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Mobile Tourist Guidance System

Mobil Turist Rehber Sistemi

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ABSTRACT

It has been found from research that the first time visitors including tourists find it extremely difficult to search for any required item if they travel to any new destination. To overcome this difficulty we designed and deployed a mobile application which is an android application, to track and advise the visitors about their specific requirement by the click of a button. This application has been designed to cover the most common requirements of any visitor such as, site seeing, hotels, restaurants, emergency services like police, embassy, post office etc.

Keywords: Android, Mobile applications, tourist system applications, Maps.

ÖZET

Araştırmalar ziyaretçilerin ve turistlerin ilk defa ziyaret ettikleri yerlerde aradıkları herhangi bireye ulaşmalarının zorluğunu göstermektedir. Bu çalışmada, bu zorluğu gidermek için ziyaretçilerin isteği doğrultusunda tavsiyelerde bulunan ve ziyaretçinin konumunu takip ederek ilgili yere yönlendiren Android tabanlı bir uygulama geliştirilmiştir. Geliştirilen uygulama herhangi bir ziyaretçinin ihtiyacı olan görülecek yerler, oteller, restoranlar ve polis, konsolosluk, postane hizmetleri gibi acil ihtiyaç duyulabilecek birçok alanı kapsayacak şekilde tasarlanmıştır

Keywords: Android, Mobil uygulama, turist yardımcı uygulamaları,Haritalar.

1. INTRODUCTION

Tourism is a main industry in the e-business. There are a few reasons for this reality. Tourism is a data escalated industry with a long esteem chain. Since 1960s this industry speaks to an established field of data and corresponded innovation applications qualities of electronic tourism commercial center prompt to many difficulties. One of them is developing requirement for interoperability between data frameworks, permitting consistent data trade between tourism associations. The customary answer for interoperability issues was to create interfaces between every match of correspondence frameworks, yet improvement and upkeep of such projects are excessively costly and not sufficiently adaptable for the electronic tourism commercial center. There have been many endeavors to institutionalize information trade inside tourism electronic markets with a specific end goal to achieve worldwide interoperability. Therefore there are a few worldwide guidelines utilized just by vast organizations and a few guidelines produced for the requirements of little organizations, however utilized just on national level (Gratzer and Etc.,2003).

1.1. Mobile Tourism

M-tourism implies the arrangement of tourism administrations on remote gadgets, cell phones and Tablet PC. Our versatile visitor control framework has capacities to enter and to sort out the tourism questions in the database and to make them accessible for sightseers and executives utilizing the E-tourism administration data frameworks (TMIS) entryways in which the tourism procedure and its exercises have been organized. The M-tourism question administration frameworks are presently good for all sort of client devices mobile phone. The advantages: The benefits of portable tourism allude for the most part to the versatile client: an extraordinary adaptability, an enhanced visitor calendar is conceivable, expanded efficiency amid dead minutes and in the nick of time tourism. Mobile tourism is a new area in the world of tourism which refers to the use of the mobile phones as a tourist website, where all the technological requirements for such an application is already available;

but still there is a lot of challenges related to the design, use, jobs, and changes. Smart phones these days have a lot of useful features which make them suitable to keep pace with evolution of the tourism, these features include (B.Brown and Etc.,2003):

1. Ubiquity & convenience: Smart phones have multiple and diverse forms that are portable, easy to access & widely applicable.
2. Positioning: The smart phones these days are able to provide GPS (Global Positioning System) with the web interface.
3. Personalization: Unlike the computer which can be used by many persons at different times, a mobile phone is meant to be used by one person only. It is like 1:1 relation whereas in the case of computers it may be 1: many relationships as per our basic set theory in mathematics.
4. Ease of access: Usage of the mobile phones has become so easy that young kids find it very easy to use it. Hence the popularity of web based mobile services has been on a rise.
5. Easy transfer of Information: These phones have the ability to connect to the Internet easily, enabling it to reach the amount of similar data and information's.

Highlighting the importance of these applications, when a tourist visits a new place (country, city, and region) he/she definitely looks for an easy and flexible way to assist in the planning process to stay in these places according to the objectives of the visit. The process of determining what places to visit and how to visit during a specific time period and budget information is one of the most important problems faced by the tourist especially in large cities and regions that contain multiple places. Using smart phones is the perfect solution for this kind of problems faced by tourist. In the last five years there have been major development in this area, taking into account the great development that emerged in the Telecom industry. Applications for this purpose must take into account many features like Global Positioning System (GPS), Internet connection, the ability to provide information about a particular place, how to get to a certain place. Application must have an easy to use interface, flexible and efficient.

2. RESEARCH METHODOLOGY

Our research is purely experimental based. It is exploratory in nature.

2.1. Related work

There is no great success in identifying places without proper application of Internet systems (İvica and Etc., 2013).Internet has turned into a support to more mind boggling and basic capacities in tourism and cordiality industry and it added to its huge advancement. Because of the presence of the Internet, there have been a few changes in the tourism subjects business and those are the accompanying:

1. The Internet offers the possibility of expansion, rapid data transfer and flexibility (websites can always change, the changes are immediately visible and are not limited to space and time) (Raza., 2006).
2. Each serious subject in the tourism and hospitality industry has a website that can be classified into four broad groups: holding corporation identity websites, chains, concession and membership websites, websites of individual sites and facilities (Koelzer and Etc., 2005).

Java has turned into a main programming dialect not long after its discharge, particularly in electronic and conveyed figuring situations, and it is a rising choice for High Performance Computing (HPC) (Gupta and E., 2001). The expanding enthusiasm for Java for parallel figuring depends on its engaging attributes, it has a broad API and a wide group of designers, lastly, it is the fundamental preparing dialect for software engineering understudies. Additionally, execution is no longer an impediment. The execution crevice between Java and local dialects (e.g., C and Fortran) has been narrowing for the most recent years, because of the Just-in-Time (JIT) compiler of the Java Virtual Machine (JVM) that gets local execution from Java byte code.

Mobile phones have turned out to be regular ordinary gadgets, furthermore, numerous nations are reporting near a 100% appropriation rate for their populace. Specialized improvement has prompt to a developing number of components, and today's cell phones can be viewed as adaptable little figuring gadgets frequently utilizing cameras, shading screens, and UI animations.

3. THE PROPOSED SYSTEM

The proposed system takes into account several important factors:

- Taking into account all the technological developments that have taken place in the mobile industry.
- Provide an integrated application so the tourist can get all the information and services they need without having to use any other source about a place of visit.

- Providing property evaluation of all tourist facilities so as to provide a transparent assessment which helps the tourist in making the right decision.
- The proposed system is characterized to meet all the tourist features in terms of providing special tracks for each type of tourism.
- Centralized database system provides support for big size photos and information about all tourist places.

In the beginning of the process of designing the proposed system, it is necessary to take into account that the proposed system should be integrated in terms of services provided to tourists and there are several types of tourists. For example, there are tourists interested in visiting historical, cultural and entertainment venues. System needs to provide multiple options to the tourist and tourist can choose what suits him. The choice of the designated path provides the ability to identify all the points and places that can be visited through the use of a map of the city and provide an accurate path to visit all places as the proposed system provides how to get this path. And after visiting these places the system provides integrated information about the place with illustration. It can also give an assessment of the place being visited. Tourists can likewise choose the correct hotel using the application. Through the rooms see pictures and costs of lodgings and restaurants accessible in the city, and the likelihood of pre-booking in the hotels and restaurants.

3.1. Features of the Proposed System

The proposed system has many features and benefits including:

1. The proposed system can locate the tourist with high precision.
2. The proposed system can identify all the hotels and restaurants in the city that tourist is in and provide enough photos and information and can include a reservation for all hotels and restaurants.
3. The proposed system provides the possibility of evaluating all the tourist facilities within the city which provides a transparent way to help all tourists to make the right decision.
4. The proposed system works as a virtual tourist guide. It contains various touristic tracks (historic, cultural gourmet etc.) and navigates tourist through this track which will allow tourist to visit the places of interest and get information about them without needing a tourist guide.
5. The proposed system provides the ability to track the path of the tourist maps in order to determine and to know whether the fact that the tourist follows the proposed path or not.
6. The proposed system saves time and effort significantly for the tourist.
7. The proposed system provides the possibility of updating information to keep up to date with changed addresses, sites and places within the city.
8. The proposed system is compatible with all types of smart phones.
9. The proposed system can call google maps through JAVA by using some tracks and locat the intended place to the tourists.

3.2. The block diagram of the proposed system:

Figure 1 shows the outline of the proposed system. As it is clear through this scheme we rely on the Google maps in the process of determining the location of tourist and specify the path that the tourist needs to take. The proposed system is connected to a database which provides a vast amount of information about touristic places.

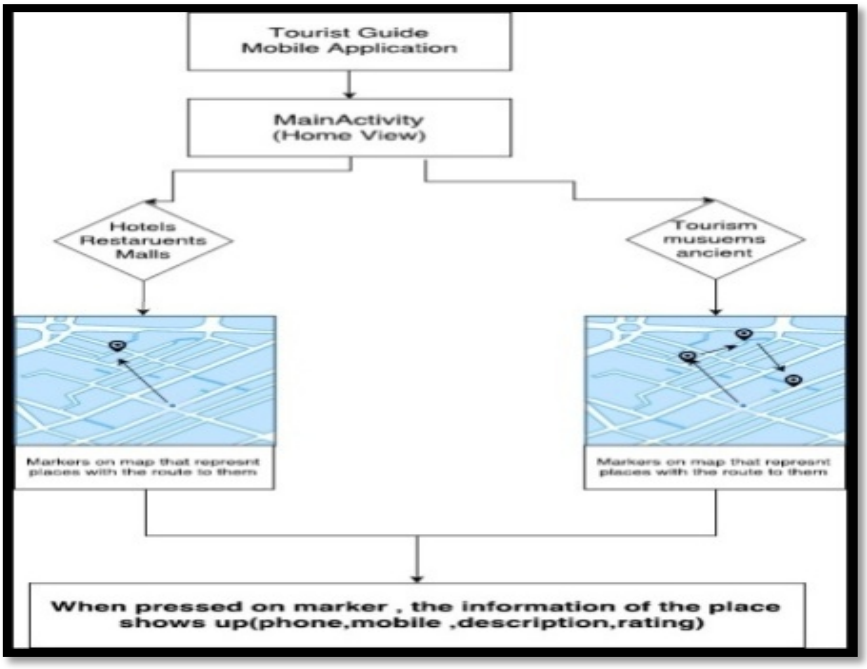

Figure 1. The Block diagram of the proposed web enabled tourist guide system

3.3. The Flowchart of our web enabled Tourist Guidance Syste

As shown in Figure 2, the tourist opts for mobile services which are commonly provided by the service provider. Then we can observe the integration of Mobile Application, Google maps, Database & web services which combine together to help customer to find his/her preferred destination.

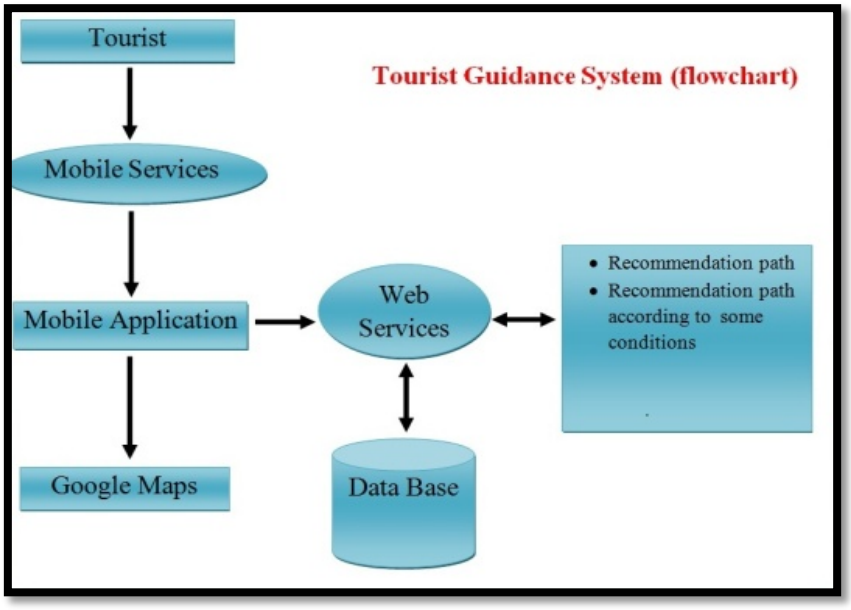

Figure 2. Data flow diagram (DFD) of the proposed system (tourist guidance system)

3.4. The Database Design

The system uses a 4-tables MySQL database to store and manage data. Diagram3 shows the proposed database design of an ER Diagram.

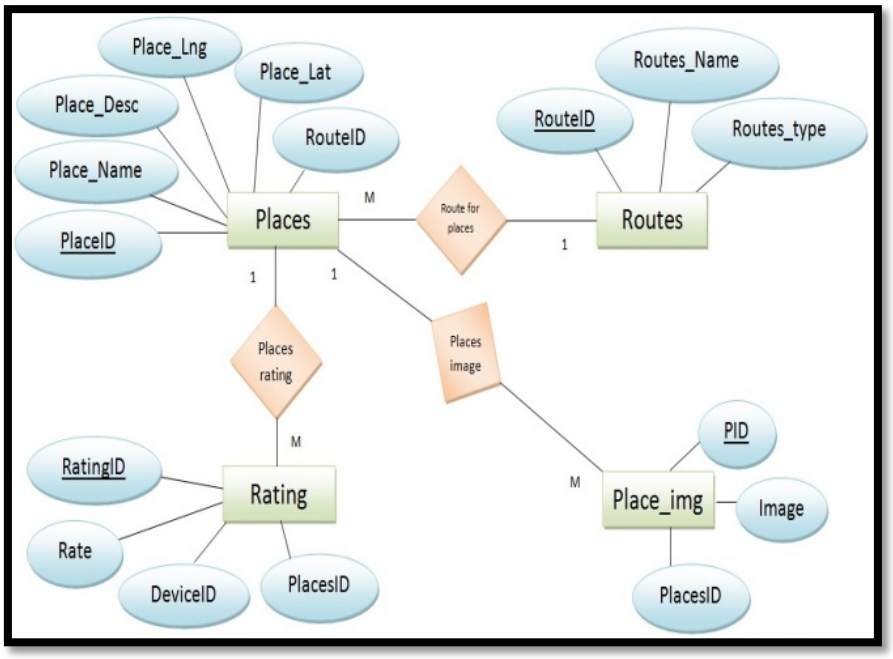

Figure 3. ER Diagram showing the Database Design

3.5. The proposed system design

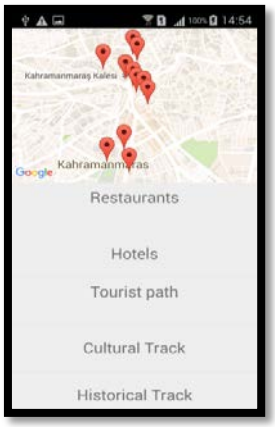

Figure 4. Home page

Figure 4 shows the home page of the application which serves as an entry point. Application provides shortcuts for searching nearby restaurants, hotels, touristic tracks, cultural tracks and historical tracks and it shows all places that the tourists need to know them. When user chooses hotels from the options, page in Figure 5 appears.

Figure 5. Hotels view

On this page, user sees multiple hotels within the area. The program will provide the property as shown in Figure 5. When user chooses one of the hotels, a detail page that provides information about the chosen hotel as shown Figure 6. Also you can get route to the hotel from your current place and it chooses the nearest road to the intended place that the tourists want to visit,the way is also avaliable and when the tourists reach to the place that he want to visit the system will allarm him/her and its connected to the main server.

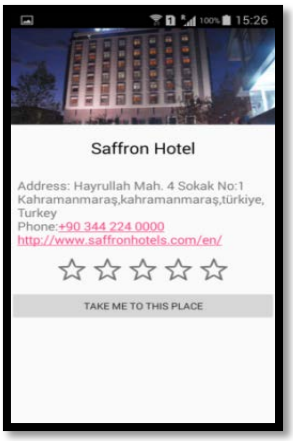

Figure 6. Hotel detail page

On the hotel detail page, there are pictures from the hotel and rooms, hotel contact information such as phone number and e-mail address is provided. Also from this page user can provide feedback about the hotel. Clicking “take me to this place” will open the map and provide user a route from his/her current place to the hotel and will navigate if necessary and will give the tourist all the information about the places that are around the area with showing multible pictures to the intended place.

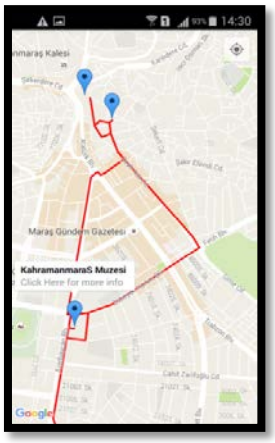

Figure 7. Historic track view

In the historic track section, a predefined historic track is provided as seen in Figure 7. This track includes places of interest that is important for that place's history. Sequence of historic places is provided in the database. When user clicks on historic track button from home page, the application will determine the current position of the user and will navigate user to the closest point in that historic track. When user reaches at the first place, application will provide an audio feedback. When user clicks on next, application will navigate user to the next place in sequence on the historic track.

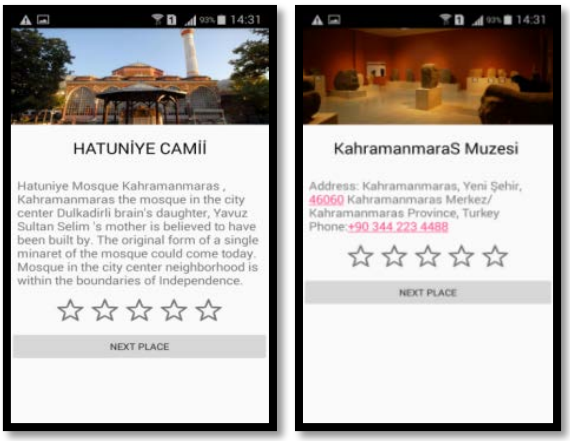

Figure 8. Details of historic places

When user clicks on a historic place on track, details of the place is provided as shown in Figure 8. Information includes importance of the place, picture of the place, address, e-mainlander available link to its website. Tourist track and cultural track works in similar fashion with historic track.

4. RESULTS & CONCLUSIONS

The proposed system helps the tourist to save time and effort in making the right decision, it also provides the possibility of pre-booking of hotels and restaurants with the possibility of assessing all these tourist facilities provide information and pictures about all these places. The process of determining the tourist itineraries to tourists on arrival to the place provides and shortens time to visit tourist areas. Also the proposed systems provide updated tourist information and property, in order to avoid the problem of the relocation of these areas. The use of tourist proposed system obviates the use of all written guidance or tour guide, and can also use the application for the publicity and promotion of hotels, restaurants and tourist facilities. All these services are provided through a user interface and uncomplicated.

The proposed system tracks are just for Kahramanmaraşat the moment and it can be added in the future to more than one place around the world and this will lead the tourists to unuse the computer system it will use just the mobile system for its easy.

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