

## Project Description:

CYFER is a modern, secure, and user-friendly password manager designed to address these needs by providing encrypted vaults, intuitive interfaces, and seamless synchronization across devices, ensuring that users can store, manage, and retrieve their credentials safely and efficiently.

Password management remains a significant challenge in 2025, as many users struggle to create and remember strong, unique passwords for the numerous online accounts they maintain. This often leads to weak or reused passwords, which increases the risk of unauthorized access and account breaches. Despite the advances in authentication technologies, such as biometrics and passkeys, passwords remain the primary method of login due to their widespread adoption. Cybercriminals exploit poor password habits through attacks such as phishing, brute force, and credential stuffing, making effective password management critical for digital security.

## Requirements Summary:

Key requirements for CYFER include:

- **Cross-platform compatibility** using Flutter to ensure a consistent experience on Android and iOS.
- **Biometric login** (Face ID, Touch ID, or fingerprint depending on device).
- **Strong password generator** with customizable criteria.
- **Secure cloud syncing** using Firebase (or similar), end-to-end encrypted.
- **Auto-lock and auto-fill support** for login forms across browsers and apps.
- **Tag-based organization** for passwords and quick search functionality.

## CYFER Mock-up/Prototype:

The CYFER prototype is developed using Flutter, with Figma wireframes for visual design. The prototype includes essential screens like login, password vault, add/view password, password generator, and settings.

### Detailed Prototype Elements (20 pts):

- **Home Vault Screen** – lists all saved credentials with logo icons and category tags.
- **Password Generator** – slider and toggle interface for password length, symbols, etc.
- **Add Credential Form** – includes app/site name, username, password, notes, and category.
- **Settings Page** – enable biometrics, choose lock timeout, manage backups.
- Screens shown side-by-side for Android and iOS in mockups.

## User Scenario:

Carlos, a freelance graphic designer, installs CYFER on both his Android phone and iPad. He stores login credentials for work tools like Adobe and Upwork. When logging into his Upwork account via browser, CYFER auto-fills his credentials after biometric confirmation, saving time securely.

## Rationale:

The prototype ensures accessibility across platforms without compromising security. Flutter allows a unified development process while maintaining native feel. Biometric login increases usability. Major advantages include portability, ease of access, and consistent performance. A downside is limited native-level customization in some UI elements.

**Changes to Requirements:**

Midway through design, we decided to integrate cloud backup and a cross-device sync feature after testers noted the need to access passwords on multiple devices. Originally, offline-only access was the goal, but user feedback pushed for secure, synced storage. We also simplified the UI for smaller screens after Android testing.

**Initial Evaluation Plan:**

To evaluate CYFER's usability, we will assess:

- **Ease of navigation and clarity of UI on both platforms**
- **Speed and accuracy of autofill functionality**
- **User trust in biometric login and password visibility settings**