Lock Pad Pro (Privacy-Focused Notes App with Encryption)

Project Name: Lock Pad Pro

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Introduction

The internship project Lock Pad Pro was developed to create a secure, privacy-first notes application. The main goal was to combine strong security with a clean, professional interface that anyone can use effortlessly. The focus was on designing a modern, reliable, and safe platform for storing personal notes and files.

Abstract

Lock Pad Pro is an offline-first notes app that ensures complete data privacy. Every note is encrypted directly on the user's device, so no one can access it without the master password. The app uses robust cryptography (AES + PBKDF2), features a simple and intuitive dashboard, and supports backup/restore functionality. With smooth animations, responsive layouts, and a modern design, LockPad Pro delivers a secure and user-friendly experience.

Tools Used

- React + Vite – for fast, modular, and efficient frontend development.
- CryptoJS & WebCrypto API – to implement secure AES encryption and PBKDF2 password strengthening.
- IndexedDB – for offline storage of encrypted notes and files.
- Tailwind CSS & Framer Motion – to create a modern UI with animations and dark/light mode support.

Steps Involved in Building the Project

1. Planned the app architecture and set up the React + Vite environment.
2. Implemented a master password system with PBKDF2 for strong protection.
3. Developed CRUD operations to add, edit, and delete notes securely with AES encryption.
4. Added features like search, pinning, archiving, and encrypted backup import/export.
5. Designed a visually appealing UI with glassmorphism, animations, and illustrations.
6. Integrated auto-lock and logout functionality for added security.
7. Conducted thorough testing to ensure encryption integrity, offline functionality, and smooth performance.

Conclusion

Lock Pad Pro successfully delivered a secure, user-friendly, and visually appealing notes application. The project shows that strong security and modern design can work together effectively. This internship provided hands-on experience in secure application development, modern UI/UX design, and building offline-first web applications.