

# **Software Requirements Specification**

**for**

# **Food Delivery Website**

**Version 1.0 approved**

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### Revision History

Date	Version	Description	Author
25-1-2025	1	Initial Draft	Aryan

# 1. Introduction

The Food Delivery System (FDS) is designed to streamline the process of ordering food online, offering users a convenient platform to browse menus, place orders, and track deliveries in real time. This document defines the detailed requirements necessary to develop, test, and deploy the system, ensuring it meets the expectations of both end-users and stakeholders. The FDS is envisioned as a user-friendly, efficient, and scalable solution that caters to the needs of customers, restaurant owners, and delivery personnel, contributing to the growth of online food services.

## 1.1 Purpose

The purpose of this document is to clearly define the requirements of the FDS, serving as a central guideline throughout the system's lifecycle. It ensures consistency and alignment among all teams involved in development, testing, and deployment. By detailing functional and non-functional requirements, the document aids in maintaining the project's focus on user satisfaction, reliability, and operational efficiency.

## 1.2 Document Conventions

To simplify reference and categorization:

- Requirements prefixed with "FR" represent functional requirements, which define specific system features and capabilities.
- Requirements prefixed with "NFR" represent non-functional requirements, which outline performance, security, and usability standards.

## 1.3 Intended Audience and Reading Suggestions

The document is intended for the following audiences:

- **Developers:** To gain a thorough understanding of the system's required functionality and architecture.
- **Testers:** To design test cases and validate that the implemented features adhere to specified requirements.
- **Stakeholders:** To verify that the system aligns with business goals and end-user expectations.

Each section of the document provides a structured approach to understanding different aspects of the system. Developers and testers should focus

on the functional and non-functional requirements, while stakeholders may benefit from the project scope and high-level overviews.

### **1.4 Project Scope**

The FDS will enable users to explore menus of registered restaurants, place orders seamlessly, and track the status of their food delivery. Additionally, the system will offer restaurant owners robust tools for managing their menus, processing orders, and updating availability in real time. The project aims to enhance user convenience, improve restaurant operations, and facilitate effective communication between all parties.

### **1.5 References**

The development of this document has been guided by the following standards and resources:

- IEEE Standard for Software Requirements Specification (IEEE Std 830-1998).
- Online Food Delivery Guidelines.

## 2. Overall Description

### 2.1 Product Perspective

The Online Food Ordering System (OFOS) aims to revolutionize the food ordering experience by transitioning from traditional methods, such as phone-based or in-person ordering, to a seamless online platform. This system will connect users, restaurants, and delivery personnel through an intuitive interface. Customers will have access to a variety of restaurants, menus, and convenient ordering options, while restaurant owners will benefit from tools to manage menus and orders efficiently. The admin panel will serve as the backbone, ensuring smooth system operations and support.

### 2.2 Product Features

The FDS includes several key features designed to enhance user experience and operational efficiency:

- **User Registration and Login:** Secure authentication process for personalized accounts.
- **Order Tracking:** Real-time updates on order status, from preparation to delivery.
- **Secure Payment Integration:** Support for multiple payment methods with robust encryption for safety.

### 2.3 User Classes and Characteristics

The system caters to four primary user groups:

- **Customers:** Includes both tech-savvy individuals and users with limited technical expertise, ensuring broad accessibility.
- **Restaurant Owners:** Manage their restaurant's menus, order statuses, and availability in real time.
- **Delivery Partners:** Handle order pickups and deliveries, track routes, and update delivery statuses in real time.
- **Admins:** Oversee system functionality, manage user queries, and maintain platform reliability.

### 2.4 Operating Environment

- **Web Browsers:** The platform is compatible with modern browsers like Google Chrome, Mozilla Firefox, and Microsoft Edge.
- **Mobile Devices:** Optimized for Android (version 8.0 and above) and iOS (version 12.0 and above) to provide seamless mobile access.

### 2.5 Design and Implementation Constraints

- **Payment Security:** Must adhere to PCI DSS standards to ensure secure payment processing.
- **Scalability:** Limited to handling a maximum of 10,000 concurrent users without performance issues.

## **2.6 User Documentation**

Comprehensive user documentation, including manuals, quick-start guides, and FAQs, will be available to help users understand and operate the system effortlessly.

## **2.7 Assumptions and Dependencies**

- A stable internet connection is required for optimal system performance.
- The system relies on third-party APIs for secure payment processing and real-time location tracking.

## **3.System Features**

### **3.1 User Authentication**

Description: Secure and robust login system for both customers and restaurant owners. This feature ensures that only authorized users can access the platform. Customers can sign up using their email or social media accounts, while restaurant owners are verified through a more comprehensive registration process.

Functionality:

Supports multi-factor authentication (MFA) for added security.

Allows password recovery via email or SMS.

Provides role-based access control to differentiate between customer and admin functionalities.

Benefits:

Protects user data and prevents unauthorized access.

Builds trust among users by ensuring a secure platform.

### **3.2 Order Management**

Description: A comprehensive system that allows customers to browse restaurant menus, customize their orders, and place them online. This feature also helps restaurant owners efficiently manage incoming orders.

Functionality:

Menu browsing with filters for cuisine, dietary preferences, and pricing.

Dynamic cart management, allowing customers to add, remove, or update items.

Real-time order confirmation and estimated delivery times.

Options for scheduling orders for a later date or time.

Order history for customers to reorder their favorite meals easily.

Notifications for customers (order placed, prepared, out for delivery) and restaurant owners (new order alert).

Benefits:

Streamlines the ordering process for customers, enhancing convenience.

Improves operational efficiency for restaurants by organizing order details systematically.



### **3.3 Delivery Tracking and Management**

Description: Enables real-time tracking of orders and efficient route optimization for delivery personnel.

Functionality:

- GPS tracking to show live delivery status to customers.

- Automated route optimization for delivery partners to reduce delays.

- Notifications for delivery milestones (pickup, en route, delivered).

Benefits:

- Enhances customer satisfaction with timely updates.

- Improves delivery efficiency and reduces operational costs.

### **3.4 Payment Integration**

Description: A secure and flexible payment system to handle transactions seamlessly.

Functionality:

- Supports multiple payment methods (credit/debit cards, UPI, wallets, cash on delivery).

- Ensures data encryption and PCI DSS compliance.

- Generates invoices and tracks payment status.

Benefits:

- Simplifies the payment process for customers.

- Provides transparency in financial transactions for all stakeholders.

### **3.5 Admin Panel**

Description: A powerful management tool for restaurants and platform administrators.

Functionality:

- Menu and inventory management.

- Order tracking and status updates.

- User management, including adding/removing customers and delivery personnel.

Access to analytics and performance reports.

**Benefits:**

Empowers restaurants to make data-driven decisions.

Facilitates smooth operation of the platform.

## **4. External Interface Requirements**

### **4.1 User Interfaces**

- Intuitive UI for customers and restaurant owners.

### **4.2 Hardware Interfaces**

- Server specifications: 16 GB RAM, 4 CPUs, 500 GB SSD.

### **4.3 Software Interfaces**

- Integration with payment gateways (e.g., Stripe, PayPal).

### **4.4 Communications Interfaces**

- Restful APIs for client-server communication.

## **5. Nonfunctional Requirements**

### **5.1 Performance Requirements**

The system must process up to 1,000 orders per second with minimal delays, ensuring fast order processing and quick response times even during peak traffic.

### **5.2 Safety Requirements**

Ensure customer data privacy: Customer information (e.g., name, address, payment details) must be securely stored and only accessible by authorized personnel, following privacy standards like GDPR.

### **5.3 Security Requirements**

Use HTTPS for all communications:

All data exchanged between the system and users must be encrypted using HTTPS to protect against unauthorized access or tampering.

### **5.4 Software Quality Attributes**

Usability: Simple navigation:

The system must have an easy-to-use interface with clear menus and options, allowing users to complete tasks quickly without confusion.

## 6. Other Requirements

The system must be designed to support future scalability, enabling the seamless integration of additional restaurants without impacting performance, ensuring continued growth and expanded service coverage.

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### Appendix A: Glossary

- **FDS:** Food Delivery System.
  - **PCI DSS:** Payment Card Industry Data Security Standard.
  - The **General Data Protection Regulation (GDPR)** is a comprehensive privacy and data protection law implemented by the European Union (EU) that came into effect on **May 25, 2018**. It governs how organizations collect, process, and store personal data of individuals in the EU. GDPR is designed to give individuals greater control over their personal data and to ensure that businesses handle data transparently and securely.
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### Appendix B: Analysis Models

- **Use case diagrams.**
  - **Sequence diagrams.**
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### Appendix C: Issues List

Issue ID	Description	Status
1	Payment gateway delays	Open
2	GPS tracking inaccuracies	Open