Travelogue: A Travel Package Recommendation using Python

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Abstract - *Our project, **Travelogue: A Travel Package Recommendation using python** is a Travel planner developed for those travelholics who love wandering and exploring new places around the globe. This is a special type of search engine which gives the users a recommendation on which are the popular places that he/she must visit at a particular destination. It is basically a front end user interface to gather travel requirements from the user and present the proposed travel itineraries back to them, and a back end journey planning engine which performs the actual computation of the possible trip plans, prioritizing these according to the user's necessities (e.g. Number of days of the tour, number of people, Adventure filed trip for children or Pilgrims centric trip for old age people etc.)*

***Key Words*: Travel Planner, TSP Algorithm, Optimized Itinerary, FourSquare API**

1. INTRODUCTION

This project aims to digitalize the whole aspect of trip planning, from choosing a destination to creation of itineraries. At least once in our lifetime, we come across this situation where to plan for months for a trip, like where to go, when, how do we go etc. and then that plans keeps on changing again and again until someone loses his or her mind.

Thus, we come up with this idea Travelogue, where whole process of planning and scheduling is taken care of by covering maximum famous places in and around the destination entered by the user. Hence, it is an innovative trip planning platform that enables user to plan trips across different cities of the world.

2. SCOPE OF THE SYSTEM

The project targets all the travelholics who love exploring different places around the world. It is a boon for all those people and families who dream of travelling to a destination but doesn't know other famous places around it. The main aspect of the project focuses on making the people independent from the travel agencies which demand a lot of money for the planning of a comfortable tour. There are many cases in which the travel agents cheat their clients and then the company takes no responsibility. Hence, this project will make people self-reliant at the same time giving them the choice to plan a trip at their own pace and luxury.

3. RELATED WORK

Tourism is a social, cultural and economic phenomenon which entails the movement of people to countries or place outside their usual environment for personal or business/professional purposes. So we are her to make people self-reliable at the same time giving them the choice to plan a trip at their own pace and luxury. On the IRJET paper of "TRAVELMATE-Travel Package Recommendation system". They first analyze the characteristics of existing travel package and develop a thematic model of the tourist area season topic (TAST). Based on this model, they suggest cocktail approach to create this for customized travel package recommendations. In addition, they extended the TAST model to TRAST model to capture the latent relationships between tourists in each tour group. Finally they have evaluated the TAST model, The TRAST model and the recommended cocktail access in the real world travel package data.

In second IRJET paper "Optimized Travel Planner": This application smartly makes its way in analyzing user's likes and dislikes and the time period the user is willing to explore a place and gives him with amazing results in the form of multiple paths to utilize the time. The system is basically used to help a traveler new to the city or anyone who wants to explore a city in the given time period , the system makes use of the Google Places API to get all the locations and places with all their information to set and place it before the user in the paths to make his choice. The places are sorted and selected based on the top rankings by the Foursquare.

4. PROPOSED MODULES

1   End User Modules:

1.1   **User Account Management Module**: User must provide all the necessary details and register himself/herself into the system provided that all details are valid against validation criteria. Using these credentials he must login into the system to further use its functionalities.

Once authenticated, the user can update the details   if he has done a mistake in entering the credentials. This can be done by navigating to the View Profile page and changing the details. We are currently using Mongo DB technology to authenticate and register users.
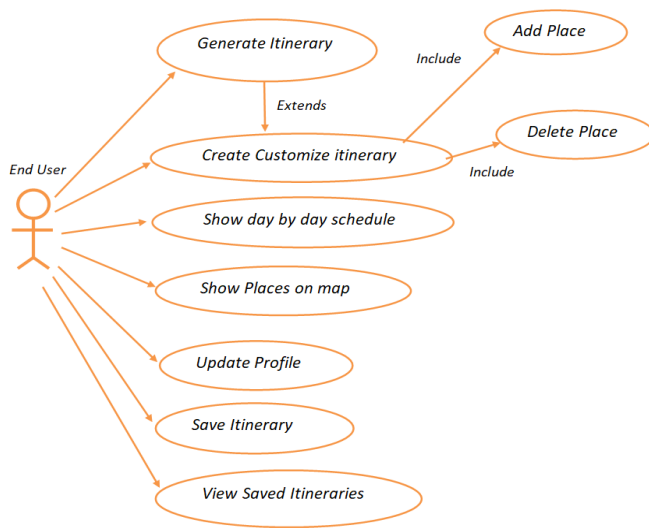
Fig -1: Use Case Diagram

1.2   Generate Itinerary Module: Whenever user wishes to schedule a trip, he/she uses this module. By entering the destination and journey dates, an itinerary is generated based on his/her preferences of places.

This is one of the main modules of our project. We have used Travelling Salesman Problem Algorithm among the most popular places we got using the FourSquare API. The list of all the places we get, is divided into the parts depending on number of days, and then we apply TSP algorithm to get the most optimized itinerary. The TSP algorithm needs to be used we need to cover all the places such that all nearby places are visited together. So that the user doesn't have to come to the same place the next day. Hence TSP algorithm gives us the most optimized itinerary.

Apart from that, we fetch the details of the places using the FourSquare API like address, place type(garden, worship etc.), images, longitude and latitude, and so on.

1.3   Place Recommendation Module: If the user wishes not to go on some of the places in the itinerary, he/she can customize the same and delete the places that he/she doesn't want to visit. User is also provided a feature of adding new places other than the ones shown in the current itinerary. After doing so, a new itinerary is generated based on the new places added by the user.

1.4   Map Plotter Module: The places shown in the itinerary are plotted on the map using longitudes and latitudes. Day By Day view of the map is shown to the user. Map contains marked places the user is

expected to visit on that day. Longitudes and Latitudes are fetched using the Foursquare API. The places are marked on the map using the Google Places API, which takes the lat, long pair as input and gives us the location of that place on the map.

This module is also used for displaying and finding the distance and path between the two places on the generated itinerary. The Google Places API used is provided the (lat, long) pair of the two places and accordingly the places are marked on the map. It also gives us the distance between two places and the route between them.

1.5   Storage Module for the itinerary: The itinerary generated finally after all the customizations, can be saved by the user for future references. Based on the journey date we classify the schedule as Ongoing, Upcoming or Past and accordingly display the itinerary in different panels. The itinerary is stored in the MongoDB tables as objects. Each object of the itinerary contains all the necessary details related to that particular place. We have used this schemaless db since we needed to store the itineraries in different format for some of the places. So Mongo Db was choosen as the backend technology.

5. FUTURE ENHANCEMENT

- We will develop an application which easy to use and user friendly.

- This project currently lacks the **Budget Module,** which takes care of the budget of user while planning a trip for him. We look forward to implement that module in the near future.

- We are planning to develop a place recommendation model using machine learning to suggest places to the users based on his past searches and other similar searches of different users. Hence concept of Cosine similarity is to be used in this project.

6. CONCLUSION

This project is successfully implemented with the functionalities such as generation of itinerary, string this itinerary, customizing it, displaying the places on the map, etc. This application focuses on making showing the users best possible routes and plan in and around a destination entered by the user. Hence, all the users and travel agencies can use this application for reference before their trip so that they can get a brief idea on what all places to explore around that destination and accordingly plan their own trip.

7. REFERENCES

[1] Mahima Phalkey, Yash Rahate, Yogesh Warathe, Shantanu Pradhan, Ayush Bharadwaj, Prof. Ashwin Shinde "Optimized Travel Planner " 2020(IRJET)

[2] Dr. A.A Jaiswal, Anmol Hinge, Mohammed Aquib, Deepak Atrahe "Automated Tourist Travel scheduling System to Enhance Tourism" 2020(IRJET)

[3] Sangram shelar, Pratik kamat, Akshay varpe, Akshay birajdar, vishwajit Gaikwad "Travel-mate Travel Package Recommendation System" 2018(IRJET)

[4] Fathima Rasidha Roushan, Piravina, Divyadharshini, Venkata Lakshmi.S "Optimized Travel Recommendation on using Location Based Collaborative Filtering" 2017(IRJET)