🛒 ShopSmart – your digital grocery store experience

📚 Full Stack Development with MERN – Project Documentation

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1. Introduction

- **Project Title:** ShopSmart – Your Digital Grocery Store Experience
- **Team ID :** LTVIP2025TMID46323
- **Team Size :** 4
- **Team Members:**
- **Team Leader :** Shaik Mehtaj
- **Team member :** Danduboyina Rajeev
- **Team member :** K Reddy Nikhil
- **Team member :** Parapatla Sai Kumar

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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.
- **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
- **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:**
  - Node.js (v18+)
  - MongoDB Atlas account
  - Git
- **Installation:**

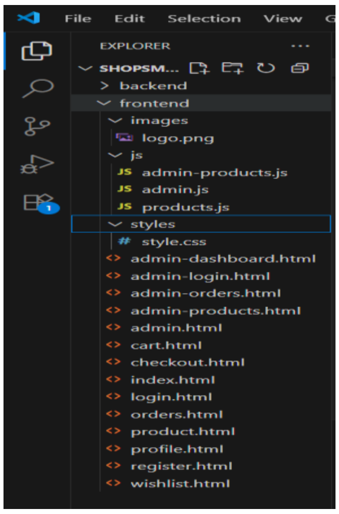
```
git clone https://github.com/yourusername/shopsmart
cd shopsmart
cd server
npm install
cd ../client
npm install
```

- **Environment Variables (.env):**
  In `server/` folder:

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

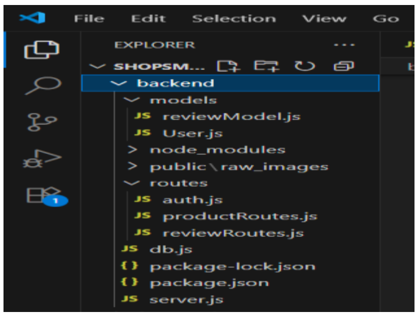
5. Folder Structure

- **Client (Frontend):**



```
SHOPSM...
  > backend
  v frontend
    v images
      logo.png
    v js
      admin-products.js
      admin.js
      products.js
    v styles
      style.css
    admin-dashboard.html
    admin-login.html
    admin-orders.html
    admin-products.html
    admin.html
    cart.html
    checkout.html
    index.html
    login.html
    orders.html
    product.html
    profile.html
    register.html
    wishlist.html
```

- **Server (Node.js Backend):**



```
SHOPSM...
backend
  models
    reviewModel.js
    User.js
  node_modules
  public\raw_images
  routes
    auth.js
    productRoutes.js
    reviewRoutes.js
  db.js
  package-lock.json
  package.json
  server.js
```

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6. Running the Application

- **Frontend:**

```
cd client
npm start
```

- **Backend:**

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

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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

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8. Authentication

- **JWT-Based Authentication:**
  - Users receive a JWT token on login
  - Token stored in localStorage and passed in headers

- Role-based middleware (`isAdmin`, `authUser`) used to protect sensitive routes

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9. User Interface

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

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10. Testing

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

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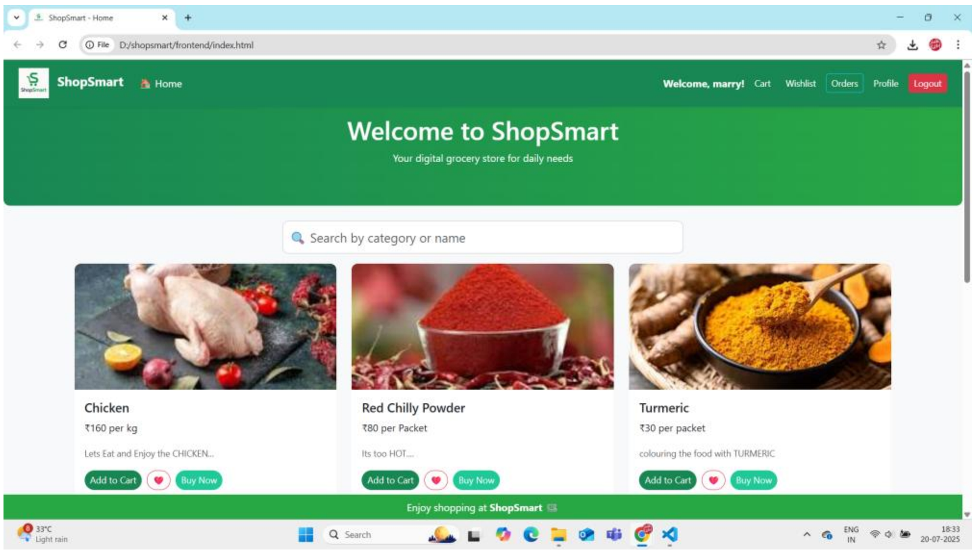
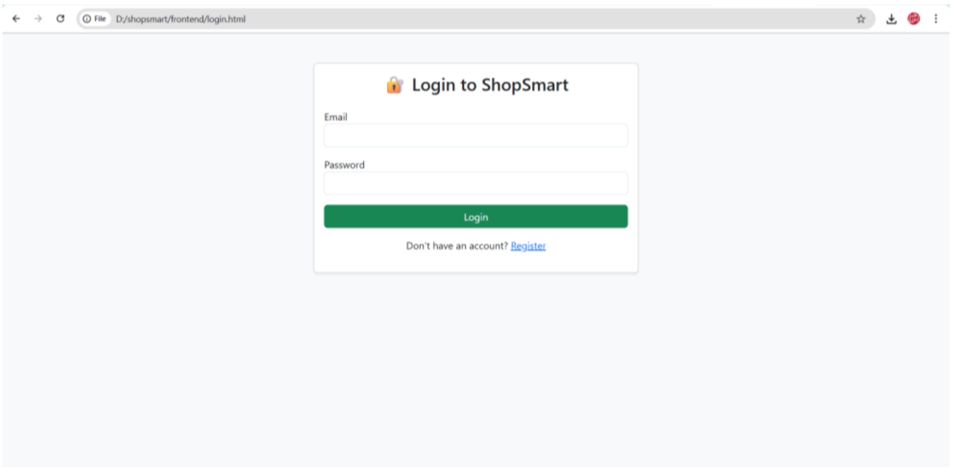
11. Screenshots & Demo video

- Home page



- Login/Register



D:/shopsmart/frontend/login.html

Login to ShopSmart

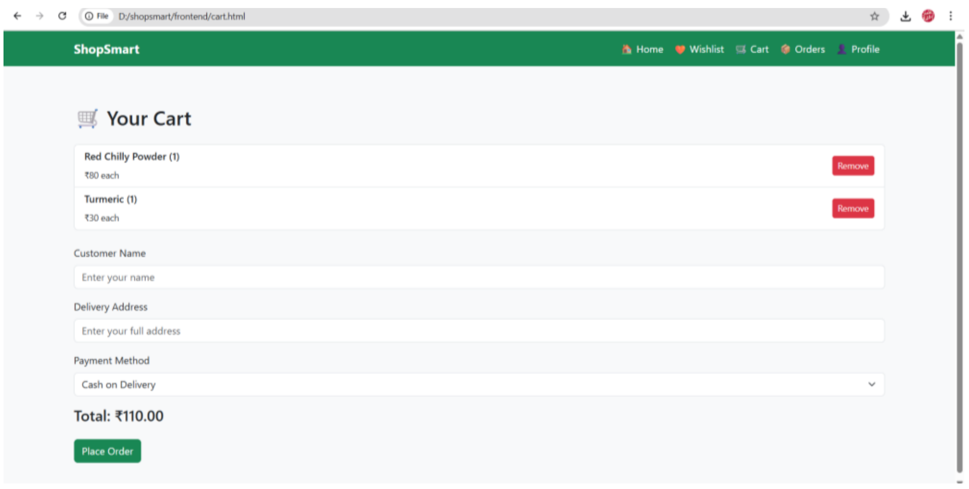
Email

Password

Login

Don't have an account? Register

- Cart



D:/shopsmart/frontend/cart.html

ShopSmart — Home · Wishlist · Cart · Orders · Profile

Your Cart

Red Chilly Powder (1)
₹80 each — Remove

Turmeric (1)
₹30 each — Remove

Customer Name: Enter your name

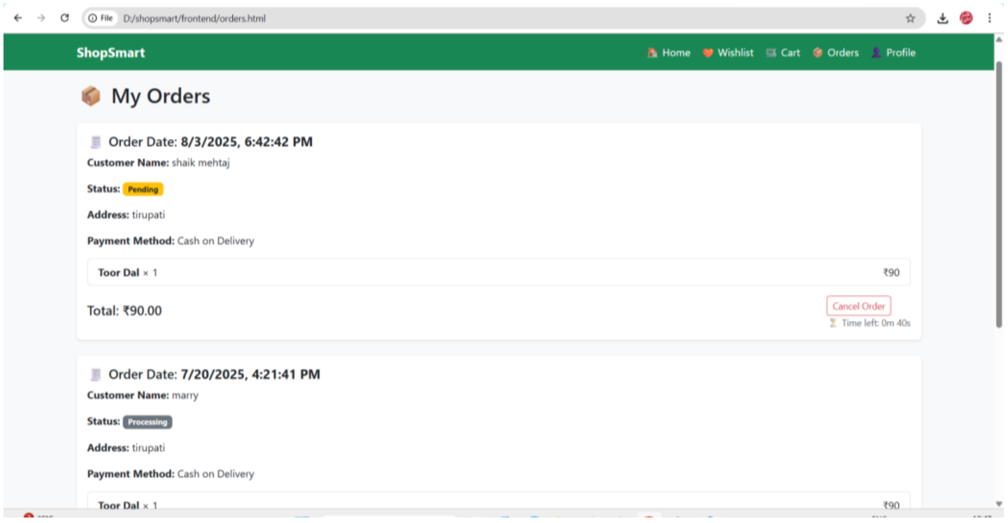
Delivery Address: Enter your full address

Payment Method: Cash on Delivery

Total: ₹110.00

Place Order

- Orders



D:/shopsmart/frontend/orders.html

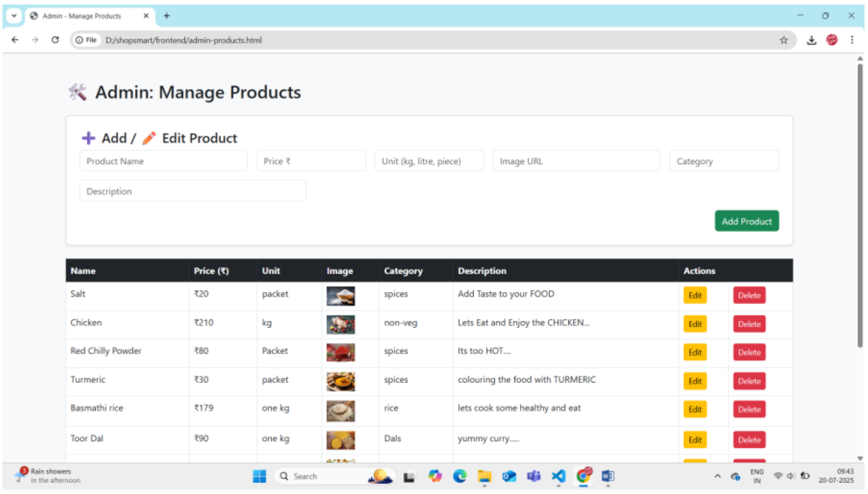
ShopSmart — Home · Wishlist · Cart · Orders · Profile

My Orders

Order Date: 8/3/2025, 6:42:42 PM
Customer Name: shaik mehtaj
Status: Pending
Address: tirupati
Payment Method: Cash on Delivery
Toor Dal × 1 — ₹90
Total: ₹90.00
Cancel Order
Time left: 0m 40s

Order Date: 7/20/2025, 4:21:41 PM
Customer Name: marry
Status: Processing
Address: tirupati
Payment Method: Cash on Delivery
Toor Dal × 1 — ₹90

- Admin Dashboard



D:/shopsmart/frontend/admin-products.html

Admin: Manage Products

Add / Edit Product

Product Name | Price ₹ | Unit (kg, litre, piece) | Image URL | Category | Description

Add Product

Name	Price (₹)	Unit	Image	Category	Description	Actions	
Salt	₹20	packet		spices	Add Taste to your FOOD	Edit	Delete
Chicken	₹210	kg		non-veg	Lets Eat and Enjoy the CHICKEN...	Edit	Delete
Red Chilly Powder	₹80	Packet		spices	Its too HOT....	Edit	Delete
Turmeric	₹30	packet		spices	colouring the food with TURMERIC	Edit	Delete
Basmathi rice	₹179	one kg		rice	lets cook some healthy and eat	Edit	Delete
Toor Dal	₹90	one kg		Dals	yummy curry.....	Edit	Delete

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

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12. Known Issues

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

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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