Product Requirements Document: Full-Stack E-commerce Platform (MVP) - Boutique Focus

Product Name: Roaster's Choice Boutique Platform **Version:** 1.3 (Full-Stack Specification) **Date:** December 13, 2025 **Owner:** User Name/Team Lead

1. Executive Summary

This document outlines the requirements for building a highly focused, full-stack e-commerce web application from scratch. The MVP is limited to a small, curated catalog (max 3 products) and must deliver two distinct, secure interfaces: a **Customer-Facing Store** (frontend) and a **Staff/Admin Dashboard** (backend management). The core focus is on minimizing friction in the checkout flow, presenting the three main products beautifully, and providing robust backend tools for order and inventory management.

2. Goals & Vision

Vision

To create a minimalistic and robust e-commerce application focused on delivering a handful of high-quality products through a **clean, modern interface** that emphasizes the **artisan quality** and offers a simple purchase path, backed by reliable order management tools.

Business Goals

1. Enable businesses to list, sell, and manage a **focused catalog of 3 unique coffee products (maximum)**, each supporting necessary variants (size/grind).
2. Achieve a secure, 3-step checkout process with integrated payment gateway functionality.
3. Establish **two functional dashboards** (Customer and Admin) for personalized and operational needs.
4. Ensure 99.9% uptime for the checkout and payment processing services.

3. Target Audience

- **Primary (B2C):** End customers purchasing specialty coffee online. (Requires extreme simplicity, high-quality imagery, and fast checkout).
- **Secondary (B2B):** Store owners/staff using the **Admin Dashboard**. (Requires clear reporting, fast order management).

4. Scope (MVP Features)

In-Scope for MVP (Must-Haves)

- User Registration & Authentication (Customer & Admin)
- **Customer Dashboard (Order History & Profile)**
- **Simplified Product Catalog View (max 3 primary SKUs)**

- **Mandatory Variant Selection (Grind & Size)**

- Shopping Cart Functionality

- Secure Checkout Flow

- Integrated Payment Processing

- Basic Order Management (Accept/Reject/Change Status)

- Inventory Tracking (Simple Count)

- **Admin Dashboard (Order/Inventory Management)**

Out-of-Scope for MVP (Future Development)

- Advanced SEO Tools

- Customer Loyalty/Points Programs (e.g., Free bag after 10 purchases)

- Multi-vendor Support

- Advanced Discount Engines (BOGO, Tiered pricing)

- In-app Chat Support

5. Detailed Feature Requirements

5.1. User Authentication (Customer & Admin)

ID	Feature	Description
A.1	**Customer Registration/Login**	Standard email/password registration and secure login.
A.2	**Password Recovery**	"Forgot Password" flow using secure email link verification.
A.3	**Admin Authentication**	Separate, higher-security login page for authorized staff only.
A.4	**Customer Profile Update**	Ability for customers to update their name, email, and primary shipping address within their dashboard.

5.2. Product Catalog & Browsing

ID	Feature	Description
C.1	**Product Listing Page**	Displays **max 3 products** prominently on the homepage with large, high-quality images, name, and price. Must feature minimalist design.
C.2	**Product Detail Page (PDP)**	Dedicated page for each item showing description, multiple images, price, stock status, and an "Add to Cart" button. **Must clearly display roast level and origin/flavor notes.**
C.2.1	**Variant Selection**	Must allow customers to select **Grind Type (e.g., Whole Bean, French Press, Espresso)** and **Bag Size (e.g., 250g, 500g)** before adding to cart.

| C.3 | Search Functionality | Search is **out-of-scope** due to the small catalog size. |
| C.4 | Basic Filtering | **Filtering is out-of-scope.** Products are displayed in a single, simple list. |

5.3. Shopping Cart & Checkout

ID	Feature	Description
T.1	Add/Remove from Cart	Users can add, remove, and adjust quantities of items in the cart.
T.2	Shipping Information Capture	Captures required customer data (Name, Address, Phone, Email).
T.3	Checkout Flow (3 Steps)	1. Shipping Info > 2. Payment Selection > 3. Review & Pay.
T.4	Inventory Check	Real-time check to ensure all items in the cart are in stock before checkout.

5.4. Payment Gateway Integration (Critical)

ID	Feature	Description
P.1	Gateway Integration	Integrate a single, primary payment processor (e.g., Stripe, Razorpay) to accept credit/debit cards. **Requires secure handling of payment tokens, never raw card data.**
P.2	Transaction Security	All payment processing must occur over HTTPS, adhering to PCI-DSS compliance standards (via the gateway partner).
P.3	Payment Status Handling	Ability to handle and record transaction status: Success, Failure, Pending.
P.4	Order Confirmation	Automatic email/in-app notification to the customer upon successful payment.

5.5. Admin Dashboard & Operations (B2B)

ID	Feature	Description
D.1	Order View	List all orders with status (New, Processing, Shipped, Completed, Canceled), sorted by "Newest."
D.2	Order Detail View	Ability to view contents of an order, customer details, and payment status, with one-click print functionality for fulfillment.
D.3	Status Updates	Ability for admin to manually change the order status (e.g., from "New" to "Processing"). Must trigger customer notification (P.4).

| D.4 | Inventory Management | CRUD functionality for products and manual updating of stock counts, including variant tracking (e.g., 250g bag of Espresso grind). |
| D.5 | Basic Sales Report | A simple link or view providing a high-level summary of total sales revenue and total orders for the current month. |

5.6. Customer Dashboard (B2C)

ID	Feature	Description
T.5	Order History View	Allows authenticated customer to view a list of all their past orders with status and order totals.
T.6	Manage Addresses	Allows authenticated customer to save and edit multiple shipping addresses for faster future checkout.
A.4	Profile Management	Link to the profile update feature (see A.4)

6. Technical Requirements & Stack Recommendation

Architecture

- **Type:** Full-Stack Monolith (Recommended for simplified deployment and faster MVP delivery).
- **API Design:** RESTful API architecture using JSON payload communication between the frontend and backend.
- **API Endpoints (Examples):**
  - `POST /api/v1/auth/register`
  - `GET /api/v1/products`
  - `POST /api/v1/orders`
  - `GET /api/v1/admin/orders` (Requires Admin Auth)

Recommended Stack (Example)

Layer	Technology	Rationale
Frontend	React (Next.js or Vite) / Tailwind CSS	Fast development, excellent performance, clean separation of Customer UI and Admin UI components. Tailwind for fast, boutique-style, clean UI development.
Backend/API	Node.js (Express) or Python (Django/Flask)	Robust, scalable, and suitable for rapid API development and complex order logic.
Database	PostgreSQL (Relational)	Recommended for transactional data (orders, inventory, users). Excellent support for complex relationships and variant tracking.
Payment Gateway	Razorpay / Stripe / PayPal	Reputable, secure, and provides necessary APIs for e-commerce.

Data Model Requirements (Minimum Tables)

1. **Users:** `user_id (PK)` , `email` , `password_hash` , `role` (Customer/Admin).

2. **Products:** `product_id (PK)` , `name` , `description` , `roast_level` , `flavor_notes` .

3. **Variants:** `variant_id (PK)` , `product_id (FK)` , `size` , `grind_type` , `price` , `stock_count` .

4. **Orders:** `order_id (PK)` , `user_id (FK)` , `status` , `total_amount` , `shipping_address` .

5. **OrderItems:** `item_id (PK)` , `order_id (FK)` , `variant_id (FK)` , `quantity` , `unit_price` .

Performance & Security

- **Load Time:** All primary pages (Home, PDP, Checkout) must load within **1.5 seconds** (Simplified site must be faster).

- **Security:** Implement environment variables for keys, bcrypt/Argon2 hashing for all user passwords, and robust input validation on all forms. Use JWTs for session management.

- **Data Integrity:** Ensure ACID compliance for all order and payment transactions (critical).

7. Success Metrics

- **Conversion Rate:** Checkout initiation to successful payment completion (Target: >85% due to simplicity).