**Problem Statement**

Planning a trip involves multiple aspects such as flights, accommodations, local attractions, and budgeting. For many travelers, this process can be time-consuming and overwhelming, particularly when trying to cater to specific preferences like dietary needs, activity interests, or travel style. The lack of truly personalized solutions leaves users dissatisfied or discouraged. Our project, the "Personalized Travel Plan Generator," seeks to address this gap by providing a smart, automated itinerary generation system that adjusts to user-defined preferences and real-time travel data.

**Business Case**

Traditional travel agencies and current travel planning apps often offer generic suggestions that do not cater to individual preferences. Our system introduces value by:

* Offering real-time data integration through multiple Web APIs (flights, accommodations, activities).
* Generating automated, customizable itineraries tailored to user needs.
* Providing JWT-based authentication for secure profile management.
* Enabling detailed budget management that adjusts dynamically based on user selection.

This system can be expanded into a commercial-grade product or integrated with existing travel platforms for enhanced user engagement.

**Scope**

**Target Users:**

* Solo travelers
* Tourists
* Families planning trips

**Main Features:**

* Personalized travel plans tailored to budget, interests, duration, and location
* Real-time integration with travel-related APIs
* JWT-based user authentication and profile handling
* Budget management and cost estimation features

**Goals**

1. Provide users with a fully personalized and dynamic travel plan.
2. Enable users to specify preferences such as:
   * Destination
   * Budget
   * Duration
   * Activity types (cultural, adventurous, relaxing, etc.)
3. Integrate real-time travel information from third-party APIs (hotels, flights, local activities).
4. Securely manage user data with JWT-based authentication and profile handling.

**Team Roles:**

* **Student khalil**: UI mockups, and user interaction, Gantt chart planning, Frontend development, SDLC modeling, and testing.
* **Student hala**: Backend development, API integration, system logic, Project documentation, requirement gathering, testing, and presentation preparation..