### WebX Lab CA - Report

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**TITLE: Smart Travel Planner** 

### PROJECT DESCRIPTION

The Smart Travel Planner is a comprehensive Flask-based web application designed to streamline and enhance the travel planning experience. The application features a robust architecture with distinct components handling user authentication, trip management, destination exploration, and social interactions.

At its core, the application utilizes MongoDB for data persistence, managing various collections including users, destinations, trips, and travel tips. The backend is built with Flask, running on port 5000, and implements a well-structured MVC (Model-View-Controller) pattern. The models are clearly defined in models.py, handling entities such as User, Trip, Destination, and JournalEntry with proper data validation and relationships.

Key features include comprehensive trip planning capabilities, allowing users to create detailed itineraries, track expenses, and maintain travel journals. The social aspects of the platform enable trip sharing and collaboration through a well-implemented invitation system. The application also integrates weather information for destinations and provides curated travel tips categorized by topics such as packing, safety, and local customs.

#### **TECHNOLOGIES USED**

#### 1. Frontend:

- HTML/CSS/JavaScript
- Bootstrap (Dark theme)
- Font Awesome icons
- Chart.js for data visualization

#### 2. Backend:

- Python 3.11
- Flask web framework
- Flask extensions:
  - Flask-Login for authentication
  - o Flask-WTF for forms
  - Werkzeug for utilities
  - o Gunicorn as WSGI server

#### 3. Database:

- Custom MongoDB-like implementation (mongo\_like.py)
- JSON file storage for data persistence

#### 4. APIs/Services:

- Weather API integration
- Repl Auth for authentication

### **FEATURES IMPLEMENTED**

### 1. User Authentication & Management:

- User registration and login
- Password reset functionality
- Profile management
- User dashboard

### 2. Trip Planning:

- Create and manage trips
- Detailed itinerary planning
- Day-by-day activity scheduling
- Budget tracking and expense management

#### 3. Destination Management:

- Browse destinations
- Search functionality
- Detailed destination information
- Weather information integration
- Attraction listings

### 4. Travel Journal:

- Create journal entries
- Add photos to entries
- Track locations and moods
- Download journal entries
- Share travel experiences

#### 6. Additional Features:

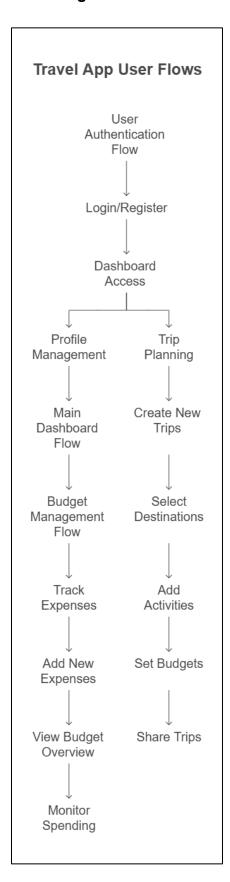
- Weather integration for destinations
- Travel tips and advice section
- Budget tracking and analysis
- Interactive timeline view
- Responsive dark theme design

## 7. Data Management:

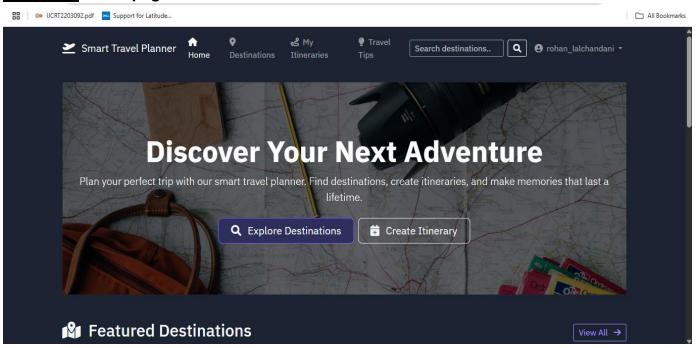
- MongoDB-like database implementation
- JSON file-based data persistence
- User data privacy controls
- File upload handling

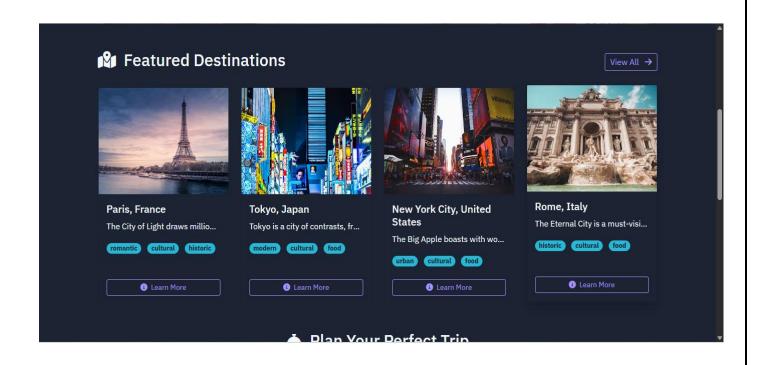
GITHUB LINK - https://github.com/Rohan-Lalchandani08/WebX CA

# Flow Diagram:



### **OUTPUT:** Homepage:





## ▲ Plan Your Perfect Trip



#### **Discover Destinations**

Explore amazing destinations around the world. Get detailed information about attractions, best times to visit, and travel tips.



#### **Create Itineraries**

Build detailed day-by-day plans for your trips. Organize activities, set schedules, and keep all your travel plans in one place.



#### **Check Weather**

Get up-to-date weather information for your destinations. Plan activities with confidence knowing the forecast for your travel dates.



## Travel Tips & Advice

Access valuable tips for packing, safety, budget, and health. Make your travel experience smoother and more enjoyable with expert advice.

View Travel Tips



Explore Now



## Travel Tips & Advice

Access valuable tips for packing, safety, budget, and health. Make your travel experience smoother and more enjoyable with expert advice.

View Travel Tips



#### Smart Travel Planner

Plan your dream vacation with our easy-to-use

#### **Quick Links**

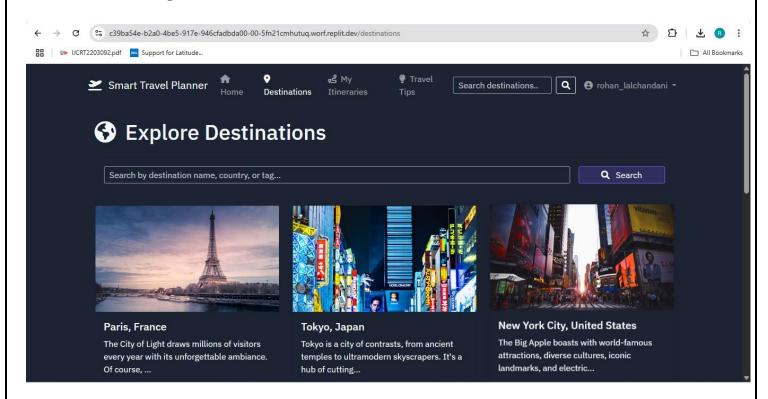
#### **Connect With Us**



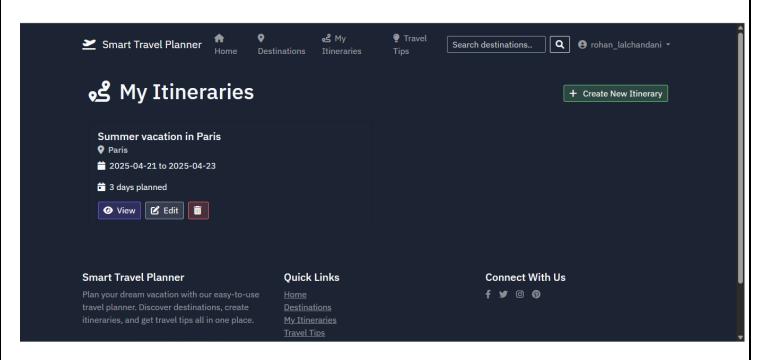




## **Destinations Page:**



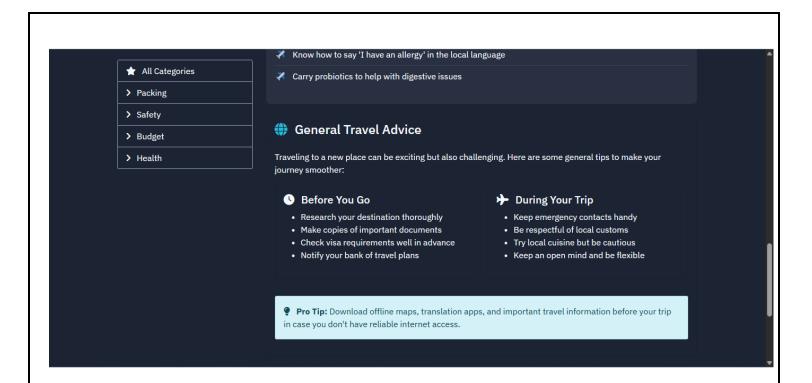
### **Create Itineraries Page:**



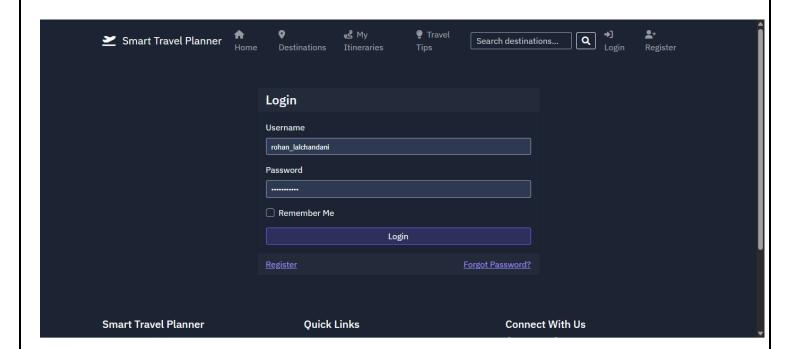
## **Travel Tips and Advice Page:**



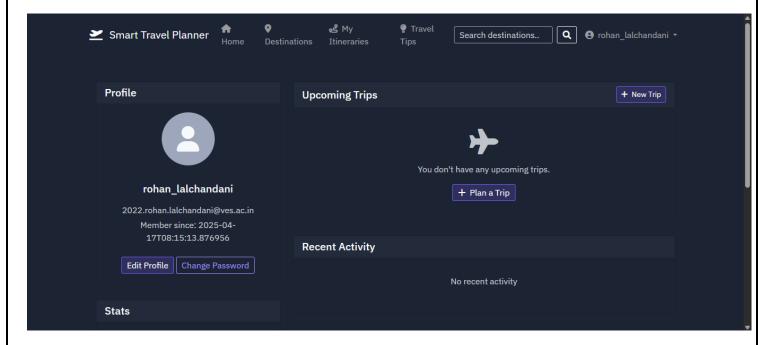




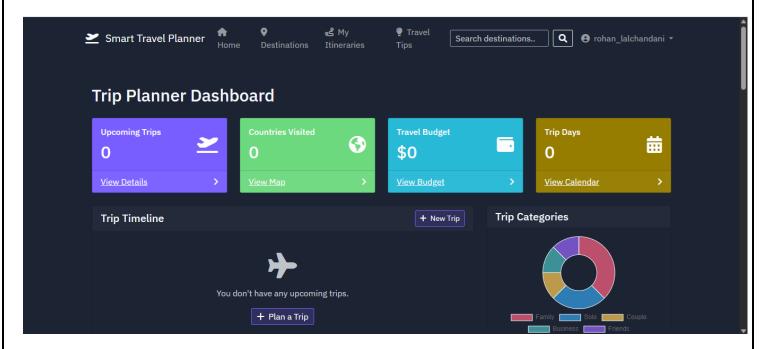
## Login/ Sign Page:



## **Profile Page:**



## **User Dashboard Page:**



### **CONCLUSION:**

The Smart Travel Planner is a comprehensive web application that streamlines trip planning and management through an intuitive interface. It offers essential features including destination exploration, detailed itinerary creation, expense tracking, travel journal capabilities, and collaborative trip planning. Users can manage their travel budgets, track expenses, maintain digital travel journals, and even share trip plans with fellow travelers. The application also provides valuable travel tips, weather information, and helps users stay organized with pre-trip checklists. With its dark-themed UI, interactive charts, and responsive design, the Smart Travel Planner serves as a one-stop solution for both solo travelers and groups looking to plan and document their adventures efficiently.