

Smart Tourism Management System

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Abstract— In this paper, an application is built which performs several tasks done by the Udaipur Tourism. The 21st century is the era of information economy. With economic development and social progress, people's material and standard of living continues to improve and leisure time continues to increase, tourism has become increasingly popular as a kind of leisure way. The number of tourists steadily increases. On the one hand, it promotes the vigorous development of tourism; on the other hand, it also brings new challenges to the traditional tourism management. There is the urgent need to improve management efficiency and modernization of industry standards. In this paper, the geographic information system applied to tourism management is the preferred platform of tourism information. It can provide considerable travel management technology to ensure the effective and scientific tourism management. And it can enable more tourists to use the Internet to find travel information they need. Compared to the traditional access to travel information, the way that gets the travel information by the network is not only fast, informative, new content, but also low cost and loved by the majority of young tourists, which greatly facilitates the travel of people and promotes the further development of the tourism industry.

Key words: Udaipur, Tourism Management, System, Tourism, Travel Information, Tourists

I. INTRODUCTION

In this project, we are going to build a application which performs several tasks that are used by Udaipur Tourism like getting the information for particular places in Udaipur, hotels in Udaipur, one can receive all information online. This application gives information about Udaipur city to inflow smart tourism as it provides all the requirements of the tourists for which they can make their travelling experience much better. It gives the live and upcoming events happening in Udaipur. It is also giving the information about the nearby places of the city [1]. With the help of map, one can get all the locations of the city. And it can enable more tourists to use the Internet to find travel information they need. This application features about the attractions of Udaipur. The objective of the application is to provide the customer with on-the-click information about the places in Udaipur. It is designed in such a way that anyone can view the required information easily. The application allows the user to easily access the relevant information and make necessary travel arrangements i.e. booking of hotels. In Tourism there is only one database so there is no chance for ambiguity. It is a robust. It is very easy to use. The application is aimed for accurate and speedy reservation, information of hotel and also for searching any necessary information. The system architecture of smart tourist management application works is shown in the Fig. 1. Here in our Project we can add most of function done by place for new user like register of user and admin, new hotel and tour package, update news, etc.

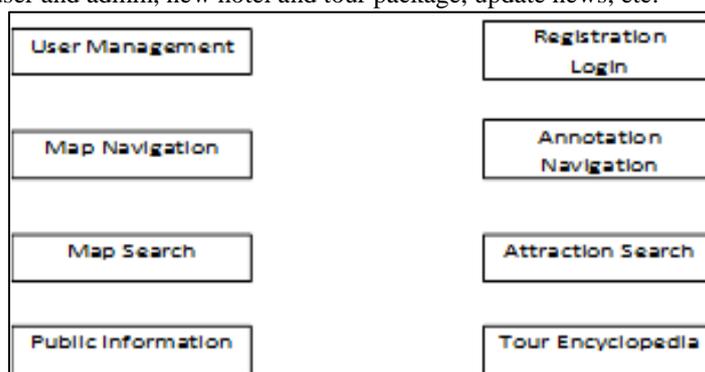


Fig. 1 System Architecture of Smart Tourist Management Application

II. LITERATURE SURVEY

Various authors have defined tourism. While Matheson and Wall (1982) created good working definition of tourism as "the temporary movement of people to destinations outside their normal places of work and residence, the activities undertaken during their stay in those destinations, and the facilities created locator to their needs.[2]" Macintosh and Goeldner (1986) have defined tourism is the sum of the phenomena and relationships arising from the interaction of tourists, business suppliers, host governments and host communities in the process of attracting and hosting these tourists and other visitors. [3]" But the widely used definition is the one given by the World Tourism Organization. Tourism is defined by the World Tourism Organization (WTO) as comprising the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes. The Fig. 2 explains the details about the tourism

management as compare to the system architecture. It explains all the point of interest, events, municipalities, museums, hotels, developers and the apps that are associated to the smart tourism. All the information regarding tourist are stored in the database which can be accessed by the registered user to perform the task as per the requirement. [2][3]The WTO further explains that “Tourism” refers to all activities of visitors including both “tourists (overnight visitors)” and “same-day visitors”.



Fig. 2: Smart Tourism

A. Tourist Destination

Many new destinations have emerged alongside the traditional ones of Western Europe and North America. A tourist destination is an amalgam of tourist products, services and public goods consumed under the same brand name, thus offering the consumer an integrated experience.[4][6]

- Rather than describing it in terms of a well-defined geographical area such as a country, island or town.
- Contemporary definitions view a destination as a blend of consumers’ space and tourism products providing a holistic experience which is subjectively interpreted according to the consumer’s travel itinerary, cultural background, purpose of visit, past experience, etc.

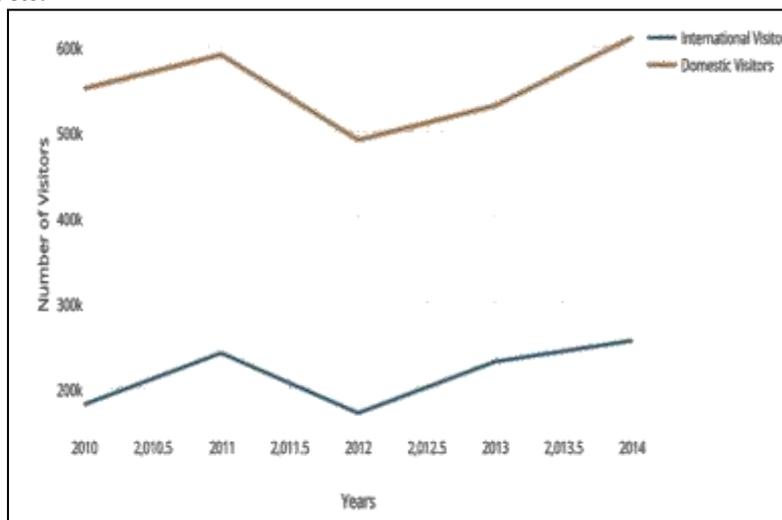


Fig. 3: Number of Visitors in Past Years

B. Existing Tourism Management System

Literature survey of application named ‘Udaipur trackr’ which gives information related to the places of Udaipur but it does not have enough content but in our application UD27, all features like information, online booking, live and upcoming events shown of the city is provided to the user. Many other applications like ‘Travelyaari’. [7]It gives the information but do not have the feature of online booking of hotels but in our application, online booking is done. You can discover all the best hotels, restaurants, shopping malls and nearby options near your favourite Udaipur locations.[5]

C. Udaipur Tourism

It is easy to use. It allows you to navigate through the maps of city, and get to know about the main city attractions. It provides you with all the useful information that you might need. It provides you with a list of hotels of a city along with their websites. It also gives you the description of each tourist spot of a city along with an image. You can navigate through the maps and find your way out.

D. Udaipurtrackr Application

It is a local and business informer app. It provide information about cabs and tour packages .The content available in this app is not enough so the visitors coming to Udaipur faces a lot of problems.

In Fig. 3, the various snapshot of app is given, which mainly gives the details about the app and its functionality. Such as Home screen, the attractions nearby you and the details about the hotels you want to visit and stay.

This app is divided into many modules and few them are as follows:

- 1) **Introductory Page:** When user login into the app by using his/her user id and password, the user is directly went to home screen. The various details are giving on the home screen such as hotels link, attraction page link and also provide some information regarding the location of the user and the hotel they searched for booking purpose.
- 2) **Travelog Page:** This category is given various attractions towards the places. When the registered user clicks on the particular link it will display the details about that place with information and pictures of that place.
- 3) **Hotels for Staying:** As shown in the Fig. 3, the hotels page gives the details about the various hotels in Udaipur along with its map so that user can reach easily and also give the distance to travel to reach that hotel from their current location.

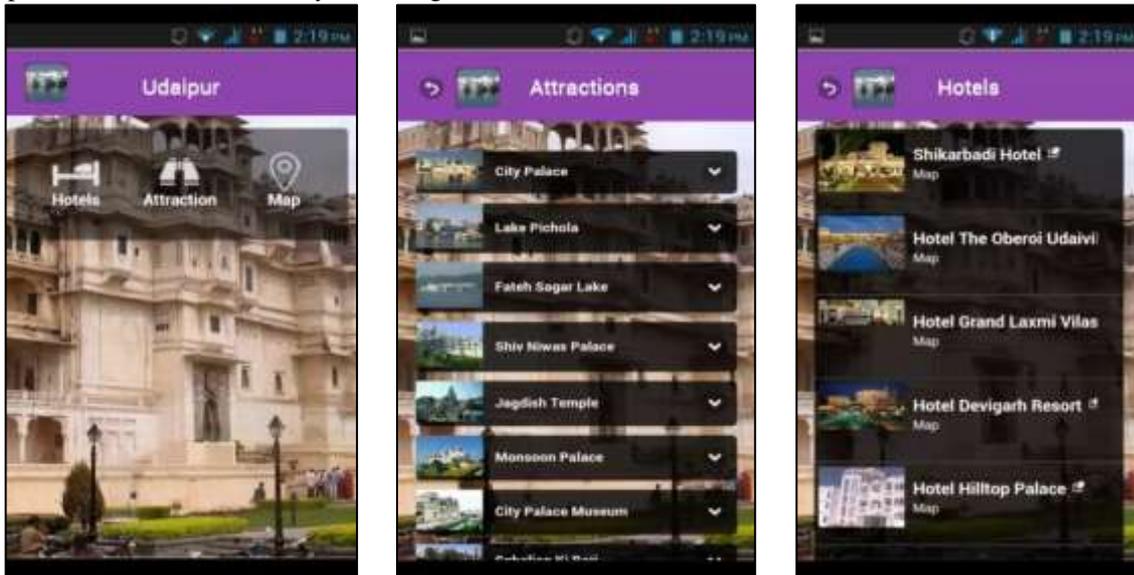


Fig. 4: Existing Application Functionality Udaipurtrackr (Home Screen, Attractions and Hotels Details)

E. Problems in Existing System

- In the existing tourism management system the hotels were not categorized so theVisitors who were coming to Udaipur face a lot of problems.
- There was not adequate content provided in the earlier system.
- The earlier system does not provide the facility of booking the hotel or restaurant.
- The earlier applications are giving the information online.

III. MODULES OF PROPOSED SMART TOURIST SYSTEM

Before describing the various modules of the smart tourism, let's give introduction about the smart tourism app UD27 which is different from the others application:

- This app is very convenient to visitors who are coming to Udaipur. It provides you with all the useful information about the city attractions, hotel and restaurants, shopping malls, market and street, culture and heritage.
- It provides you with a list of hotels or restaurants categorized into luxury, heritage and luxury. It also provides the facility of booking it online.
- The visitor who is coming to Udaipur gets to know about the events going in the town and the upcoming events.
- You can navigate the nearby places and find your way out.

In Fig. 5, the working of Smart Tourism is explained and the various functions are as follows:

- It have many modules like travel services which describe about the local and national travel solution, like how to book and get the best traveller services without knowing the much details about this.
- It also explains about the smart area management, which describe about the places which using the smart technology to save nature.
- The service hotline for the customer to connect 24*7 to get the details about the tourist places and many more.
- Settlement travel deals give the best deal to the customer who are registered into the system, and get the best way of it to explore the more tourist destinations.
- Smart shopping guide enable user to search for the best shopping areas within their premises and also guide them according to the customer needs.

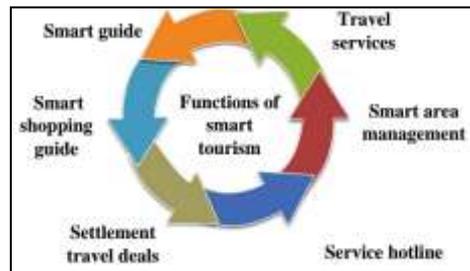


Fig. 5: Various Functions of Smart Tourism System

The various modules of the project and application UD27 are as follows:

A. Module 1: Welcome Screen Page

As shown in the Fig. 6, the welcome screen shows the display with app name UD27 at the top centre and also the background details about the app and gives further instructions to the user for processing. This is the welcome screen of UD27.

B. Module 2: Introductory Udaipur Page

As the name suggests introductory, this page will give the details about the Udaipur, as this app is made for the city Udaipur. In Fig. 7, this page explains some introduction about the Udaipur, how its name came from and the various details about the city Udaipur etc. This is the home screen of the application ‘UD27’ which tells the history of the city ‘Udaipur’.

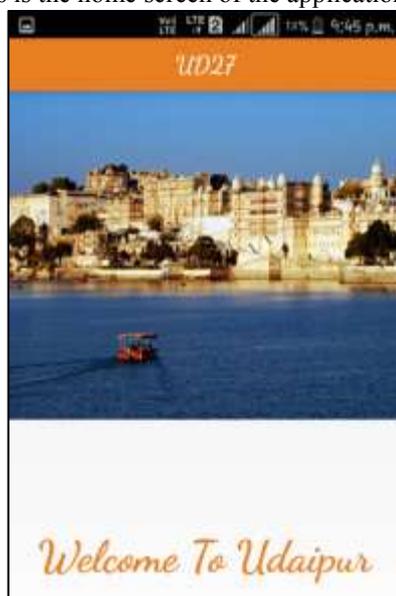


Fig. 6: Welcome Screen

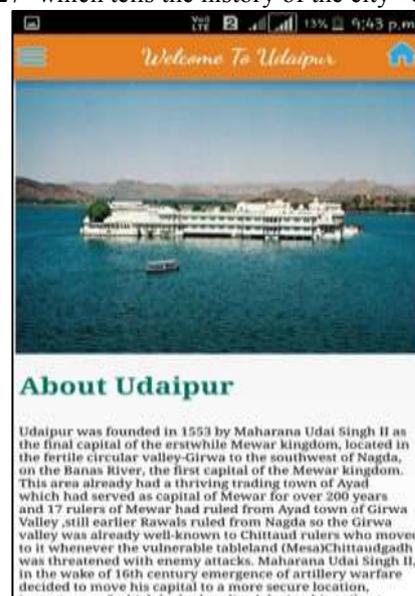


Fig. 7: Introductory Page for Udaipur

C. Module 3: App Functionality / Features Page

- Home: In the next snapshot depicted by Fig. 8, a list appears which has several options. When the user clicks on home option and about city he/she come to know about description and history of Udaipur.
- Geographic and climate: Geographic and climate section tells about the best season and climate to visit Udaipur in terms of best month to visit like in rainy season, or in summer season depends upon the user needs.
- Navigation Map: Map option brings out the map of Udaipur to show different locations around the user and the distance from the current location from the user and it also categorized in to the different class so that it's easy to navigate through such place.
- Multimedia Section: Then the next option is of multimedia, which provides the pictures and video of the city. The best thing is that it; the user can download the pictures and video for offline purpose also. So that no needs to login or open the link again and again.
- Emergency Calls: And then the last option is of emergency a call which gives all the emergency numbers to the user like hospital, ambulance, police etc. which can be used anytime when the user has emergency.

D. Module 4: Visit Lakecity Page

When the user clicks on visit Lakecity page another snapshot appears which is depicted by Fig. 9. It mainly divides into various categories and they are as follows:

- Attractions
- Hotels and Restaurants
- Shopping Malls

- Market and Street
- Culture and Heritage
- Nearby Places
- Events
 - 1) It consists of various popular places, hotels and resorts, shopping malls and their description and images.
 - 2) Hotels and resorts is again categorised into luxury, heritage and deluxe and these can be booked online.
 - 3) User can also come to know about the current events and the upcoming events which will be held in the city. Through the map, user can easily navigate to popular places.

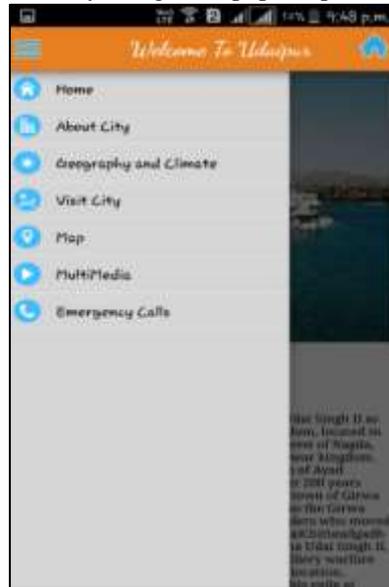


Fig. 8: App Functionality Page

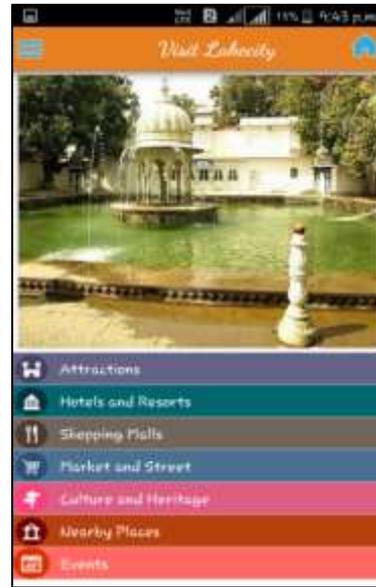


Fig. 9: Exclusive City Page

E. Module 5: Attractions/TravelogPage

In Fig. 10 all the information related to the attractions of Udaipur like Fatehsagar lake, City Palace, Jagdish Temple and many more are explained in the travelog page. So that user will get all the details about the particular place in one place and no need to search about that place anywhere else. This gives details about the time of open and close and also suggests best time to visit place.

F. Module 6: Restaurants/ Foodies Page

In Fig. 11, all the restaurants are categorised into various types of food varieties like Chinese, Rajasthani etc. So that the user can easily get his favourite type of food accordingly. These consist of the entire possible restaurants or foodies junction one can find in the Udaipur, from luxury restaurant to the family restaurant. This app also added an additional functionality as per the user needs that the user can select the restaurant according to the food he/she likes. The searching option will tell which food you want to search such as;

- Food types of all categories
- Chinese
- Continental and Italian
- Rajasthani and North Indian
- South Indian

G. Module 6: Events Page

In Fig. 12, all the events happening in the city are shown to the user. In fact, it also provides all the information related to the upcoming events of the city 'Udaipur'. The events module can give the details about the events and mainly divided into two parts:

- 1) Today's Events: This will give all the today's event details, so that the users who are in Udaipur can attend that event and get the best of it.
- 2) Upcoming Events: This will show all the events related to future or in the date prescribed. If the user has to visit city in upcoming days then he can search the events which can occur between his dates so that he can plan according to the particular dates and travel along that place in the prescribed dates only.

For example: suppose someone wants to attend the Shilpgram event in Udaipur, then this event can occur only in between the month of December. So the user gets the notification regarding that place and event dates.



Fig. 10: Travelog Page

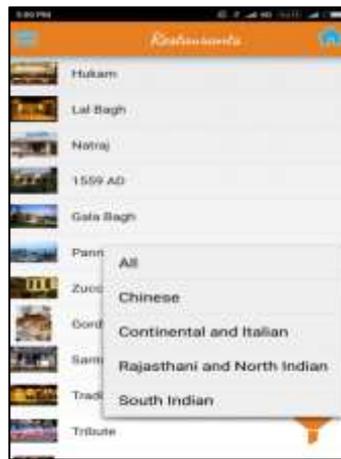


Fig. 11: Restaurants/ Foodies Page



Fig. 12: Events Page

IV. CONCLUSION

The development of tourism not only needs its own information management and exchange, but also adapts to the economic development and information needs of the whole society. The GIS applied to the tourism management is the inevitable demand for tourism management and tourism development. The development of modern information technology constantly presents new challenges to tourism management. In this case, it is a very important problem that how to make full use of the GIS in the tourism management to make tourism management better adapt to the needs of Information development. It requires ongoing in-depth discussion and study.

V. FUTURE SCOPE

- The future scope of our application can be increased by using guides without an internet connection.
- Also thousands of articles will be added about the landmarks, with photos.
- Also we'll use a device named Ibeacon. It is a compatible hardware transmitter typically called beacons- a class of Bluetooth low energy (BLE) devices that broadcast their identifier to nearby portable electronic devices. This device will be used to track nearby locations through GPS. It helps to determine the device's physical location, track customers, or trigger a location- based action on the device such as a check-in on social media or a push notification.

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