Full Stack Development with MERN

Project Documentation : ShopsMart

1. Introduction

Project Title : ShopsMart (Grocery Web App) using MERN Stack [LearnHub]

Team Members:
Shaik Mahaboob Subhani – Full Stack Developer
Veerisetty Chandu – Frontend Developer
Bollepalli Naveen Kumar – Backend
Developer
Revanth – Database Administrator

2. Project Overview

Purpose:

The **purpose of the ShopsMart project** is to provide a convenient, user-friendly online grocery shopping experience that saves time and effort for users. It aims to deliver high-quality groceries, including fresh produce and household essentials, directly to customers' doorsteps. The platform empowers both users and administrators with seamless features like order tracking, secure payments, and inventory management.

Features:
- User Registration & Authentication
- Product Catalog & Search
- Smart Cart & Checkout
- Personalized Recommendations
- Order Tracking
- Multiple Payment Options
- Admin Dashboard
- Customer Reviews & Ratings

3. Architecture

Frontend:
Built using React.js with Vite for fast development build , styled with Bootstrap and Material UI. Uses Axios for API calls.

Backend:
Node.js with Express.js for server-side logic and RESTAPI development.Uses JSON Web Tokens (JWT) for authentication and middleware for protected routes.

Database:
MongoDB is a No SQL database with Mongoose ODM . Collections include:
- Users Collection
- Courses Collection

4. Setup Instructions

Prerequisites:

- Node.js
- npm
- MongoDB
- Vite
- Express.js
- React.js

Installation Steps:

1. Clone the repository
2. Backend setup : npm install
3. Frontend setup : npm install
4. Database setup : Ensure MongoDB is running locally or via Atlas

5. Folder Structure

Client (Frontend):

```
frontend/
├──src/
│ ├──components/
│ ├──pages/
│ ├──App.jsx
│ └──main.jsx
```

Server(Backend):

```
backend/
├──config/
├──controllers/
├──middleware/
├──models/
├──routes/
├──index.js
└──.env
```

6. Running the Application

Frontend:

```
npm run dev
```

Backend:

```
npm start
```

Access URL:

Frontend:

http://localhost:5172Backend:

http://localhost:5000

7. API Documentation

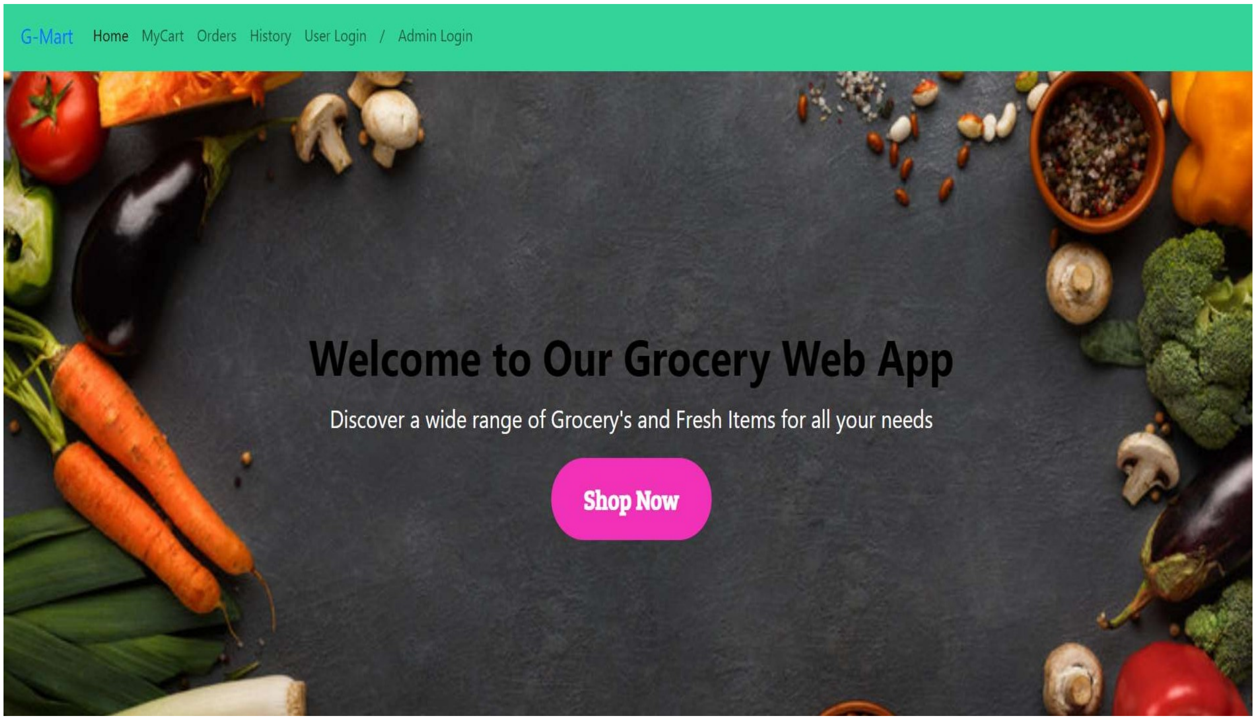
Example Endpoints:
- POST/api/users/register
- POST/api/users/login
- GET/api/courses
- POST/api/courses
- PUT/api/courses/:id
- DELETE/api/courses/:id
- POST/api/courses/enroll/:id
- GET/api/users/me

8. Authentication

Method Used:
JSON Web Tokens(JWT)
How it Works:
- Users register and login to get JWT tokens.
- Protected routes use authentication middleware.
- User roles are checked at the API level.

9. User Interface

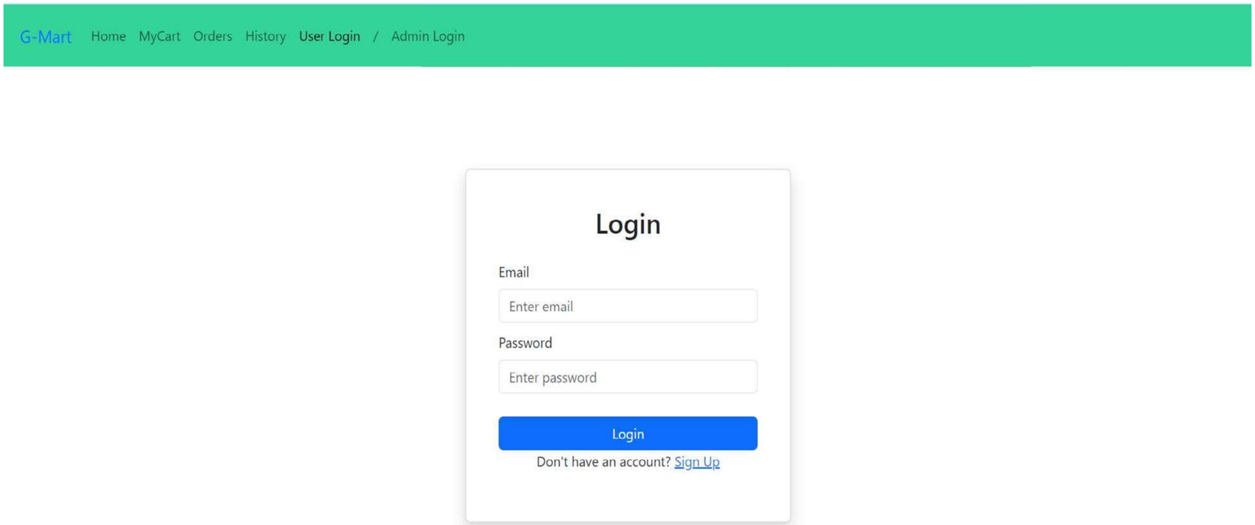
Screens Included:
- Landing Page



Welcome to Our Grocery Web App

Discover a wide range of Grocery's and Fresh Items for all your needs

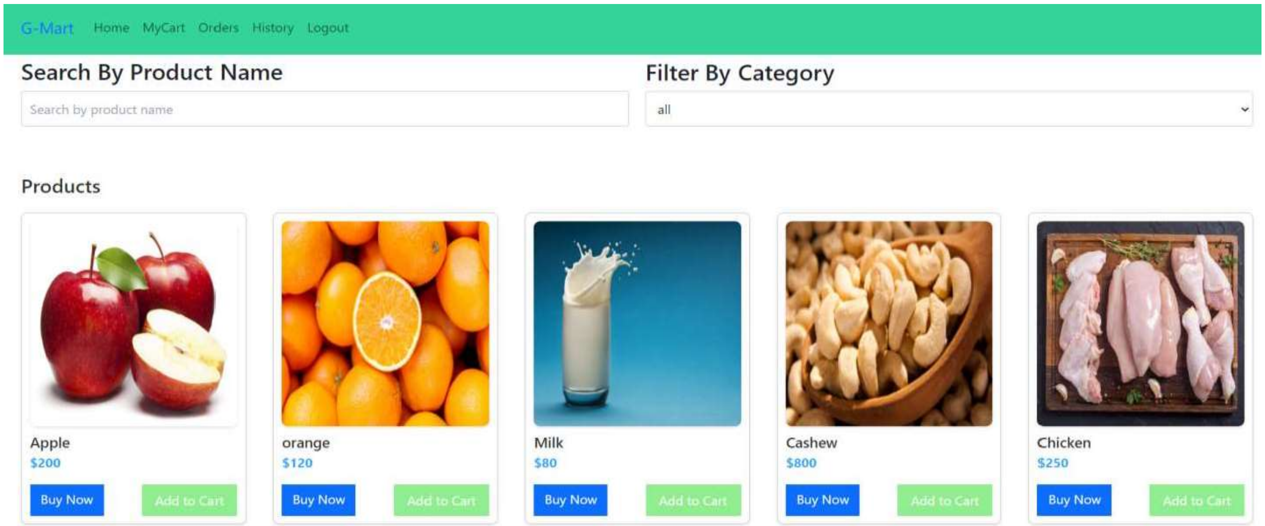
- Register Page



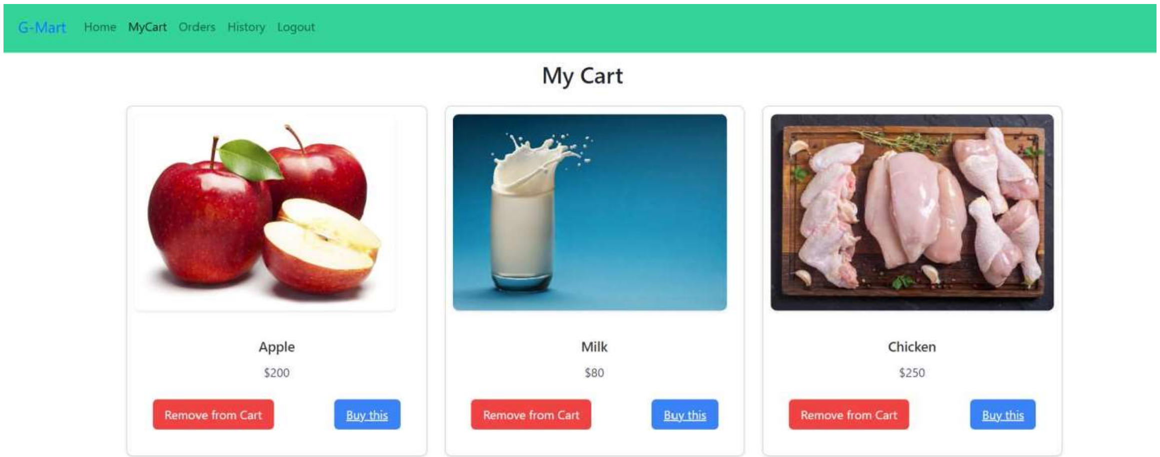
Don't have an account? Sign Up

-

Items page:



My cart :



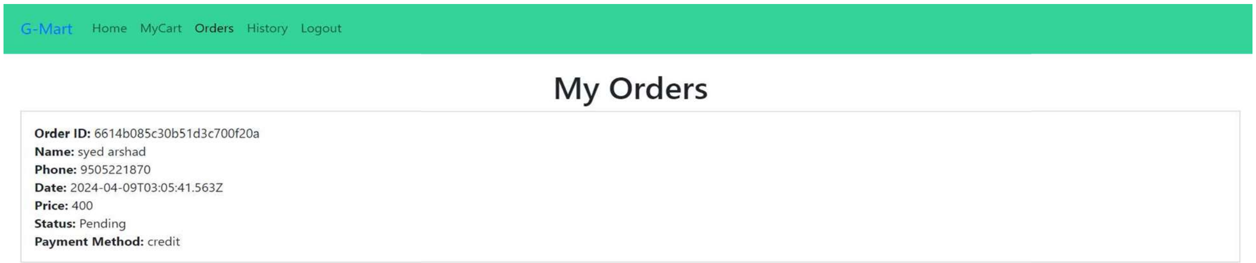
My Cart

Apple
$200

Milk
$80

Chicken
$250

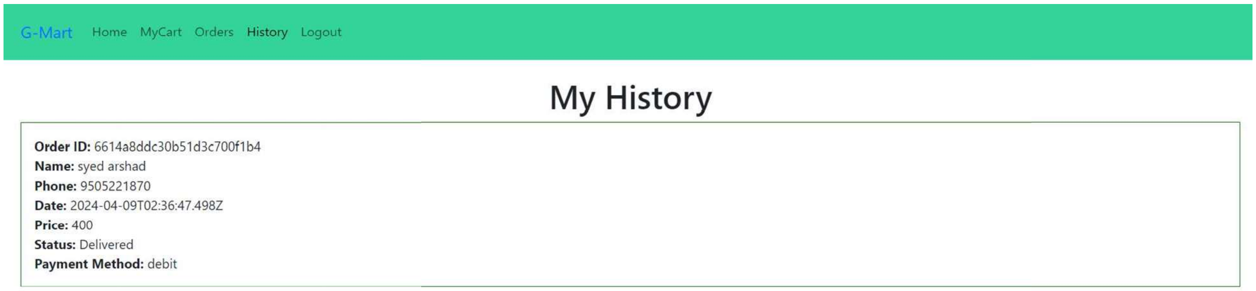
My Order Page :



My Orders

Order ID: 6614b085c30b51d3c700f20a
Name: syed arshad
Phone: 9505221870
Date: 2024-04-09T03:05:41.563Z
Price: 400
Status: Pending
Payment Method: credit

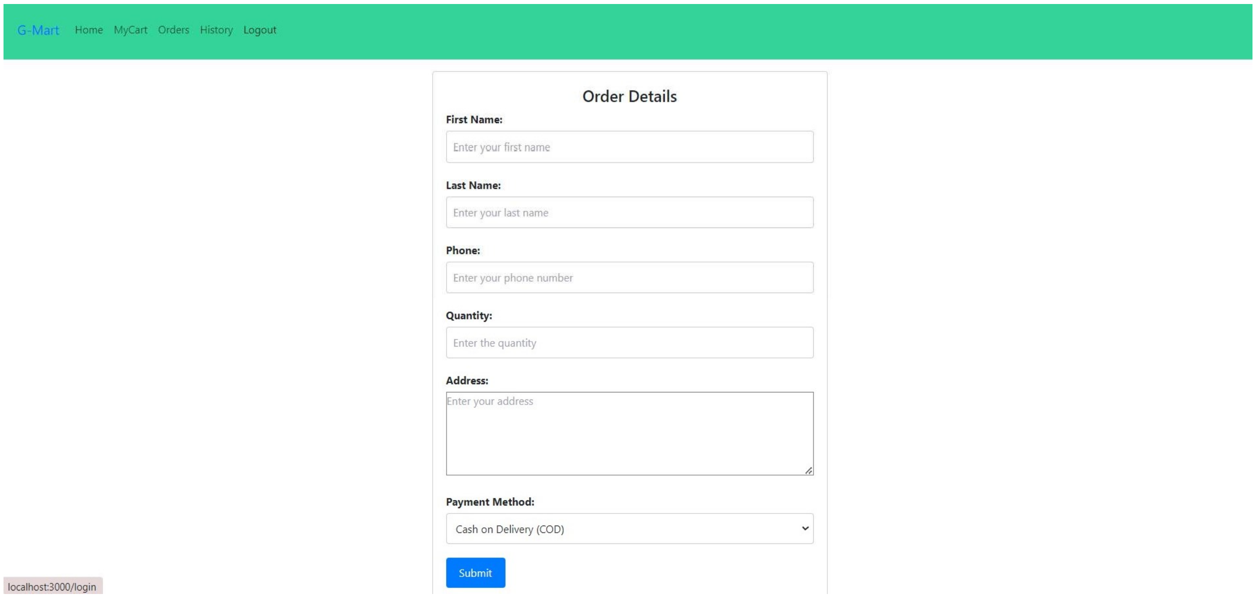
My History Page :



My History

Order ID: 6614a8ddc30b51d3c700f1b4
Name: syed arshad
Phone: 9505221870
Date: 2024-04-09T02:36:47.498Z
Price: 400
Status: Delivered
Payment Method: debit

Place Order Page :



Order Details

First Name:

Enter your first name

Last Name:

Enter your last name

Phone:

Enter your phone number

Quantity:

Enter the quantity

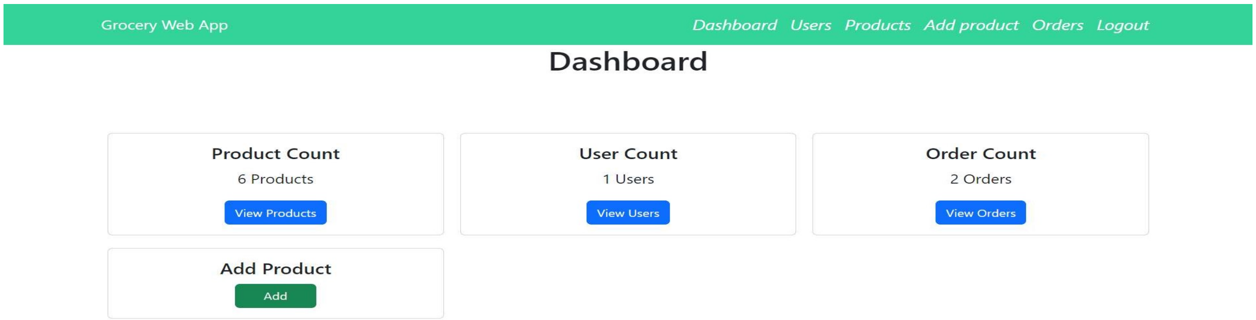
Address:

Enter your address

Payment Method:

Cash on Delivery (COD)

Admin Dashboard Page:



Dashboard

Product Count

6 Products

User Count

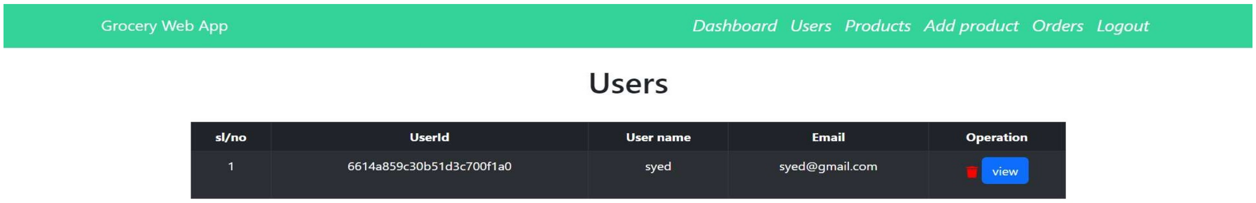
1 Users

Order Count

2 Orders

Add Product

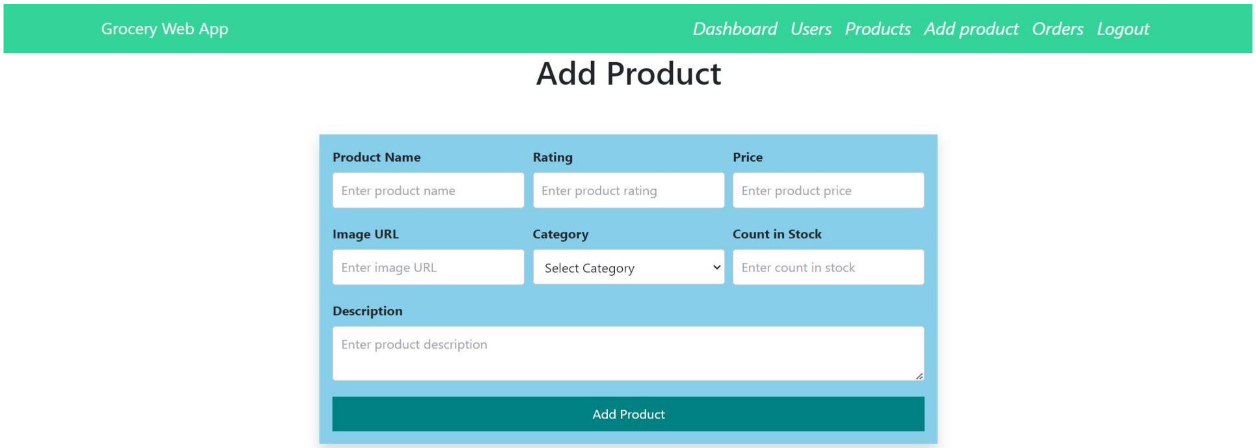
User Page :



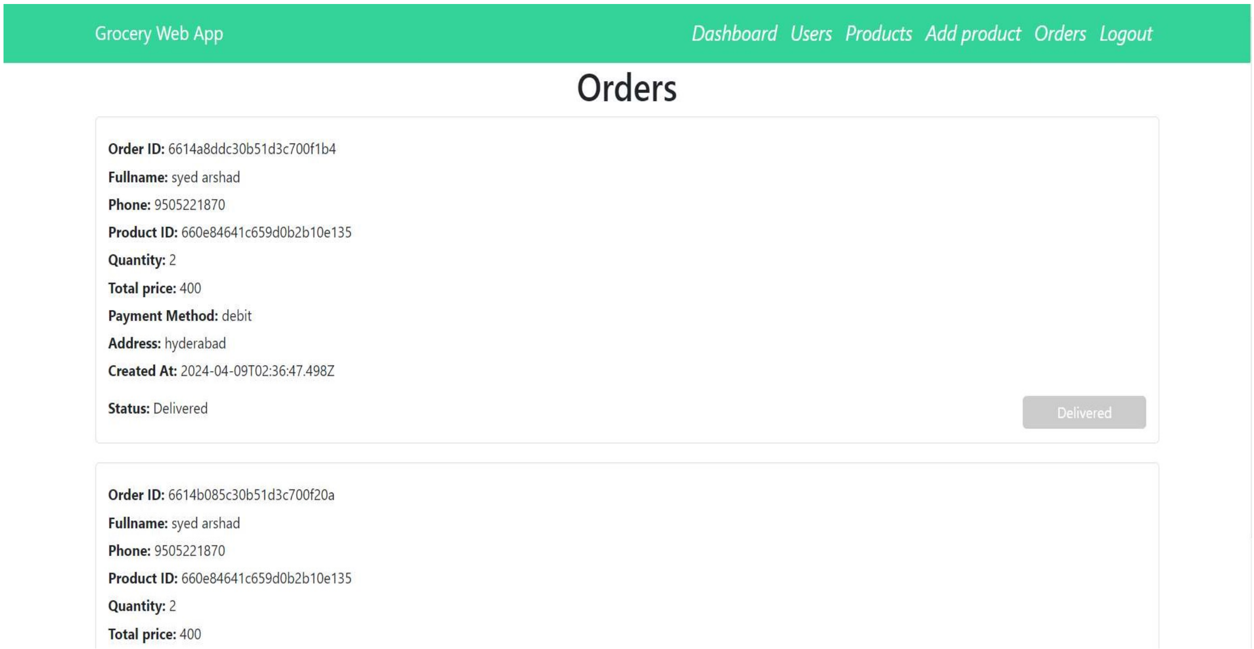
Users

sl/no	UserId	User name	Email	Operation
1	6614a859c30b51d3c700f1a0	syed	syed@gmail.com	view

Add Product Page :



Admin Order Page :



Order ID: 6614a8ddc30b51d3c700f1b4

Fullname: syed arshad

Phone: 9505221870

Product ID: 660e84641c659d0b2b10e135

Quantity: 2

Total price: 400

Payment Method: debit

Address: hyderabad

Created At: 2024-04-09T02:36:47.498Z

Status: Delivered

Order ID: 6614b085c30b51d3c700f20a

Fullname: syed arshad

Phone: 9505221870

Product ID: 660e84641c659d0b2b10e135

Quantity: 2

Total price: 400

10. Testing

Testing Tools:

- Postman for API testing
- Manual frontend testing
- Basic unit tests on backend routes(optional)

11. Demo

Demo Video Link :
https://drive.google.com/file/d/13Clyjrrh8Wwl4uWFo_wR6rBaEs5fBJYl/view?usp=drivesdk

12. Known Issues

- Limited payment gate way features
- Minimal frontend form validation
- Error handling for API responses can be improved

13. Future Enhancements

- Add role-based dashboards
- Implement full – featured payment gateway integration
- Improve UI/UX styling
- Add live chat and notifications
- Unit testing and test automation