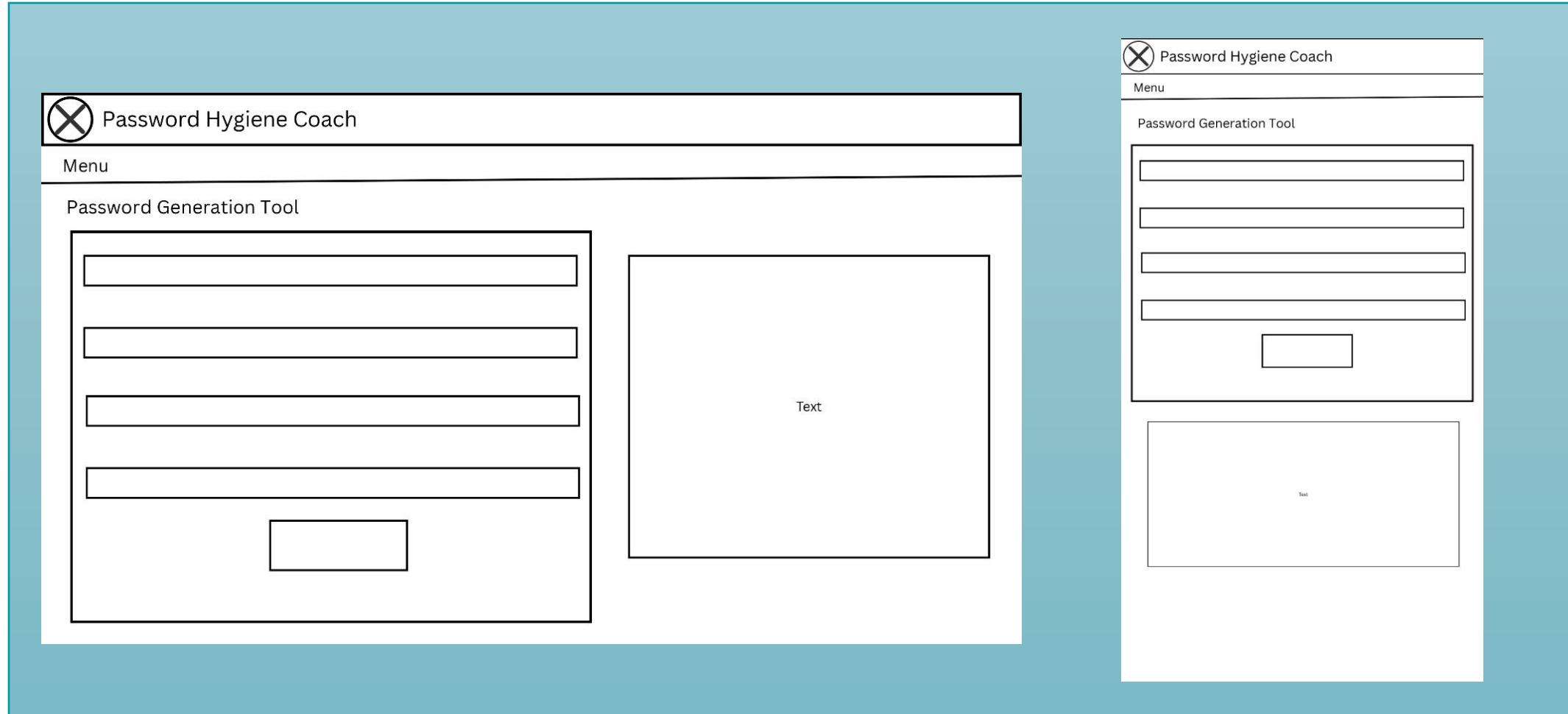
CONTINUED...

WIREFRAMES – PASSWORD ANALYSER



CONTINUED...

WIREFRAMES – PASSWORD GENERATOR



CONTINUED...

WIREFRAMES – TIPS PAGE

The image displays two wireframe versions of a 'Password Hygiene Coach' tips page, separated by a vertical teal bar.

Left Wireframe:

- Header:** A logo icon (a circle with a crossed-out X) followed by the text "Password Hygiene Coach".
- Section:** "Menu" (represented by a horizontal line).
- Content:** "Tips on being more secure" (represented by a large, tilted rectangular area containing two "Text" labels). Below this area are two small double-headed arrows pointing left and right.
- Image:** A gray rectangular placeholder labeled "IMAGE".

Right Wireframe:

- Header:** A logo icon (a circle with a crossed-out X) followed by the text "Password Hygiene Coach".
- Section:** "Menu" (represented by a horizontal line).
- Content:** "Tips on being more secure" (represented by a large, tilted rectangular area containing two "Text" labels). Below this area are two small double-headed arrows pointing left and right.
- Image:** A gray rectangular placeholder labeled "IMAGE".

KEY TAKEAWAYS

RECENT PROGRESS

- Completed research and requirements gathering.
- Designed UI wireframes and system architecture.
- Implemented password generation feature.
- Set up GitHub repository and version control workflow

CURRENT OBJECTIVES

- Frontend: UI refinement and navigation design
- Backend: Finalising functions/features
- Complete documentation & prepare final week PPTX
- Prepare all deliverables for submission before WEEK 12

NEXT STEPS

By the end of this module, we aim to...

Finalise backend/frontend development

Complete the UI design of the application

Launch 'KEYWISE' as a mobile app

Conduct unit, integration, & user testing

Prepare to close-up module deliverables

THANK YOU FOR LISTENING

ANY QUESTIONS?