Software Requirements Specification

FOR

TOURISM MANAGEMENT SYSTEM

1. Introduction

1.1 Purpose

The purpose of this SRS document is to provide a detailed description of the "Pack Your Bags" Tourism Management System. This document outlines the functional and nonfunctional requirements, constraints, and assumptions related to the project, ensuring that all stakeholders have a clear understanding of the system's capabilities.

1.2 Scope

"Pack Your Bags" is a web-based application designed to facilitate the management of tourism-related activities, including travel bookings, itinerary planning, and customer relationship management. The system will cater to travel agencies, tour operators, and end-users looking to plan and book their travel experiences.

1.3 Overview

This document is organized into several sections, including overall description, specific requirements, and appendices.

2. General Description

2.1 Product Functions

- User registration and authentication
- Search and book travel packages
- Create and manage itineraries ⬜ Customer reviews and ratings
- Admin dashboard for managing users, packages, and bookings
- Payment processing integration

2.2 User Classes and Characteristics

End Users : Individuals looking to book travel packages and manage their itineraries.

Travel Agents : Professionals who will use the system to manage bookings and customer relationships.

Administrators : Users responsible for managing the system, including user accounts, travel packages, and reports.

2.3 Operating Environment

- Web-based application accessible via modern web browsers (Chrome, Firefox, Safari).
- Compatible with desktop and mobile devices.

2.4 Design and Implementation Constraints

- Compliance with data protection regulations (e.g., GDPR).
- Integration with third-party APIs for payment processing and booking services.

3. Functional Requirements

3.1 User Registration and Authentication

Description : Users must be able to register and log in to the system.

Inputs   : Username, Password, Email, Phone Number

Outputs   : Success/Failure message, User profile creation

3.2 Travel Package Search and Booking

Description : Users can search for available travel packages based on various criteria (destination, date, price).

Inputs   : Search parameters (destination, date, number of travelers)

Outputs   : List of available packages, Booking confirmation

3.3 Customer Reviews and Ratings

Description : Users can leave reviews and ratings for travel packages.

Inputs   : Review text, Rating (1-5 stars)

Outputs   : Confirmation message, Updated review list

3.4 Admin Dashboard

Description : Administrators can manage users, travel packages, and bookings.

Inputs   : Admin credentials, Package details

Outputs   :   User management interface, Package management interface

4. External Interface Requirements

4.1 User Interfaces

Web Interface : The system will provide a responsive web interface for users, travel agents, and administrators. The UI will be designed to be intuitive and user-friendly, ensuring easy navigation and accessibility.

Mobile Interface : The system will be optimized for mobile devices, allowing users to access features and functionalities on smartphones and tablets.

4.2 Hardware Interfaces

Server Requirements : The application will be hosted on a cloud server with the following minimum specifications:

CPU   : 4 cores

RAM   : 8 GB

Storage : 100 GB SSD

Client Requirements : Users will need a device with internet access and a modern web browser (e.g., Chrome, Firefox, Safari, Edge).

4.3 Software Interfaces

Database Management System : The system will use a relational database

(e.g., MySQL, PostgreSQL) to store user data, travel packages, bookings, and reviews.

Payment Gateway Integration: The system will integrate with third-party payment gateways (e.g., PayPal, Stripe) for processing transactions securely.

Third-Party APIs :

- The system will utilize APIs for:
- Hotel and flight bookings
- Currency conversion
- Weather information for travel destinations

4.4 Communication Interfaces

- Email Notifications : The system will send email notifications for user registration, booking confirmations, and promotional offers.
- In-App Messaging : Users and travel agents will have access to an in-app messaging system for communication regarding bookings and inquiries.

5 . Performance Rquirements

5.1 Response Time

User Registration & Login: Not more than 2 seconds

Group Matching: Not more than 5 seconds

Booking Process: Processed in not more than 3 seconds

Real-time Communication: Within 1 second delay

5.2 Scalability

It must be able to handle up to 500 concurrent users without loss of performance

It will scale horizontally up to 1,000 concurrent users during traffic.

Database should support fast query processing as the user base grows.

Peak load handling without slowdowns or downtime.

5.3 Throughput

Booking Throughput: Process 100 bookings per minute during peak hours.

Real-time Communication: Support 200 active users messaging simultaneously.

Handle 1,000 simultaneous user interactions without issues.

6. Non-Functional Requirements

6.1 Performance

The system should handle up to 500 concurrent users without performance degradation.

6.2 Security

- All user data must be encrypted in transit and at rest.
- Implement secure authentication mechanisms (e.g., OAuth, JWT).

6.3 Usability

The system should have an intuitive and user-friendly interface, requiring minimal training for users.

6.4 Reliability

The system should have an uptime of 99.9% and provide backup and recovery options.

7. Schedule and Budget

Phase 1 : Initiation (2 weeks)

Requirement gathering and planning.

Phase 2 : Design (3 weeks)

UI/UX mockups.

Database schema design.

Phase 3 : Development (8 weeks)

User registration system.

Group matching algorithm.

Booking and payment integration.

Real-time communication system.

Phase 4: Testing (4 weeks)

Unit and system testing.

Bug fixes.

Phase 5 : Deployment (2 weeks) Live

deployment.

User training.

Phase 6 : Maintenance (On-going)

Post-deployment updates and support.

Duration : 4-5 months

Budget :

Development Costs: INR 15,000 Hosting

and Infrastructure: INR 5,000

Marketing and Promotions: INR 3,000

Operational Costs: INR 2,000

Contingency Reserve: INR 5,000

Total Estimated Budget: INR 30,000

8. Appendices

8.1 Glossary

Travel Package : A bundled offering that includes transportation, accommodation, and
activities for a specific destination.

Booking : The process of reserving a travel package or servic