



Minor Project

Title – Travel and Toursim

1. Introduction

The travel and tourism industry has evolved rapidly with the adoption of digital technologies. Travelers now rely on web-based platforms to access destination information, manage bookings, and plan trips efficiently. However, many traditional systems lack scalability, real-time data handling, and structured backend architecture.

The **Travel & Tourism Web Application** is developed using **Java and Spring Boot** to provide a robust, scalable, and API-driven solution for managing travel-related services. The application allows users to explore destinations, view travel packages, register and manage profiles, and make booking requests without online payment integration.

The system uses **RESTful APIs** for communication and a **relational database** for persistent data storage. By following a layered architecture and modular design principles, the application ensures maintainability, security, and future extensibility. The project is developed by a **team of three members**, focusing on enterprise-level backend development practices.

2. System Requirements

2.1 Hardware Requirements

- Processor: Intel i3 or above
- RAM: Minimum 8 GB
- Storage: 20 GB free disk space

2.2 Software Requirements

- Java (JDK 17 or above)
- Spring Boot Framework
- Spring Data JPA / Hibernate
- MySQL Database
- REST APIs
- IDE (IntelliJ IDEA / Eclipse / VS Code)

- Web Browser
- Postman API Testing

3. Objectives of the Project

- To design and develop a scalable **Travel & Tourism Web Application** using Java and Spring Boot
- To implement RESTful APIs for efficient client-server communication
- To manage application data using a relational database
- To follow layered architecture (Controller, Service, Repository)
- To provide a user-friendly and secure backend system →
- To gain hands-on experience in enterprise-level web application development

4. Data Flow Diagram (DFD)

Level 0 DFD (Context Diagram)

- User interacts with the **Travel & Tourism Web Application**
- User sends requests (login, view destinations, booking request)
- Application processes requests and fetches/stores data in the **Database**
- Application sends responses back to the user

Level 1 DFD

Processes:

1. User Authentication
2. Destination & Package Management
3. Booking Management
4. API Data Processing

Data Stores:

- User Database
- Travel Package Database
- Booking Database

Data Flow:

- User → Authentication Module → User Database
- User → View Packages → Package Database

- User → Booking Request → Booking Database
- Admin → Manage Data → Database

Process	Input Data Flow (From)	Process Description	Output Data Flow (To)
1.0 Manage Auth	Credentials (User)	Validates login or creates new account	User Details (User DB)
2.0 Search & Browse	Search Criteria (User)	Queries available inventory based on filters	Hotel/Package List (Inventory DB → User)
3.0 Manage Booking	Selection ID (User)	Reserves the spot provisionally	Booking Details (Booking DB)
4.0 Process Payment	Card Details (User)	Sends request to Bank/Gateway	Transaction Status (Payment Gateway → Booking DB)
5.0 Feedback	Rating/Review (User)	Updates service quality records	Review Data (Feedback DB)

5. Expected Outcomes

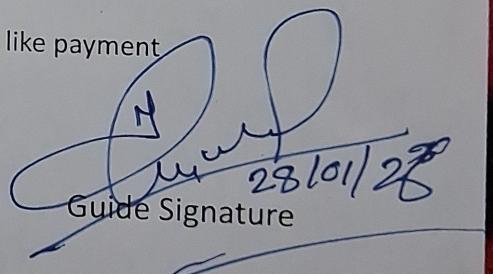
- A fully functional backend-driven travel and tourism web application
- Efficient data management using Spring Data JPA and relational databases
- Secure and structured REST APIs
- Improved understanding of Spring Boot architecture
- Practical experience in teamwork and collaborative development
- A scalable system that can be enhanced with future features like payment integration, analytics, or mobile app support

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