

Habit Tracker Progressive Web App

Introduction

The Habit Tracker Progressive Web App (PWA) is designed to help users build and maintain positive habits by tracking daily check-ins, maintaining streaks, and offering reminders. The application works both online and offline, and can be installed as a standalone app.

Abstract

This project demonstrates the development of a Progressive Web App using React, Tailwind CSS, IndexedDB, and Workbox. The app allows users to add, update, and delete habits, monitor their progress through streaks, and view progress charts. It also provides notification reminders to encourage consistency.

Tools Used

- React.js: Frontend framework for building UI.
- Tailwind CSS: Utility-first CSS framework for styling.
- IndexedDB (via idb): Local storage for offline support.
- Workbox: Service worker setup for PWA functionality.
- Recharts: For displaying habit progress charts.

Steps Involved in Building the Project

1. Set up React project with Vite and Tailwind CSS.
2. Implement habit tracking with add, mark done, and delete features.
3. Store user data using IndexedDB for offline-first support.
4. Add streak calculation and automatic daily reset.
5. Integrate progress visualization with charts.
6. Configure Workbox for service worker and offline caching.
7. Add notification reminders for daily habit check-ins.
8. Convert project into a Progressive Web App (PWA) for installation.

Conclusion

The Habit Tracker PWA provides an effective and installable offline-first solution for maintaining daily habits. By combining streak tracking, reminders, and progress visualizations, the app motivates users to stay consistent with their goals. The use of React, Tailwind, IndexedDB, and Workbox ensures a modern and efficient development approach.