# Taxi Booking Portal

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### **1. Introduction**

#### **1.1 Purpose**

This document details the essential requirements for the Taxi Booking Portal, which will provide a platform for users to search, book, and manage taxi rides. It will include features for real-time fare estimation, and secure payment processing. Admins will have a backend panel to oversee ride management, driver availability, and user support. Designed to enhance convenience, the platform will also streamline communication between riders and drivers, ensuring a smooth and efficient taxi booking experience.

#### **1.2 Scope**

The Taxi Booking Portal will provide users with a platform to search, book, and manage taxi rides based on their location and preferences. The system will offer multiple service types, including standard and premium options. Admins will have access to a secure backend to manage drivers, bookings, service areas, and user feedback. The portal will be mobile-friendly and accessible via all major browsers, ensuring ease of use across various devices. Booking history, and customer support features will also be included to streamline the ride experience.

### **1.3 Definitions, Acronyms, and Abbreviations**

* **UI** – User Interface
* **API** – Application Programming Interface
* **SEO** – Search Engine Optimization
* **Admin** – Website administrator with access to manage backend operations
* **GPS** – Global Positioning System
* **ETA** – Estimated Time of Arrival

### **1.4 References**

[Taxi Services Chandigarh | Book Cab Airport Taxi Services - Sardar Travels](https://sardartravels.in/)

### **1.5 Overview**

This SRS document outlines the requirements for developing a robust, efficient, and scalable Taxi Booking Portal. The platform is designed to serve three key user groups: passengers seeking transportation, drivers providing rides, and administrators overseeing the platform’s operations. The system will focus on seamless ride booking and effective communication between users and drivers. It aims to provide an intuitive experience while ensuring smooth platform management and reliable service delivery.

## **2. Overall Description**

### **2.1 Product Perspective**

The taxi booking website will serve as a central digital solution for handling urban transportation, offering key services such as ride scheduling, fare estimation, driver assignment. Built using technologies like HTML5, CSS3, JavaScript , and a PHP the platform will focus on performance, scalability, and security. The design will be fully responsive and optimized for various screen sizes, ensuring smooth user experiences across smartphones, tablets, and desktops.

### **2.2 Product Features**

* **Taxi Search & Booking**: Real-time search, location input, ride selection, and instant booking
* **Fare Estimation**: Calculates fare based on distance, time, and selected service type
* **Admin Panel**: Administrators can manage users, rides, fares, service areas, and platform content.
* **Service Types**: Standard cab, premium cab, SUVs, airport transfers
* **WhatsApp Integration**: Instant messaging functionality for users to connect with consultants and customer service agents in real time.
* **Content Management System (CMS):**Enables admins to update service information, FAQs, policies, and announcements without technical expertise.
* **Responsive Design:** Optimized for performance across mobile, tablet, and desktop devices.
* **Help Center and FAQs:**Provides categorized, searchable FAQs and support contact options for users seeking assistance.

### **2.3 User Classes and Characteristics**

* **Riders (Users):** Can search, book, cancel, and track rides
* **Drivers:** Receive and manage bookings, update availability
* **Admins:** Manage bookings, users, pricing, reports, and platform content
* **Guest Users:** Can search rides and fare but must sign up to book

### **2.4 Operating Environment**

* **Supported Browsers:** Chrome, Firefox, Safari, Edge
* **Mobile:** Android and iOS (responsive design or hybrid app)
* **Backend:** PHP with MySQL
* **Hosting:** Secure, scalable cloud infrastructure

### **2.5 Design and Implementation Constraints**

* **Accessibility Compliance**: The website must meet WCAG 2.1 standards to ensure it is accessible to all users, including those with disabilities.
* **Data Security**: The platform must implement strong security measures including SSL encryption, secure login/authentication, and protection against vulnerabilities like SQL injection and cross-site scripting (XSS).
* **Reliable Hosting Environment**:The website will be hosted on reliable, high-availability servers with enhanced security measures to ensure continuous accessibility and protection of sensitive user data.
* **Performance Optimization**: The website should load quickly with techniques like image compression, lazy loading, caching, and optimized code to provide a smooth user experience across all devices.
* **Cross-Browser Compatibility**: The platform must function consistently across all major desktop and mobile browsers including Google Chrome, Firefox, Safari, and Edge.
* **Content Management System (CMS)**: A user-friendly CMS must be integrated to allow admins to easily manage and update content, services, and announcements without needing technical skills.
* **Scalability**: The architecture should support future growth in users, rides, and content, maintaining performance as demand increases.
* **Legal Compliance:** The platform must include all required legal pages such as Terms of Service, Privacy Policy, and Cookie Policy, which should be easily accessible and regularly updated to comply with regulations.

### **2.6 Assumptions and Dependencies**

* **Internet Connectivity:** The system assumes users have access to a reliable internet connection for smooth ride booking, real-time tracking, and payment processing.
* **Third-Party Integrations:** The platform will rely on external services such as Google Maps for location tracking, and SMS/email providers for notifications.
* **Updated User Devices and Browsers:** Users are expected to access the portal using modern, up-to-date browsers and devices to ensure compatibility and security.
* **Hosting Provider Reliability:** The website’s uptime and performance depend on the hosting provider’s infrastructure, including security, backups, and server availability.
* **Regulatory Compliance:** The platform depends on adherence to local transportation laws, data privacy regulations (like GDPR), and payment processing standards.
* **Availability of GPS Services:** The accuracy of ride tracking and driver navigation depends on GPS signal availability and third-party map services.

## **3. System Features**

### **3.1 Feature 1: Admin Dashboard**

* **Description**:Provides administrators with comprehensive tools to manage all aspects of the taxi portal, including user profiles (customers and drivers), and content.
* **Functional Requirements**:
  + Ability to approve or reject driver registrations and manage user roles..
  + Manage ride requests and monitor ride statuses (pending, ongoing, completed, canceled).
  + Control fare settings, vehicle types, and service areas.
  + Manage platform content such as FAQs, policies, and announcements.

### **3.2 Feature 2: Booking and Scheduling**

* **Description**:Enables users to book taxis instantly or schedule rides for a later time.
* **Functional Requirements**:
  + Display available vehicle types and fare estimates based on route and time.
  + Allow users to select pickup and drop-off locations with address autocomplete.
  + Option to cancel or reschedule rides with notifications sent to drivers and customers.

### **3.3 Feature 3: Content Management System (CMS)**

* **Description**:Allows clients to book consultations with immigration experts and monitor their appointments.
* **Functional Requirements**:
  + Admins can publish FAQs, terms of service, privacy policies, and announcements.
  + Built-in SEO tools to optimize content visibility on search engines.

### **3.4 Feature 4: Help Center and FAQs**

* **Description**:Provides users with self-help resources and easy access to support.
* **Functional Requirements**:
  + Categorized and searchable FAQ section.
  + Step-by-step guides for booking rides,and account management.
  + Contact support options for unresolved queries.

### **3.5 Feature 5: Social Media Integration**

* **Description**Supports sharing of ride experiences and promotions on popular social media platforms.
* **Functional Requirements**:
  + Social sharing buttons on key pages like ride confirmation and promotions.
  + Options for users to follow the taxi service on platforms like Facebook, Twitter, and Instagram for updates.

## **4. External Interface Requirements**

### **4.1 User Interface**

The taxi portal must have a clean, intuitive, and responsive user interface that provides a seamless experience across all devices. The design should be consistent throughout the platform, ensuring ease of navigation for users and drivers alike. Key pages and components include:

* Home page with ride booking functionality
* Admin login and dashboard
* Ride booking and scheduling interface
* Contact forms
* Help center and FAQs
* About us page
* Services page

### **4.2 Hardware Interfaces**

The system must be compatible with various hardware devices including:

* Desktop computers and laptops
* Smartphones and tablets running Android and iOS
* GPS devices and smartphone location services for ride tracking

### **4.3 Software Interfaces**

* **CRM System:** For managing customer and driver interactions, support tickets, and feedback.
* **Analytics Tools:** Integration with Google Analytics or similar platforms for tracking user behavior and website performance.
* **SMS and Email Service Providers:** For sending booking confirmations, notifications, and alerts.

### **4.4 Communications Interfaces**

* All communications between users and the portal will occur over secure HTTPS protocols to ensure data privacy and integrity.
* The system will send automated email notifications to users and drivers regarding ride status, and alerts.

## **5. System Attributes**

### **5.1 Performance Requirements**

* The website must load in under **3 seconds** on a standard internet connection to ensure a fast and responsive user experience.
* The system must be capable of handling high volumes of simultaneous users, especially during peak times (e.g., weekends, holidays).

### **5.2 Safety Requirements**

* The system must comply with **GDPR** (General Data Protection Regulation) for users within the EU and other applicable data protection laws, ensuring personal information is handled securely.
* All personal and financial data, such as customer profiles and payment details, must be encrypted both at rest and in transit using SSL/TLS encryption.
* The system must provide secure authentication methods, including multi-factor authentication (MFA) for sensitive actions (e.g., password changes, payment details).

### **5.3 Security Requirements**

* **User Data Protection:** All user data (including ride history, payment methods, and personal details) must be securely stored with access restricted to authorized users only.
* **Security Audits:** The website should undergo regular security audits to identify and resolve vulnerabilities, including penetration testing and vulnerability scanning.
* **API Security:** All third-party integrations (e.g., Google Maps, payment gateways) should be secured using OAuth or similar authorization methods to prevent unauthorized access to data.

### **5.4 Software Quality Attributes**

* **Reliability:** The system must maintain **99.9% uptime**, ensuring continuous availability and minimizing disruptions for both customers and drivers.
* **Usability:** The portal should be user-friendly for customers of all technical backgrounds, with a simple and intuitive interface for booking rides, managing profiles, and making payments.
* **Scalability:** The platform should be able to scale horizontally to accommodate increasing numbers of users, ride requests, and transactions. It must handle an increasing volume of traffic and bookings during peak hours without performance degradation.
* **Maintainability:** The codebase should be modular and well-documented to support easy maintenance and updates. It should be designed to allow for quick bug fixes and the addition of new features without disrupting the system's operations.

### **5.5 Availability and Redundancy**

* The system must support high availability through load balancing and redundant infrastructure to ensure 24/7 access for users across different time zones.
* **Data Backup:** Regular backups must be performed to ensure no loss of user data in case of system failure.

### **5.6 Legal and Compliance Requirements**

* The system must comply with all local and international regulations regarding transportation services, including applicable safety and data privacy laws.
* Terms of Service and Privacy Policy should be readily available and easily accessible to users before they use the platform. These documents should be regularly reviewed and updated to ensure compliance with evolving regulations.

## **6. Appendix**

### **6.1 Glossary**

* **API**: A set of protocols for building and interacting with software applications.
* **SEO**: The practice of optimizing a website to rank higher in search engine results.
* **HTTPS**: A secure protocol for transferring data between a browser and a website.
* **CRM (Customer Relationship Management):** A system that helps manage interactions with current and potential customers. It stores customer information, tracks interactions, and helps improve business relationships.
* **GDPR**: Regulation protecting personal data and privacy for EU residents.
* **User Experience (UX)**: The overall satisfaction and ease of use a user experiences on a website.
* **Scalability**: The ability of a system to grow and handle increased demand.
* **MFA (Multi-Factor Authentication):** A security process in which the user provides two or more verification factors to gain access to a website, enhancing the login security beyond just a password.
* **OAuth:** An open standard for token-based authentication and authorization. It allows secure access to user data from external services without exposing passwords.