ShopSmart: Your Digital Grocery Store Experience

Team Details

Team ID: LTVIP2025TMID54891

Team Leader: Gogireddy Dhatruni Reddy

Team Members:

- Ganapathi Jahnavi Durga (UI Development, React Components, Backend Integration)

- Gandra Manosh Reddy (API Integration, Deployment)

- Gangadhar Dakarmi (Testing, Documentation, Support Modules)

1. Introduction

ShopSmart is a MERN stack-based grocery web application that aims to revolutionize the way users shop for groceries. By bringing grocery shopping online, it offers convenience, speed, and efficiency for both customers and administrators.

2. Problem Statement

Traditional grocery shopping often involves long queues, limited product availability, and time constraints. ShopSmart solves these problems by offering an online platform where users can browse products, place orders, and track deliveries from the comfort of their homes.

3. Objectives

- Provide a user-friendly online grocery shopping experience

- Enable secure user authentication and authorization

- Support real-time order placement and tracking

- Facilitate product management and analytics for admins

4. Technology Stack

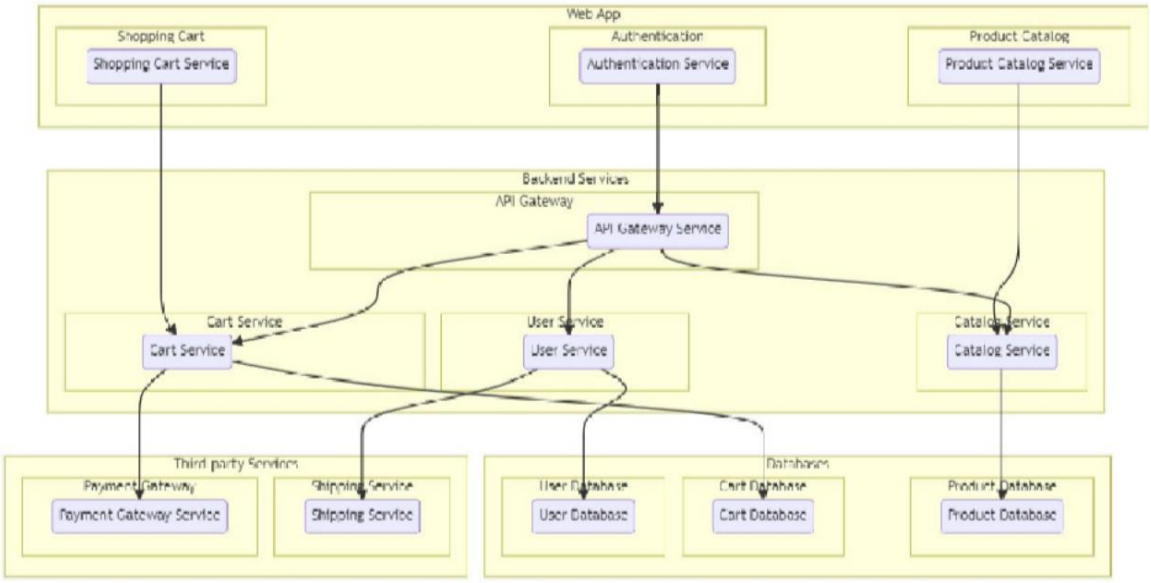
Frontend: React.js, React Router, Bootstrap

Backend: Node.js, Express.js

Database: MongoDB with Mongoose

5. System Architecture

The system uses a client-server architecture where the frontend interacts with backend APIs for all operations. MongoDB handles persistent data storage. Admins manage product listings and user orders through a secure dashboard.



6. Key Features

- - Product listing with filtering and search
- - Shopping cart and checkout
- - Secure login/logout system
- - Real-time order tracking
- - Admin dashboard for product and user management
- - Product reviews and ratings

7. User Roles

User:

- Register and login securely

- Browse and search for products

- Add items to cart and place orders

- Track order status

Admin:

- Manage product listings and inventory

- View and manage customer orders

- Access analytics and reports

8. Project Phases

Sprint 1:

- Frontend setup and login/register implementation

- Page routing and layout design

Sprint 2:

- Backend API setup for users, products, and orders

- Cart and order placement features

Sprint 3:

- Admin dashboard creation

- Final integration and bug fixes

9. Testing

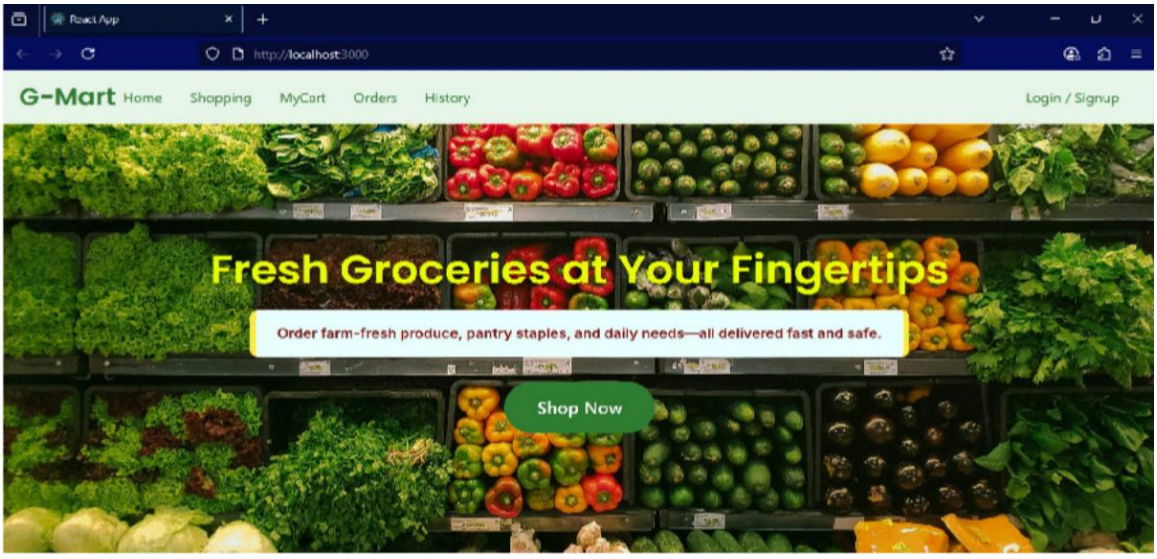
Manual testing using Postman and Browser

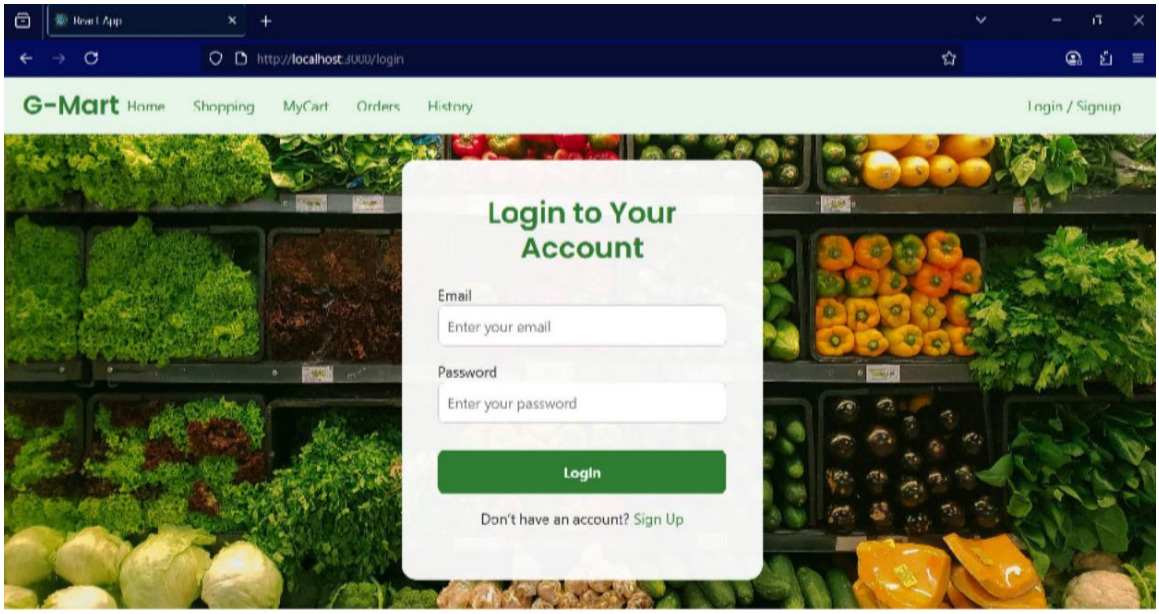
Functional tests on all CRUD operations for users, products, and orders

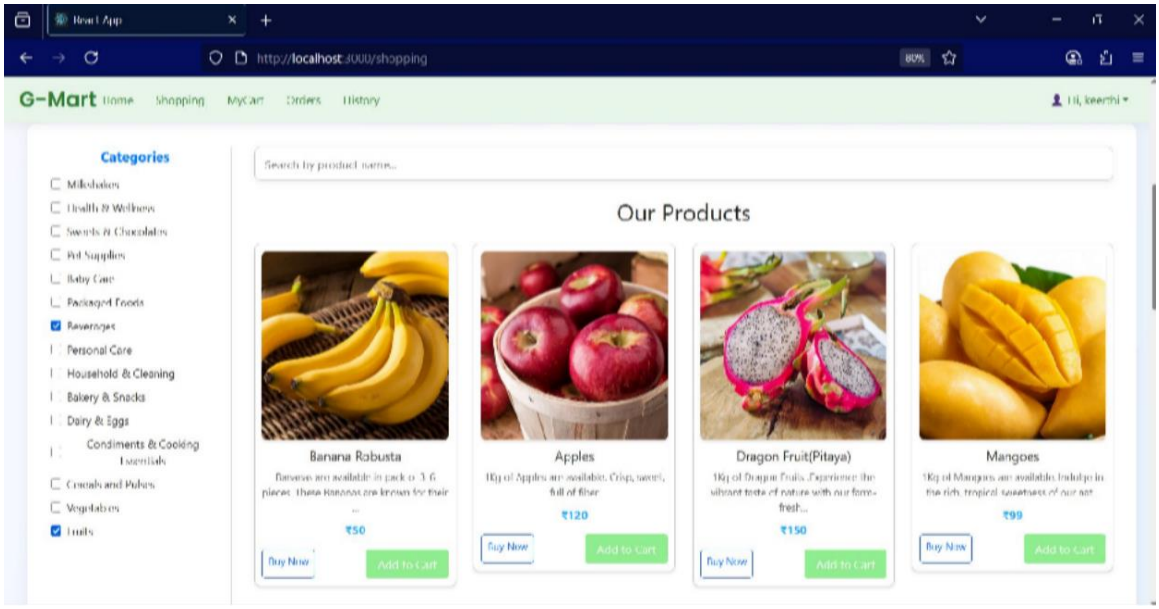
10. Demo and Source Code

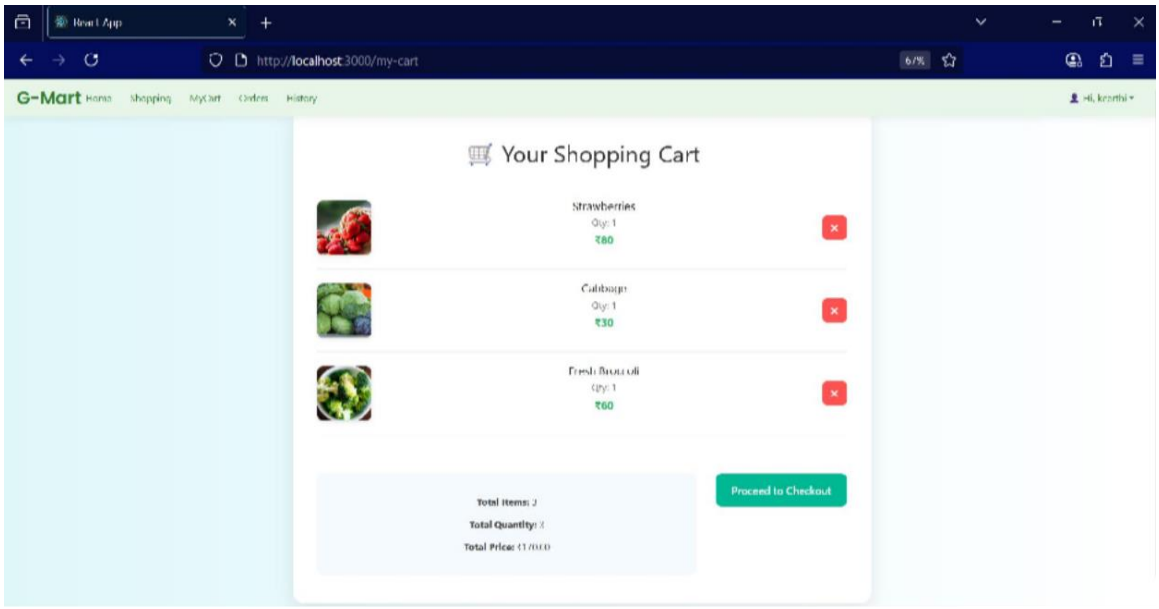
Demo Video:
https://drive.google.com/file/d/1qYn32LyyFOldHh5VO0O_k39AUDzuvVr2/view?usp=sharing

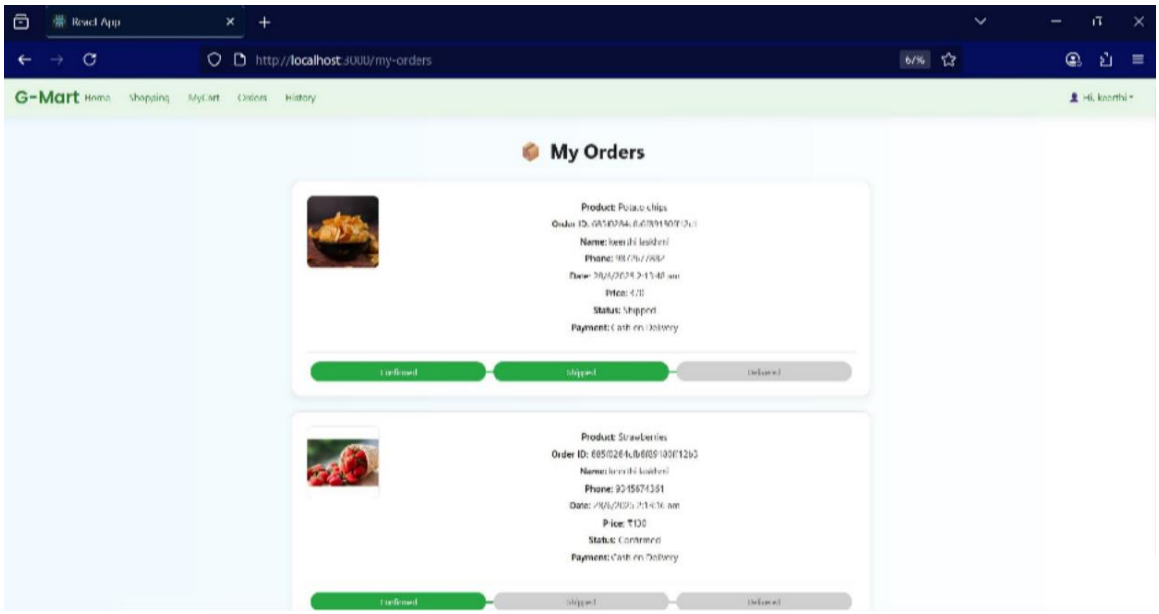
GitHub Repository: https://github.com/ganapathijahnavi/Grocery-web-app-using-mern-stack



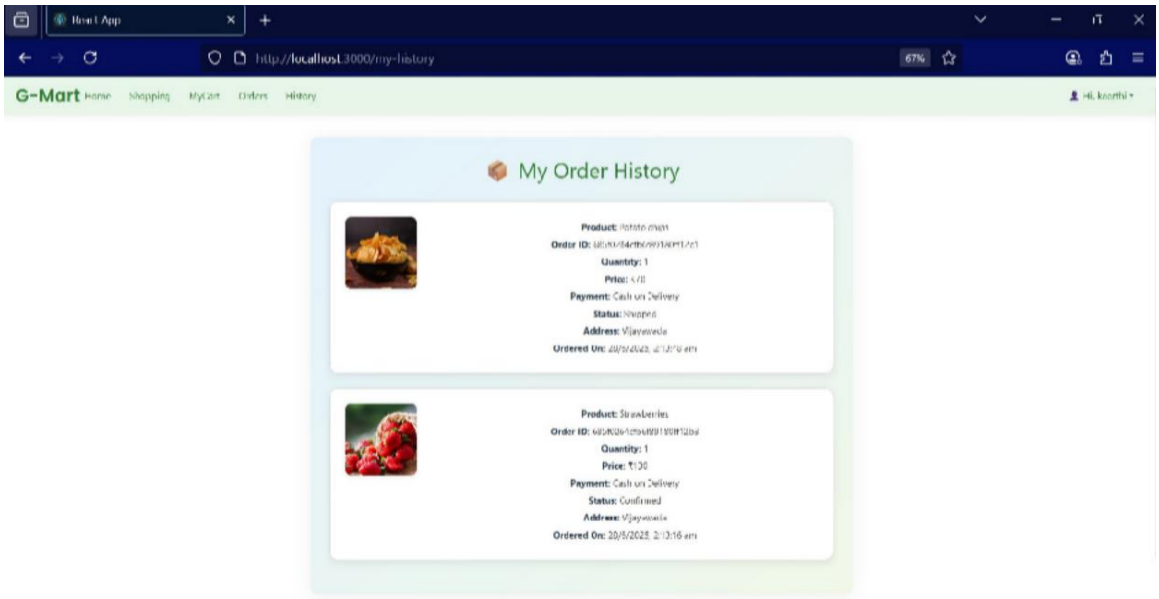



React App
http://localhost:3000/shopping
G-Mart
Home
Shopping
MyCart
Orders
History
Hi, keerthi
Categories
Search by product name...
Our Products
Banana Robusta
₹50
Buy Now
Add to Cart
Apples
₹120
Buy Now
Add to Cart
Dragon Fruit(Pitaya)
₹150
Buy Now
Add to Cart
Mangoes
₹99
Buy Now
Add to Cart

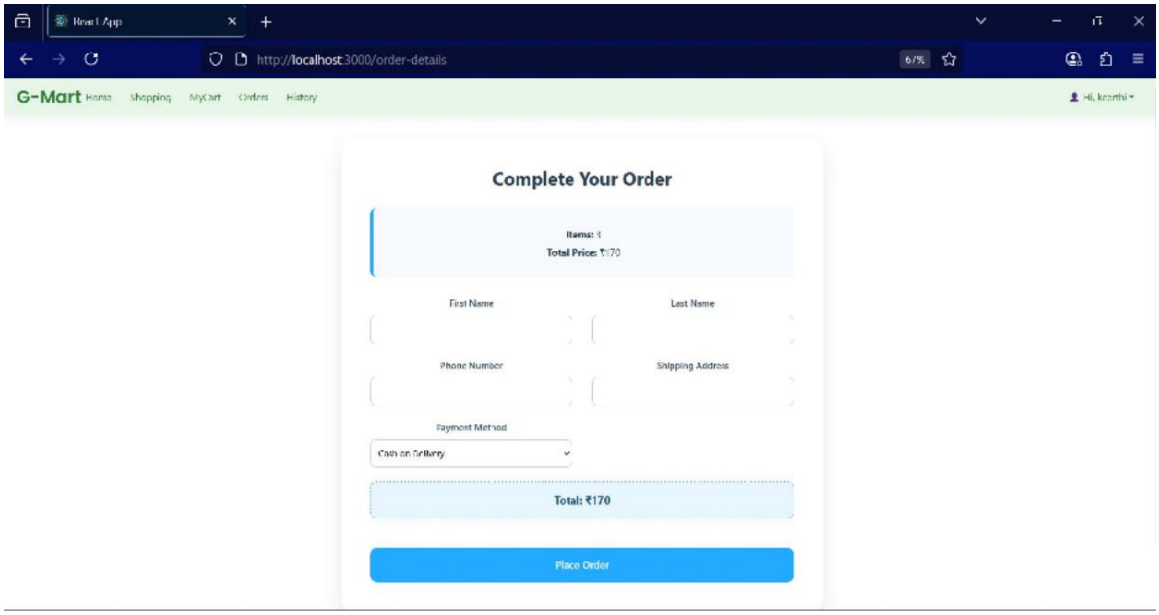

React App
http://localhost:3000/my-cart
G-Mart
Home
Shopping
MyCart
Orders
History
Hi, keerthi
Your Shopping Cart
Strawberries
Qty: 1
₹80
Cabbage
Qty: 1
₹30
Fresh Broccoli
Qty: 1
₹60
Proceed to Checkout

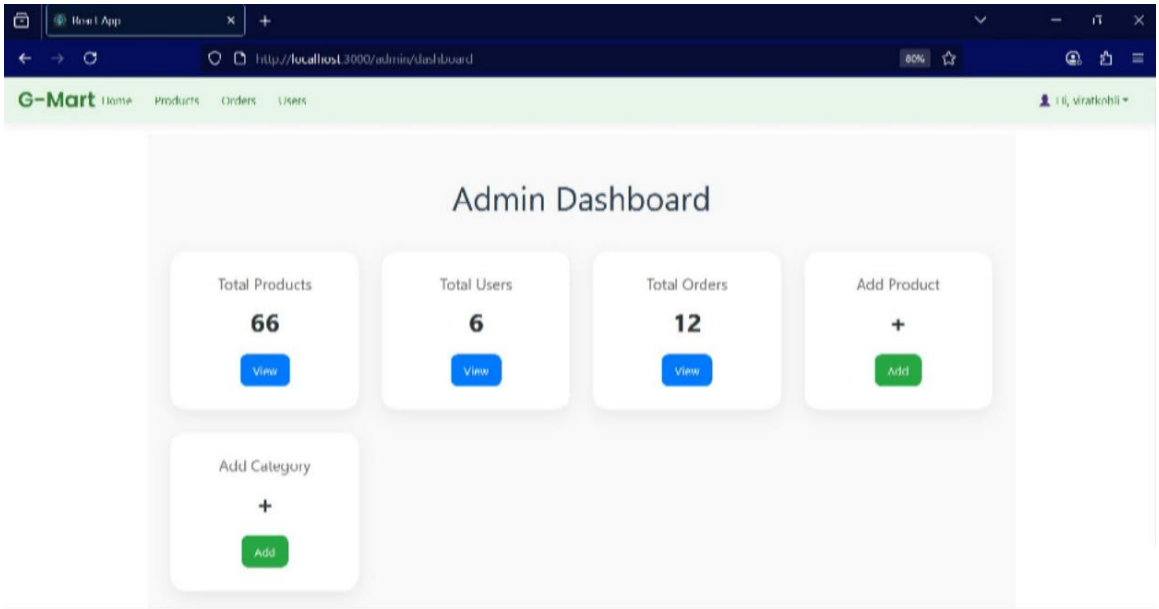


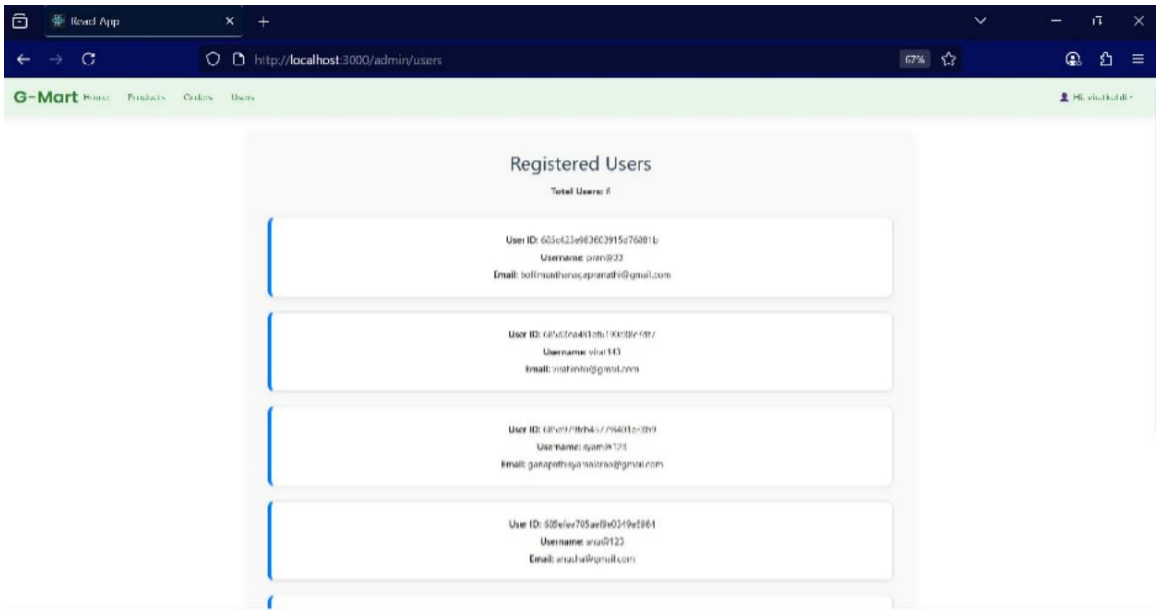
http://localhost:3000/my-orders
G-Mart
My Orders
Product: Potato chips
Name: keerthi lakhmi
Status: Shipped
Payment: Cash on Delivery
Product: Strawberries
Phone: 9045674361
Price: ₹100
Status: Confirmed
Payment: Cash on Delivery

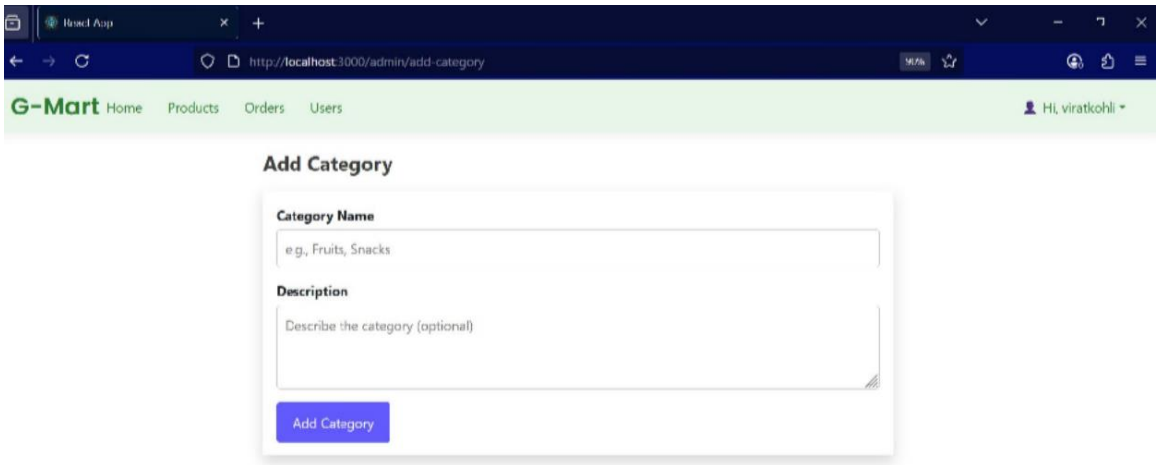


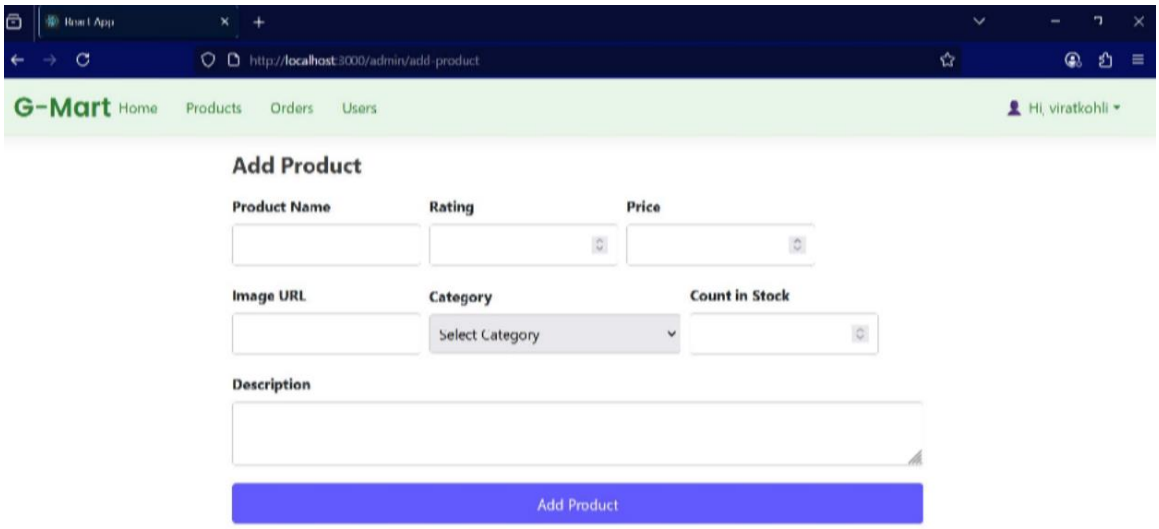
http://localhost:3000/my-history
G-Mart
My Order History
Product: Potato chips
Quantity: 1
Payment: Cash on Delivery
Status: Shipped
Address: Vijayawada
Product: Strawberries
Quantity: 1
Price: ₹100
Payment: Cash on Delivery
Status: Confirmed
Address: Vijayawada

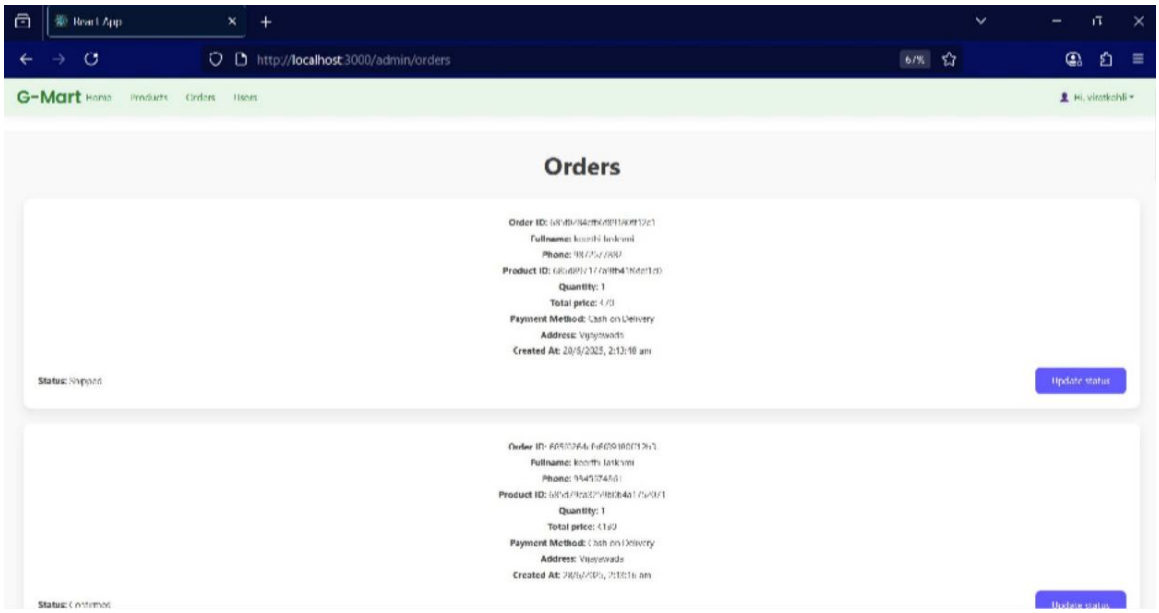

React App
http://localhost:3000/order-details
G-Mart Home Shopping MyCart Orders History
Hi, keerthi
Complete Your Order
Items: 1
Total Price: ₹170
First Name
Last Name
Phone Number
Shipping Address
Payment Method
Cash on Delivery
Total: ₹170
Place Order


React App
http://localhost:3000/admin/dashboard
G-Mart Home Products Orders Users
Hi, viratkohli
Admin Dashboard
Total Products
66
View
Total Users
6
View
Total Orders
12
View
Add Product
+
Add
Add Category
+
Add


React App
http://localhost:3000/admin/users
G-Mart
Registered Users


React App
http://localhost:3000/admin/add-category
G-Mart Home Products Orders Users
Hi, viratkohli
Add Category
Category Name
e.g., Fruits, Snacks
Description
Describe the category (optional)
Add Category





11. Future Enhancements

- - Integration with payment gateways like Razorpay/Stripe
- - Progressive Web App (PWA) support
- - Push notifications and real-time tracking
- - AI-based recommendations

12. Conclusion

ShopSmart delivers a complete grocery shopping experience through a clean and intuitive interface backed by a strong MERN stack architecture. It simplifies everyday grocery

purchases for users while equipping administrators with tools to manage the platform efficiently.