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Smart Tourist Guide

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Abstract:- Android Smart city traveler by the name indicated smartly makes it way in analysing user's likes and dislikes and the time period the user is willing to explore a place and gives them with amazing results in the form where utilization of the time is maximum. This system is basically used to help the traveller new to city or anyone who wants to explore the city in the limited time period, the system makes use of the preferences of the user to get all the locations and places with all the locations and places with all their information to sort and give a plan to the user. Thus we have used certain algorithms and google maps API to create this application.

I. INTRODUCTION

Travelling is one of the most common way to spend the holiday. Information about the travel destination, infrastructure, facility, event and promotion should be increased and easy to retrived in order to help the traveler in preparing the enjoyable trip. It is believed that daily lives of today's people are influenced by the interest and social media. Today mobile applications play a very crucial role in our real life. Public utilization of mobile applications for multipurpose has now become a major part of our life. Travel and tourism industry is no such exception since a huge part of its success relies on these applications. Quite simply, if the mobile technology impact on general society over the last decade has been ambient, its impression on the tourism sector has been enormous is no longer a leap into the unknown. The smartphone keeps its nature tourism experience and their technologies is suited their perfect travel partner. No traveller wants to feel like migrant when travelling. Mobile and digital technology have ensured that travelling tourists at their fingertips has empowered tourists with a sense of freedom, flexibility and choice than ever before. Somehow it is important for a mobile to have a proper and well defined platform. Developers can get help from the Android developer community for the forthcoming versions which they can incorporate into their app development projects. Android is an operating system for smartphones which is developed by Google. Android is based on linux operating system and it is used in touch screen smartphones.A good interface design intends to guide users through their journey on an application. One of the most stressing parts about joining an application is to provide detailed information on a Log-in form, just to have complete access. On one hand where log-in forms are essential for application owners, they can also be difficult and often take people off of an application. This is because they lookout for other easier log-in options on similar kind of applications where it is not always a inconvenience to log in to an application to use it. . Our objective was to keep it simple, so as to give the user the benefit of a inconvenience free login. We understand the importance of the user's time, energy and patience.

The proposed system is bent on helping tourists who have a desire to visit and explore a city within a stipulated amount of time. Every tourist has a list of likes and dislikes. Some tourists might be interested in visiting heritage sites to understand the cultural diversity, whereas some of them would prefer knowing more about the natural biodiversity, so parks, zoos and gardens. With a lot of options in hand, it becomes time consuming for the tourist to analyse the options against his/her likes and dislikes. That's where our application helps simplify decision making.

II. PROBLEM STATEMENT

As we know that the world is moving forward in the field of technology and until it is slow in the tourism industry. It is observed that people spend more time in travel planning and it becomes very difficult to organize a simple and enjoying trip. Even it is difficult in decision making of travelling spots, hotels, parks, exploring places. If a person is travelling first time, it is difficult to know the exact location about the places. At that time person have to totally dependent on the suggestion and directions given by the local people of that area. In developing country there will be need of smart tourism applications that help the traveller to know the exact locations, directions and how much time will take during travelling.

Sometime people came to any city and wants to explore that city. But they have the limited time and in that time they wants to travel the famous places in that city. At that time they need an application that help them to find the famous places, hotels, restaurants, shopping complex, entertainment zone, etc nearby by their locations and also how much time will it be taken to explore it.

III. SCOPE OF PROJECT

The scope of our project is mainly for the travellers who have limited time and they want to explore the city. This application helps the traveller to save their times. In short times the travellers visit the city and know about the city in detail.

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IV. AIM AND OBJECTIVE

- **Aim:** To develop an android application that analyses the user's likes, dislikes and time period that user is willing to put in to explore a place and give an optimized result.
- **Objective:** This application can be used by traveller who is new to the city or anyone who wants to explore a city in a bounded time period, so the person has to do minimum travelling can make use of time wisely.

V. ANALYSIS

A. Existing system

In the existing system, it is necessary for user to input the name of the destination exactly. If sightseeing place is decided, users do not have any problem (Google Maps). But, if the user wants to explore new places which he is not aware of then this system is not desirable. Current system shows only the top locations around the user. But, the user has to choose the places he wants to visit and search routes for each places separately. Furthermore, Google map displays it only to the route of the destination. On the other hand, in this system, the point that can propose a sightseeing route and sightseeing plan in the planned time to return is big superiority. In the existing tourist guide system, user is necessary to input an individual visit. Therefore, it is necessary for the traveller to prepare for sightseeing spot beforehand. Traveller can only visit the places which he is aware of. If it is a famous sightseeing spot, traveller can easily check it on a book or Internet. However, if it is not a famous sightseeing spot, but there are a lot of attractive places the traveller will not be aware of it.

VI. METHODOLOGY

A. Proposed system

The Places are sorted and selected based on the top rankings by the foursquare. During the Make trip/create trip the user is asked some questions helping them to filter out in searching the places, the places are displayed on the maps giving a clear idea of the location and giving the paths from one place to another from the start location to the end location. The Time shouldn't exceed 22 hours and the travel plan you choose is saved only for a single day and exceeding will be dissolved. If the time specified by the user exceeds 8 hours i.e. between 9 am to 7 pm the system also asks you whether you want to visit a adventure or water park and will show you options based on the rankings and reviews about it. Since the Traveller may be new to the city not knowing any place, in the map view if the user clicks on the marker he can see the ratings and reviews which are recorded from the Foursquare itself.

For the proposed system, the entire application is developed on android. Android is widely used in touch screen based smartphones. Android has very large communities that extend its features and create apps that cover almost all aspects. The app will be divided into 3 sections. The first section is for the user login and registration. The second section will provide the list of questionnaire that is required for the system. The third section shows the map of the city which will show the shortest route. This section will also provide other features like information about the tourist places around the city, availability of public transport etc. Google Maps API allows maps to be added based on Google Maps data to an application. Google Maps API itself, handles access to Google Maps servers, data downloading, map display, and response to map gestures. API calls can be used to alter the user's view of a particular map area. These objects provide additional information about map locations and improve user interaction with the map.

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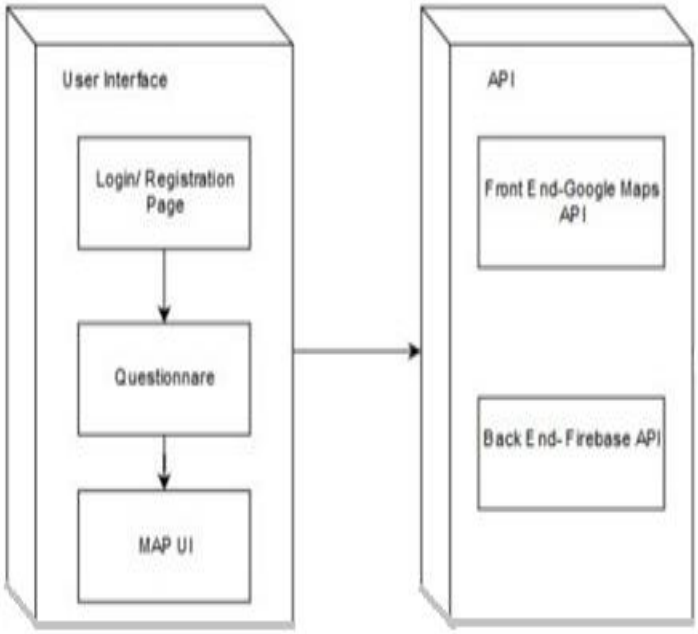

Fig 1: Block Diagram Of Page Interface

The entire registration process is on the first page of the UI. The UI also provides the list of questionnaire which is required by the system. The output generated by the system i.e. the route generated is displayed on the map. The processing of data and implementation of algorithms is carried out by API. The front end API is responsible for making an interactive UI and acts as a platform to execute the algorithms. The back end API is responsible for managing the database.

VII. REQUIREMENT ANALYSIS

A. Technologies Used

ANDROID STUDIO as a tool used to build both the applications, user end and admin end. XML language is used to build screen of android app (User Interface). Listener for accessing User details. API'S (application programming interface) is developed and integrated to android studio in order to communicate with server. All the database will be maintained in SQLITE db.

B. Hardware Requirements

- Mobile application
  - Processor - 1GHZ and above
  - Battery - 1200mah and above
  - RAM - 512 MB
  - Memory - 2 GB and above
- Software Requirement Specifications
  - Operating system : windows 7 and above
  - Coding language : Android
  - Front-end : Android
  - Data base : SQLITE
  - Software : Android Studio

VIII. MODULES

- **Registration:** The application allowsthe user to register in the application with basic details like name, mobile number, email, and password. This application uses SQLITE Database where the user details will be stored in the mobile database, which is primary source.

- **Login:** Once the user is registered user can get an access to login to the application. The entered mobile number and password will be checked in the database, if the user is present then application allow him to do next process else it asks for check credentials or register again.

- **Device geo location capture:** Nowadays many applications capture the location of the user to locate or track anyone. On installing theappthe user is asked to provide the location permission, then with help of location GPS which is inbuilt app, gives the current latitude and longitude of the device/user.

- **Make your schedule:** The user can make the schedule of the travel plan, initially the application captures the user locations and ask some question to select date and time. Once the date and time is captured again user has to select to which place he need to travel like shopping, temple, hill station. Once user select these then application call FOURSQUARE API to retrieve the data based on the user interest and gives the nearest location and user can select and save.

- **My schedule:** Here all the list of data will be populating based on the user selection with respect to theirlocation and he can choose any location and start seeing in google map.

- **Notification:** once the user selects places the data will be stored in user database and alarm with notification will be set. Once the time matches with device time and trip time user will get the notification saying that you can start moving to next place.

IX. LIMITATIONS

After evaluating our project, our project work only in one city. Our project work in Delhi and neighboring city of Delhi like Noida, Greater Noida, Gurgaon, etc.

X. FUTURE SCOPE

Based on the current limitations of our project, there can be some recommendations to improve the features of our app in order to make more user friendly, efficient and as well as effective.

Whole country coverage: In future, First we will made our project for the whole city of our country (India). And later we will made it for the whole country. It means this app can be implemented for the entire country.

XI. ADVANTAGES

The Data is very accurate and authentic as we take all the data from Foursquare. The User has to Login to use keeping the data secure. The user can also find the paths to follow to reach the final destination in map which gives a better view to the users. Since the location can be viewed in map, the user can even zoom in and zoom out to get a better view. The system gives many travel plans for the user to select. The usage of this application greatly reduces the time required to search for a place. The application also leads to quicker decision making with respect to places to visit.

XII. CONCLUSION

Humans have been traveling from long time for a variety of reasons. Traveling not only takes us to distant places, countries but also introduce us with different people, but it also tends to break the monotony of our lives. Since modern times, travelling has become more of an urban importance. Primitive methods of planning trips involve searching for popular spots, figuring out routes by referring to maps, fixing the number of places one can visit in a duration, etc. The days of paper maps, guidebooks, booklets have been replaced by interactive and amazing mobile applications for travel and tourism industry that come along with various functionalities. The accelerating interaction between technology and tourism has changed genuinly the efficiency and effectiveness of tourist guidance systems. Mobile applications and the capabilities it gives tourists at their fingertips has empowered tourists with a sense of freedom, flexibility and choice than ever before. An application like android Smart City Traveller saves the user's precious time and leads to quicker decision making. A simple user- friendly, jargon free interface ensures that users of all types can easily interact with the application.

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