

Habit Tracker PWA

Introduction

“Habit Tracker PWA” is a Progressive Web App designed to help users track daily habits through intuitive check-ins, streak-based motivation, and visual analytics. As a PWA, it works offline and can be installed on both desktop and mobile devices

Abstract

This project presents a small yet powerful habit-tracking app built using modern web technologies. It empowers users to mark daily habits, monitor streaks, review progress via charts, and set reminders—all within an offline-first web experience. The app leverages React for UI, TailwindCSS for styling, IndexedDB for storage, and Workbox for PWA capabilities

Tools Used

- **React** – for building responsive UI components
- **TailwindCSS** – for utility-first styling and layout
- **IndexedDB (via idb)** – browser-based storage for offline data persistence
- **Workbox** – service worker generation for offline support and PWA functionality
- **Recharts** – to render analytics charts and visual feedback
- **npm** – package management and project setup (via package.json, postcss.config.js, tailwind.config.js, vite.config.js, etc.)

Steps Involved in Building the Project

1. **Project Setup**
 - Clone the repository
 - Install dependencies using `npm install` [GitHub](#)
2. **UI Development with React & TailwindCSS**
 - Create habit UI components (e.g., habit card, check-in button)
 - Use TailwindCSS for responsive and consistent styling
3. **Data Storage with IndexedDB**
 - Configure persistent habit data storage using idb to manage user habits, check-ins, and streak states

4. Offline Support & PWA Integration

- Implement service worker strategies using Workbox to cache app assets and enable offline functionality
- Set up PWA manifest to allow installation on various devices

5. Analytics & Visualization

- Use Recharts to generate streak and progress visualizations, such as line or bar charts depicting habit consistency

6. Reminders (Mock Notifications)

- Implement simulated reminder functionality to prompt users to complete their habits (mocked instead of using real notifications)[GitHub](#)

7. Deployment & Running the App

- Start development server using npm start

Conclusion

The Habit Tracker PWA is an elegantly simple yet feature-rich project demonstrating key web development skills: building a responsive React interface, ensuring offline functionality via PWA standards, managing client-side data with IndexedDB, and delivering a smooth UX through visual analytics. Its architecture is ideal for expansion—such as real push notifications, habit categories, syncing to the cloud, or user authentication—making it a solid foundation for a full-fledged habit-tracking solution.