INSTITUTE FOR ADVANCED COMPUTING AND SOFTWARE DEVELOPMENT, AKURDI, PUNE

Organic Eats Express

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Submitted By:
Group No: 67

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Centre Coordinator

ABSTRACT

Organic Eats Express is a platform designed to connect farmers with consumers with help of our online platform, aiming to empower farmers to produce organic products and provide high-quality, organic, fresh products to

end-users. **Organic Eats Express** ensures that farmers receive fair prices for their products, thereby improving their livelihoods and encouraging sustainable agricultural practices. The platform emphasizes transparency and traceability, by ensuring that Standard Operating Procedures (SOPs) were followed by farmers. This is the reason due to which trust builds and accountability to the customer remains intact.

Organic Eats Express also focuses on promoting sustainable and organic farming, benefiting the environment and enhancing consumer health. The platform fosters a community of environmentally conscious consumers, making it convenient for them to access farm-fresh produce through an easy-to-use interface and home delivery services. Through educational outreach, Organic Eats Express informs both farmers and consumers about the advantages of sustainable practices, organic products, contributing to a healthier and more sustainable food system.

ACKNOWLEDGEMENT

I take this occasion to thank God, almighty for blessing us with his grace and taking our endeavour to a successful conclusion. I extend my sincere and heartfelt thanks to our esteemed guide, Mrs. Geeta Durante for providing me with the right guidance and advice at the crucial junctures and for showing me the right way. I extend my sincere thanks to our respected Centre Co-Ordinator Mr. Rohit Puranik, for allowing us to use the facilities available.

I would like to thank the other faculty members also, at this occasion. Last but not the least, I would like to thank my friends and family for the support and encouragement they have given me during the course of our work.

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1. INTRODUCTION

Organic Eats Express is a transformative platform designed to connect farmers directly with consumers, bridging the gap between agricultural producers and end-users. The platform's primary objective is to empower farmers by providing them with a fair pricing mechanism for their produce, thereby enhancing their livelihoods and promoting sustainable farming practices. By eliminating intermediaries in the supply chain, Organic Eats Express not only supports local farmers but also ensures that consumers receive fresh, high-quality, and nutritious produce.

The platform emphasizes transparency and traceability, offering consumers detailed insights into the origins of their food. This transparency builds trust and fosters a sense of accountability within the supply chain. By promoting organic and environmentally friendly agricultural practices, Organic Eats Express aims to create a sustainable food system that benefits both the environment and consumer health.

Additionally, Organic Eats Express seeks to build a community of health-conscious and environmentally aware consumers. Through its easy-to-use interface and home delivery services, the platform provides a convenient shopping experience for consumers seeking farm-fresh produce. Educational outreach initiatives further enhance the platform's mission by informing farmers and consumers about the benefits of organic produce and sustainable agriculture.

This project documentation outlines the features, objectives, and operational framework of Organic Eats Express, detailing how the platform aims to revolutionize the agricultural industry by connecting farmers directly with consumers in a sustainable and transparent manner.

2. SRS

Software Requirements Specification (SRS) for Online Organic Vegetable, Fruits and Dairy products Platform namely Organic Eats Express.

1. Introduction

1.1 Purpose

The purpose of this document is to outline the software requirements for an Online Organic Vegetable and Fruits Platform. This platform aims to provide a user-friendly interface for customers to browse, purchase, and receive organic vegetables and fruits and Dairy products.

1.2 Scope

The platform will include features for customers and Admin. Customers can view products, place orders, make payments. Admin can manage their inventory, update product listings, and process orders. The system will also include administrative capabilities for managing users, orders, and product catalogs.

1.3 Definitions, Acronyms, and Abbreviations

SRS : Software Requirements Specification

UI : User Interface

API : Application Programming Interface

DBMS: Database Management System

SSL : Secure Sockets Layer

TLS : Transport Layer Security

2. Overall Description

2.1 Product Perspective

The Online Organic Vegetable, Fruits and Dairy products Platform will operate as a webapp system interacting with external systems for payment processing, delivery, and possibly integration with inventory updates.

2.2 Product Functions

Customer Features:

Browse organic vegetables, fruits and Dairy products by category, price, and availability.

View product details, including descriptions, images, and customer reviews.

Add items to cart, update quantities, and proceed to checkout.

Make secure payments using integrated payment gateways.

Track order status and view order history.

Provide feedback and ratings for products and services.

Administrator Features:

Manage user accounts, including customers.

Monitor and manage product categories.

Manage product listings, including adding, editing, and removing products.

View and manage orders, including order status updates.

Receive and process orders, update order status, and notify customers of order updates.

View sales reports and analytics related to their products.

Generate reports on sales, customer feedback, and vendor performance.

2.3 User Classes and Characteristics

Customers:

Individuals interested in purchasing organic vegetables, fruits and Dairy Products online.

Administrators: Platform administrators responsible for managing users, orders, and overall platform operations.

2.4 Operating Environment

The platform will be web-based and accessible via standard web browsers (Chrome, Firefox, Safari) on desktop and mobile devices. It will require a reliable internet connection for real-time updates and transactions.

2.5 Design and Implementation Constraints

Use of responsive web design to ensure usability across various devices.

User Specific Login and cart management.

Crud operations through admin.

2.6 Assumptions and Dependencies

Assumption: Users have basic internet browsing skills and access to a compatible device.

Dependency: UI request depends on backend API for providing appropriate data.

3. System Features

3.1 Feature 1: User Registration and Authentication

Description: Allow users to register as customers, with authentication and authorization mechanisms.

Priority: High

Dependencies: Database for storing user credentials and permissions.

3.2 Feature 2: Product Management

Description: Enable Admin to manage their product listings, including adding new products, updating details, and managing inventory.

Priority: High

Dependencies: Product registration and management, product database.

3.3 Feature 3: Shopping Cart and Checkout

Description: Provide customers with a shopping cart to add products, update quantities, and proceed to checkout for payment.

Priority: High

Dependencies: Product listings, user authentication, payment gateway integration.

3.4 Feature 4: Administrator Dashboard

Description: Provide administrators with tools to manage users, monitor transactions, resolve issues, and generate reports.

Priority: Medium

Dependencies: User management, order tracking, reporting functionalities.

4. Non-functional Requirements

4.1 Usability

The UI should be intuitive and easy to navigate for users of all technical backgrounds.

Response times for page loads and transactions should be optimized for a smooth user experience.

4.2 Performance

The platform should support concurrent user sessions without significant degradation in performance.

Response times for critical functions (e.g. adding items to cart, processing payments) should be minimal.

4.3 Reliability

The platform should be available 24/7 with minimal downtime for maintenance and updates.

Backup and recovery mechanisms should be in place to prevent data loss in case of system failures.

4.4 Scalability

Design the system to handle increasing numbers of users, products, and transactions as the platform grows.

Ensure that infrastructure and database capacity can be easily expanded to meet future demands.

5. Other Requirements

5.1 Legal and Compliance

Ensure compliance with local and international regulations regarding online sales, data protection, and consumer rights.

Provide clear terms of service, privacy policy, and refund policies accessible to users.

5.2 Documentation

Maintain comprehensive documentation covering system architecture, user guides, and developer documentation for future maintenance and updates.

5.3 Testing

Conduct thorough testing including unit testing, integration testing, and user acceptance testing (UAT) to ensure the platform meets functional and non-functional requirements.

Software Requirements

For development, software's used are:
Operating System: Windows 11
Platform: STS , VS Code
Technology: JDK 11, SpringBoot, React JS
Language: java, javascript
Backend: J2EE, MySQL
Editor: VS Code

For deployment, software's used are:
Operating system: Windows 11
Framework: React, SpringBoot
Backend: J2EE, MySQL

Hardware Requirements

- **For Development, Hardware's used are:**

1. Processor: intel Core i5
2. SSD: 512 GB
3. RAM: 8 GB(minimum)

- **For Deployment, Hardware's used are:**

Minimum

1. Processor: intel Core i5
2. Hard disk: 512 GB
3. RAM: 8GB

4. Database Design

Following table structures depicts the database design:

Table 1 : Users

```
mysql> desc users;
+---------------+--------------+------+-----+---------+----------------+
| Field         | Type         | Null | Key | Default | Extra          |
+---------------+--------------+------+-----+---------+----------------+
| user_id       | bigint       | NO   | PRI | NULL    | auto_increment |
| city          | varchar(255) | YES  |     | NULL    |                |
| country       | varchar(255) | YES  |     | NULL    |                |
| email         | varchar(255) | YES  |     | NULL    |                |
| first_name    | varchar(255) | YES  |     | NULL    |                |
| last_name     | varchar(255) | YES  |     | NULL    |                |
| mobile_number | varchar(255) | YES  |     | NULL    |                |
| password      | varchar(255) | YES  |     | NULL    |                |
| role          | varchar(255) | YES  |     | NULL    |                |
| state         | varchar(255) | YES  |     | NULL    |                |
+---------------+--------------+------+-----+---------+----------------+
10 rows in set (0.00 sec)
```

Table 2 : Roles

```
mysql> desc roles;
+-----------+--------------+------+-----+---------+----------------+
| Field     | Type         | Null | Key | Default | Extra          |
+-----------+--------------+------+-----+---------+----------------+
| role_id   | bigint       | NO   | PRI | NULL    | auto_increment |
| role_name | varchar(255) | YES  |     | NULL    |                |
+-----------+--------------+------+-----+---------+----------------+
2 rows in set (0.01 sec)
```

Table 3 : Carts

```
mysql> desc carts;
+-------------+--------+------+-----+---------+----------------+
| Field       | Type   | Null | Key | Default | Extra          |
+-------------+--------+------+-----+---------+----------------+
| cart_id     | bigint | NO   | PRI | NULL    | auto_increment |
| total_price | double | YES  |     | NULL    |                |
| user_id     | bigint | YES  | MUL | NULL    |                |
+-------------+--------+------+-----+---------+----------------+
3 rows in set (0.00 sec)
```

Table 4 : Products

```
mysql> desc  products;
+--------------+--------------+------+-----+---------+-------+
| Field        | Type         | Null | Key | Default | Extra |
+--------------+--------------+------+-----+---------+-------+
| product_id   | bigint       | NO   | PRI | NULL    |       |
| description  | varchar(255) | YES  |     | NULL    |       |
| img_url      | varchar(255) | YES  |     | NULL    |       |
| price        | double       | NO   |     | NULL    |       |
| product_name | varchar(255) | YES  |     | NULL    |       |
| quantity     | int          | YES  |     | NULL    |       |
| vendor_name  | varchar(255) | YES  |     | NULL    |       |
| added_by     | bigint       | YES  | MUL | NULL    |       |
| category_id  | bigint       | YES  | MUL | NULL    |       |
+--------------+--------------+------+-----+---------+-------+
9 rows in set (0.00 sec)
```

Table 5 : Payments

```
mysql> desc payments;
+----------------+-------------+------+-----+---------+----------------+
| Field          | Type        | Null | Key | Default | Extra          |
+----------------+-------------+------+-----+---------+----------------+
| payment_id     | bigint      | NO   | PRI | NULL    | auto_increment |
| payment_method | varchar(255) | YES  |     | NULL    |                |
+----------------+-------------+------+-----+---------+----------------+
```

Table 6: Cart_Items

```
mysql> desc cart_items;
+---------------+--------+------+-----+---------+----------------+
| Field         | Type   | Null | Key | Default | Extra          |
+---------------+--------+------+-----+---------+----------------+
| cart_item_id  | bigint | NO   | PRI | NULL    | auto_increment |
| product_price | double | NO   |     | NULL    |                |
| quantity      | int    | YES  |     | NULL    |                |
| cart_id       | bigint | YES  | MUL | NULL    |                |
| product_id    | bigint | YES  | MUL | NULL    |                |
+---------------+--------+------+-----+---------+----------------+
5 rows in set (0.00 sec)
```

Table 7: Orders

```
mysql> desc orders;
+--------------+--------------+------+-----+---------+----------------+
| Field        | Type         | Null | Key | Default | Extra          |
+--------------+--------------+------+-----+---------+----------------+
| order_id     | bigint       | NO   | PRI | NULL    | auto_increment |
| email        | varchar(255) | YES  |     | NULL    |                |
| order_date   | date         | YES  |     | NULL    |                |
| total_amount | double       | YES  |     | NULL    |                |
| payment_id   | bigint       | YES  | MUL | NULL    |                |
+--------------+--------------+------+-----+---------+----------------+
5 rows in set (0.00 sec)
```

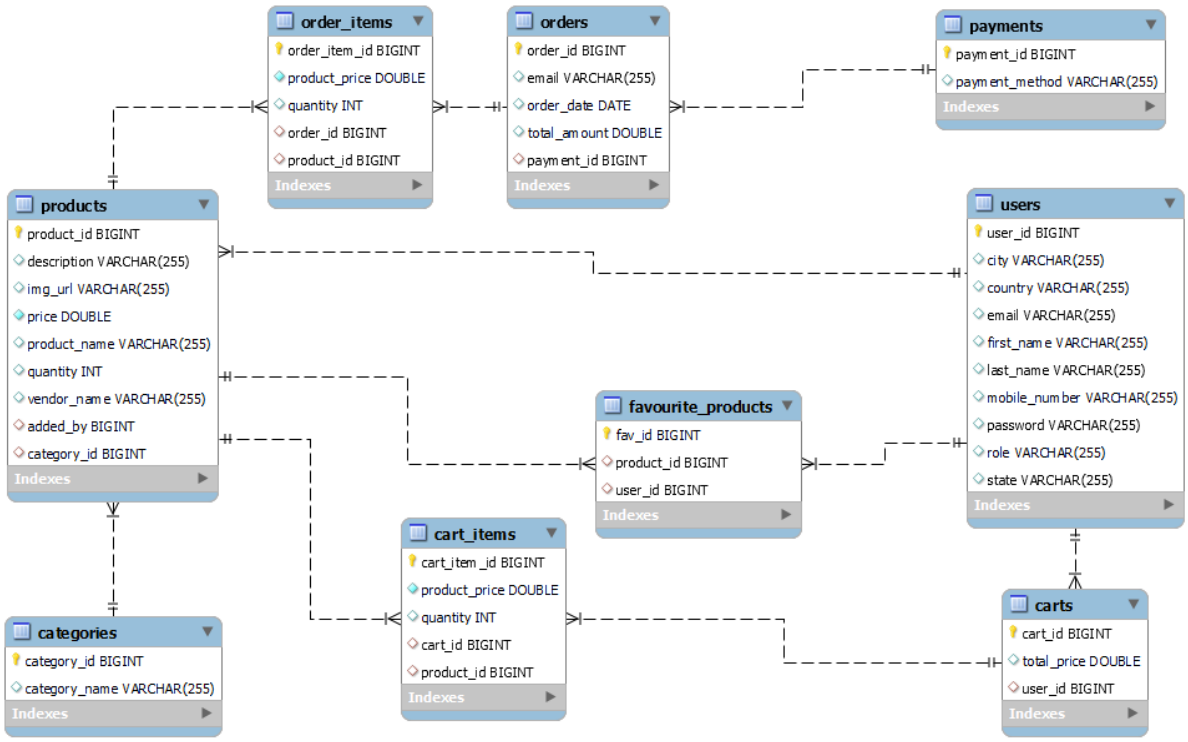
Table 8: Order_Items

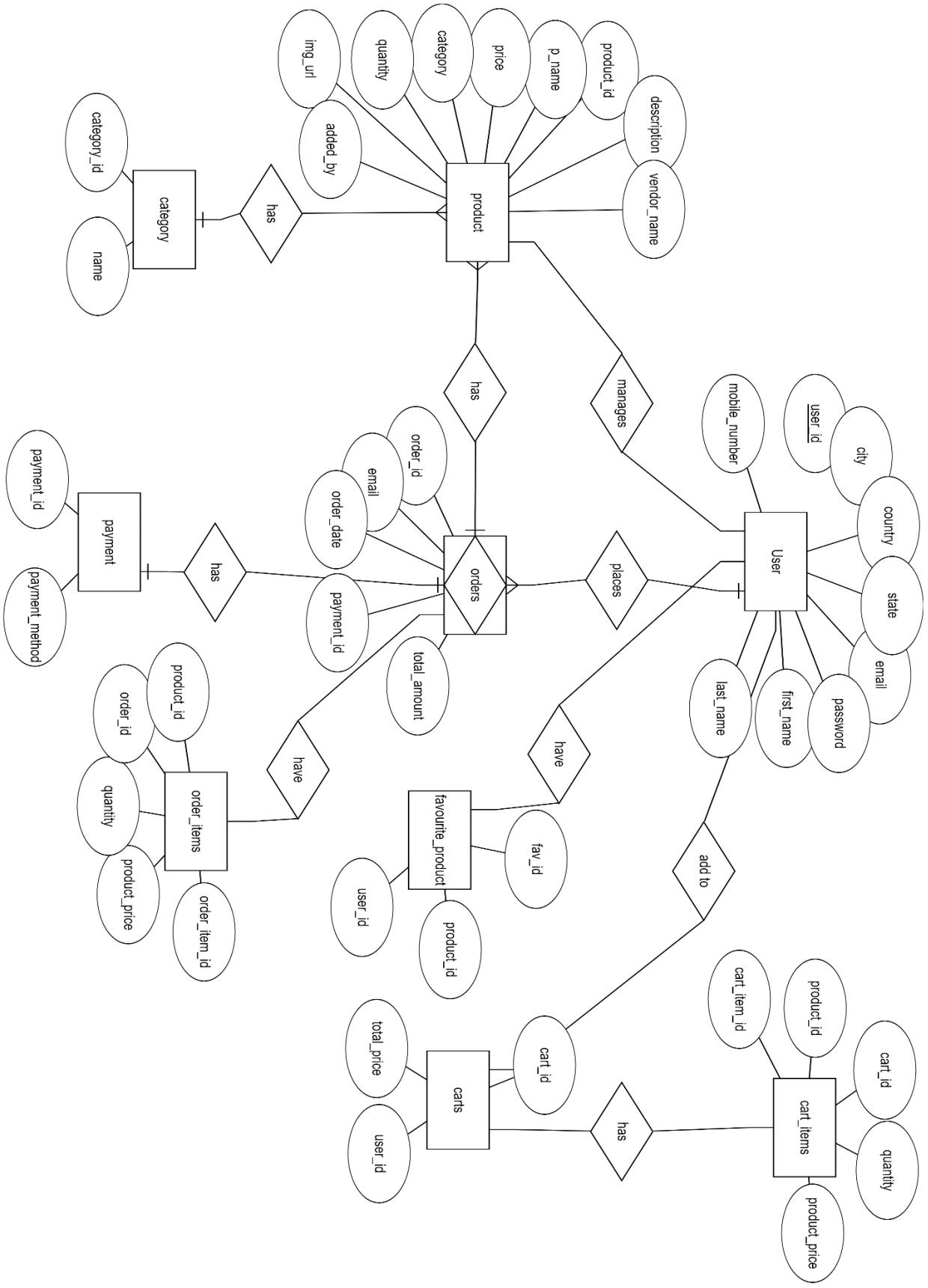
```
mysql> desc order_items;
+---------------+--------+------+-----+---------+----------------+
| Field         | Type   | Null | Key | Default | Extra          |
+---------------+--------+------+-----+---------+----------------+
| order_item_id | bigint | NO   | PRI | NULL    | auto_increment |
| product_price | double | NO   |     | NULL    |                |
| quantity      | int    | YES  |     | NULL    |                |
| order_id      | bigint | YES  | MUL | NULL    |                |
| product_id    | bigint | YES  | MUL | NULL    |                |
+---------------+--------+------+-----+---------+----------------+
5 rows in set (0.00 sec)
```

Table 9: Favourite_Products

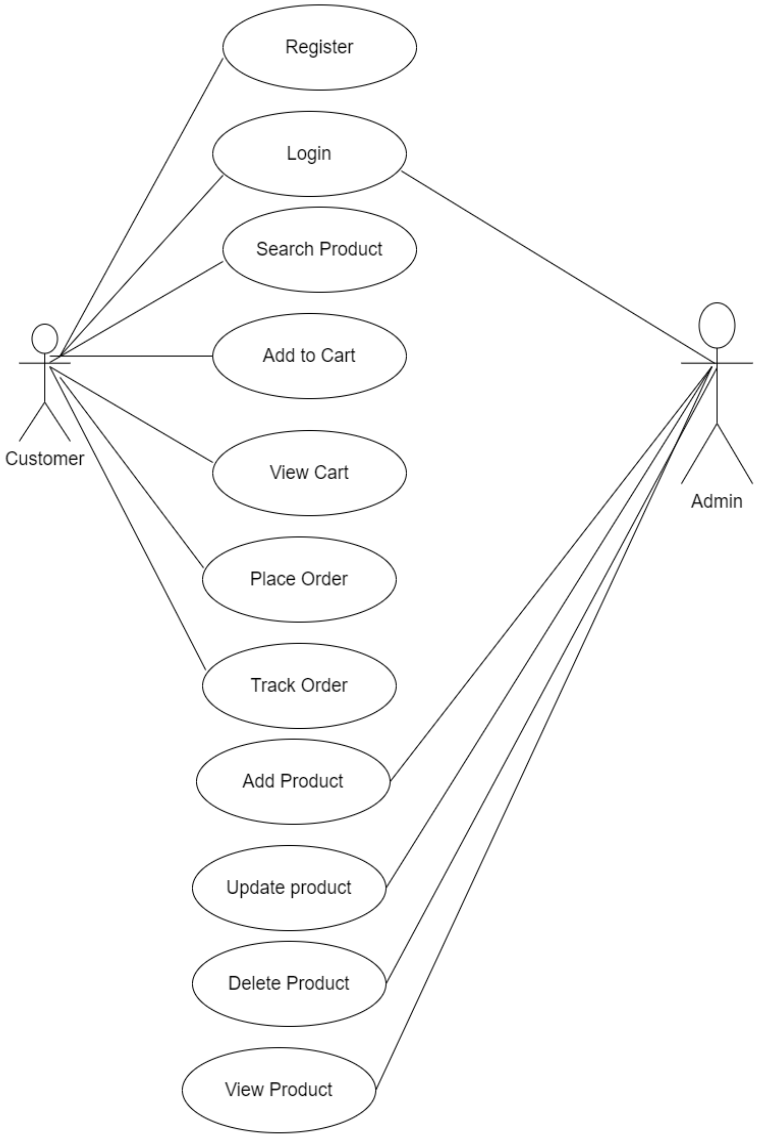
```
mysql> desc favourite_products;
+------------+--------+------+-----+---------+----------------+
| Field      | Type   | Null | Key | Default | Extra          |
+------------+--------+------+-----+---------+----------------+
| fav_id     | bigint | NO   | PRI | NULL    | auto_increment |
| product_id | bigint | YES  | MUL | NULL    |                |
| user_id    | bigint | YES  | MUL | NULL    |                |
+------------+--------+------+-----+---------+----------------+
3 rows in set (0.00 sec)
```

4.1 Entity Relationship Diagram




product_id
p_name
price
category
quantity
img_url
added_by
description
vendor_name
product
has
category
category_id
name
manages
has
User
user_id
mobile_number
city
country
state
email
password
first_name
last_name
orders
order_id
email
order_date
payment_id
total_amount
places
payment
payment_id
payment_method
has
have
order_items
product_id
order_id
quantity
product_price
order_item_id
have
favourite_product
user_id
product_id
fav_id
add to
carts
total_price
user_id
cart_id
has
cart_items
cart_item_id
product_id
cart_id
quantity
product_price

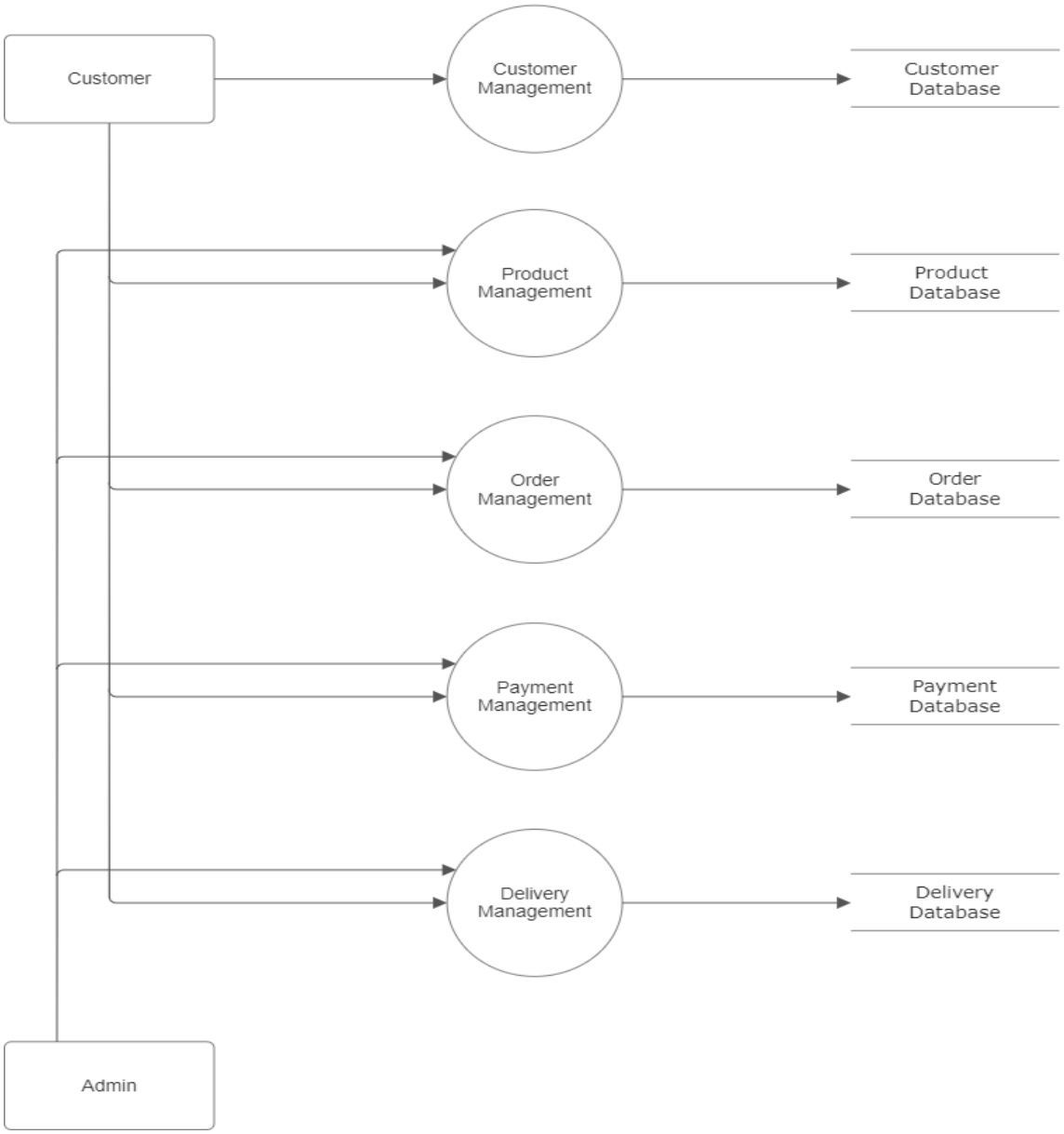
Use Case Diagram:



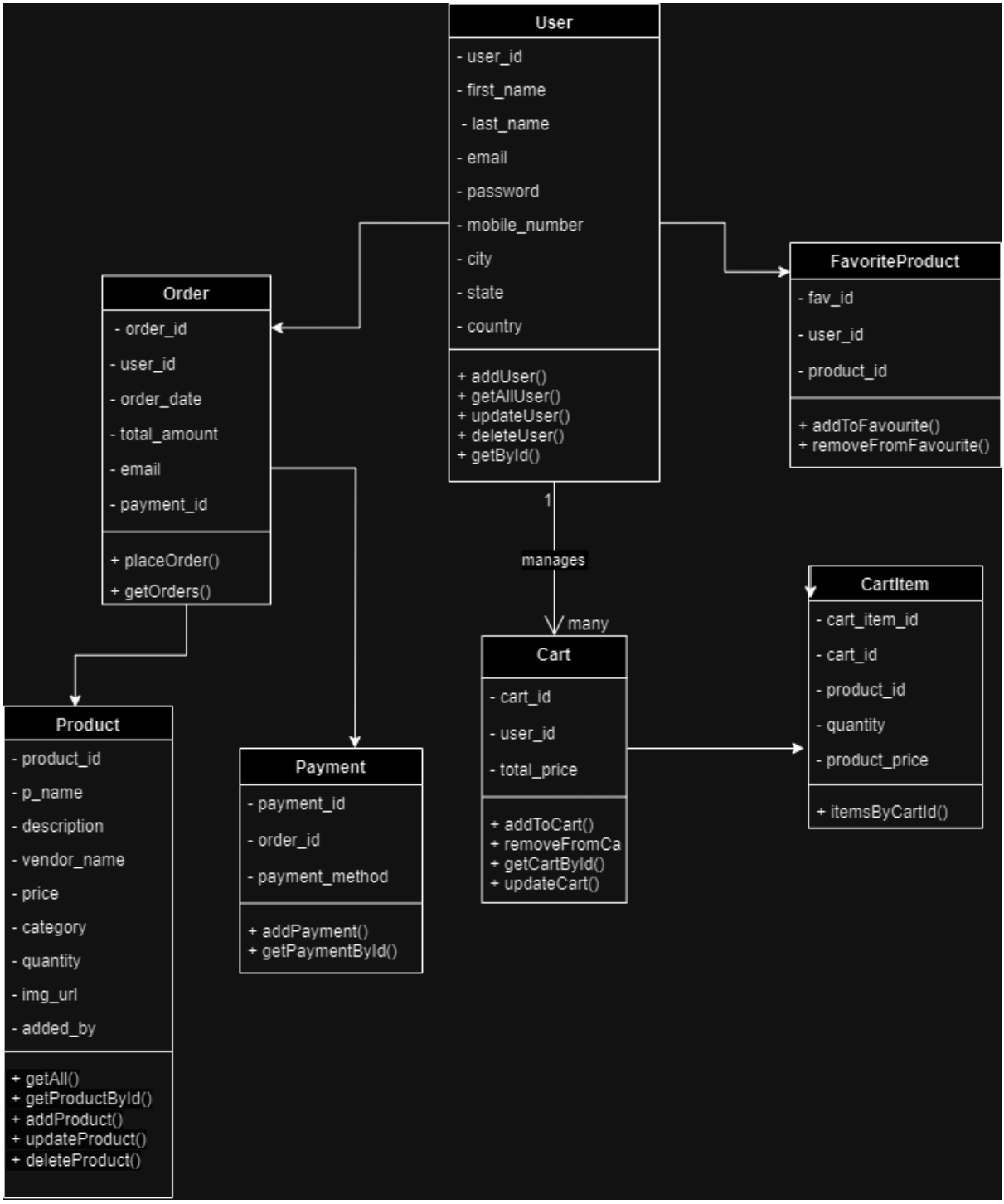
Data Flow Diagram:

DFD Level 0 :

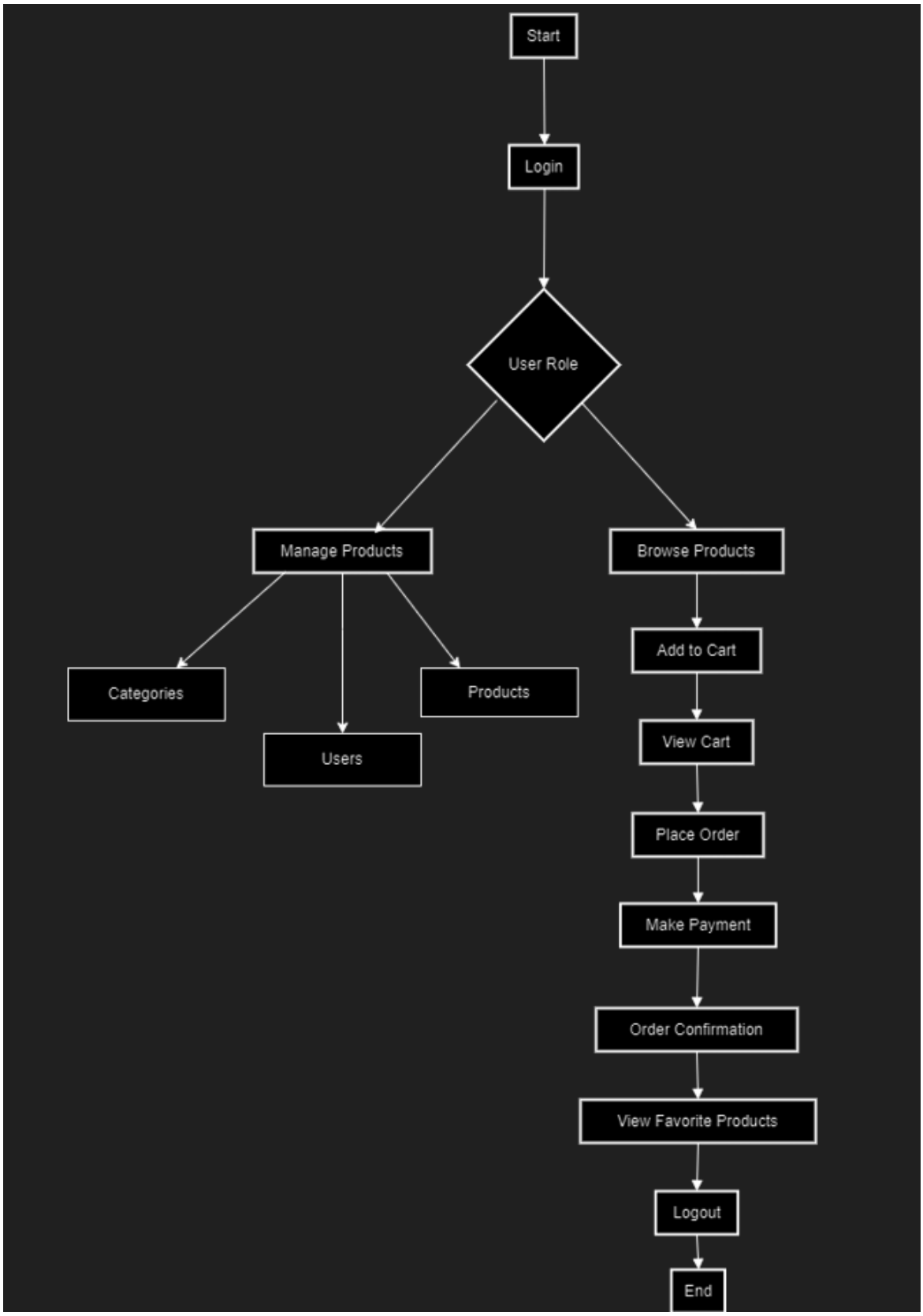
DFD Level 1 :



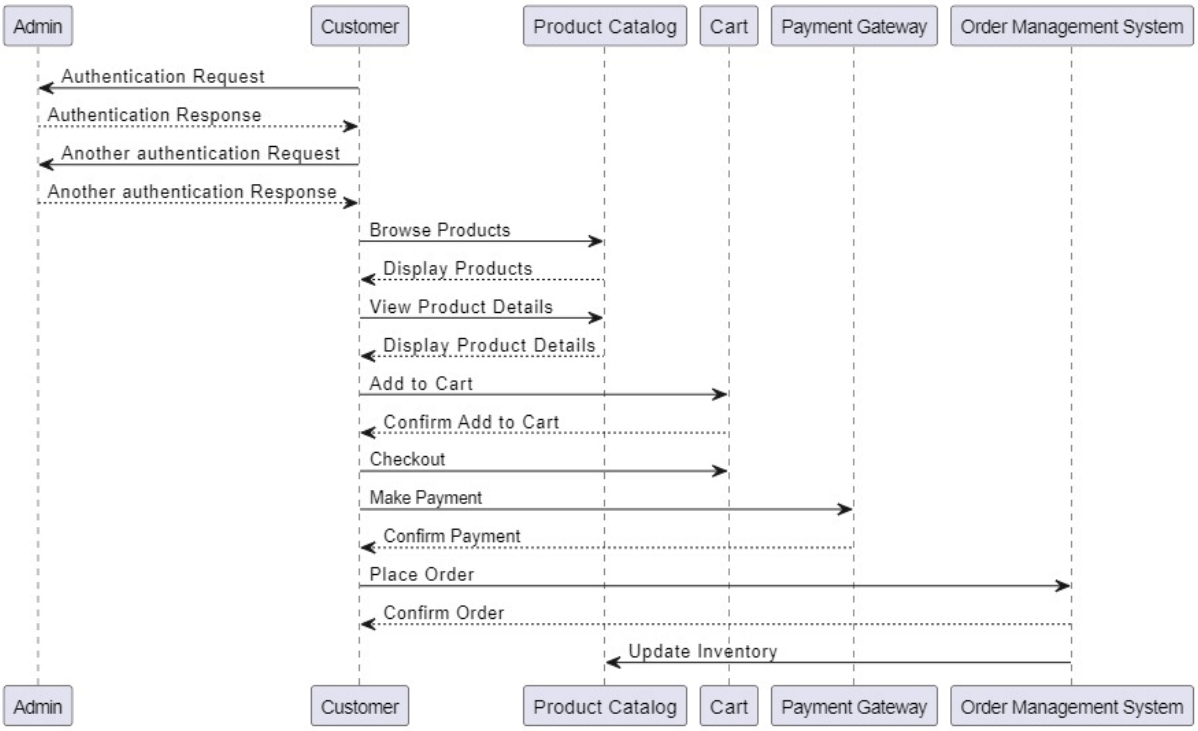
Class Diagram:



User Activity Diagram:

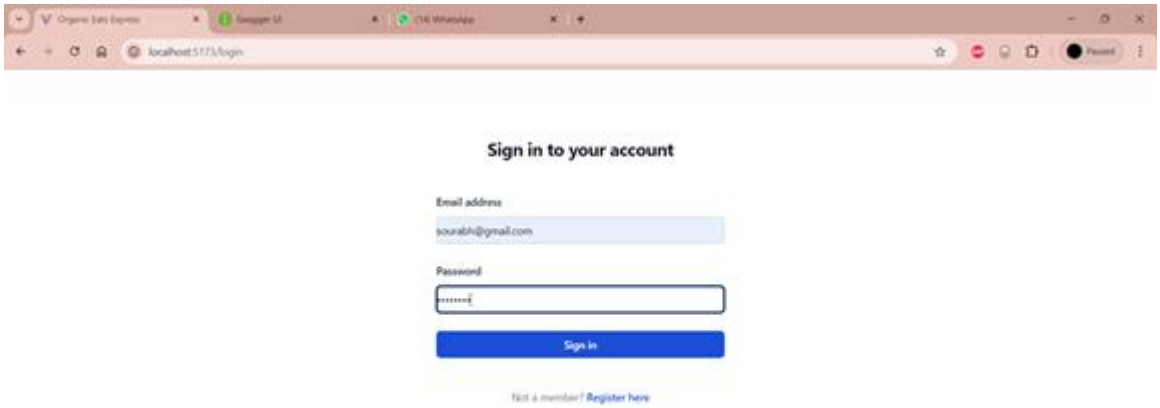


Sequence:

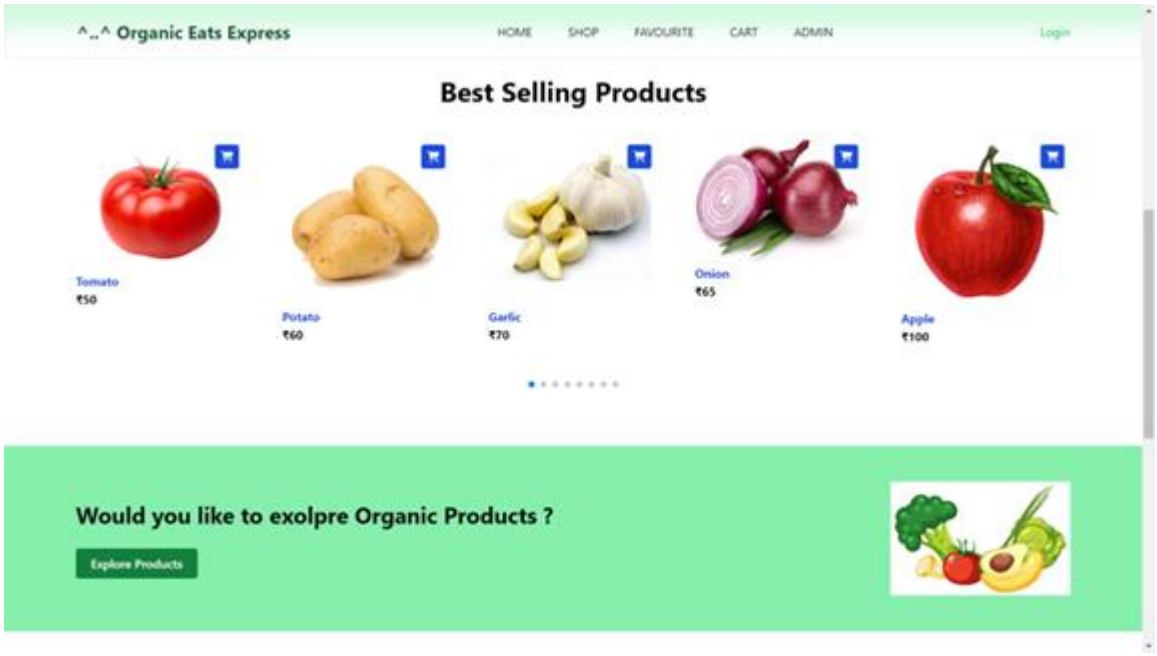

Admin
Customer
Product Catalog
Cart
Payment Gateway
Order Management System
Authentication Request
Authentication Response
Another authentication Request
Another authentication Response
Browse Products
Display Products
View Product Details
Display Product Details
Add to Cart
Confirm Add to Cart
Checkout
Make Payment
Confirm Payment
Place Order
Confirm Order
Update Inventory
Admin
Customer
Product Catalog
Cart
Payment Gateway
Order Management System

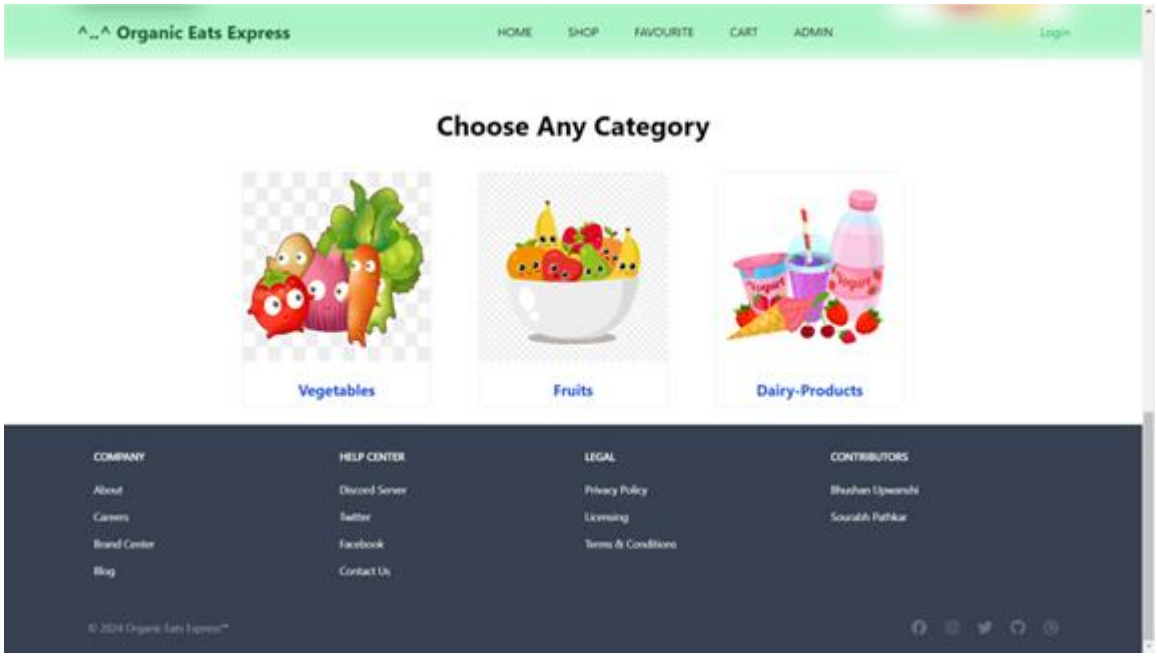
Snapshots

SignIn Page:

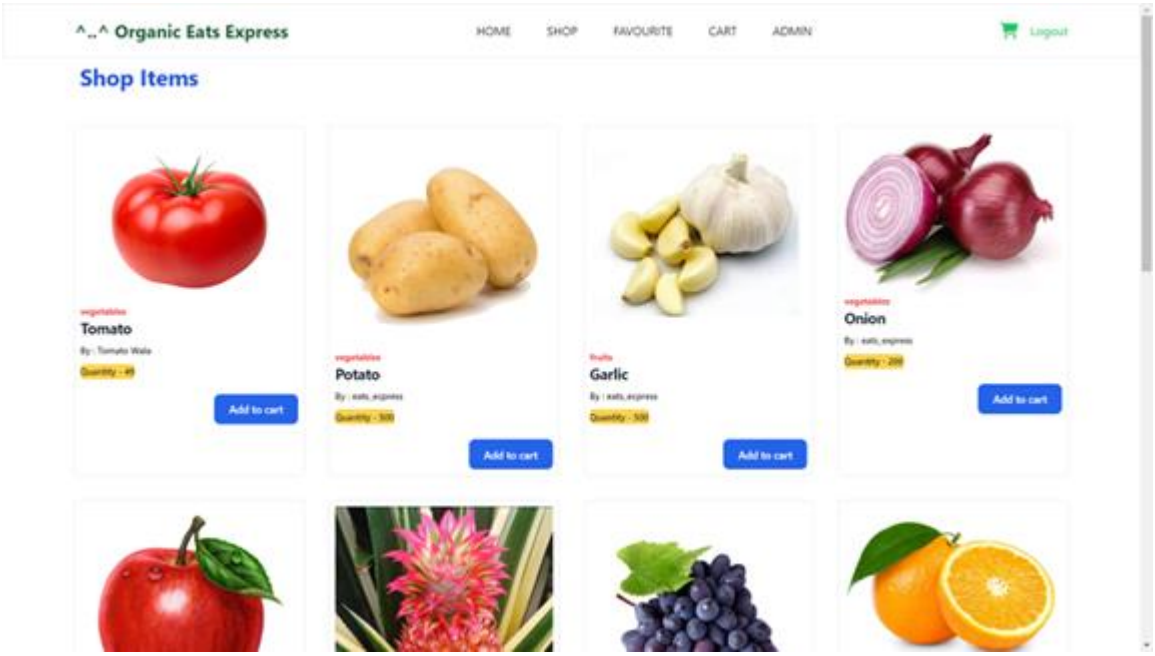


Home Page:

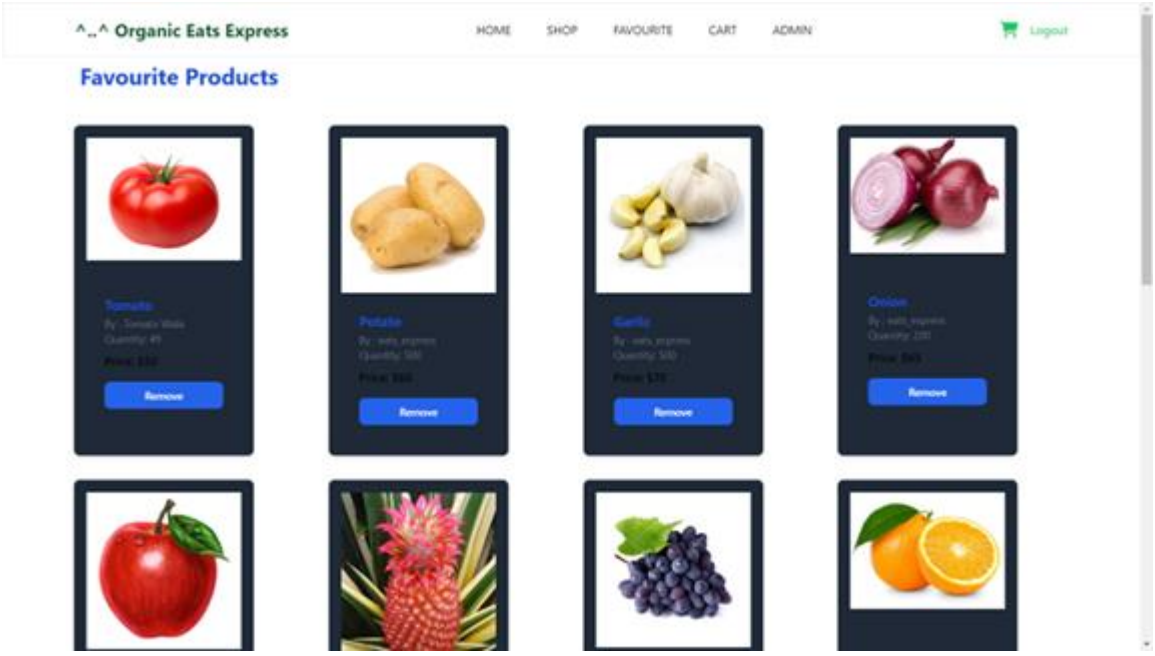

^_^ Organic Eats Express
HOME
SHOP
FAVOURITE
CART
ADMIN
Login
Best Selling Products
Tomato
₹50
Potato
₹60
Garlic
₹70
Onion
₹65
Apple
₹100
Would you like to exolpre Organic Products ?
Explore Products


^_^ Organic Eats Express
HOME
SHOP
FAVOURITE
CART
ADMIN
Login
Choose Any Category
Vegetables
Fruits
Dairy-Products
COMPANY
About
Careers
Brand Center
Blog
HELP CENTER
Discord Server
Twitter
Facebook
Contact Us
LEGAL
Privacy Policy
Licensing
Terms & Conditions
CONTRIBUTORS
Bhushan Upwanshi
Sourabh Pathkar

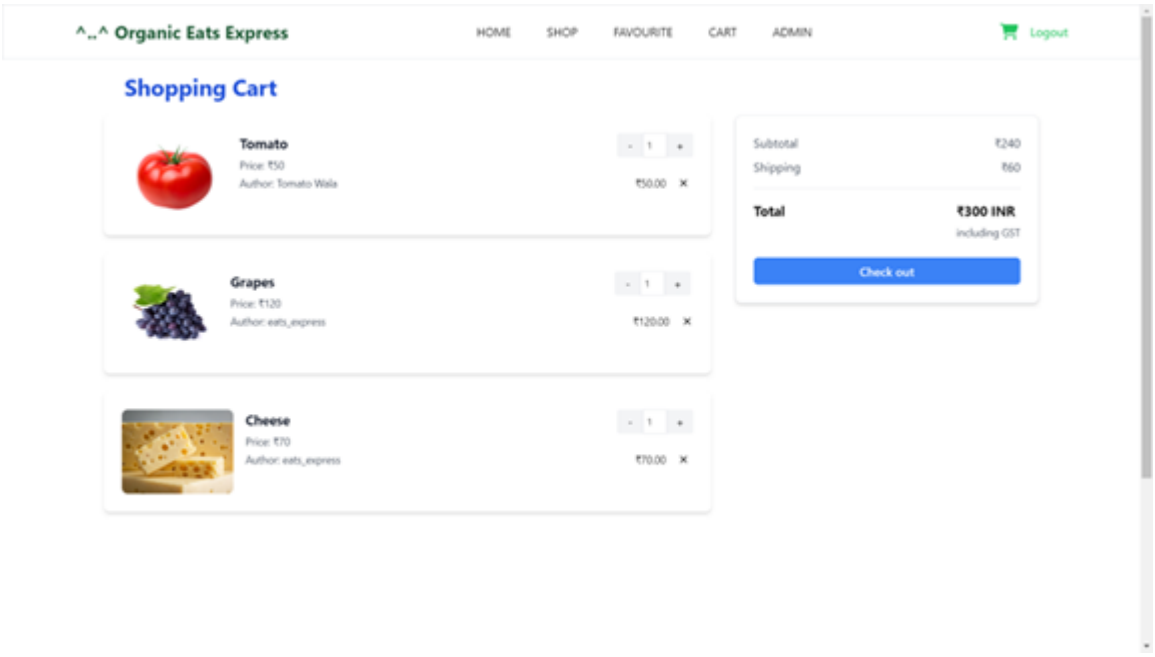
Shop Items:



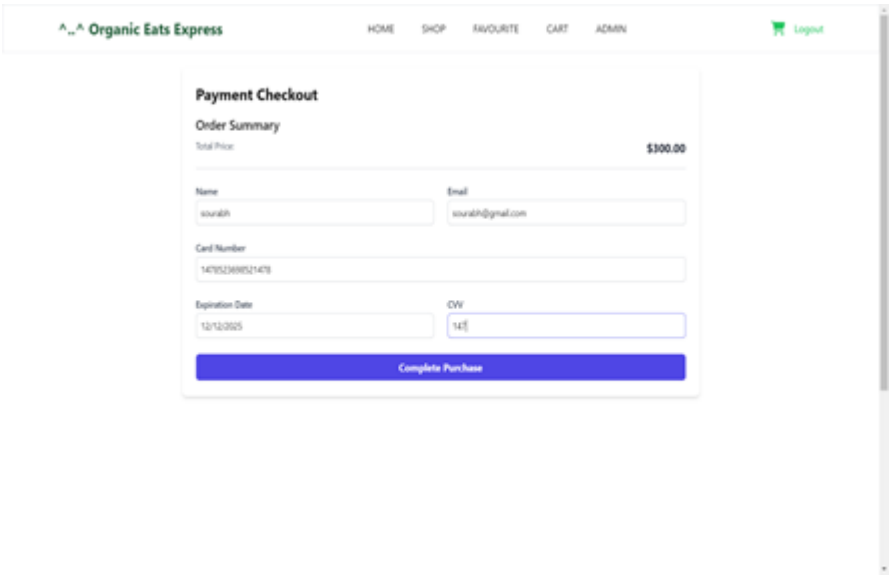
Favourite Products:



Shopping Cart:

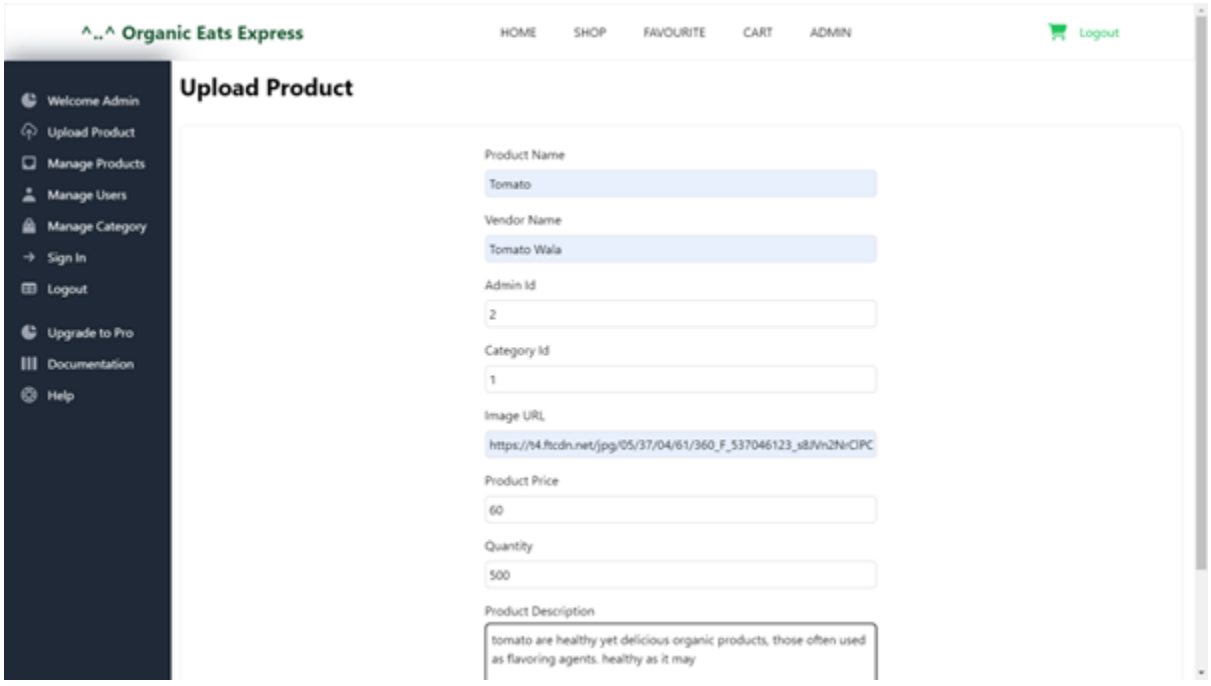


Payment Checkout:

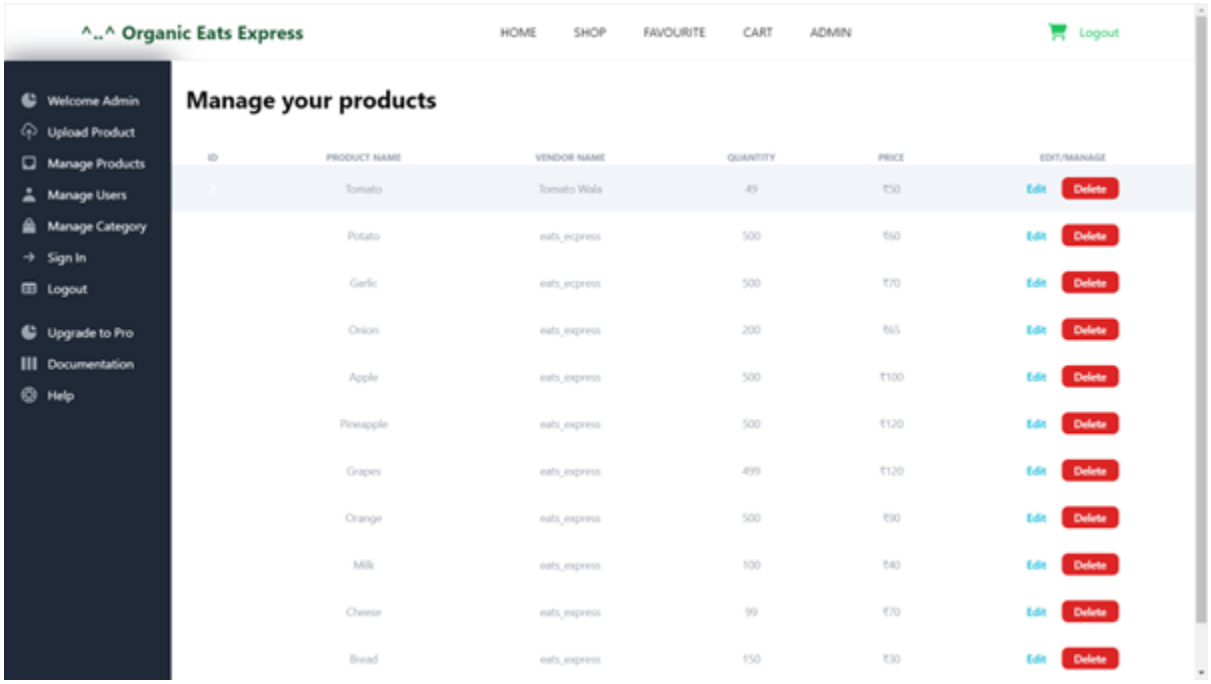


Order Placed:

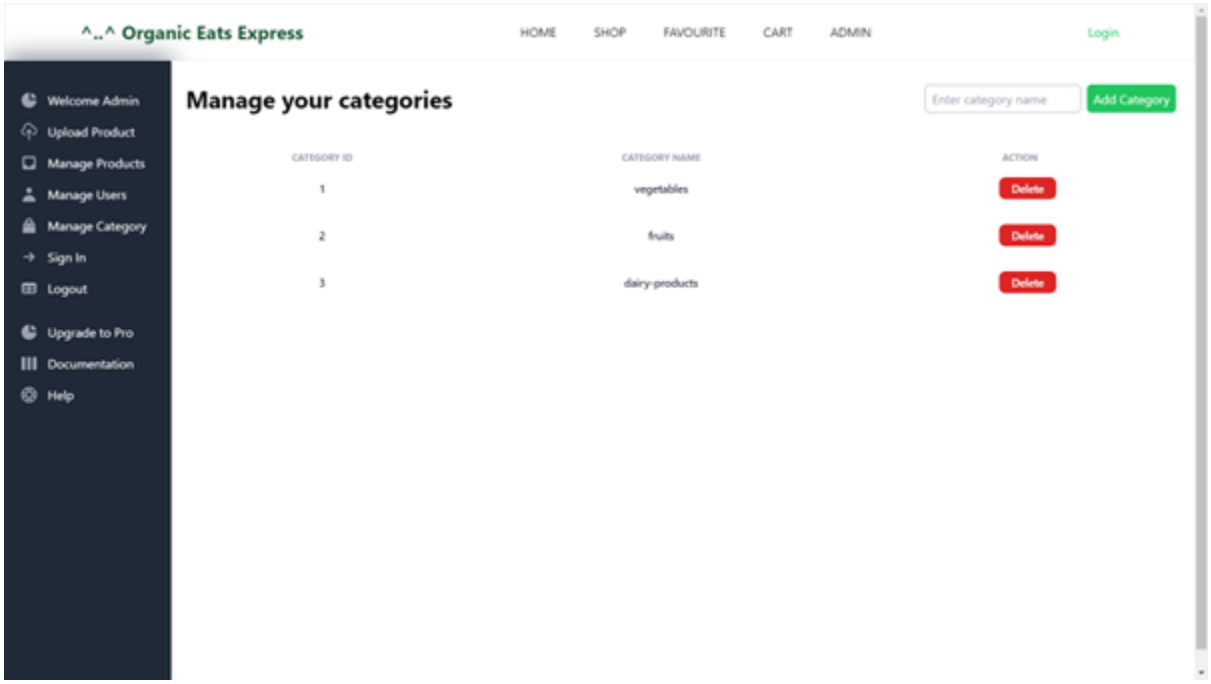
Admin Panel:



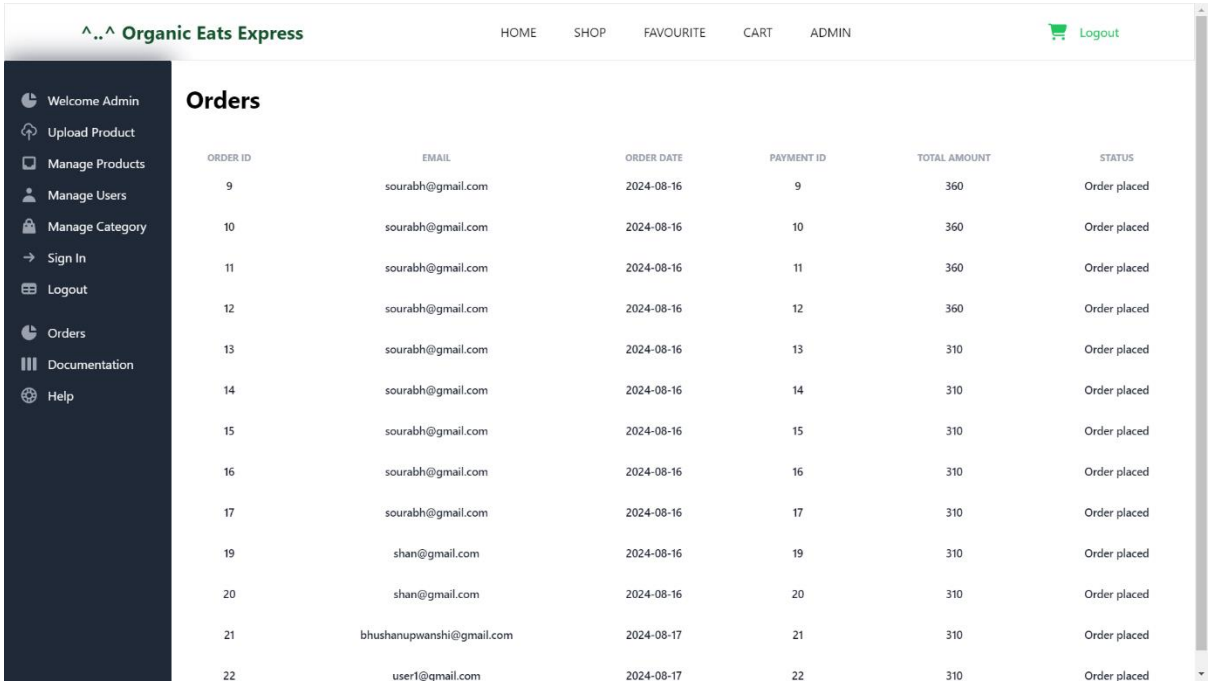
Manage Products:



Manage Categories:



Order:


^..^ Organic Eats Express
HOME
SHOP
FAVOURITE
CART
ADMIN
Logout
Welcome Admin
Upload Product
Manage Products
Manage Users
Manage Category
Sign In
Logout
Orders
Documentation
Help
Orders
ORDER ID EMAIL ORDER DATE PAYMENT ID TOTAL AMOUNT STATUS
9 sourabh@gmail.com 2024-08-16 9 360 Order placed
10 sourabh@gmail.com 2024-08-16 10 360 Order placed
11 sourabh@gmail.com 2024-08-16 11 360 Order placed
12 sourabh@gmail.com 2024-08-16 12 360 Order placed
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19 shan@gmail.com 2024-08-16 19 310 Order placed
20 shan@gmail.com 2024-08-16 20 310 Order placed
21 bhushanupwanshi@gmail.com 2024-08-17 21 310 Order placed
22 user1@gmail.com 2024-08-17 22 310 Order placed

Conclusion:

Documentation for Organic Eats Express provides a comprehensive blueprint for the development of an online platform dedicated to the sale of organic vegetables, fruits, and dairy products. This document outlines the key features and functionalities required to create a user-friendly, secure, and efficient system that caters to both customers and administrators. By incorporating essential customer features such as product browsing, secure payment processing, and order tracking, alongside robust administrative tools for product and user management, Organic Eats Express is designed to offer a seamless shopping experience.

It also emphasizes the importance of non-functional requirements, such as usability, performance, security, reliability, and scalability, to ensure the platform meets the highest standards of quality and user satisfaction. Additionally, adherence to legal and compliance requirements, along with thorough documentation and testing practices, will contribute to the platform's long-term success and adaptability.

In conclusion, by following the specifications outlined in this document, Organic Eats Express will be well-positioned to become a leading online platform for organic produce, delivering value to both farmers and consumers while promoting sustainable agricultural practices. The platform's focus on transparency, quality, and customer convenience will help build trust and foster a loyal user base, ultimately contributing to a healthier and more sustainable food ecosystem.

Future Scope

The future scope of the Organic Eats Express platform is broad and offers numerous opportunities for growth and enhancement. As the platform evolves, several areas can be expanded or improved to meet emerging market demands, enhance user experience, and ensure the platform's long-term sustainability. Key areas of focus for future development include security, delivery management, and payment management:

1. **Enhanced Security Measures**:
    - **Advanced Authentication**: Implement multi-factor authentication (MFA) and biometric authentication to provide an additional layer of security for user accounts.
    - **AI-Powered Threat Detection**: Utilize artificial intelligence and machine learning to detect and respond to security threats in real-time, including identifying potential fraud, phishing attempts, and unauthorized access.
    - **Data Encryption**: Expand encryption protocols for data at rest, in transit, and during processing to ensure that all user and transaction data are securely handled across the platform.
    - **Compliance with Emerging Regulations**: Stay ahead of evolving data protection and privacy laws by continuously updating security practices to comply with global standards such as GDPR, CCPA, and local data protection regulations.
2. **Delivery Management Optimization**:
    - **Real-Time Delivery Tracking**: Integrate advanced GPS and IoT technologies to provide real-time tracking of deliveries, allowing customers to monitor their orders from dispatch to delivery.
    - **AI-Based Route Optimization**: Implement AI-driven logistics solutions to optimize delivery routes, reducing delivery times, and fuel consumption while ensuring timely and efficient deliveries.
    - **Partnership with Local Delivery Services**: Expand partnerships with local delivery services to enhance the last-mile delivery experience, particularly in remote or rural areas.
    - **Sustainable Delivery Options**: Introduce eco-friendly delivery options, such as electric vehicles or bicycle couriers, to align with the platform's commitment to sustainability.
3. **Payment Management Advancements**:
    - **Support for Multiple Payment Methods**: Expand the range of payment options to include cryptocurrencies, digital wallets, and international payment gateways to cater to a broader audience.
    - **Automated Payment Reconciliation**: Implement automated systems for reconciling payments with orders, reducing the likelihood of errors and simplifying financial management for administrators.
    - **Subscription and Membership Models**: Introduce subscription-based models for regular deliveries of organic products, offering customers convenience and potential discounts.
    - **Dynamic Pricing and Promotions**: Develop dynamic pricing algorithms to offer personalized discounts, loyalty rewards, and promotions based on user behavior and purchasing patterns.

4. **User Experience and Interface Enhancements**:
    - **Personalized Shopping Experience**: Utilize AI to create personalized shopping experiences, offering product recommendations based on past purchases, preferences, and dietary needs.
    - **Voice and Chatbot Integration**: Introduce voice command functionalities and AI-powered chatbots to assist users in product searches, placing orders, and customer service inquiries.
    - **Expansion to Mobile Apps**: Develop native mobile applications for Android and iOS with enhanced features such as push notifications, offline browsing, and easy payment options.

By focusing on these future developments, Organic Eats Express can continue to grow, innovate, and meet the evolving needs of its customers while maintaining a strong commitment to security, sustainability, and superior service delivery. This will ensure the platform remains competitive and relevant in the fast-evolving e-commerce landscape.

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