# 🍽️ Tiffin Subscription & Delivery Platform - Functional Specification Document

## 🚀 Project Overview

A multi-role tiffin delivery platform enabling users to subscribe to meal plans (one-time, weekly, monthly), with personalized preferences and dedicated vendor-assigned delivery partners.

## 📲 Platform Scope

* Customer App (Android/iOS)
* Tiffin Provider/Vendor App (Android/iOS)
* Delivery Partner App (Android)
* Admin Panel (Web)

## 🤖 Technology Stack

* **Frontend (Mobile):** React Native
* **Frontend (Web):** React.js
* **Backend:** Node.js
* **Database:** MySQL

## 🏡 Customer App Features

### Core

1. **Tiffin Menu Browsing** (with photos, ingredients, calories)
2. **Subscription Plans**: One-time, Weekly, Monthly
3. **Order Tracking**: Real-time status (kitchen prep, delivery)
4. **Secure Payments**: UPI, Card, Wallet, COD
5. **Live Delivery Map**: Integrated with Google Maps

### Additional

* Cuisine/Diet Filters (veg/non-veg, Jain, low-carb, etc.)
* Personalized Meal Box
* Allergy & Health Tagging
* Meal Skip/Reschedule

### User Account

* OTP/Login
* Multiple Addresses
* Wallet System
* Profile + Dietary Preferences

### Order Management

* Active Subscription Dashboard
* Favorite Kitchens/Meals
* Repeat Orders

### Payments

* Auto-renewal
* Invoice download
* Coupons & Referrals

### Support

* In-app Chat
* FAQ & Policy Pages
* Emergency Hotline

## 🍳 Tiffin Provider App Features

### Core

1. Franchise Onboarding (fee, docs)
2. Kitchen Profile Setup (logo, bio, tags)
3. Menu Setup & Scheduling (weekly/fixed)
4. Real-time Order Notifications
5. Payment & Withdrawals

### Additional

* Pause/Stop Services
* Portion Limits per Meal Type
* Earnings Dashboard
* Kitchen Insights (ratings, repeat rate)

### Customer Handling

* Reply to Feedback
* Broadcast Notifications
* Subscription Calendar

### Financial

* Withdraw Requests
* Tax Reports
* Commission Breakdown

## 🚚 Delivery Partner App

### Core

* Register/Login with ID
* Assigned Orders List (based on vendor)
* Map Navigation (Google Maps)
* Status Update (picked, enroute, delivered)

### Additional

* Earnings Summary
* Delivery History
* Support Contact

## 📆 Kitchen-Specific Timing System

Each kitchen sets delivery time windows: - **Lunch Window:** e.g. 12PM – 2PM - **Dinner Window:** e.g. 7PM – 9PM - User gets meals only within kitchen’s defined window - Subscription enforces preferred time within allowed slot

## 🔄 Order Generation Flow (Daily CRON)

1. At fixed time (e.g., 6AM), generate today’s orders
2. Fetch active subscriptions
3. Validate meal window (e.g., lunch = 12–2)
4. Assign order to vendor’s delivery partner
5. Notify delivery partner via push

## 💼 Admin Panel Features

### Franchise & Vendor

* Franchise/Kitchen Onboarding, KYC
* Zone Assignment
* Kitchen Verification (docs, photos)

### Partner Mgmt

* Menu Approval
* Delivery Assignment Logic (auto/manual)
* Availability Monitoring

### Financial Panel

* Commission Settings
* Wallet & Refund System
* Plan Manager (subscription tiers)

### Support

* Complaint Dashboard
* Refund Processing
* Delivery Delay Alerts

### Promotion

* Push Notifications
* Referral System Tracking
* SMS/Email Campaigns

### Analytics

* City/Zone Performance
* Revenue Reports
* Top Performer Dashboards

### Platform

* Role-based Access
* CMS Management
* App Version Control

## 🎒 Final Suggestions

* All meal slots should respect kitchen availability
* Delivery partners can be freelancers but fixed per kitchen
* Use BullMQ for job scheduling (CRON)
* Track delivery delay penalties and user feedback per kitchen

## 🚀 Project Modules Categorized by Complexity

### Easy

* User login + OTP
* Vendor onboarding form
* Wallet management
* Meal browsing + filters
* Support chat UI

### Medium

* Subscription flow with preferred time
* Daily CRON for order generation
* Admin zone-based kitchen assignment
* Partner order scheduling interface

### Complex

* Vendor-specific delivery partner mapping
* Live tracking (Google Maps integration)
* Kitchen-level scheduling and rescheduling
* Menu planning + scheduling module

### Very Complex

* Order distribution logic with time window validation
* Delivery time optimization for multiple partners
* Auto-renewal billing logic with payment gateway integration
* Real-time analytics dashboard (multi-role)

You’re now ready to go full-send on development. Want me to start with backend logic, DB design, or React Native screen flow?