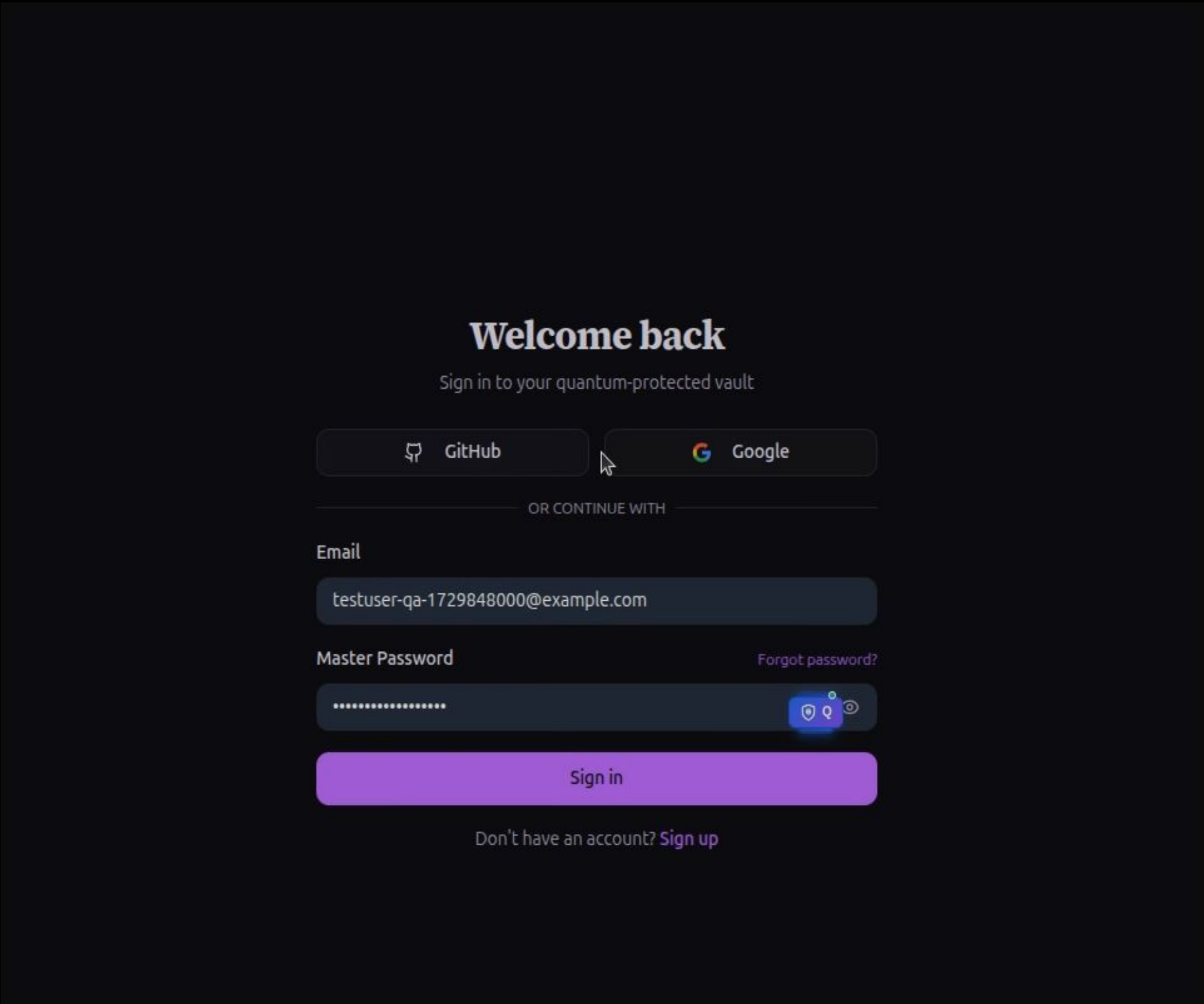


Secure Password Manager



Login Page – Secure authentication with master password.

Problem

- 1- Many users reuse weak passwords across multiple platforms.
- 2- Existing password managers can be too expensive or complex.
- 3- Users need an intuitive, secure, and accessible solution.

Project Overview

Our project is a secure password management system designed to protect user credentials through strong encryption and simple design.

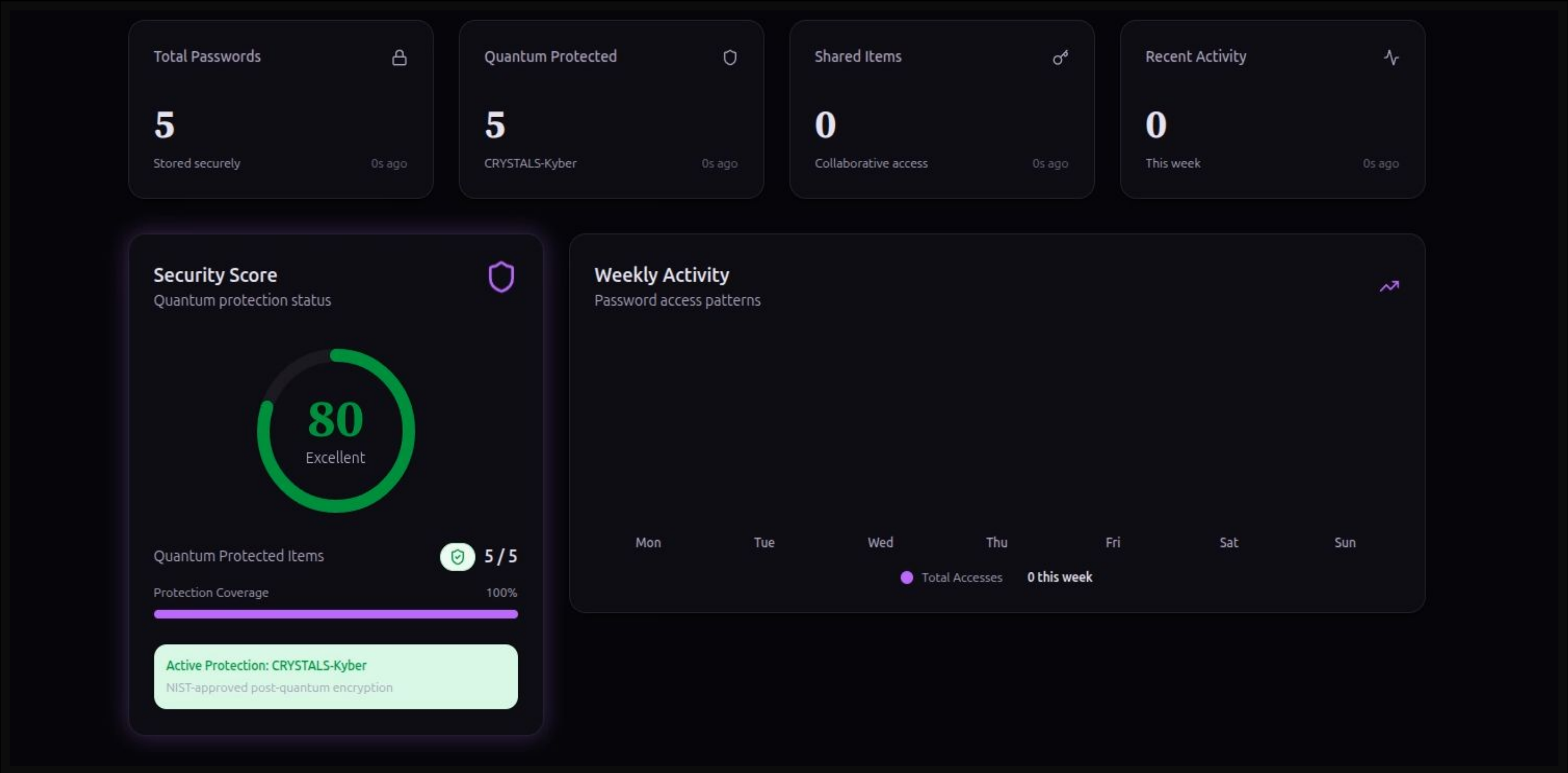
The system is built using React for the frontend, Node.js/Express for the backend, and a SQL database for secure storage.

Users can register, log in, and store passwords in encrypted form.

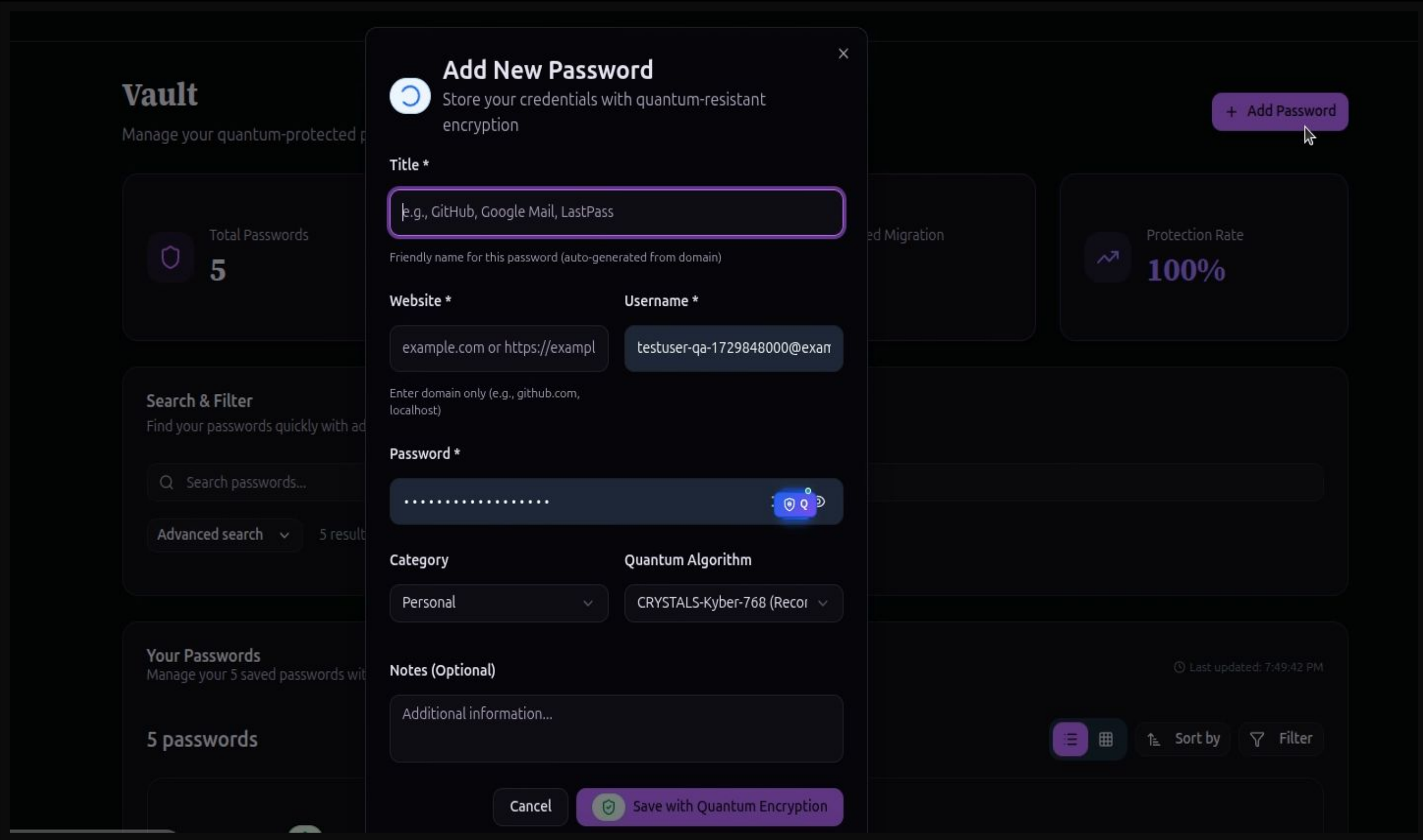
It supports import/export of credentials using CSV files, compatible with major password managers.

A role-based collaboration feature lets users securely share credentials with others by assigning view, edit, or admin permissions.

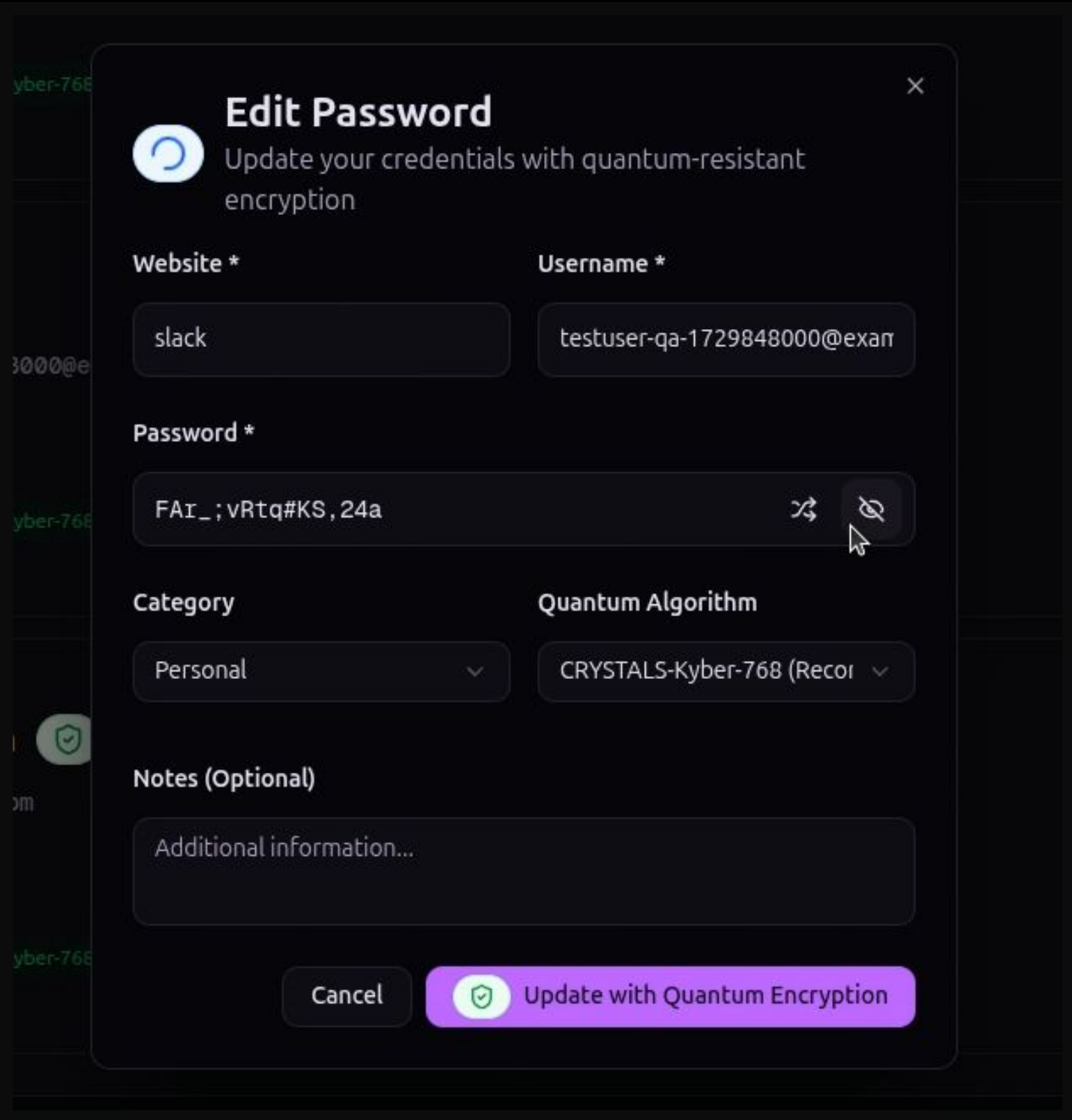
The app was developed with real-world use in mind, including a staging environment for alpha testing and performance feedback.



Dashboard – Real-time security score, activity insights, and quantum-protection status for stored passwords.



Add New Password – Save credentials with post-quantum encryption using the CRYSTALS-Kyber algorithm.



Edit Password – Update existing credentials with quantum-resistant encryption and category management.

Team Contributions

Each team member led a key area of the system while also collaborating across different components. Our approach emphasized communication, shared tools, and a unified vision for the application's functionality.

Mauricio Ballart Alvarez – Frontend Lead

Took the lead on designing the user interface using React
Created the UI style guide and outlined component structures
Supported API planning and user testing preparation
Assisted with onboarding flow and visual consistency across pages

Alexis Henkel – Database & UI Support

Led the planning of the database schema and table relationships
Drafted field structures and indexing for efficient storage
Contributed to frontend layout structure and responsive design testing
Worked closely with backend and encryption logic for compatibility

Alberto Espinoza – Deployment & Support

Set up the project repository and initial deployment tools
Assisted with database integration and backend testing
Helped coordinate alpha testing logistics
Supported performance optimization and issue tracking setup

Isaac Quintero – Backend Lead

Focused on structuring the backend using Node.js and Express
Helped define authentication logic and session management
Supported encryption setup and frontend-backend data flow
Coordinated integration testing and route planning

Christian Dominguez – Security & Permissions

Focused on encryption design and permission system planning
Researched best practices for secure password sharing
Supported backend team with authentication features
Helped plan role-based collaboration functions