Custom Itinerary Generator Software for Sage Holidays

Overview

We are developing a **custom Travel Itinerary Generator Software** that will allow users to create and download their personalized travel plans in **PDF format**.
The software will provide a seamless, fast, and interactive experience, ensuring a professional approach to user engagement and brand presentation.

The system will collect specific user details such as:

- Name
- Email
- Phone Number
- Number of Persons
- Destination Place
- Number of Days

Based on this information, the software will automatically generate a **dynamic and well-structured PDF itinerary**. This PDF will include:

- Destination Overview
- Day-wise Travel Plans
- Adventure and Experience Highlights
- Local Attractions
- Enjoyment and Fun Activities

- Accommodation Suggestions

- General Travel Tips

- Contact Information

Technology Stack

The software will be built using a modern, robust, and scalable technology stack:

Component	Technology
Frontend	HTML5, CSS3, JavaScript, Bootstrap 5
Client-Side Communication	jQuery, AJAX
Backend	PHP 8.x
Database	MySQL 8.x
PDF Generation	FPDF or TCPDF (PHP Libraries)
Hosting (Server)	Dedicated VPS or Cloud Server (optional). Currently, Business hostinger plan work for this software.

Core Features

1. User Data Collection

A responsive web form where users can input their basic information and travel preferences.

2. Asynchronous Data Handling

Using AJAX, the form data will be submitted without reloading the page, creating a smooth and modern user experience.

3. Dynamic PDF Generation

The backend will dynamically create a personalized PDF document based on the user's input using a PHP-based PDF library (FPDF or TCPDF).

4. Instant PDF Download

Once generated, the PDF will be available for immediate download, providing users with a fast and satisfying service experience.

5. Data Validation and Security

Both client-side and server-side validation will be implemented to ensure data integrity and security.

6. Scalability and Future Integration

The software architecture will be modular, allowing future integration with CRM systems, mobile apps, or additional third-party services if required.

System Workflow

1. User fills out the travel details form.
2. Form data is securely transmitted to the server via AJAX.
3. Server validates and processes the input data.
4. A personalized PDF itinerary is generated and saved.
5. The user receives a direct link to download the PDF.

API Usage Explanation

In this software, we will create **our own internal APIs** rather than depending on any third-party external APIs.

- **Reason:** To ensure complete control over user data, customization, speed, and reliability without exposing data to any external service.

- **How:** We will build secure PHP API endpoints that will handle data reception, validation, PDF creation, and file delivery.

This approach ensures the software remains fully **private, secure, and cost-efficient**.

Hosting Infrastructure

Given the nature of the application and the need for quick response times, we recommend hosting the software on a **dedicated VPS (Virtual Private Server)** or a **dedicated cloud server**.

Benefits:

- High performance and fast processing.

- Full control over server resources.

- Better data security and protection.

- Scalability for future user growth.

If traffic increases in the future (higher number of users), a dedicated server will allow easy scaling without compromising speed or reliability.

Development Timeline

The complete development and testing process will take approximately:

- **1.5 weeks (10–12 days)**

Phase Breakdown:

Phase	Duration
Requirement Analysis & Planning	1 day
Frontend Form Development	2 days
API & Backend Development	3 days
PDF Dynamic Design & Implementation	3 days
Testing, Debugging & Optimization	2 days
Deployment and Final Review	1 day

Security and Best Practices

- User inputs will be sanitized and validated to avoid any vulnerabilities.
- Server-side validation will prevent malicious data entry.
- Directory permissions will be configured securely.
- PDF files will be stored in protected folders if needed.