

Solution Architecture

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Project Name: Shop Smart: Your Digital Grocery Store Experience

1. Overview

Shop Smart is a digital grocery store platform that enables users to browse products, add items to cart, make secure payments, and track orders online. The system is designed to be scalable, secure, and user-friendly.

The architecture follows a 3-tier architecture model: Presentation Layer (Frontend), Application Layer (Backend), and Data Layer (Database).

2. Components Description

- Presentation Layer (Frontend): Handles user interface, product browsing, cart management, and order placement.
- Application Layer (Backend): Manages authentication, business logic, order processing, and payment integration.
- Data Layer (Database): Stores user data, product details, categories, orders, payments, and inventory data.

3. Key Functional Modules

- User Management Module: Registration, login/logout, profile management.
- Product Management Module: Add/update/delete products (Admin), search and filter (User).
- Cart & Checkout Module: Add/remove items, quantity update, order summary.
- Payment Module: Secure payment gateway integration (UPI/Card/Net Banking).
- Order Management Module: Order confirmation, tracking, and history.