

Software Requirements Specification

Platform for Booking and Service Management

Introduction / Overview

This document outlines the functional and non-functional requirements for a platform designed to facilitate bookings and services. It details the various user roles, system functionalities, and technical considerations necessary for the successful development and operation of the platform.

Objectives

- To provide a seamless booking experience for users.
- To enable business owners to manage their services, bookings, and payments efficiently.
- To offer robust administrative control over the platform's operations.
- To ensure secure and reliable payment processing.
- To facilitate effective communication between users, business owners, and support staff.

Scope

This document covers the core functionalities of the platform, including user management, booking management, payment processing, communication features, and administrative controls. It also addresses key non-functional requirements such as security, performance, and usability.

In-Scope

- User authentication and profile management (Customer, Business Owner, Admin, Sub-Admin).
- Service and location browsing, viewing, and booking.
- Integrated payment gateway for secure transactions and payment splitting.
- Real-time chat functionalities (Customer-Owner, Customer-Support, Customer-AI Bot).
- Notification system for booking confirmations, reminders, and payment alerts.
- Comprehensive admin dashboard for platform oversight and management.
- Business owner dashboard for service, booking, and payment management.
- Rating and review system.

Out-of-Scope

- Specific marketing campaigns or promotional content generation (beyond featured listings).
- Advanced CRM functionalities not directly related to booking or support.
- Integration with external accounting systems (beyond payment disbursement).

Functional Requirements

Admin Dashboard

- **Access Control:** View, add, update, or delete any user or location.
- **Role Management:** Manage roles and permissions for all user types.
- **Commission Management:** Control commission percentage split between the platform and location owners.
- **Analytics:** Access full analytics including bookings, payments, and user data.
- **Listing Management:** Approve or suspend any listing.
- **Communication Oversight:** Review all conversations (between users, owners, and support).

- **Feedback Management:** See all feedback and ratings.
- **Content Management:** Create blog/news/FAQs (if needed).
- **Support Staff Management:** Add or manage internal support staff.

User Interaction (Customer)

- **Authentication:** Login / Sign up (Email, Phone, Google, Apple).
- **Browsing:** Browse services or locations with filters (Location, Rating, Category, Available Time).
- **Details Viewing:** View details (photos, availability, reviews, descriptions, prices, owner info).
- **Booking Initiation:** Click "Book Now".
- **Booking Details Selection:** Choose date & time, select service/package, add extra notes or requirements.
- **Availability Check:** See live availability (from backend/API).
- **Payment:** Pay using integrated gateways (e.g., Paymob, Stripe).
- **Booking Management:** View upcoming/past bookings, cancel/reschedule within policy, download invoices.
- **Support Contact:** Contact Support.
- **Reviews:** Rate and review the service/location after completion.

Payment Gateway

- **Payment Method Selection:** User chooses payment method (Paymob / Stripe / Tap / Others).
- **Payment Splitting:** Automatically split payment: % to platform (admin) and % to location owner.
- **Confirmation:** Confirmation via Email, SMS, and in-platform notification.
- **Integrated Gateways:** Support Paymob (MENA region), Stripe (Global), Tap Payments (Gulf region), Fawry / Vodafone Cash (Egypt).
- **Supported Methods:** Credit / Debit Card, Wallets (Apple Pay, Google Pay), Local payment links or cash options.

- **Secure Checkout:** Redirect or inline form with tokenization, PCI-DSS compliance, OTP / 3D Secure supported.
- **Card Saving:** Option to save card for future use.
- **Payment Confirmation:** Instant webhook/API update to backend for success/failure status.
- **Transaction Storage:** Store transaction ID + details in database.
- **Disbursement:** Platform splits payment, admin takes % or fixed fee, remainder goes to Business Owner wallet (delayed payout or instant).
- **Earnings Display:** Show earnings in Business Dashboard.

Backend Handling

- **Booking Storage:** Save booking in database.
- **Availability Update:** Update availability in real-time.
- **Notifications:** Notify Customer, Business Owner, and Admin upon booking.
- **Payment Trigger:** Trigger payment after booking is confirmed.
- **Price Display:** User sees final price (with tax or fees) and payment breakdown (platform fee + service fee).

Notifications System

- **Real-time:** Real-time booking confirmation.
- **Calendar Sync:** Calendar sync for business owner.
- **Reminders:** Reminders before appointment.
- **Payment Alerts:** Email / SMS / In-app alerts for payment receipt, booking + payment summary, invoice (PDF or link).
- **Chat Notifications:** Real-time via sockets, in-app badge on unread messages, optional Email or push notifications.

Chat System

- **Private Chat (Customer ↔ Business Owner):** For specific product/booking inquiries.

- **Customer Support Chat (Customer ↔ Admin / Support Team):** For general questions or problems.
- **Smart AI Assistant (Customer ↔ AI Bot):** Answers common FAQs 24/7.
- **Admin Oversight:** Admin can see all messages, reply to any chat, assign support chats to team members, and check full chat history.
- **Customer Experience:** Users can choose to chat with Owner, Support, or the Bot.

Roles and Permissions

- **Admin (Super user or system owner):** Full access to all data, create/manage sub-admins with roles (e.g., support, content, finance), track payments, booking stats, user growth, add/edit global content (FAQs, T&Cs, Refund policy).
- **Venue Owner:** Sign up / log in as "Business Owner", add/edit/delete their own locations, upload images, prices, available times, and working hours, view and manage their own bookings only, get notifications on new bookings, chat with their own customers and customer support, set up payment method (e.g., link Stripe or bank info), automatically receive their portion of the payment.
- **Customer:** Sign up / log in, browse services and locations, make bookings, pay using integrated gateways, receive booking confirmations, chat with business owner (private), customer service (support), and smart assistant (AI bot), rate and review the service/location.
- **Customer Service:** Chat with users and business owners, view bookings for support purposes, report abuse or technical issues to Admin, cannot manage payments or edit locations.
- **Sub-Admin:** Limited-access user with specific permissions (e.g., managing bookings, services, or support).

Reviews & Ratings

- **User Submission:** User rates services after completion.
- **Owner Reply:** Business owner can reply to reviews.
- **Admin Moderation:** Admin monitors and can hide abusive reviews.

Refund & Cancel

- **Policy Enforcement:** Partial / Full refund based on admin-defined rules.
- **Money Return:** Money returned to user via gateway API.
- **Status Update:** Update reflected in Admin panel, User dashboard, and Business dashboard.

Non-Functional Requirements

- **Performance:** The system should be responsive, with quick loading times for pages and efficient processing of bookings and payments.
- **Security:** All transactions and user data must be secured using industry-standard encryption and security protocols (e.g., PCI-DSS compliance for payments, OTP/3D Secure).
- **Usability:** The platform should have an intuitive and user-friendly interface for all user roles.
- **Scalability:** The system should be able to handle an increasing number of users, bookings, and data without significant performance degradation.
- **Reliability:** The platform should be available 24/7 with minimal downtime.
- **Maintainability:** The codebase should be well-structured, documented, and easy to maintain and update.
- **Compatibility:** The web application should be compatible with major browsers and devices (desktop and mobile).

User Stories

- **As a Customer,** I want to easily browse and book services so that I can quickly find and schedule what I need.
- **As a Customer,** I want to securely pay for my bookings so that my financial information is protected.
- **As a Business Owner,** I want to manage my services and availability so that I can efficiently run my business.

- **As a Business Owner**, I want to receive my payments automatically so that I don't have to manually track earnings.
- **As an Admin**, I want to oversee all platform activities and user interactions so that I can ensure smooth operations and address issues promptly.
- **As a Customer Support Agent**, I want to chat with users and business owners so that I can provide timely assistance.

Assumptions & Constraints

Assumptions

- Users have reliable internet access.
- Third-party payment gateway APIs (Paymob, Stripe, Tap, etc.) are stable and accessible.
- Business owners will provide accurate and up-to-date information for their listings.
- Legal and regulatory compliance for online bookings and payments will be adhered to.

Constraints

- Development timeline and budget are limited.
- Integration with specific third-party services may be subject to their API limitations.
- The platform must comply with relevant data privacy regulations (e.g., GDPR, CCPA).

Timeline / Milestones

(To be filled in during project planning phase)

Conclusion

This document provides a comprehensive overview of the requirements for the platform. Adhering to these specifications will ensure the development of a robust, user-friendly, and efficient system that meets the needs of all stakeholders. Further detailed design and implementation plans will build upon these foundational requirements.