SOFTWARE REQUIREMENTS SPECIFICATION (SRS)

CHEEZIOUS – Restaurant Mobile Application

1. Introduction

1.1 Purpose

This document describes the functional and non-functional requirements of the CHEEZIOUS Restaurant Mobile Application. The application allows users to browse food items, add items to cart, place orders, select payment methods, reserve tables, and track orders.

1.2 Scope

CHEEZIOUS is a mobile-based restaurant ordering system developed using React Native (Expo). The system enables:

- User login
- Food menu browsing
- Add to cart functionality
- Online and offline payment options
- Table reservation
- Order tracking
- Order history management
- Profile management

The application is designed for customers who want to order food digitally and reserve tables easily.

1.3 Definitions

- COD: Cash on Delivery
- QR: Quick Response Code
- UI: User Interface

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2. Overall Description

2.1 Product Perspective

CHEEZIOUS is a standalone mobile application. It does not currently connect to a backend server; all data is stored temporarily in application state.

2.2 Product Features

The system provides:

- Secure Login System
- Food Menu Display (Pizza, Burger, Pasta, Drinks, etc.)
- Shopping Cart
- Checkout System
- Multiple Payment Methods (EasyPaisa, JazzCash, Bank Transfer, COD)
- Table Reservation with Timer
- Order Success Confirmation
- User Profile Screen
- Order Tracking
- Order History
- Logout Function

2.3 User Characteristics

- Basic smartphone knowledge
- Can navigate mobile applications
- Can enter payment and login details

2.4 Operating Environment

- Android / iOS Mobile Devices
- Developed using React Native with Expo
- Requires internet connection for images

3. Functional Requirements

3.1 Login System

- User must enter email and password.
- System validates minimum character length.
- After successful login, user is redirected to Menu Screen.

3.2 Menu Management

System displays list of food items with:

- Image
- Name
- Price
- Category
- User can add items to cart.
- Cart updates quantity automatically.

3.3 Cart System

- Display selected items with quantity.
- Calculate subtotal automatically.
- Provide "Proceed to Checkout" option.

3.4 Checkout System

- Show order summary.
- Calculate grand total.
- Allow payment method selection.

3.5 Payment System

System supports:

- EasyPaisa
- JazzCash
- Bank Transfer
- Cash on Delivery

Requirements:

- If COD selected → No account number required.
- If other methods selected → Account number must be validated.

3.6 Order Management

- On confirmation, order is saved in order history.
- Cart is cleared after successful order.
- Show Order Success Screen.

3.7 Table Reservation System

- User can book table via QR simulation.
- Display available and reserved tables.
- Reserved tables automatically become available after timer expires.
- Show reservation success message.

3.8 Profile Management

- Display user name and email.
- Show active order tracking with progress bar.
- Display complete order history.
- Allow logout.

4. Non-Functional Requirements

4.1 Performance

The application must deliver fast and responsive performance to ensure a smooth user experience. The menu screen should load within 2–3 seconds after login so that users can quickly browse food items without delay. Additionally, the table reservation timer must update every second in real time to accurately display the remaining time for reserved tables. The system should handle navigation and state updates efficiently without noticeable lag.

4.2 Usability

The application is designed with a simple and user-friendly interface so that users of all experience levels can operate it easily. It follows a clean and modern design layout with properly aligned elements, readable fonts, and attractive color combinations. Navigation between screens such as Menu, Cart, Checkout, and Profile is straightforward, ensuring that users can complete tasks like placing orders or reserving tables without confusion.

4.3 Security

Basic security measures are implemented to protect user interactions within the application. Login validation ensures that users must enter valid email and password credentials before accessing the system. Payment number validation is required for online payment methods to reduce incorrect entries. Furthermore, no sensitive user data is permanently stored in the system, which enhances data privacy and reduces security risks.

4.4 Reliability

The application must function reliably without crashes or unexpected errors during navigation between screens. All features such as adding items to the cart, placing orders, and reserving tables should operate smoothly. The cart and order information must be maintained throughout the user session to ensure that no data is lost before order confirmation.

4.5 Maintainability

The system is developed using a component-based structure, making the code organized and easier to manage. Each feature is divided into reusable components, which simplifies debugging and future modifications. The application is also designed in a way that allows easy integration with a backend server or database in the future, ensuring scalability and long-term maintainability.

5. System Architecture

The system follows a component-based architecture:

- App Component
- Navigator (Screen Control)

- Header Component
- Menu Screen
- Cart Screen
- Checkout Screen
- Profile Screen
- Reservation Module
- State Management
- useState Hook
- useEffect Hook

6. Data Requirements

6.1 Menu Item Structure

- id
- name
- price
- image URL
- category

6.2 Order Structure

- order id
- items
- total price
- date

6.3 Table Structure

- table id
- status (available/reserved)
- freeAt (timestamp)

7. Future Enhancements

- Backend database integration
- Real payment gateway integration
- Real-time GPS tracking
- Admin panel
- Push notifications
- User registration system
- Persistent storage using database

8. Conclusion

CHEEZIOUS Restaurant Mobile Application provides a complete digital food ordering and table reservation system. It includes modern UI, payment integration options, order tracking, and user profile management. The system improves customer experience by allowing easy ordering and efficient table booking.