

Retail Shift Scheduler

Weekly retail rosters, leave tracking and payroll export, done in minutes instead of hours, offline in a browser.

PROBLEM

Rostering a retail store is deceptively hard. Every week a manager has to cover opening and closing under staffing rules, respect who's on leave, spread duties fairly across departments, and land on hours that reconcile to payroll, usually in a sprawling spreadsheet no one else can safely touch. It's slow, error-prone, and a single mistake shows up in someone's pay.

APPROACH

The heart of the app is a DOM-free scheduling core: pure JavaScript that takes staff, rules, leave and duties and produces a roster, with no dependency on the browser or a network. Persistence is layered across IndexedDB, localStorage and the File System Access API, and HTML5 Canvas renders printable PDF sheets. The saved format is explicitly versioned, and the app migrates older files forward on load, defended by roughly 135 automated tests: unit tests plus a Playwright end-to-end suite.

OUTCOME

~135

automated tests (unit + E2E)

v5

data model with migrations

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servers · fully offline

The scheduler is in real, ongoing store use. A weekly roster that used to be an afternoon of spreadsheet wrangling is now minutes of guided work, with leave and coverage handled automatically, payroll exported directly, and an audit trail behind every change.

Vanilla JS (DOM-free core)

HTML5 Canvas

IndexedDB

localStorage

File System Access API

Playwright E2E