Surfboard

Project Overview

SurfBoard is a specialized property management system for hostels and surf camps. It integrates a seamless booking engine for beds and lessons with an automated backend that syncs real-time availability, processes payments, and generates financial performance reports.

Problem Statement

Hostel and surf camp owners struggle with overbookings and the manual complexity of managing beds, gear rentals, and lesson schedules across multiple sites. Existing tools often lack the flexibility to handle the unique, multi-service nature of surf-stay businesses.

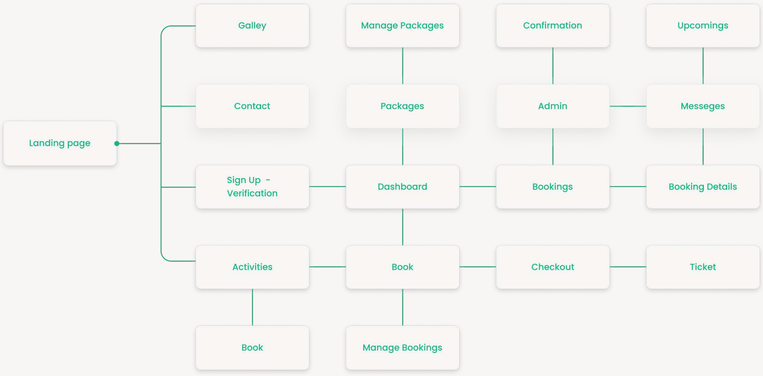
SurfBoard streamlines these operations with an automated, all-in-one booking and management system.

Solution

- **For Guests::** Book beds, surf lessons, and equipment rentals through a unified, mobile-friendly interface.
- **For Staff:** Manage daily check-ins, room assignments, and rental returns with real-time availability updates.
- **For Managers:** Oversee automated payments, sync third-party booking platforms, and analyze revenue trends.

Site Map

To structure the user experience, I created a site map that outlines the core pages and user flows for **Surfboard**. This helped define navigation, prioritize features, and simplify the overall design.



Tech stack

A comprehensive overview of the frameworks, languages, and tools used to build and deploy this application.

React · Typescript · Nextjs · Prisma · Stripe

Data Model

This is a private freelance project, so I'm unable to share the database details or schema.

Problem Solving & Takeaways

The core difficulty was preventing overbookings while simultaneously managing beds, surf instructors, and rental gear availability.

- **Atomic Booking Logic:** Used transaction isolation levels to ensure a bed or instructor is locked during the checkout process, preventing double-bookings from concurrent users.
- **Channel Synchronization:** Integrated a webhook-based sync system to update availability across external booking platforms (like Airbnb/Booking.com) instantly upon a direct site purchase.
- **Multi-Resource Scheduling:** Built a custom scheduling algorithm that validates instructor and board availability before confirming a lesson, ensuring zero scheduling conflicts.

Conclusion

SurfBoard strengthened my expertise in complex scheduling logic and multi-channel synchronization. The project taught me how to manage interdependent resources—like beds, instructors, and equipment—within a single atomic transaction. I mastered the art of balancing high-speed performance with the data accuracy required to manage a global booking ecosystem without conflicts.