

# Functional Requirements

## 1. User Management

1. The system shall allow tourists, local business owners, and souvenir shop owners to register and manage accounts.
  2. The system shall require authentication (email/password or social login) for users to access personalized features.
  3. The system shall allow administrators to approve, suspend, or delete user accounts.
  4. The system shall enable users to update their personal or business profiles.
  5. The system shall allow users to request password resets via email.
  6. The system shall support role-based access control (e.g., tourists, business owners, administrators).
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## 2. Tourism Services & Bookings

7. The system shall allow tourists to search for and filter destinations based on preferences.
  8. The system shall enable tourists to book guided tours, cultural activities, and events.
  9. The system shall display tour availability, pricing, and descriptions.
  10. The system shall allow business owners to list, edit, and delete their service offerings.
  11. The system shall enable businesses to mark offerings as fully booked or unavailable.
  12. The system shall provide booking confirmation and allow tourists to cancel or reschedule bookings.
  13. The system shall notify users of booking status via email or push notifications.
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## 3. Souvenir Shop & E-commerce

14. The system shall allow souvenir shop owners to list, edit, and delete products.
15. The system shall allow tourists to browse souvenir shops and view product details.
16. The system shall support adding souvenirs to a shopping cart.
17. The system shall allow tourists to review cart contents before checkout.

18. The system shall support online payment options (credit card, digital wallets, etc.).
  19. The system shall allow shop owners to manage stock levels and update product availability.
  20. The system shall allow shop owners to view and process customer orders.
  21. The system shall notify customers when their orders are shipped.
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#### **4. Reviews & Ratings**

22. The system shall allow tourists to submit reviews and ratings for services, destinations, and souvenir shops.
  23. The system shall display reviews and ratings for each service or product.
  24. The system shall allow business owners to respond to customer reviews.
  25. The system shall prevent users from submitting multiple reviews for the same service within a specified period.
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#### **5. Search & Filtering**

26. The system shall allow tourists to search for destinations, tours, and souvenir shops by keyword.
  27. The system shall allow filtering based on price, category, location, and availability.
  28. The system shall display search results with relevant details and images.
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#### **6. Payment & Transactions**

29. The system shall support secure online payments through integrated payment gateways.
  30. The system shall generate electronic invoices and email receipts after a transaction.
  31. The system shall allow refunds and cancellations based on business policies.
  32. The system shall track and display transaction history for users.
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## **7. Notifications & Alerts**

- 33. The system shall notify tourists of upcoming bookings via email or push notifications.
  - 34. The system shall notify business owners of new bookings and pending orders.
  - 35. The system shall notify users about promotions, discounts, and special events.
  - 36. The system shall alert administrators of pending approval requests.
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## **8. Administrator Functions**

- 37. The system shall allow administrators to approve or reject local business and souvenir shop registrations.
  - 38. The system shall allow administrators to create, update, and delete user accounts.
  - 39. The system shall allow administrators to generate reports on service usage, bookings, and revenue.
  - 40. The system shall provide an overview dashboard for system performance and user activity.
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## **9. Reports & Analytics**

- 41. The system shall allow businesses to generate reports on customer reviews, sales, and booking trends.
  - 42. The system shall allow administrators to generate reports on popular destinations and services.
  - 43. The system shall provide souvenir shops with sales analytics and stock reports.
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## **10. Security & Compliance**

- 44. The system shall encrypt sensitive user data to ensure privacy and security.
- 45. The system shall log and monitor user activities for security audits.
- 46. The system shall implement multi-factor authentication for admin accounts.

# Nonfunctional Requirements for the Tourism Hub System

## 1. Usability & User Experience

1. The system shall provide an intuitive and user-friendly interface for tourists, business owners, and administrators.
  2. The system shall ensure accessibility by following WCAG (Web Content Accessibility Guidelines) for visually impaired users.
  3. The system shall offer a simple and guided registration process for all user roles.
  4. The system shall ensure a consistent design across all pages and sections.
  5. The system shall provide tooltips and help sections for users unfamiliar with the platform.
  6. The system shall allow users to navigate between different sections with minimal steps.
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## 2. Security & Data Protection

7. The system shall encrypt all sensitive user data, including passwords and payment details, to prevent unauthorized access.
  8. The system shall enforce secure password policies (e.g., minimum length, special characters).
  9. The system shall provide account recovery options using email verification.
  10. The system shall prevent unauthorized users from accessing admin and business functions.
  11. The system shall restrict multiple failed login attempts to prevent brute-force attacks.
  12. The system shall ensure that reviews and transactions are linked to verified users to prevent spam or fake activity.
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## 3. Maintainability & Extensibility

13. The system shall be designed using modular components to facilitate easy updates and maintenance.
14. The system shall allow the addition of new user roles or service types without requiring major structural changes.

15. The system shall use standardized data formats (e.g., JSON, XML) for easy integration with external tools.
  16. The system shall provide error-handling mechanisms with clear messages to guide users when issues occur.
  17. The system shall include logging mechanisms to track user actions for debugging and auditing purposes.
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#### **4. Compliance & Legal Considerations**

18. The system shall comply with relevant data protection regulations, ensuring that user data is handled responsibly.
  19. The system shall include a terms and conditions agreement that users must accept before using the platform.
  20. The system shall allow users to request account deletion in compliance with privacy policies.
  21. The system shall maintain a log of user transactions and activities for auditing purposes.
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#### **5. Reliability & Data Integrity**

22. The system shall ensure that critical data, such as bookings and transactions, cannot be deleted without confirmation.
  23. The system shall prevent duplicate submissions of reviews, bookings, or purchases.
  24. The system validates input data (ex: emails, payment details) to prevent errors.
  25. The system shall implement role-based access control to ensure only authorized users can modify critical data.
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#### **6. User Notifications & Feedback**

26. The system shall provide clear success or error messages for every action (e.g., booking confirmations, failed transactions).
27. The system shall send notifications for critical actions, such as booking confirmations, order shipments, and account approvals.
28. The system shall allow users to provide feedback about their experience on the platform.