🛒 ShopSmart – Digital Grocery Store

◼ Final Project Report

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1. INTRODUCTION

1.1 Project Overview

ShopSmart is a full-stack digital grocery shopping platform that allows users to buy groceries online and enables admins to manage products and orders. It provides features like cart, wishlist, order tracking, and admin dashboard, making it a complete e-commerce solution tailored for grocery businesses.

1.2 Purpose

The purpose of the ShopSmart project is to simplify grocery shopping for customers and streamline inventory and order management for store owners through a responsive web application.

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2. IDEATION PHASE

2.1 Problem Statement

Most local grocery stores lack an online presence and a proper backend system to manage inventory and customer orders. This results in inconvenience for customers and inefficiencies for store owners.

2.2 Empathy Map Canvas

Users: Daily grocery shoppers
Needs: Time-saving, easy access to groceries
Says: "I want to quickly find and buy groceries."
Thinks: "Is the item in stock?"
Feels: Frustrated when items are unavailable or checkout is slow
Does: Shops regularly but struggles with availability and travel

2.3 Brainstorming

- Online store with simple UI
- Secure user login
- Cart and wishlist
- Admin panel for product/order control
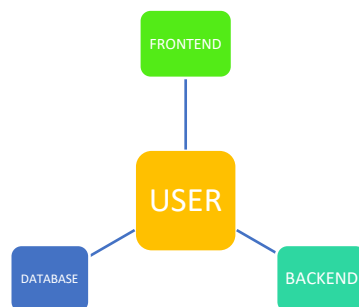- Real-time updates

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3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

1. Visit website
2. Register/Login
3. Browse items
4. Add to cart or wishlist
5. Place order
6. View order status
7. Admin processes the order
8. Order delivered

3.2 Solution Requirement

- Secure user authentication
- Product catalog
- Shopping cart
- Order placement and history
- Admin panel with CRUD functionalities

3.3 Data Flow Diagram

Shows flow between User → Frontend → Backend → Database

3.4 Technology Stack

- **Frontend:** HTML, CSS, JavaScript, Bootstrap
- **Backend:** Node.js, Express.js
- **Database:** MongoDB Atlas
- **Tools Used:** Postman, Git, GitHub, Render (for deployment)
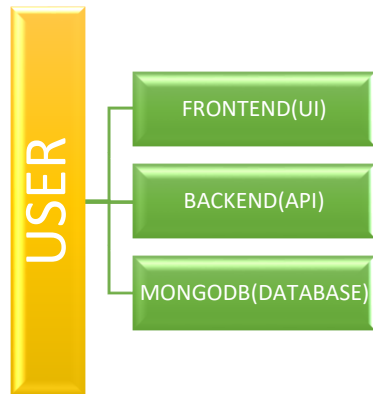
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4. PROJECT DESIGN

4.1 Problem Solution Fit

The platform addresses user needs for easy shopping and store owner needs for centralized control of inventory and orders.

4.2 Proposed Solution

A responsive web application with user and admin modules. Features include product search, cart, wishlist, order tracking, admin product management, and order updates.

4.3 Solution Architecture

Users → Frontend (UI) → Backend (API) → MongoDB (Database)

USER

FRONTEND(UI)

BACKEND(API)

MONGODB(DATABASE)

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

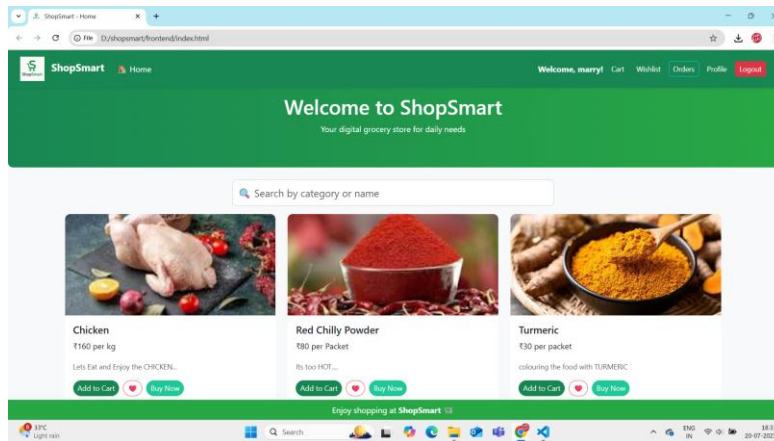| Week	Task
Week 1	Requirement gathering, planning
Week 2	Frontend design
Week 3	Backend APIs
Week 4	User authentication
Week 5	Admin panel
Week 6	Testing and bug fixes
Week 7	Final integration
Week 8	Deployment and documentation

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

- Tested all routes using Postman
- Load testing performed for product listing and order placement
- Verified quick response times on both frontend and backend
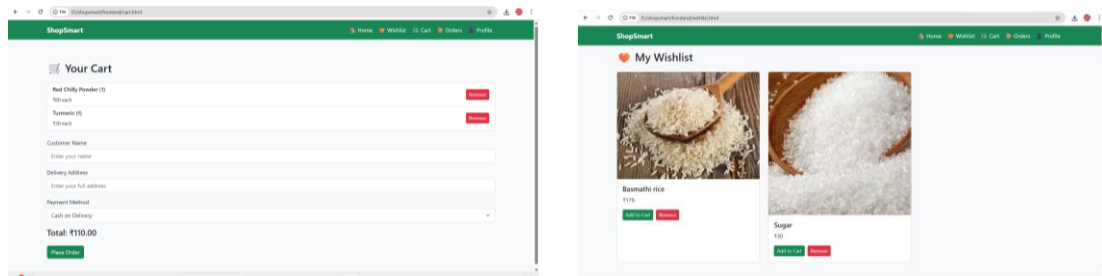- UI tested across mobile, tablet, and desktop screens
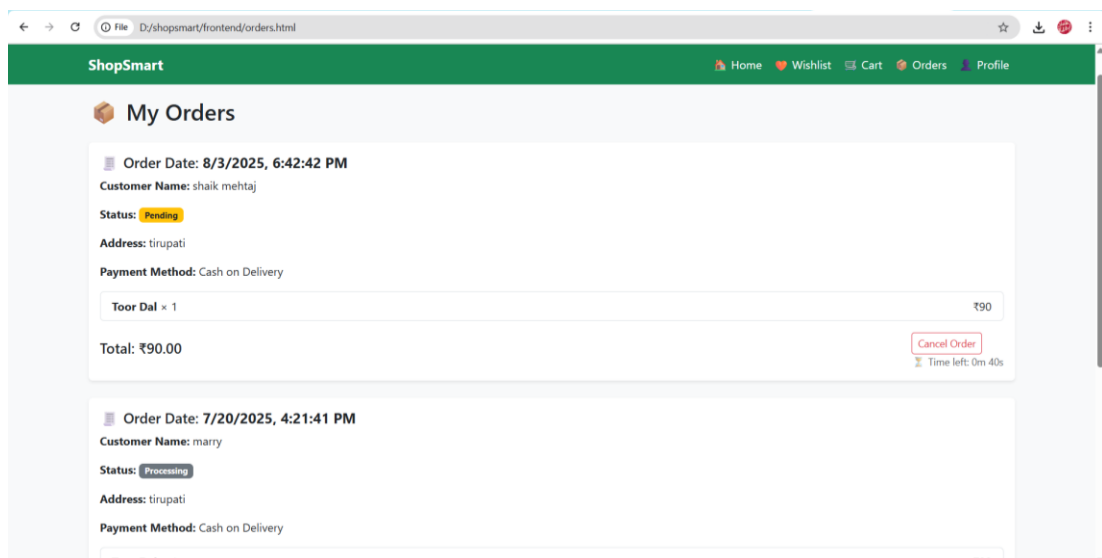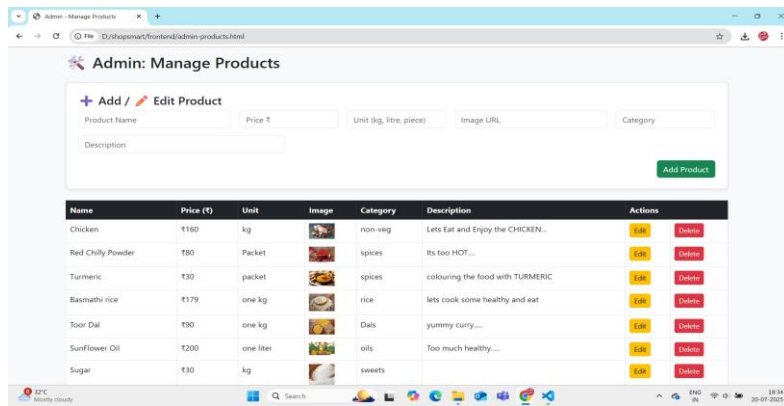
7. RESULTS
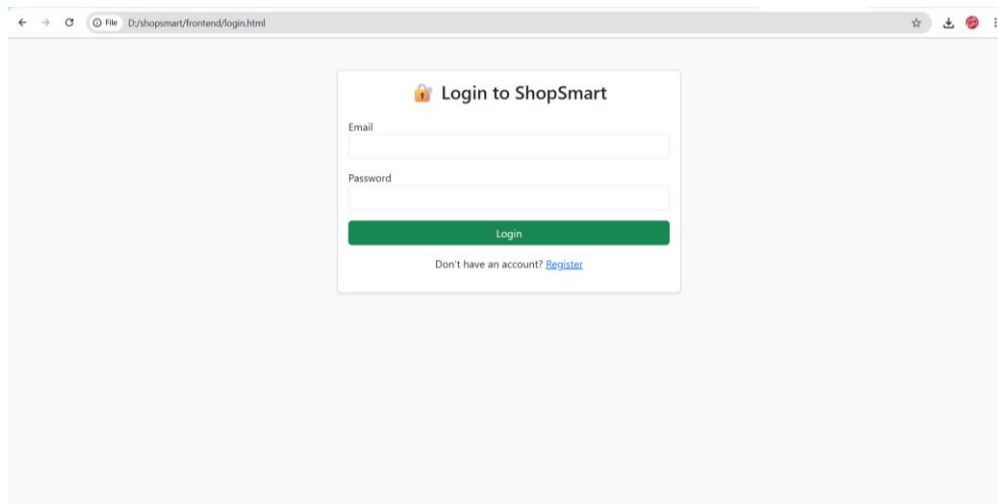
7.1 Output Screenshots

- Home page

- Cart and wishlist

- Order history

- Admin dashboard (add/edit/delete product)

- Login and registration pages

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8. ADVANTAGES & DISADVANTAGES

✅ Advantages:

- User-friendly UI/UX
- Easy to manage from the admin side
- Real-time order tracking
- Scalable and customizable

✖ Disadvantages:

- No integrated payment gateway
- No delivery tracking system
- No mobile app version

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9. CONCLUSION

The ShopSmart platform successfully meets the needs of a basic online grocery store. It simplifies the buying process for users and gives complete product/order control to admins. It lays the foundation for future expansion like mobile apps and AI-based features.

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10. FUTURE SCOPE

- Add Razorpay or Stripe payment integration
- Include real-time delivery tracking with Google Maps
- Launch Android/iOS mobile apps
- Add feedback, rating, and review system
- AI-based product recommendations

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11. APPENDIX

☙ Source Code

https://github.com/ShaikMehtaj/shopsmart-your-digital-grocery-store-experience/tree/main

🎥 GitHub & Project Demo Link

Video & Code explanation demo links:

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

https://drive.google.com/file/d/1N9yelvnp3G1s24SmvM_AQGJXIIwvMLuv/view?usp=drive_link