User Requirements

**Functional Requirements**

1. **Tourist Information Portal**

* Attractions Database: The system should allow tourists to browse and view detailed information about Albania’s tourist attractions, including descriptions, images, opening hours, entrance fees, and user reviews.
* Cultural and Historical Insights: The system should provide a section where tourists can access information about Albania’s cultural heritage, including UNESCO World Heritage Sites, historical landmarks, and traditional practices.
* Travel Guides: The system should provide digital travel guides for tourists, featuring suggested itineraries for different regions of Albania, including the Albanian Riviera, Accursed Mountains, and Tirana.
* Interactive Maps: The system should provide interactive maps showing tourist destinations, accommodations, local restaurants, and transport routes. Users should be able to click on map markers to view more details.

1. **Accommodation Management**

* Hotel and Accommodation Booking: The system should allow users to search for available accommodations, filter by location, type, and amenities, and complete bookings for various types of accommodation.
* Availability Calendar: The system should display a real-time calendar showing room availability for accommodations, including detailed information on pricing, availability, and user reviews.
* Price Comparison: The system should allow users to compare prices for different accommodations, helping them find the best deals based on their preferences.

1. **Transportation and Travel Options**

* Transport Booking: The system should allow users to search for and book transportation options, including flights, buses, trains, and car rentals, with payment processing integrated into the platform.
* Public Transport Information: The system should display detailed schedules for Albania’s public transportation system, including bus and ferry routes, and provide real-time updates for arrivals and departures.
* Tour Packages: The system should allow tourists to browse and book pre-arranged tour packages that include transportation, guided tours, and activities for specific destinations or routes in Albania.

1. **Tourist Activities and Events**

* Activity Booking: The system should enable tourists to book a wide range of activities, including guided tours, nature hikes, adventure sports, cooking classes, and cultural events.
* Event Calendar: The system should feature a dynamic calendar listing upcoming festivals, concerts, exhibitions, and other events in Albania, with the option to book tickets.
* Outdoor Adventures: The system should provide detailed information and booking options for outdoor activities available in Albania’s national parks, such as trekking, hiking, and rafting.
* Local Experiences: The system should provide curated local experiences, such as visiting villages, wine-tasting tours, and learning about Albanian culture and traditions.

1. **Travel Safety and Alerts**

* Emergency Contacts: The system should provide easy access to emergency services information and tourist police for quick assistance.
* Travel Warnings: The system should notify tourists about potential safety risks or issues that may affect specific regions.
* COVID-19 Guidelines: The system should provide up-to-date information about COVID-19 regulations in Albania, including health protocols, testing and vaccination requirements, and other travel-related safety measures.

1. **Customer Reviews and Social Features**

* User Reviews and Ratings: The system should allow users to leave ratings and written reviews for accommodations, tours, and activities.
* Photo Galleries: The system should feature photo galleries showcasing user-submitted and curated images of Albania’s tourist attractions.

1. **Payment and Currency Support**

* Online Payment Gateway: The system should integrate with payment providers to allow users to securely make payments for bookings, tickets, and tours.
* Currency Converter: The system should include a currency converter tool that allows international tourists to easily convert their home currency to Albanian lek (ALL) for transactions.

1. **Multilingual Support**

* Language Options: The system should support multiple languages to accommodate international tourists, including at least English, Albanian, Italian, German, and French. The language preference should be configurable by users.

1. **Tourism Analytics and Reporting (Admin Dashboard)**

* Visitor Analytics: The system should provide an admin dashboard to track visitor activity, popular destinations, and user behavior trends, helping businesses improve their offerings.
* Revenue Management: The system should include features for tracking revenue from bookings, tours, and accommodations, with reports on overall financial performance.
* Promotions and Marketing: The system should allow admins to create and manage promotions, discounts, and special offers, to attract more visitors during off-peak seasons or for special events.

**Non-Functional Requirements**

**1. Performance**

* Response Time: The system should ensure that all user requests are processed within 3 seconds under normal usage conditions.
* Throughput: The system should support at least 1000 concurrent users without significant degradation in performance.
* Scalability: The system should be designed to handle increasing traffic and data over time.
* Availability: The system should be available 99.9% of the time to ensure continuous access to information for users, especially during high traffic periods like holidays or summer months.

**2. Security**

* Authentication and Authorization: The system should ensure that all users, including tourists and administrators, are authenticated through secure login mechanisms.
* Data Protection: All personal data, including payment information and personal identification, must be encrypted in transit using TLS/SSL and at rest using strong encryption standards.
* Secure Payment Integration: All payment transactions should be processed using PCI DSS-compliant payment gateways (Stripe or PayPal).
* Access Control: Different user roles must have appropriate access rights to sensitive system data and actions.
* Security Audits: The system should undergo regular security audits to identify and fix vulnerabilities.

**3. Usability**

* Multi-language Support: The system should be user-friendly and support at least five languages (e.g., English, Albanian, Italian, German, French).
* Mobile Accessibility: The system should be fully responsive, ensuring seamless access and usability across desktop, tablet, and mobile devices.
* User Interface: The platform should have an intuitive, visually appealing user interface (UI) that provides easy navigation, especially for non-technical users. The UI should load within 2 seconds.
* Error Handling: Clear error messages and guides should be displayed when an operation fails (e.g., failed booking, payment error), with suggested actions for users.

**4. Reliability**

* Data Integrity: The system should ensure the accuracy and consistency of data across the platform, including booking records, reviews, and transactions. Any system failure should not result in data loss.
* Backup: Regular backups of the database should be performed, with an automatic recovery process in place in the event of data corruption or system failure.
* Disaster Recovery: The system should include a disaster recovery plan to ensure quick restoration of service in the event of system downtime or failure, targeting a recovery time objective (RTO) of less than 4 hours.

**5. Maintainability**

* Code Quality: The system’s source code should adhere to industry best practices, including clear documentation and proper code structure, making it easy to maintain, upgrade, and troubleshoot.
* Logging and Monitoring: The system should have an integrated logging system for tracking user activities, error messages, and system performance. It should also include monitoring tools to track system health and performance metrics.
* Updates and Patches: The platform should be regularly updated to improve performance, patch security vulnerabilities, and add new features without significant disruptions to users.

**6. Compliance**

* Legal Compliance: The system should comply with all relevant legal regulations related to data protection and privacy.

**7. Interoperability**

* API Integration: The system should support APIs for integrating with third-party services such as payment gateways (Stripe, PayPal), map services (Google Maps), and external booking systems (for flights or car rentals).
* System Integration: The system should seamlessly integrate with existing third-party systems like hotel booking systems, transport companies, and payment systems.

**8. Localization and Internationalization**

* Currency Support: The system should automatically convert prices to the tourist’s preferred currency, using real-time exchange rates, and support multiple currencies.
* Time Zone Handling: The system should correctly handle time zones for booking activities, events, and accommodations, displaying accurate times based on the user's location.

**9. Auditability**

* Tracking User Actions: The system should log and track all user interactions related to bookings, transactions, and reviews. Admins should have the ability to view logs for auditing purposes.
* Transparency in Payments: Detailed reports should be available for tourists, administrators, and businesses for transparency regarding payment transactions, cancellations, and refunds.

**10. Support and Customer Service**

* Help and Support: The system should provide easy access to help resources, including FAQs, live chat support, and contact forms for tourists to reach customer service.
* 24/7 Availability of Support: Live customer support (chat, email, or phone) should be available 24/7 to address any urgent tourist concerns or technical issues.

**Prioritize Requirements:**

* **Must-have**: Essential for the system to function (e.g., booking system, payment integration).
* **Should-have**: Important but not critical (e.g., user reviews, event calendar).
* **Could-have**: Nice-to-have features that enhance user experience but aren't essential (e.g., weather, advanced personalization).
* **Won't-have (for now)**: Features that won’t be included in the first version (e.g., virtual reality tours, augmented reality).