**Functional Requirements:**

1. **User-Friendly Booking Process:**
   * **FR1**: The system must allow users to search and filter for travel services (flights, transportation, accommodation) by destination, dates, and other preferences.
   * **FR2**: Users must be able to view real-time availability and prices for all available travel options.
   * **FR3**: The system must allow users to add services to a booking cart and make adjustments (e.g., change dates, services).
   * **FR4**: The booking process should support multiple steps with clear navigation, including selecting services, entering personal details, and confirming payment.
   * **FR5**: After booking, the system must generate a booking confirmation and send it to the user .
2. **Efficient Transportation Management:**
   * **FR6**: The system must allow administrators to manage a fleet of vehicles or transportation options (e.g., adding new vehicles, drivers, and scheduling).
   * **FR7**: Users must be able to track the location of their transportation in real-time .
   * **FR9**: The system should allow users to rate drivers or transportation services, and provide feedback.
3. **Customer Management:**
   * **FR10**: Users must be able to create and maintain an account with profile information, including travel preferences and payment details.
   * **FR11**: The system must store a history of past bookings for each user.
   * **FR12**: The system must send automatic email/SMS reminders for upcoming bookings, cancellations, or important updates.
   * **FR13**: The system should allow users to contact customer support.
4. **Pricing and Billing Management:**
   * **FR14**: The system should dynamically calculate prices based on the selected services, dates, and other user inputs.
   * **FR16**: The system should generate detailed invoices for all transactions, including breakdowns for taxes, fees, and discounts.
   * **FR17**: The system should securely process payments through a third-party payment gateway and provide feedback on successful/failed transactions.
5. **Reservation Tracking:**
   * **FR18**: The system must allow users to track the status of their reservations in real time.
   * **FR19**: Users should receive notifications about changes to their reservations (e.g., flight delays, transportation availability).
   * **FR20**: The system should allow users to view and manage their past and upcoming reservations.
6. **Payment Gateway Integration:**
   * **FR21**: The system should integrate with third-party payment gateways (e.g., Stripe, PayPal) for secure payments.
   * **FR22**: The system must support various payment methods (credit/debit cards, wallets, etc.).
   * **FR23**: The system should handle refunds and cancellations, updating the payment status in real-time.
7. **Bidding System:**
   * **FR24**: The system must allow customers to place bids for services (e.g., upgrades, special offers).
   * **FR25**: The system must notify customers of bid acceptance or rejection in real-time.
   * **FR26**: The bidding interface should display real-time bid status and remaining time.
8. **Chatbot-Based Customer Service:**
   * **FR27**: The chatbot must handle basic customer inquiries (e.g., booking, itinerary details, payment issues).
   * **FR28**: The chatbot must be integrated with the user’s booking history and profile to provide personalized assistance.
   * **FR29**: If the chatbot cannot resolve an issue, it must escalate the case to a human support agent.
   * **FR30**: The chatbot should be available 24/7.

**Non-Functional Requirements:**

1. **Performance:**
   * **NFR1**: The system should handle up to **10,000 concurrent users** without performance degradation.
   * **NFR2**: Page load times should be under **3 seconds** to ensure a smooth user experience.
   * **NFR3**: Real-time updates (e.g., transportation tracking, bidding status) should be delivered with **no more than 5 seconds delay**.
2. **Scalability:**
   * **NFR4**: The system should scale horizontally to accommodate growth in user traffic, especially during peak seasons (e.g., holidays, sales events).
   * **NFR5**: The system should be able to handle spikes in booking volume without crashing or slowdowns.
3. **Security:**
   * **NFR6**: User data, including payment details, must be encrypted using **SSL/TLS encryption** during transmission.
   * **NFR8**: User authentication should be implemented using **two-factor authentication (2FA)** for added security.
   * **NFR9**: The system must ensure that sensitive data (e.g., passwords, personal details) is stored securely, using hashed encryption.
4. **Reliability:**
   * **NFR10**: The system should have **99.9% uptime**, with minimal downtime for maintenance.
   * **NFR11**: The system should provide an **automatic failover mechanism** in case of server failure to ensure service continuity.
5. **Availability:**
   * **NFR12**: The system must be available 24/7, with minimal interruptions.
   * **NFR13**: Customer support should be available 24/7 through multiple channels (chatbot, email, phone).
6. **Usability:**
   * **NFR14**: The system should provide a **responsive design** that works seamlessly on both desktop and mobile devices.
   * **NFR15**: The user interface must be intuitive and easy to navigate, requiring minimal effort from users to complete bookings.
   * **NFR16**: The system should support **multiple languages** (if applicable) and should provide localization based on the user’s location and language preference.
7. **Maintainability:**
   * **NFR17**: The system should be modular, allowing for easy updates and maintenance without affecting core functionalities.
   * **NFR18**: The system should have **comprehensive logging** and **monitoring** in place for troubleshooting and debugging purposes.
   * **NFR19**: There should be clear documentation for all system components (e.g., API, database schemas, user interface) for future maintenance.
8. **Compliance:**
   * **NFR20**: The system must comply with **GDPR** (General Data Protection Regulation) for user data privacy and protection.
   * **NFR21**: The system should also comply with regional laws and regulations depending on the geographical location of the business and users (e.g., PCI-DSS, CCPA).
9. **Interoperability:**
   * **NFR22**: The system should integrate seamlessly with third-party services (e.g., payment gateways, hotel providers, flight booking systems) through APIs.
   * **NFR23**: The system should support integration with popular customer relationship management (CRM) tools for customer data and feedback management.