

ShopSmart – your digital grocery store experience

Full Stack Development with MERN – Project Documentation

1. Introduction

Project Title: ShopSmart – Your Digital Grocery Store Experience

Team ID : LTVIP2026TMIDS818992

IN TEAM : 5

Team Members:

Team Leader : Shaik Asma

Team member : Shaik Muskan

Team member : Shaik Reshma Reshma

Team member : Thottampuri Krthura

Team member : Telugu Padmini

2. Project Overview

Purpose:

□

To build a user-friendly online grocery shopping platform where users can browse, search, and purchase groceries, while administrators can manage inventory and orders through a powerful backend.

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Key Features:

- User Registration/Login
 - Product Search and Filter
 - Shopping Cart and Wishlist
 - Order Placement and History
 - Admin Dashboard for Product and Order Management
 - Secure authentication and role-based access
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3. Architecture

□

Frontend (React):

- Components: Home, ProductList, Cart, Wishlist, Login, Register, Orders, AdminDashboard
- Libraries: React Router, Axios, Bootstrap

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Backend (Node.js + Express.js):

- REST APIs for all user and admin operations
- JWT-based authentication and middleware for role protection
- Routes: /auth, /products, /orders, /admin

□

Database (MongoDB Atlas):

- Collections: Users, Products, Orders
- CRUD operations via Mongoose ORM
- Indexed for performance

4. Setup Instructions

□ Prerequisites:

- o Node.js(v18+)
- o MongoDB Atlas account
- o Git

□ Installation:

```
git clone https://github.com/yourusername/shopsmart
cd shopsmart
cd server
npm install
cd ../client
npm install
```

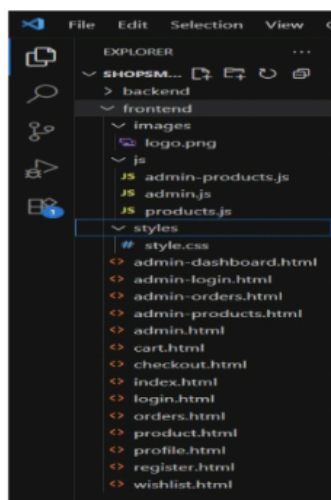
□ Environment Variables (.env):

In server/ folder:

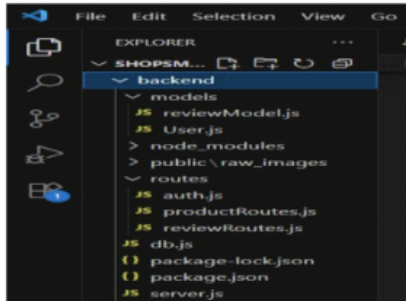
```
ini
MONGO_URI=your_mongodb_atlas_url
JWT_SECRET=your_jwt_secret
```

5. Folder Structure

□ Client (Frontend):



□ Server (Node.js Backend):



6. Running the Application

□ Frontend:

```
cd client
npm start
```

□ Backend:

```
cd server npm
start node
server.js
```

7. API Documentation

Endpoint	Method	Description
/api/auth/register	POST	User registration
/api/auth/login	POST	User login and token generation
/api/products	GET	List all products
/api/products/:id	PUT/DELETE	Admin: Update/Delete product
/api/orders	POST	Place new order
/api/orders/:userId	GET	Get all orders by user
/api/admin/orders	GET/PUT	Admin: View or update order status

8. Authentication

□ JWT-Based Authentication:

- Users receive a JWT token on login
- Token stored in localStorage and passed in headers

- o Role-based middleware (isAdmin, auth) used to protect sensitive routes

9. User Interface

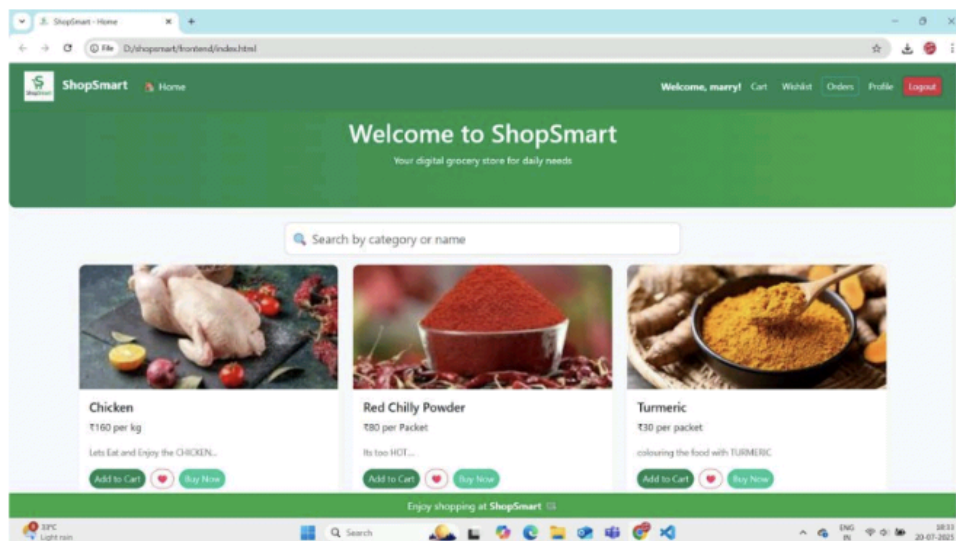
- Pages:
 - o Home Page with product cards
 - o Search bar, product filter
 - o Add to Cart / Wishlist buttons
 - o Order History page
 - o Admin Dashboard: Add/Edit/Delete Products, Manage Orders
- **UI Technologies:**
 - React + Bootstrap 5
 - Responsive layout for mobile & desktop

10. Testing

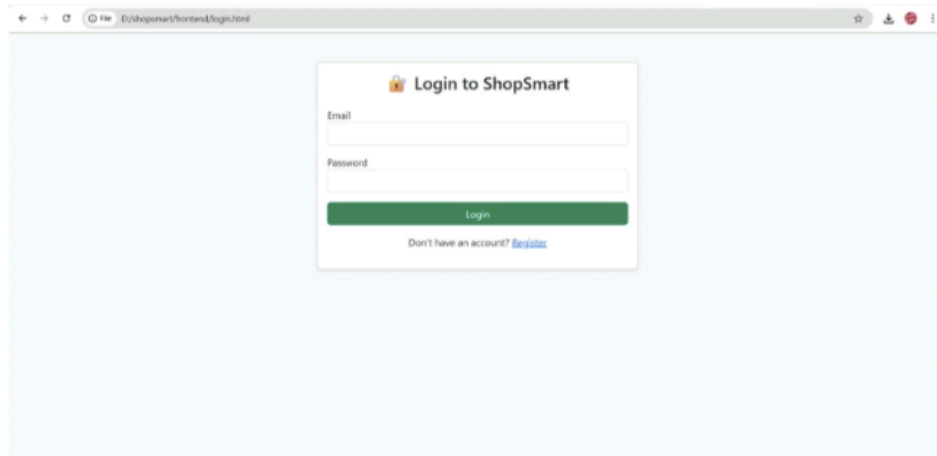
- **ToolsUsed:**
 - o Postman (API testing)
 - o Manual UI testing on Chrome, Firefox, Mobile view
 - o Console and network inspection using DevTools
- **Strategy:**
 - o Unit tests for APIs (optional)
 - o Manual tests for all user/admin flows

11. Screenshots & Demo video

- o Home page

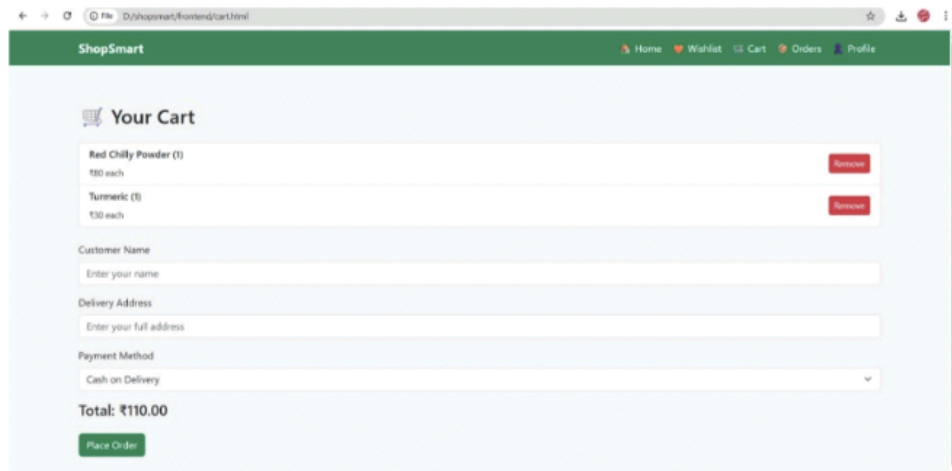


- o Login/Register



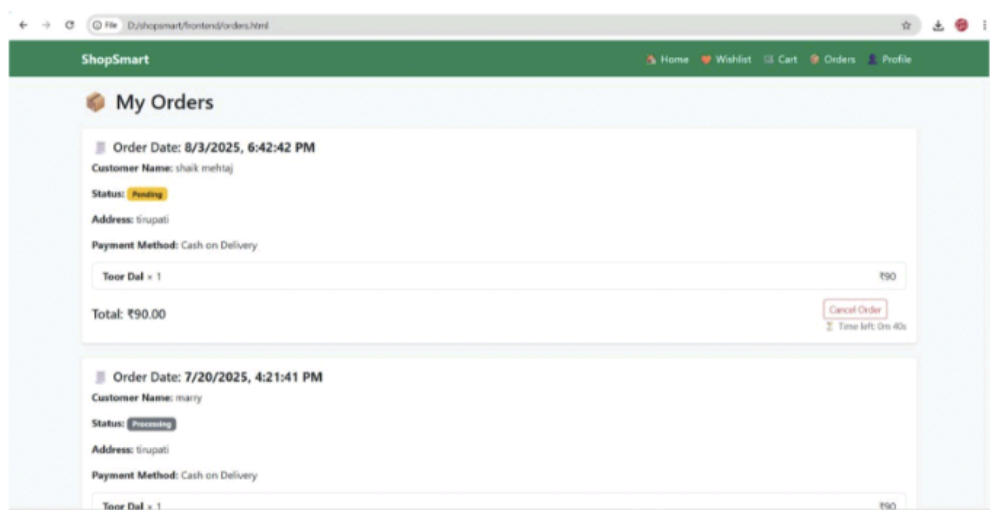
A screenshot of a web browser showing the 'Login to ShopSmart' page. The page has a light blue background. In the center, there is a white box with a green header 'Login to ShopSmart' and a shopping cart icon. Below the header, there are two input fields: 'Email' and 'Password'. A green 'Login' button is positioned below the password field. At the bottom of the box, there is a link that says 'Don't have an account? Register'.

- o Cart



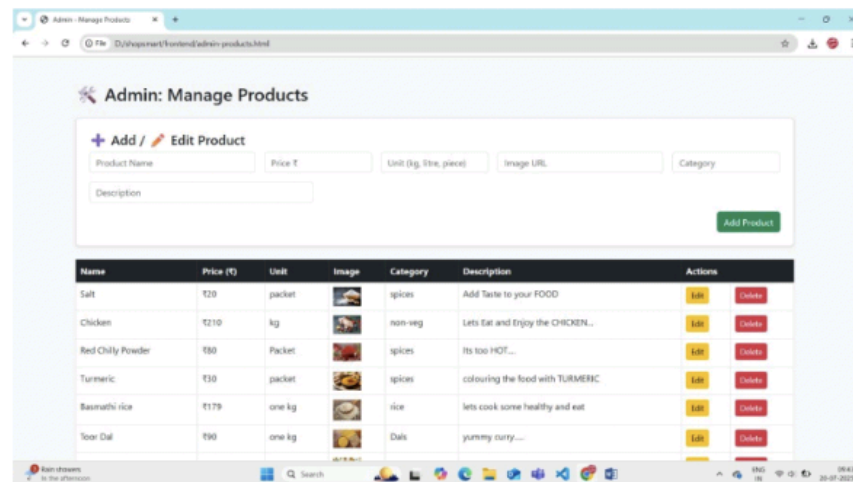
A screenshot of the 'Your Cart' page in the ShopSmart application. The page has a green header with the ShopSmart logo and navigation links: Home, Wishlist, Cart, Orders, and Profile. The main content area is titled 'Your Cart' with a shopping cart icon. It lists two items: 'Red Chilly Powder (1)' for ₹80 each and 'Turmeric (1)' for ₹30 each. Each item has a red 'Remove' button. Below the items, there are form fields for 'Customer Name', 'Delivery Address', and 'Payment Method' (set to 'Cash on Delivery'). The total amount is ₹110.00, and there is a green 'Place Order' button at the bottom.

- o Orders



A screenshot of the 'My Orders' page in the ShopSmart application. The page has a green header with the ShopSmart logo and navigation links: Home, Wishlist, Cart, Orders, and Profile. The main content area is titled 'My Orders' with a shopping cart icon. It displays two orders. The first order is dated 8/3/2025, 6:42:42 PM, with customer name 'shaik mehtaj', status 'Pending', address 'Gurupati', and payment method 'Cash on Delivery'. It shows 'Toor Dal x 1' for ₹90 and a total of ₹90.00. A red 'Cancel Order' button is visible next to the total. The second order is dated 7/20/2025, 4:21:41 PM, with customer name 'manny', status 'Processing', address 'Gurupati', and payment method 'Cash on Delivery'. It also shows 'Toor Dal x 1' for ₹90.

- o Admin Dashboard



- **Demo Link:**
https://drive.google.com/file/d/1npDzANr0_yQ9ahc1rsONG8BpFcjdmzxk/view?usp=drive_link

12. Known Issues

Payment gateway not integrated
No real-time delivery tracking
Cart items don't persist on logout

13. Future Enhancements

Integrate Razorpay/Stripe for secure payments
Build mobile app with React Native
Add delivery tracking and notification system
Implement product ratings and feedback