Design and Develop an Efficient Porter Booking System for Streamlined Service Management

Presented by:

Kushagra Thapa(07511802721)
Ritanshu Babuta(08018002721)
Shivani Sah(11418002721)

Under Guidance of:
Ms.Eirty Telang
Assistant professor

Objectives

Streamlined Booking

Develop an intuitive and user-friendly portal for customers to easily book and manage their grocery slots.

Improved Visibility

Provide real-time information on slot availability and booking status to enhance customer experience.

Efficient Management

Empower store administrators with tools to effectively monitor, control, and optimize the booking process.

Feasibility Study

1

Technical Feasibility

Assessing the technical capabilities needed for the implementation of the portal booking system is crucial. This includes a thorough evaluation of the necessary software, hardware, and infrastructure to ensure a seamless and efficient user experience.

2

Economic Feasibility

Assess the project's financial viability, including development, maintenance, and operational costs.

3

Organizational Feasibility

Examine how this project directly supports our company's strategic goals and gauge the enthusiasm of stakeholders to champion this initiative.

Needs and Significance

Competitive Advantage

The innovative portal booking system will differentiate R.K.S. Grocery from competitors, attracting more customers and increasing market share.

Enhanced Customer Experience

The portal booking system will provide a seamless and convenient experience for customers, reducing wait times and improving satisfaction.

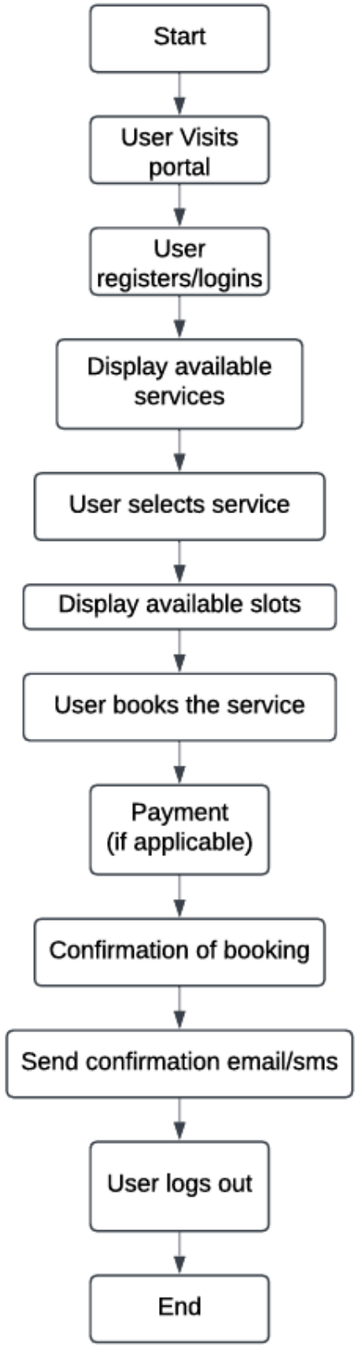
Improved Operational Efficiency

The system will enable better management of bookings, leading to optimized resource allocation and reduced overbooking.

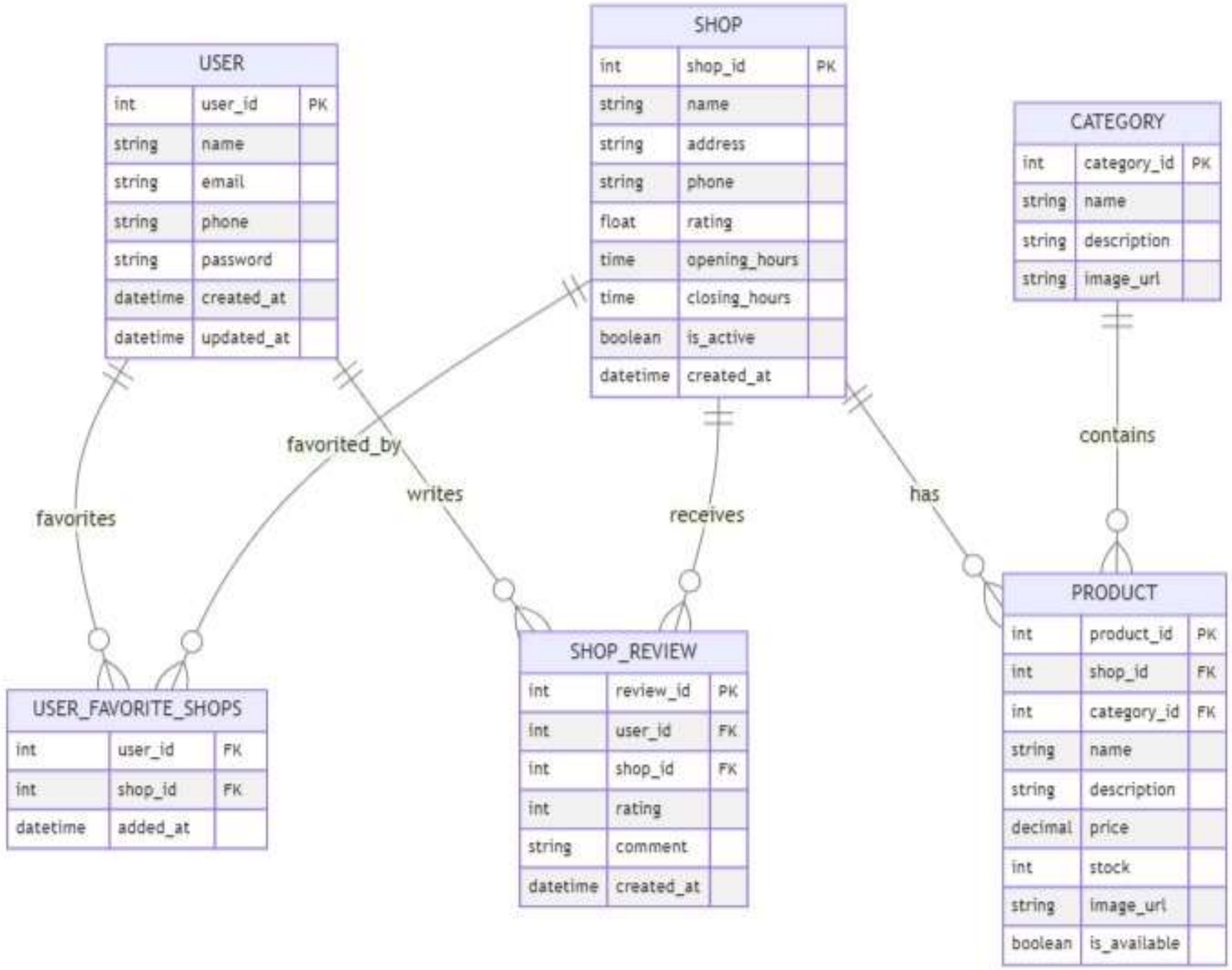
Flow Chart for R.K.S. Grocery

The flowchart outlines the step-by-step user journey through the portal:

- **Start**: User accesses the portal.
- **Login/Registration**: Users log in or register if they are new.
- **Service Browsing and Selection**: The system displays available services and the user selects a desired service.
- **Booking Process**: After selecting a service, the system displays available time slots for booking.
- **Payment (if applicable)**: User completes payment if required for the service.
- **Confirmation and Notification**: Upon successful booking, the system confirms the booking and sends a notification via email or SMS.
- **Logout and End**: The user logs out after completing the booking.
- This flowchart represents the end-to-end process, ensuring a streamlined booking experience for users, with checkpoints for authentication, selection, payment, and confirmation.



ER Diagram for R.K.S.Grocery



Entities:

- **User**: Contains information about users, such as name, email, and login details.
- **Shop**: Represents shops available for booking, with details like address, rating, and operational status.
- **Category**: Defines types of services or products available in shops.
- **Product**: Represents specific services or items provided by a shop, linked to a category.
- **Shop Review**: Stores user-written reviews and ratings for shops.
- **User Favorite Shops**: Tracks users' favorite shops for quick access.

Relationships:

- Users can favorite shops and write reviews for shops they've interacted with.
- Shops have multiple categories and contain products or services associated with those categories.

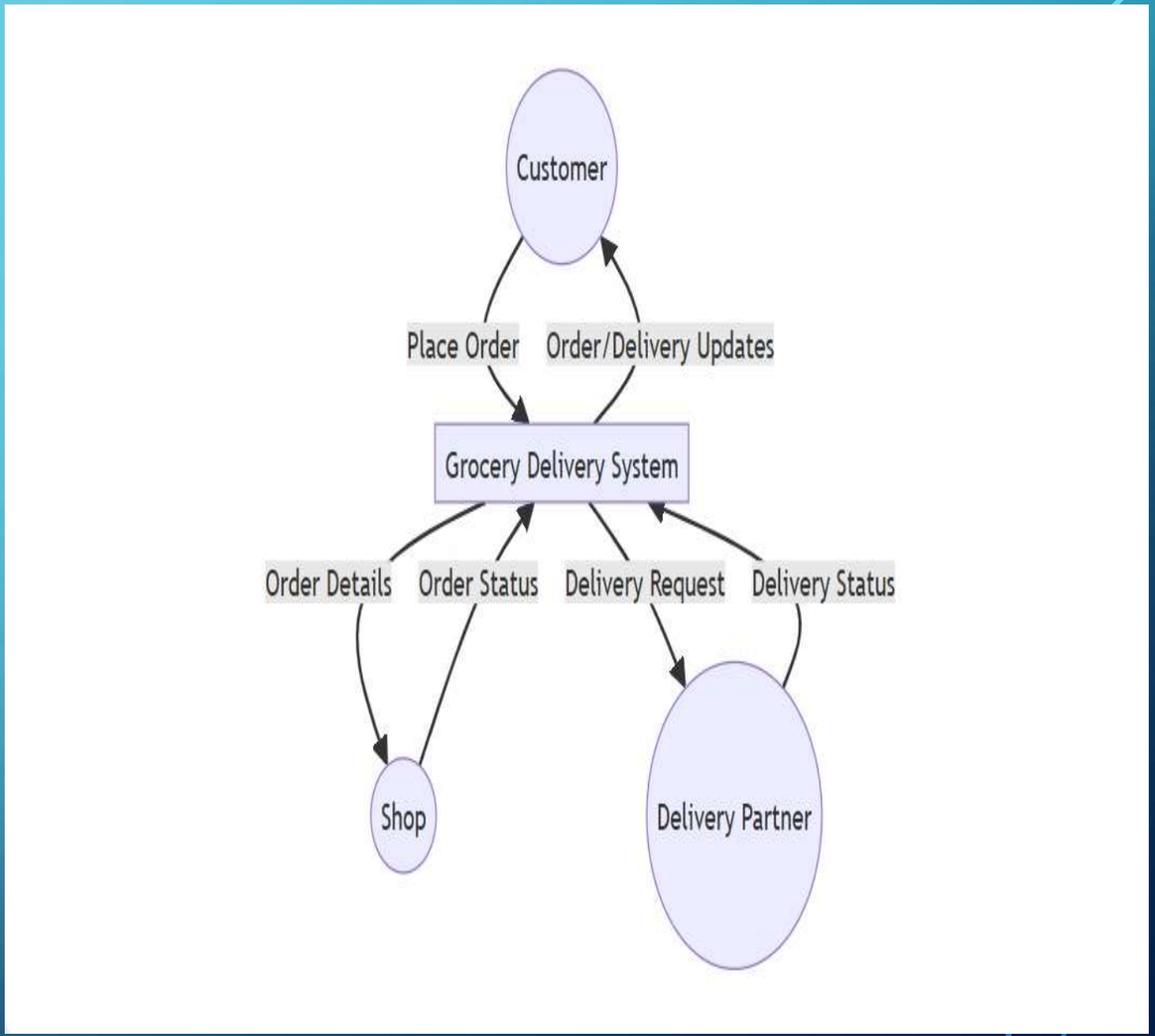
DFD Diagram for R.K.S. Grocery (0)

Customer Interaction: The customer can log in/register, search shops, and place orders.

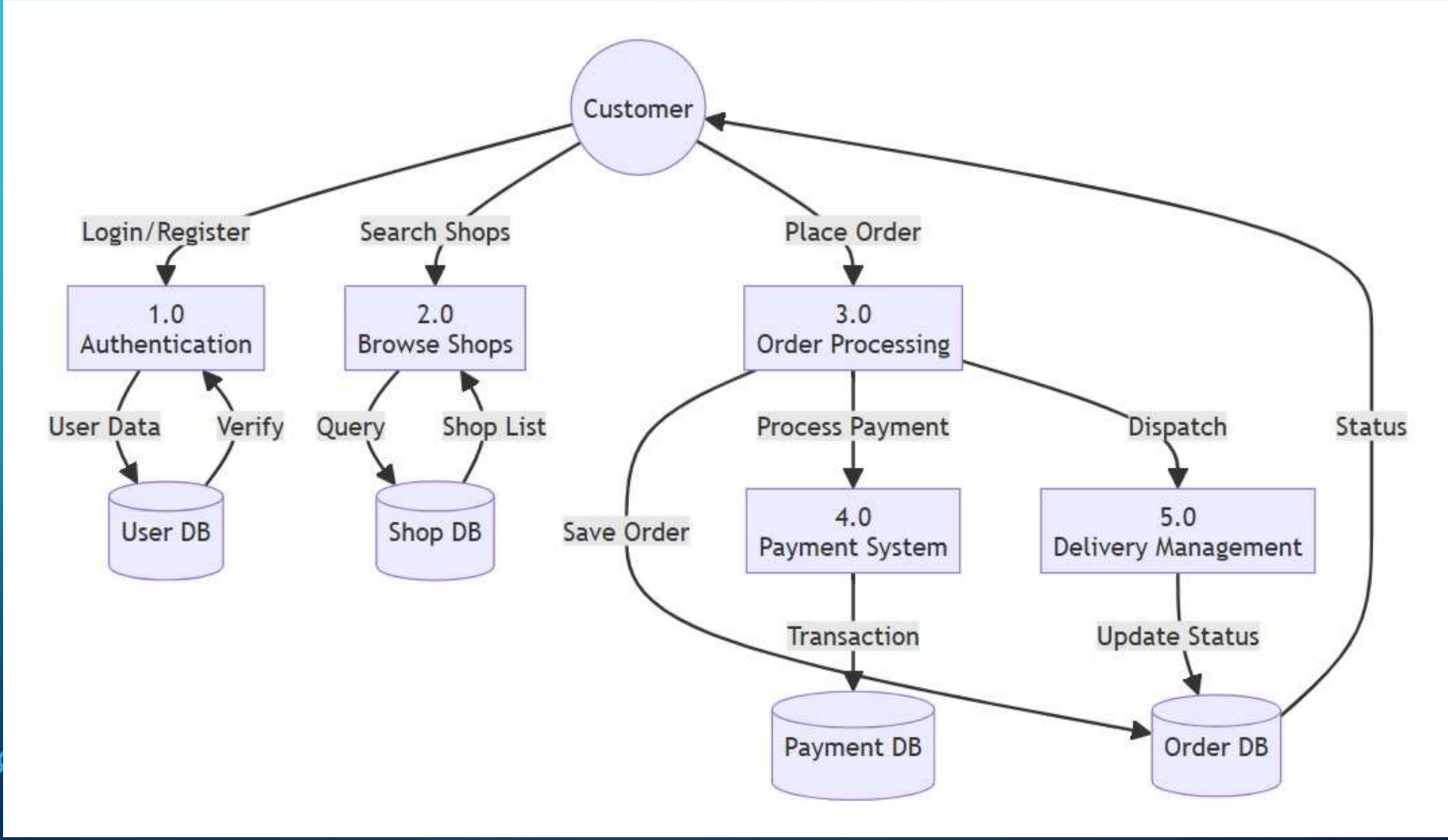
Subsystems:

- **Authentication (1.0):** Handles user login and registration by verifying data in the User Database.
- **Browse Shops (2.0):** Allows customers to search and browse available shops by querying the Shop Database.
- **Order Processing (3.0):** Manages order placement and saves order data.
- **Payment System (4.0):** Processes payment information and saves transaction data to the Payment Database.
- **Delivery Management (5.0):** Manages dispatch and status updates, storing order status in the Order Database.

Databases: Each component stores and retrieves data from specific databases (User, Shop, Payment, Order), ensuring smooth data flow and record-keeping.

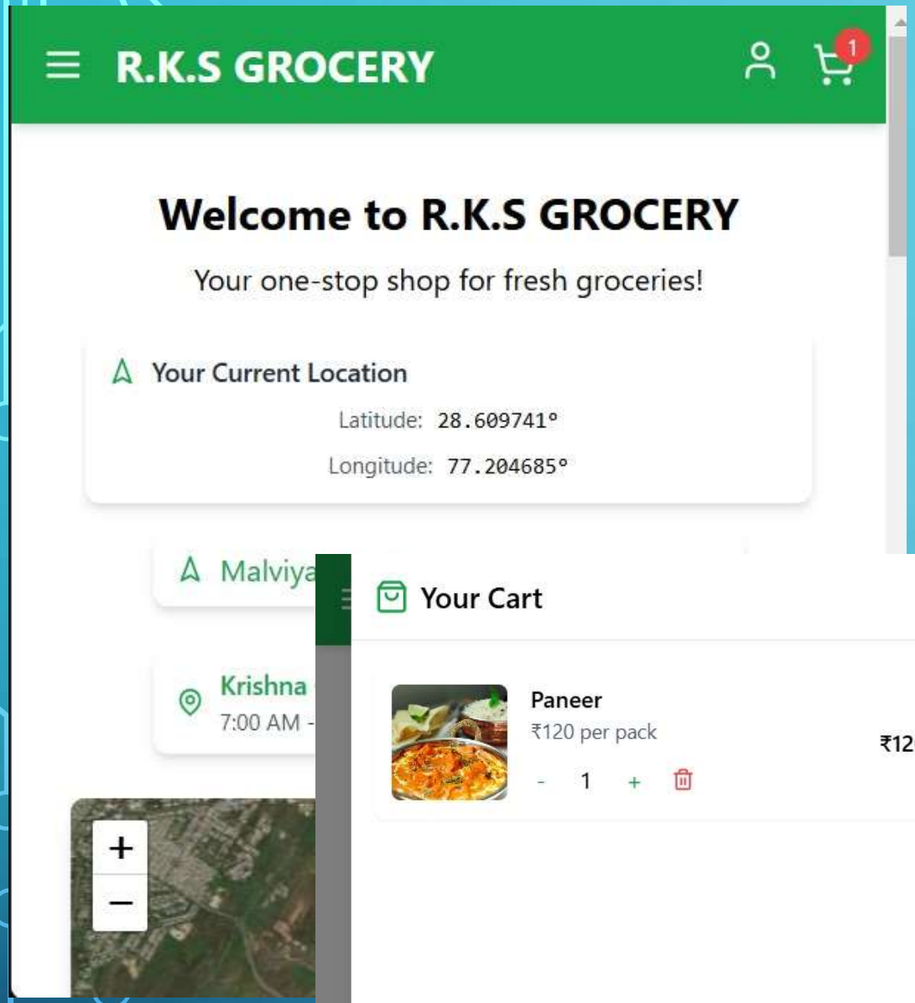


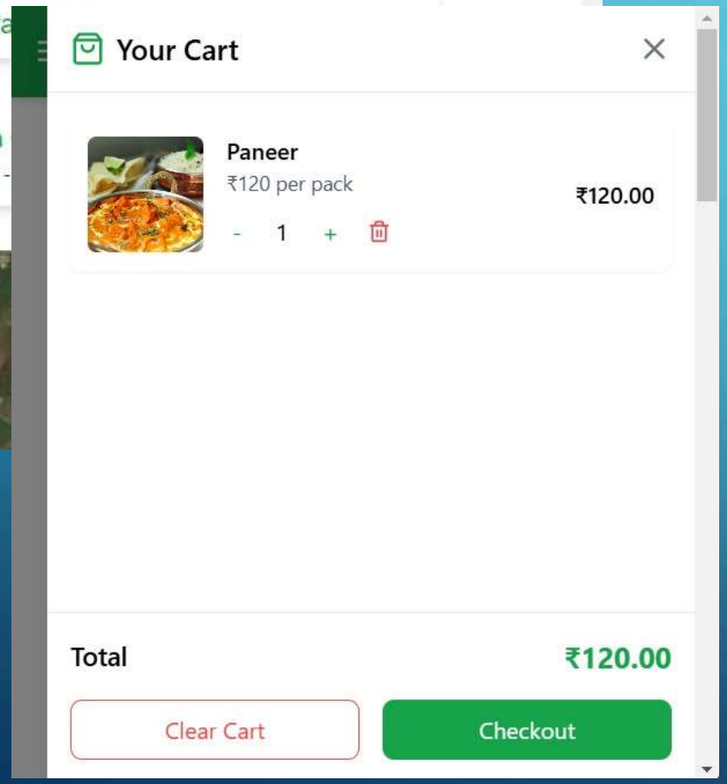
DFD Diagram for R.K.S. Grocery (1)

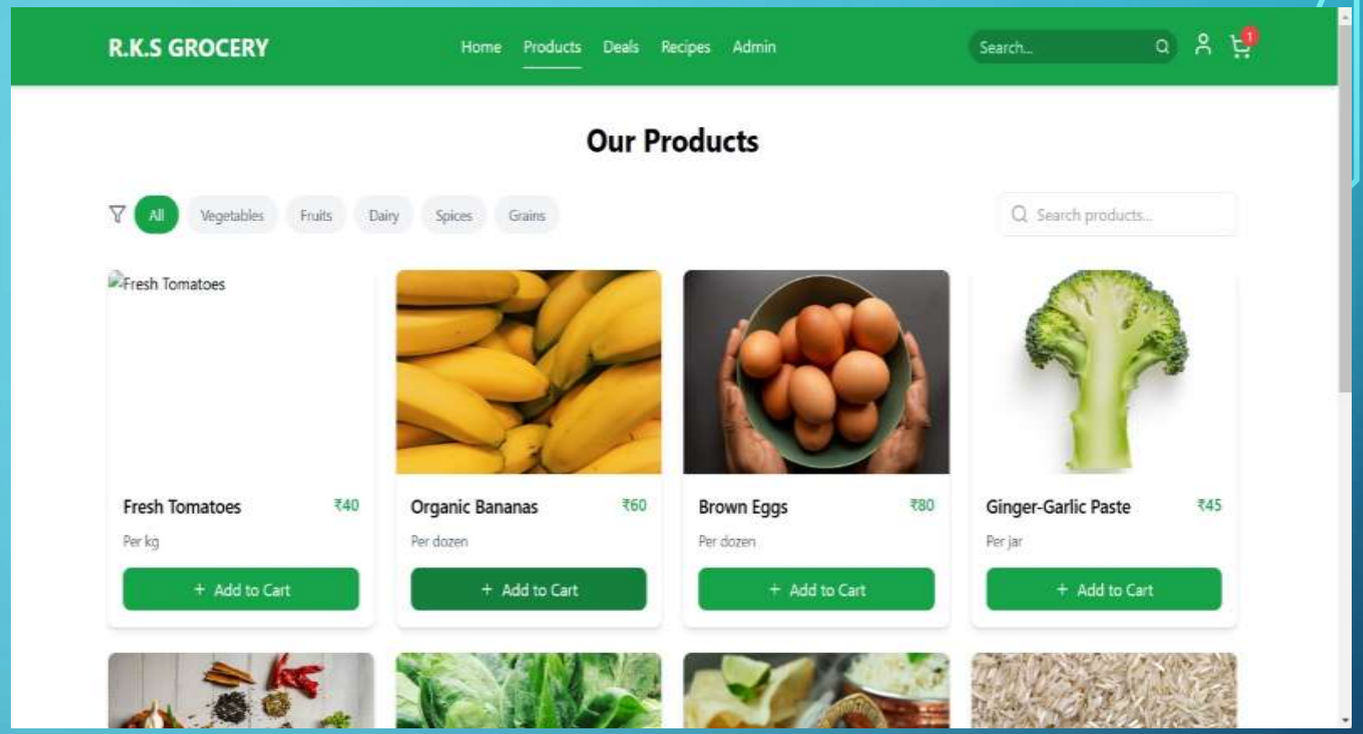


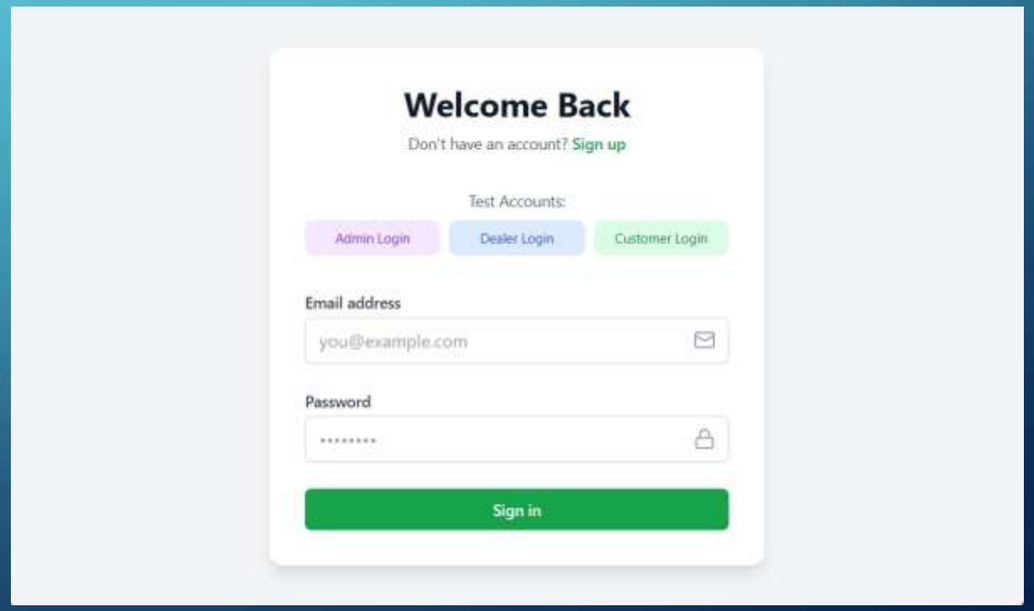
Hardware/Software Requirements

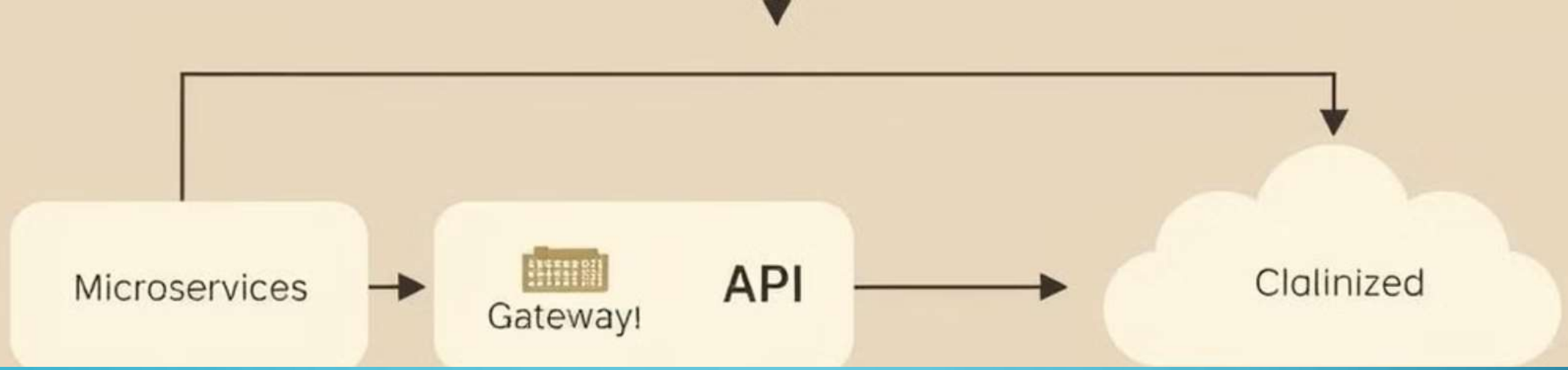
Hardware	Software
High-performance server	Web application framework (e.g., React, Angular)
Reliable database system	Booking and scheduling management software
Secure network infrastructure	Customer relationship management (CRM) system


R.K.S GROCERY
1
Welcome to R.K.S GROCERY
Your one-stop shop for fresh groceries!
Your Current Location
Latitude: 28.609741°
Longitude: 77.204685°
Malviya
Krishna
7:00 AM -


Your Cart
Paneer
₹120 per pack
₹120.00
- 1 +
Total
₹120.00
Clear Cart
Checkout


R.K.S GROCERY
Home
Products
Deals
Recipes
Admin
Search...
Our Products
All
Vegetables
Fruits
Dairy
Spices
Grains
Search products...
Fresh Tomatoes
Fresh Tomatoes ₹40
Per kg
+ Add to Cart
Organic Bananas ₹60
Per dozen
+ Add to Cart
Brown Eggs ₹80
Per dozen
+ Add to Cart
Ginger-Garlic Paste ₹45
Per jar
+ Add to Cart


Welcome Back
Don't have an account? Sign up
Test Accounts:
Admin Login
Dealer Login
Customer Login
Email address
you@example.com
Password
Sign in



System Architecture

1

2

3

Customer Portal

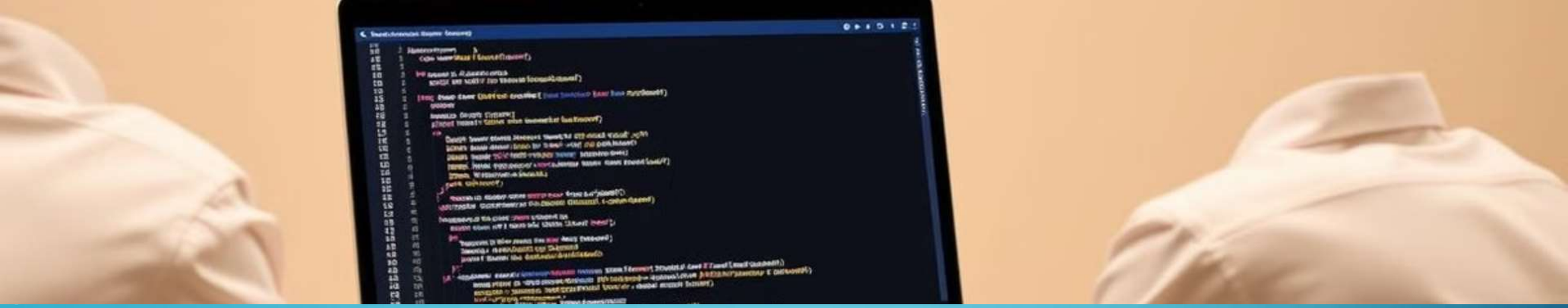
Intuitive web-based interface for customers to book and manage grocery slots.

Booking Management

Microservices handling booking, scheduling, and slot availability updates.

Admin Dashboard

Comprehensive tools for store administrators to monitor and control the booking system.



Implementation and Testing

Agile Methodology

Iterative development with frequent feedback and continuous integration.

Rigorous Testing

Comprehensive unit, integration, and end-to-end testing to ensure system reliability.

Scalable Deployment

Containerized and cloud-based infrastructure for easy scaling and maintenance.

Conclusion and Future Scope

1

Conclusion

The implementation of the R.K.S. Grocery portal booking system will revolutionize the customer experience and improve operational efficiency.

2

Future Scope

Explore integration with mobile apps, digital payments, and personalized recommendations to further enhance the customer experience.

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