Here’s a **clear, high-level but detailed** overview of the Jonathan’s Cafe Restaurant Yield Management MVP project and the *eventual shape* we’re aiming for.

**Project Overview: Restaurant Yield Management & Ordering System**

**1. Purpose & Vision**

This project is designed to help restaurants **maximize revenue, optimize table utilization, and improve customer experience** through dynamic pricing, pre-booked offers, and intelligent menu filtering.  
The MVP begins with *Jonathan’s Cafe* and two other sample restaurants (*Ali’s Bistro* and *McDonald’s*), but the system is architected to scale to multiple venues with different rules, menus, and branding.

The **long-term vision** is a **multi-restaurant platform** where:

* Customers can discover, book, and order from restaurants offering personalized pricing, menu filtering based on dietary profiles, and pre-paid specials.
* Restaurants can adjust prices, manage inventory, track revenues, and analyze demand patterns in real time.
* The system eventually integrates **AI-assisted menu creation**, **WhatsApp/Chatbot ordering**, and **data-driven yield optimization** across all partner restaurants.

**2. Current MVP Shape**

**Core Features in MVP**

* **Restaurant & Menu Management**
  + Sample data for Jonathan’s Cafe, Ali’s Bistro, and McDonald’s with structured menu categories, images, and item metadata (ingredients, tags, dietary info).
  + Inventory-linked menu (auto-hide sold-out items).
* **Ordering & Reservation**
  + Table-based, time/day-dependent pricing.
  + Prepaid reservation deals for low-traffic slots (48h in advance) with fixed menu & discounts.
  + Order history & easy reordering.
  + Guest name and party size input.
  + Live order status tracking.
* **Customer Personalization**
  + “Food Passport” profile: dietary identity, allergies, sourcing preferences, and meal experience notes.
  + Menu auto-filtering based on profile (with override option).
* **Admin Tools**
  + Revenue dashboard (daily/weekly/monthly views).
  + Refund marking button for tracking without manual edits.
  + Feedback prompts after meals.
  + Handling scenarios guide & live operation tips for edge cases.
* **Technical Setup**
  + Glide MVP for speed of delivery.
  + Supabase/PostgreSQL backend with Prisma ORM.
  + Seed scripts for data bootstrapping.
  + Inventory and pricing logic configurable via admin panel.

**3. Eventual Shape & Roadmap**

Over time, the platform will evolve into a **full-stack, multi-tenant restaurant yield management system** with:

**A. Multi-Restaurant Marketplace**

* Restaurants onboard via a self-service portal.
* Upload menu (or scan with AI menu extractor → human validation).
* Set yield-pricing rules (per table, time slot, day, event).
* Accept orders and reservations across web, mobile, and integrated channels.

**B. Advanced Yield & Demand Optimization**

* AI-assisted price recommendations based on demand, weather, events, and historical sales.
* Dynamic table allocation to maximize seat occupancy and order value.
* Insights dashboard showing demand heatmaps, popular items, and no-show patterns.

**C. Omnichannel Ordering**

* Direct web/app ordering.
* WhatsApp bot & social media integration for instant booking/order.
* QR-code table ordering.

**D. Customer Loyalty & Personalization**

* Persistent “Food Passport” across all partner restaurants.
* Cross-restaurant loyalty rewards & offers.
* Predictive menu suggestions based on history.

**E. Operations & Integrations**

* POS integration for order sync.
* Supplier inventory link for auto-stock updates.
* Staff mobile app for real-time order and seating management.

**F. Monetization**

* SaaS subscription for restaurants.
* Commission on prepaid deals and bookings.
* Premium analytics packages.

**4. Architecture Summary**

**MVP Tech Stack**

* **Frontend:** Glide (no-code for MVP speed).
* **Backend:** Node.js + Prisma ORM + Supabase/PostgreSQL.
* **Hosting:** Vercel (for APIs/UI) + Supabase (DB).
* **Data:** Seeded menu, pricing, and rules for demo restaurants.
* **Integration-ready** for payment gateways, WhatsApp API, POS systems.

**Future Full-stack Build**

* Flutter (cross-platform app) + Next.js (web frontend).
* Firebase or Supabase for authentication, real-time updates, and storage.
* Serverless functions for yield-pricing logic and AI inference.
* AI services for menu scanning, demand forecasting, and personalization.

