Food Delivery App Backend Documentation

Overview

This backend service supports a food delivery app with three primary user roles: **Customer**, **Chef**, and **Rider**. The system enables secure OTP authentication, payment processing, meal subscriptions, order management, and delivery tracking.

1. Customer App

Authentication

- **OTP Authentication:** Customers can log in/register using OTP verification.

Payments

- **Razorpay Integration:** Supports payments and refunds via Razorpay gateway.

Ordering and Subscription

- **Order Types:**
    - One-time order
    - Subscription-based tiffin meal plans
- **Default Meal Selection:**
    - Customers must select a default meal daily by **10 AM or 12 Noon**.
    - If not selected, the system auto-assigns a default meal from the restaurant's available menu.
- **Notifications:**
    - Customer receives notification daily at 10 AM to select their default meal.

Subscription Management

- **Pause Subscription:**
  - Customers can pause their subscription.
  - Paused days are added to the end of the subscription period upon resumption.
- **Cancel Subscription:**
  - Partial refunds are calculated based on days consumed.
  - Refund is processed against the closest matching meal plan.
- **Modification:**
  - Customers can change delivery time slots and address daily.

History & Records

- View **subscription history** and **order history**.
- View meals served under subscription for current and previous weeks.

2. Chef App

Authentication

- **OTP Authentication:** Chefs authenticate using OTP.

Restaurant & Meal Plan Setup

- On login, chef creates or manages their restaurant profile.
- Define meal plans for subscriptions, e.g., 7, 15, 30 days.

Subscription & Orders

- Customers select a meal plan and make payment.
- Subscription start time depends on order timing:
  - If ordered **before 12 noon**, subscription starts immediately.
  - If ordered **after 12 noon**, subscription starts next day.

Batch Management & Rider Assignment

- Create delivery batches containing both one-time and subscription orders.
- Assign batches to riders.
- Every order has an OTP visible only to customers for verification.

Rider Management

- Register riders under the restaurant.
- Rider registration requires admin approval.
- Rider details are shared with the admin for approval.

3. Rider App

Authentication

- OTP-based login and registration.
- Rider accounts can only be created/registered by restaurant chefs.

Order Delivery

- Riders view assigned batches.
- Optimized delivery routes provided on integrated map.
- Orders require OTP verification upon delivery; delivery not allowed if OTP is incorrect.
- Once the last order in the batch is marked delivered, the entire batch is considered delivered.

Notifications

- Riders receive notifications on batch status changes.
- Customers receive corresponding notifications for batch updates (e.g., rider assigned, order out for delivery, order delivered).

Additional Notes

Notifications Summary

- Customers: Meal selection reminder, order status, batch status.
- Riders: Batch assignments, route updates, order status.
- Chefs: Rider registration status, batch status, order status.

Refund Calculations

- Refunds on subscription cancellation are prorated based on days used.
- System finds the closest meal plan for refund processing.

Security & Access Control

- OTP verification is used for all roles.
- Order OTP protects delivery authenticity.
- Admin approval controls rider registrations.

API Endpoints (High Level Overview)

Module	Endpoint	Description
Customer	POST /auth/otp-login	Login/Register via OTP
Customer	POST /orders/one-time	Place a one-time order
Customer	POST /subscriptions/start	Start subscription with payment
Customer	GET /subscriptions/history	Fetch subscription history
Customer	POST /subscriptions/pause	Pause subscription
Customer	POST /subscriptions/cancel	Cancel subscription with refund

Customer	POST /meal/select-default	Select daily default meal
Chef	POST /auth/otp-login	Chef login/register via OTP
Chef	POST /restaurants/create	Create restaurant profile
Chef	POST /mealplans/create	Create meal plans
Chef	POST /batches/create	Create delivery batch
Chef	POST /riders/register	Register a rider
Rider	POST /auth/otp-login	Rider login/register via OTP
Rider	GET /batches	View assigned batches
Rider	POST /orders/verify-delivery	Verify OTP and mark order delivered
Notifications	(Various endpoints for push notifications)	