Software Requirements Specification

for

<Food Delivery Application

>

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

This document specifies the software requirements for a food delivery application. The system enables users to register, place orders, track deliveries, and provide reviews. It also facilitates restaurant managers in managing their menu and orders while allowing delivery personnel to update delivery status. Additionally, it ensures seamless interaction that facilitates food ordering and delivery between users, restaurants, and delivery personnel.

1.2 Document Conventions

This document follows standard SRS formatting conventions. Each requirement is uniquely identified using an REQ-XX format.

1.3 Intended Audience and Reading Suggestions

This document is intended for developers, project managers, quality assurance teams, and stakeholders. It is structured to first provide an overview and then detailed specifications.

1.4 Product Scope

The food delivery application allows users to browse restaurant menus, place orders, and track deliveries, and make payments. It ensures efficient order management for restaurant managers and provides seamless communication for delivery personnel. The application also integrates with third-party services for payment processing and location tracking.

1.5 References

API documentation, UI style guides, and database schema documentation.

2. Overall Description

2.1 Product Perspective

This product is a standalone application facilitating food ordering, restaurant management, and delivery tracking, integrating third-party services for smooth operation.

2.2 Product Functions

- User registration and authentication
- Menu management by restaurant managers
- Order placement, tracking, and review system
- Delivery assignment and status updates
- Integration with third-party payment gateways

2.3 User Classes and Characteristics

- Users: Can register, login, place orders, and leave reviews
- Managers: Manage restaurant menu and accept orders
- Delivery Personnel: View assigned deliveries and update order status
- Administrators: Oversee system operations, handle disputes, and monitor platform security

2.4 Operating Environment

The application will run on web and mobile platforms, requiring an internet connection. It will be compatible with Android and iOS devices.

2.5 Design and Implementation Constraints

- Must comply with data security regulations
- Must support multiple restaurants and users concurrently
- Must handle high concurrency of orders and transactions
- Must support multiple payment options and secure transactions

2.6 User Documentation

- User manuals
- Online help system
- FAQs and support documentation

2.7 Assumptions and Dependencies

- Requires a stable internet connection
- Third-party payment gateways
- GPS services for tracking deliveries

3. External Interface Requirements

3.1 User Interfaces

- Web and mobile interfaces
- User-friendly navigation with filters for restaurants and items
- Real-time order tracking dashboard

3.2 Hardware Interfaces

- Runs on Android and iOS devices
- Compatible with standard web browsers
- Supports GPS-enabled devices for tracking deliveries

3.3 Software Interfaces

- Uses RESTful APIs for data transactions
- Integration with third-party payment gateways
- Supports push notifications and messaging services

3.4 Communications Interfaces

- Uses HTTPS for secure communication
- Real-time notifications via WebSockets
- SMS and email notifications for order updates

4. System Features

4.1 User Management

4.1.1 Description and Priority

Users can register, log in, and update their profiles (High Priority).

4.1.2 Stimulus/Response Sequences

Users provide details -> System validates -> User profile is created.

4.1.3 Functional Requirements

REQ-1: Users must register with email and password.

REQ-2: Passwords must be encrypted.

REQ-3: Users must be able to reset their passwords securely.

4.2 Order Management

4.2.1 Description and Priority

Users can place, track, and review orders (High Priority).

4.2.2 Stimulus/Response Sequences

User selects items -> Confirms order -> Tracks delivery.

4.1.3 Functional Requirements

REQ-4: Users can add items to the cart.

REQ-5: Users can track orders in real-time.

REQ-6: Users can provide feedback on deliveries and restaurant service.

4.3 Payment Management

4.2.1 Description and Priority

Users can make secure payments (High Priority).

4.2.2 Stimulus/Response Sequences

User selects payment method -> Payment is processed -> Confirmation is sent.

4.1.3 Functional Requirements

REQ-7: Users can pay using credit/debit cards, UPI, and wallets.

REQ-8: Payment transactions must be securely processed.

REQ-9: Users must receive payment confirmation receipts.

4.4 Delivery Management

4.2.1 Description and Priority

Delivery personnel handle order pickups and deliveries (High Priority).

4.2.2 Stimulus/Response Sequences

Order assigned to delivery personnel -> Order picked up -> Delivered to customer.

4.1.3 Functional Requirements

REQ-10: The system must assign orders to delivery personnel dynamically.

REQ-11: Delivery personnel must update order status in real time.

REQ-12: Customers must receive delivery time estimates.

4.5 Notifications

4.2.1 Description and Priority

Users receive real-time notifications (Medium Priority).

4.2.2 Stimulus/Response Sequences

Order status updates -> System sends notifications -> User receives alert.

4.1.3 Functional Requirements

REQ-13: Users must receive push notifications for order status updates.

REQ-14: Admin must be able to send promotional notifications.

REQ-15: Users must be able to manage notification preferences.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- System should handle 10,000 concurrent users.
- Response time should be <2 seconds.
- Must scale automatically during peak hours.

5.2 Safety Requirements

- Ensuring data privacy of users.
- Secure handling of payment transactions.
- Data backup and recovery mechanisms.

5.3 Security Requirements

- Two-factor authentication for users.
- Encrypted payment transactions.
- Role-based access control for different user classes.
- Secure API authentication for third-party integrations.

5.4 Software Quality Attributes

- High availability and scalability.
- Easy maintainability and modularity.
- User-friendly interface and seamless navigation.

5.5 Business Rules

- Only registered users can place orders.
- Delivery personnel can update order status only for assigned orders.
- Restaurants must provide accurate menu details and pricing.

6. Other Requirements

- Must support multiple payment methods including credit/debit cards, UPI, and wallets.
- Must provide order history for users.
- Must include analytics for restaurants to track sales and performance.

Appendix A: Glossary

- *API: Application Programming Interface*
- *HTTPS: HyperText Transfer Protocol Secure*
- *GPS: Global Positioning System*

Appendix B: Analysis Models

- ***ER diagrams***
- ***Flowcharts***
- ***Use case diagrams***

Appendix C: To Be Determined List

- *Payment gateway provider*
- *Specific performance benchmarks*
- *Third-party service providers for delivery logistics*