



Travel Planning System (Travelify)

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Abstract: The Travel Planning System is a web-based application designed to help budget-conscious travelers organize their trips and manage their expenses efficiently. This platform, similar to travel apps like "Make My Trip," offers a unique feature: it provides personalized trip recommendations based on the user's budget and current location. The system calculates the minimum amount a traveler needs to carry before embarking on their journey, ensuring they are financially prepared. Additionally, in case of an emergency, users can access a special "Save Our Souls" (SOS) feature for immediate help. A core component of the application is the use of a greedy algorithm to determine the shortest and most cost-effective route from the user's starting point to their destination. Users can set specific preferences through the Budget Pre-Analysis Module, which considers various travel requirements such as accommodation, transportation, and sightseeing preferences. The app then calculates the optimal budget and suggests cost-effective travel options.

Keywords – Travel Planning System, Save Our Souls, Web-based, Greedy Algorithm, Suggestion

I. INTRODUCTION

Traveling and experiencing different cultures is something many people enjoy. There are various travel options to choose from, depending on individual preferences. Travel can be categorized into types like weekend escapes, summer vacations, group tours, or visiting friends and family. The Travel Planning System is a great choice for those looking to organize their trip according to their specific needs.

This system uses a greedy algorithm to calculate the shortest and most efficient path from the user's starting point to their destination. Through the Budget Pre- Analysis Module, users can set specific criteria to tailor their trip. Based on these parameters, the system determines and shows the minimum budget the user needs before beginning their journey. For those unfamiliar with a destination, the app provides helpful navigation and location-based information. To access the platform, users must log in with their mobile number and password. The system verifies the entered credentials against the database of registered users. If the details don't match, an error message appears, saying, "You're not a registered user." New users who don't have an account can sign up by entering their information, which will be stored in the database for future verification.



Fig-1:Travel

I.I.PROBLEM DEFINATION

The Travel Planning System is designed to address multiple challenges encountered by travelers who are mindful of their budgets. A key issue is the difficulty in finding affordable, customized travel options that match the user's financial limits and preferences. Many travelers face difficulties managing their expenses, estimating the total cost of their trip, and ensuring they have enough funds for unforeseen circumstances. Additionally, planning the most economical and efficient travel routes can be a complex and time-consuming process, especially for those unfamiliar with the available options. Another problem is the absence of immediate assistance during emergencies, which leaves travelers vulnerable when unexpected situations arise. Furthermore, accessing real-time updates on transportation schedules, lodging, and activities can be challenging, resulting in potential delays or overspending. The Travel Planning System seeks to overcome these obstacles by providing an integrated solution to streamline budgeting, route planning, and emergency support.

I.II.OBJECTIVE

The Travel Planning System is created to provide an all-in- one solution for travelers who are conscious of their budget, helping them plan and manage their trips efficiently. This platform offers personalized travel suggestions tailored to the user's location, budget, and preferences, ensuring affordable choices for transportation, lodging, and activities. It allows users to estimate and monitor their travel expenses, ensuring they are financially prepared by calculating the total cost of their trip. Additionally, the system leverages algorithms to optimize travel routes, minimizing both travel time and costs. A key feature of the system is the Save Our Souls (SOS) function, designed to offer immediate assistance in emergencies, ensuring traveler safety. It also provides real-time updates on transportation schedules and any travel disruptions to keep users informed. With a user- friendly interface and seamless integration with third- party services for bookings and reservations, the Travel Planning System aims to simplify trip planning, making it more affordable, secure, and efficient.

II. LITRATURE SURVEY

The Intelligent System for Tourism developed by Staphen Staab and Hannes Werther has both advantages and limitations. One of its key strengths is the ability to offer personalized travel recommendations based on in-depth analysis and research, ensuring that the suggestions meet the specific needs of each user. The system also provides useful features such as booking prices, authentic images, and ratings from users, which help travelers make well- informed decisions. However, it does have some drawbacks. The platform does not allow users to complete bookings directly, limiting its functionality as a one-stop solution. Additionally, it lacks a revenue analysis tool, which would have been helpful for tracking and understanding the financial aspects of the trip. Another limitation is that the system's focus on personalized recommendations may lead to a more limited selection of travel options, which could exclude users who prefer a wider variety of choices for destinations and services.

Xuefei Gfi's Tourism Management System Based on Mobile Internet presents both benefits and challenges. A notable advantage is that it allows users to select their own routes based on their current location and desired destination, offering flexibility and comfort for travelers. This feature empowers users to customize

their journeys according to their preferences, improving the travel experience. However, the system also has some limitations. It does not provide real-time routes from the user's location to the destination, which can lead to potential confusion or inconvenience. Moreover, the system depends on analyzed maps and pre-set routes, which may not always be accurate or tailored to the user's specific requirements, reducing its effectiveness in offering the most current or personalized travel options.

Omar Bayari's GIS System for Tourism has a number of notable strengths and weaknesses. A significant advantage is its ability to offer visual representations of tourist destinations using satellite maps and 3D mapping, providing users with a more engaging and detailed way to explore locations. The system also features a centralized platform for managing various aspects of tourism, simplifying the process of accessing travel-related services. However, the system does have some limitations. While it offers useful tools, it does not include integrated tourism booking services, which could reduce convenience for users who prefer to manage all their travel arrangements, including bookings, from a single platform.

III.EXISTING SYSTEM

Most travel planning systems primarily facilitate booking flights, accommodations, and activities but often fail to deliver personalized recommendations based on individual preferences. Platforms like MakeMyTrip enable users to search for destinations and make reservations; however, they do not seamlessly incorporate factors such as the user's location, budget, or group size for a truly customized experience. Additionally, these systems have several drawbacks, including generic search results that lack tailored suggestions, disjointed property rental services that require users to switch between multiple platforms, reliance on third-party brokers that may lead to inflated costs and opaque pricing, and limited user participation in listing properties or sharing feedback and experiences.

IV.METHODOLOGY

Creating a budget-friendly travel plan involves several important steps to ensure you have a great experience without overspending. Here's an effective approach:

1. **Establish Your Budget:** Determine the total amount you're willing to spend on your trip. Be sure to account for all expenses, such as transportation, lodging, food, activities, and unexpected costs.
2. **Select Your Destination:** Choose locations that fit your budget. Research the cost of living, local prices, and affordable things to do to ensure your destination is financially feasible.
3. **Book Early:** Make transportation and accommodation reservations as early as possible to secure the best prices. Early bookings often come with discounts and lower rates.
4. **Accommodation Alternatives:** Explore affordable lodging options, like hostels, guesthouses, or vacation rentals. You can also consider budget-friendly alternatives like Couchsurfing or house-sitting.
5. **Transportation Savings:** Rely on public transportation instead of taxis or rental cars. Walking or biking are also great ways to explore the area while saving on travel costs.
6. **Be Flexible:** Stay open to adjusting your plans if you come across deals or new opportunities. Flexibility can help you stretch your budget further.
7. **Monitor Your Spending:** Use budgeting apps to track your expenses and manage your finances efficiently. To avoid extra charges, use credit cards that don't have foreign transaction fees or withdraw money from ATMs strategically.

V.APPLICATION AND RESULTS

Travelify can be utilized in various real-world scenarios to enhance the travel booking process. Whether for individual travelers, businesses, or travel agencies, the platform provides an all-in-one solution for effortless trip planning. With multi-mode ticket booking, AI-driven trip recommendations, and community-based accommodations, it serves as a valuable tool in the travel industry.

Following are the Screenshots of the interface and output of the proposed system.

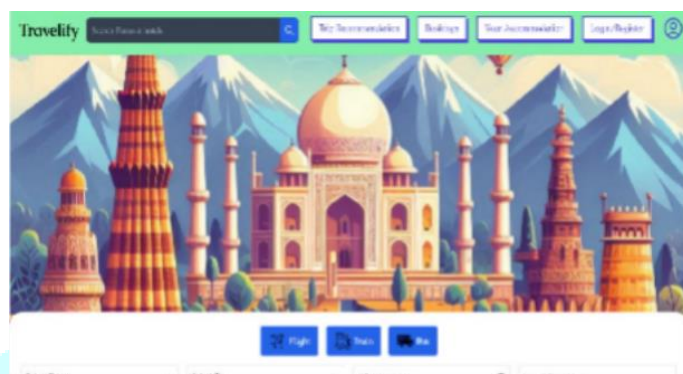


Fig-2: Home Page

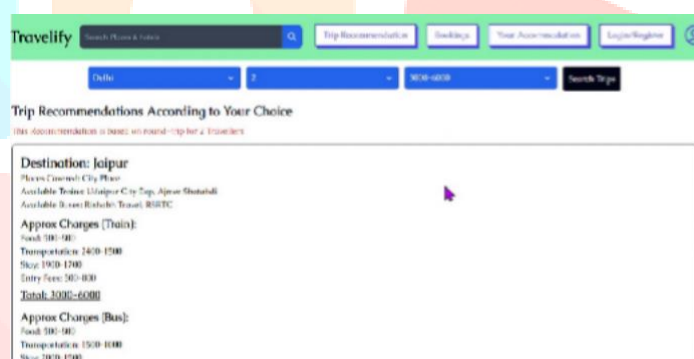


Fig-3: Recommendation (Trip Suggestion)

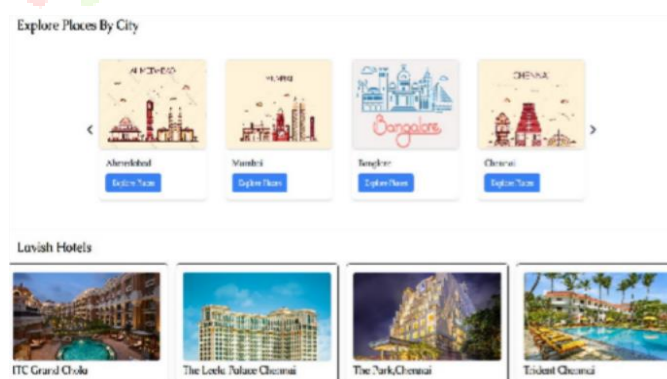


Fig-4: Explore Places By City

Fig-5: Flight Booking

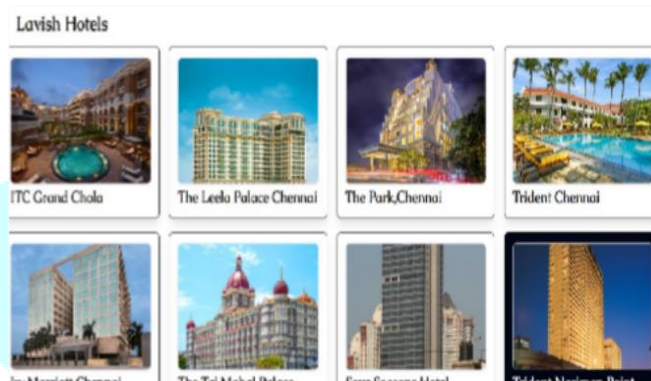


Fig-6: Available Hotels

Fig-7: Accomodation page

VI.FUTURE ENHANCEMENTS

As technology advances and user expectations continue to grow, Travelify has the potential for significant enhancements. Expanding its features and capabilities will transform it into a more intelligent and comprehensive travel management platform. Below are key areas for future development:

1. AI-Driven Personalized Recommendations

- Integrate AI-powered recommendation systems that analyze user preferences, booking history, and reviews to provide tailored travel suggestions.
- Introduce dynamic pricing predictions to help travelers secure the best deals on flights and accommodations.

2. Smart Assistant & Chatbot Integration

- Develop an AI-powered chatbot to assist users with bookings, itinerary planning, and real-time travel support.
- Implement voice-based search and booking options compatible with virtual assistants such as Google Assistant and Alexa.

3.Enhanced Community & Social Features

- Introduce user-generated travel blogs and reviews to create a community-driven travel platform.
- Allow travelers to design and share custom trip itineraries with others.
- Integrate social media sharing options, enabling users to share their bookings and travel experiences seamlessly.

4.Augmented Reality (AR) & Virtual Reality (VR) Integration

- Implement AR-powered navigation for improved guidance at airports, train stations, and hotels.
- Offer VR-based virtual tours of accommodations, destinations, and attractions to help users make informed booking decisions.

5.Multi-Currency and Multi-Language Support

- Provide currency conversion and multiple payment options to cater to international travelers.
- Introduce multi-language support to enhance accessibility for a diverse global audience.

VII.CONCLUSION

The budget-friendly travel planning system helps travelers maximize their experiences while staying within their financial limits. By integrating real-time data on accommodations, transportation, and activities, it enables users to make informed decisions and manage expenses effectively, catering to diverse preferences and budgets. This project has successfully implemented a unified booking system, streamlined resource allocation, automated administrative tasks, and leveraged advanced analytics. As a result, it has enhanced operational efficiency, boosted customer satisfaction, increased revenue, and provided valuable insights through data analysis.

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