perplexity

# Online Food Delivery Platform

## Project Requirements Specification (Detailed Version 1.0)

## 1. Introduction

The **Online Food Delivery Platform** connects users with local restaurants, enabling seamless food ordering, real-time tracking, and secure payments. This document provides an exhaustive breakdown of functional and non-functional requirements, use cases, business rules, and integration points—sufficient for engineering, quality assurance, and project management teams.

## 2. Scope

- **User Types:** Customers, Restaurant Admin, Delivery Agents, Platform Admin
- **Platforms:** Web (responsive), Android, iOS native apps
- **Core Features:** Registration/Authentication, Restaurant Discovery, Order Management, Payment Processing, Delivery Tracking, Feedback/Ratings, Admin Dashboard

## 3. User Stories & Functional Requirements

### 3.1 User Registration & Authentication

| User Story | Acceptance Criteria |
|---|---|
| As a new user, I want to register using my email or phone so that I can access the platform. | - Registration form collects: Full Name, Email, Phone, Password<br>- Password policy: 8+ chars, 1 upper, 1 lower, 1 number, 1 special character<br>- Email/phone must be unique; duplicates are rejected with clear error<br>- Confirmation link/OTP sent; account inactive until verified<br>- Password reset via email/SMS, with temporary link/OTP valid for 15 mins |

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|---|---|
| As a registered user, I want to log in securely so that I can order food. | - Login requires verified email/phone and correct password<br>- CAPTCHA shown after 3 failed attempts<br>- Session expires after 30 mins inactivity<br>- Failed login lockout after 5 attempts (15 min lock)<br>- Login logs maintained for security review |
| As a user, I want to update my profile information. | - Users can edit: Name, Phone, Email (requires re-verification), Profile Picture<br>- All changes saved and reflected immediately<br>- Audit log of changes maintained |

## 3.2 Restaurant Search & Discovery

| User Story | Acceptance Criteria |
|---|---|
| As a user, I want to search for restaurants by various criteria so that I can find food I like. | - Search by: Name, Cuisine, Location (GPS/address), Rating, Delivery Time, Minimum Order<br>- Advanced filters: Veg/Non-veg, Vegan, Gluten-free, Halal, etc.<br>- Sort by: Delivery time, rating, price<br>- Pagination (20 items/page)<br>- Restaurant cards show: Logo, Name, Cuisine, Rating, Delivery Time, Min. Order, Open/Closed status |
| As a user, I want to view restaurant details and menus. | - Restaurant page shows: Full menu (categories, items, descriptions, prices, customization options, images)<br>- Dietary tags on menu items<br>- User reviews and ratings<br>- Operating hours (with holiday exceptions) |

## 3.3 Order Placement & Management

| User Story | Acceptance Criteria |
|---|---|
| As a user, I want to add items to my cart, review, and place an order. | - Cart shows items, quantities, customization, price breakdown<br>- Users can modify cart before checkout<br>- Delivery address selection: Saved addresses or new entry<br>- Special instructions field for delivery<br>- Order only allowed during restaurant operating hours<br>- Order confirmation page: Order ID, items, total, delivery time estimate, payment method |

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|---|---|
| As a user, I want to track my order in real time. | - Order status: Confirmed → Preparing → Out for Delivery → Delivered<br>- Real-time map tracking of delivery agent<br>- Push/SMS notifications at each status change<br>- In-app chat/call with delivery agent<br>- Estimated delivery time updates (live) |
| As a user, I want to cancel an order if needed. | - Cancellation allowed up to "Preparing" status<br>- Refund processed per payment method<br>- Notification to user and restaurant<br>- Order history reflects cancellation |

## 3.4 Payment Processing

| User Story | Acceptance Criteria |
|---|---|
| As a user, I want to pay securely using my preferred method. | - Payment options: Credit/Debit Card, UPI, E-Wallet, Net Banking<br>- Secure checkout (HTTPS, PCI-DSS compliant)<br>- Payment failure does not confirm order; user can retry or choose another method<br>- Successful payment generates invoice (email/SMS)<br>- Refund processed within 3–5 business days for cancellations |
| As a user, I want to apply promo codes or discounts. | - Promo code field at checkout<br>- Validation: Code exists, is active, user eligible<br>- Discount applied to cart total<br>- Only one promo per order |

## 3.5 Ratings & Feedback

| User Story | Acceptance Criteria |
|---|---|
| As a user, I want to rate my order and provide feedback. | - Rating: 1–5 stars for food, delivery, packaging<br>- Optional text feedback<br>- Feedback visible on restaurant page after moderation<br>- Users can edit feedback within 24 hours |

## 3.6 Admin & Restaurant Management

| User Story | Acceptance Criteria |
|---|---|

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|---|---|
| As a restaurant admin, I want to manage my menu and availability. | - Add/remove/edit menu items, categories, prices, images<br>- Mark items as out of stock/available<br>- Set operating hours, holidays, delivery zones<br>- Receive and respond to customer feedback |
| As a platform admin, I want to manage users, restaurants, and orders. | - User/restaurant/delivery agent CRUD operations<br>- View/export order history, analytics<br>- Handle disputes, refunds, bans<br>- Push platform-wide notifications |

### 3.7 Delivery Management

| User Story | Acceptance Criteria |
|---|---|
| As a delivery agent, I want to receive and manage delivery assignments. | - Receive order details, pickup location, customer address<br>- Navigate using integrated maps<br>- Mark delivery status (Picked Up, On the Way, Delivered)<br>- In-app chat/call with customer<br>- Earnings and performance dashboard |

## 4. Non-Functional Requirements

- **Performance:** Platform supports 10,000 concurrent users; order placement completes in <5 seconds; search results load in <2 seconds
- **Availability:** 99.9% uptime (excluding scheduled maintenance)
- **Security:** End-to-end encryption; regular security audits; GDPR/data protection compliance
- **Scalability:** Horizontal scaling for peak loads; microservices architecture
- **Usability:** WCAG 2.1 AA compliant; intuitive navigation; responsive design
- **Localization:** Support for multiple languages and currencies

## 5. Integration Requirements

- **Payment Gateways:** Stripe, PayPal, Razorpay (seamless API integration)
- **SMS/Email:** Twilio, SendGrid

- **Maps/Navigation:** Google Maps, Mapbox
- **Analytics:** Google Analytics, Mixpanel
- **Logging/Monitoring:** ELK Stack, Prometheus, Grafana

## 6. Business Rules

- **Restaurant onboarding:** KYC, menu approval, hygiene certification
- **Order cancellation:** Full refund if canceled before “Preparing”; partial/no refund after
- **Promotions:** Limited-time offers, referral bonuses, loyalty points
- **Dispute resolution:** 24-hour window for raising issues; escalated to support if unresolved

## 7. Assumptions

- Users have internet access and compatible devices
- Restaurants update menu/availability in real time
- External services (payment, SMS, maps) are available and reliable

## 8. Constraints

- Delivery zones defined by restaurant and platform
- Menu changes take effect immediately but may not reflect in active carts
- Payment gateway downtimes may delay order confirmations

## 9. Risk Management

- **Payment failure:** Fallback to alternate methods; clear user communication
- **Delivery delay:** Real-time updates; compensation policy
- **Data breach:** Immediate incident response; user notification

This **comprehensive requirements document** is structured for clarity, traceability, and actionable test case derivation. It covers user journeys, edge cases, business rules, and integration details—mirroring real enterprise-grade project specifications. If you need this expanded into formal test cases, or require a specific section in even greater detail, please specify your focus area.