RV Educational Institutions ®
RV College of Engineering ®

Autonomous	Approved by AICTE,
Institution Affiliated	New Delhi, Accredited
to Visvesvaraya	By NAAC, Bengaluru
Technological	And NBA, New Delhi
University, Belagavi	

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

Tour Guide

Mobile Application Development Project Report

(18G6E10)

Submitted by

Spoorthi Jayaprakash Malgund   **1RV18CS170**

Soundarya S V   **1RV18CS169**

Under the guidance of

Prof. Anisha B S

Assistant Professor

Dept. of ISE

RV College of Engineering

In partial fulfilment for the 6th semester- Course

Introduction to Mobile Application Development

2020-202

RV COLLEGE OF ENGINEERING®, BENGALURU-59

(Autonomous Institution Affiliated to VTU, Belagavi)

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

CERTIFICATE

Certified that the mobile app development project work titled *'Tour Guide'* is carried out by **Spoorthi Jayaprakash Malgund (1RV18CS170)** and **Soundarya S V(1RV18Cs169)**who are bonafide students of Sixth Semester, RV College of Engineering, Bengaluru, in partial fulfilment for the 6th semester - Introduction to Mobile Application Development Course (18G6E10), during the year 2020-2021. It is certified that all corrections/suggestions indicated for the Internal Assessment have been incorporated in the project report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of self-study component project work prescribed by the institution for the said degree.

Signature of Course In-charge   **Signature of Head of the Department**

Prof. Anisha B S   **Dr. Sagar B M**

RV COLLEGE OF ENGINEERING®, BENGALURU-59

(Autonomous Institution Affiliated to VTU, Belagavi)

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

DECLARATION

We, Spoorthi Jayaprakash Malgund and Soundarya SV, students of Sixth semester B.E,RV College of Engineering, Bengaluru, hereby declare that the project titled **'Tour Guide'** has been carried out by us and submitted in partial fulfilment for the 6th semester - Introduction to Mobile Application Development Course (18G6E10), during the year 2020-2021.

Further we declare that the content of the dissertation has not been submitted previously by anybody for the award of any degree or diploma to any other university.

We also declare that any Intellectual Property Rights generated out of this project carried out at RVCE will be the property of RV College of Engineering, Bengaluru and we will be one of the authors of the same.

Place: Bengaluru

Date:

      Name   **Signature**

1. Spoorthi Jayaprakash Malgund (1RV18CS170)

2. Soundarya S V (1RV18CS169)

ACKNOWLEDGEMENT

We are indebted to our guide**, Anisha B.S,** Assistant Professor**, Dept. of Information Science and Engineering,** for his/her wholehearted support, suggestions and invaluable advice throughout our project work and also helped in the preparation of this thesis.

Our sincere thanks to **Dr. Sagar B M**, Professor and Head, Department of Information Science and Engineering, RVCE for his support and encouragement.

We thank all the **teaching staff and technical staff** of the Information Science and Engineering department, RVCE for their help.

Lastly, we take this opportunity to thank our **family** members and **friends** who provided all the backup support throughout the project work.

ABSTRACT

Nowadays there has been a large increase in the number of people out on tours, for the sake of recreation and entertainment. Tourism is the strongest and largest industry in the global economy, generating an estimated 11% of the global gross domestic product (GDP). Meanwhile, there is greatly enriched travel information provided to the tourists on the Internet.

However, a problem is shown that tourists are not able to get travel information timely when they are on the move. Therefore, with a humanitarian spirit we intend to build an android application which will provide the tourists useful, relevant and real time information in one place. It empowers the customer to explore within the city and furthermore realize some essential zones to wander around.

The main purpose of this project is when users are on the move, it is able to provide rich and concise information and make them access the service at any time and anywhere. A travel guide or guide book is "a book of information about a place designed for the use of visitors or tourists". This application permits users to customize their search for places and get your guidance information they need anytime and anywhere. In specific, the tourist data could be browsed or queried 2 through an Internet map service such as Google Maps.

A problem is shown that tourists are not able to get travel information timely when they are on the move. Hence the application aims to develop detailed texts, pictures, videos and other guidance information, so people can better understand the tourist attractions and make decisions objectively.

TABLE OF CONTENTS

Page No

2.2 For your app idea, research to see if the idea is already implemented by an app in the Android Market and list the existing apps of the same category.

2.3 If it is an existing app, justify that your idea either adds a significant feature, or is implemented in a way that is a significant improvement over the existing app (e.g. higher quality, better usability etc).

CHAPTER-1

Introduction

CHAPTER 1

Introduction to development of Tour Guide Application

Tourism is the strongest and largest industry in the global economy, generating an estimated 11% of the global gross domestic product (GDP). Meanwhile, there is greatly enriched travel information provided to the tourists on the Internet.

However, a problem is shown that tourists are not able to get travel information timely when they are on the move. Therefore, with a humanitarian spirit we intend to build an android application which will provide the tourists useful, relevant and real time information in one place. It empowers the customer to explore within the city and furthermore realize some essential zones to wander around.

The main purpose of this project is when users are on the move, it is able to provide rich and concise information and make them access the service at any time and anywhere. A travel guide or guide book is "a book of information about a place designed for the use of visitors or tourists". This application permits users to customize their search for places and get your guidance information they need anytime and anywhere. In specific, the tourist data could be browsed or queried 2 through an Internet map service such as Google Maps.

1.1. Problem statement

Build an android application which permits tourists to explore places of interest and provide guidance information anytime and anywhere.

1.2 Objective

- The Main aim is to design a Tour Guide (Mysuru) app ,the application is to be a user friendly tourist guide over android operating system for Mysore city.
- To avoid getting services from people which we need to engage guides.The application

serves as a virtual guide to facilitate a tourist with interactive Google Maps.

● This application provides information on Places, parks, hotels, restaurants and Shops.

1.3 Expected Outcome

● People travelling to Mysore can go sightseeing and carry out extra activities without asking the locals and won't have to deal with the problem of language barrier.

● The information provided is accurate and sufficient to help guide the tourist and if in any case, they want more information such as the history of the place, they can be easily taken to the website of any historical place directly through our app.

● They can travel to their destination without any hurdle as the app will take them directly to the google maps application.

CHAPTER-2

Requirement Analysis & Literature Survey

CHAPTER 2

Requirement Analysis & Literature Survey of Tour Guide App

2.1 Requirement analysis

Although people can get some general information regarding traveling over the internet, it is sometimes problematic for newcomers in a place to get familiar with the new environment. Basically, they face difficulties in communicating and finding proper routing information and associated costs for distinct routes.

Nowadays people have been moved so much into modern technology that they really want an intelligent living environment along with intelligent objects which contain powerful infrastructure with the most desired features. Thus android mobile applications have become very popular among smartphone users.

Software requirements
- Tools/ platform: Java/ XML
- Android Studio

System Requirements
- Operating System: Windows 7 or above
- IDE: Android Studio
- Android Google API 15 or higher
- Software: Android SDK (Software Development Kit), Java SE 7 or higher
- Android Device: Android phone
- The mobile should have GPS and GPRS features.

2.2 Existing Systems

There are many mobile applications and different websites providing tourist information, but those are mostly location related. An important class of context aware applications is Location-dependent services, which answer location-related queries. There are many mobile travel applications available such as travel, ToGo, TravelReminder, TravelGuide, TravelAgent, that are providing location related information, location-dependent services and some websites providing tips, advice, and travel packages to places all over the world, such as tripadvisor.com, Kayak.com, Orbitz.com, Nomadicmatt.com, Travelocity.com, and Travel + Leisure.

These existing systems just provide the list of all available hotels, restaurants, and tourist attractions , but do not provide weather forecasts of the travel city, distance between two places, and tourist attraction place videos as the user needs. In the tourism industry, tourist information is acquired mainly through magazines, newspapers, radio and other simple ways that are available easily . Problem 7 is that when they are on the move, they are not able to get travel information on a timely basis. There are many mobile travel guide applications available. These mobile apps have some limitations, not providing videos and other guidance information; as a result people cannot make decisions objectively and cannot understand the tourist attractions. Also due to continued acquisition of the bandwidth the application on these mobiles works slowly. Hence, the mobile end-user's operation is very difficult, and the contents displayed on the screen of a mobile device are limited.

CHAPTER-3

Vision & Scope, System Design & Architecture

CHAPTER 3

Vision and Scope, System Design & Architecture of Tour Guide App

3.1 Opportunity

Today online business promotion and internet marketing have become one of the most dominant tools to enhance your business productivity and visibility.With the progression taking place in the web technologies department, it has become essential for any business to have their own web application on desktops and smart-phones and the travel & tourism industry is not an exclusion. The days of paper maps, guidebooks, and other stuff are gone and replaced by interactive & amazing mobile apps for the travel & tourism industry that come with many functionaries.

3.2 Vision Statement

"Our vision is to provide outstanding travel & event experiences by suggesting some guidelines for best places , restaurants,hotels,parks and shops to visit and get immersive experiences ."

3.3 Major Features

The functionalities in this application are:
- Location Finder: This module is accountable to retrieve the user's current latitude and longitude using GPS. This will convert the coordinates into street addresses using Geo-coding technology.
- This module can indicate the tourist attractions, hotels, shops and restaurants on the map.
- Provide ratings, timings, entry fee, location and destination website.

3.4 Assumptions and Dependencies

This mobile travel guide application available is limited to the recent operating system versions. For instance, the application is available on smartphones with the recent Android operating system. However, this application is new, the data of museums which we corporated in

application may need more time to upgrade.In addition, in order to implement the mobile application, the practical demonstrations are limited by financial and human resources. Application requires storage space and active internet connection.

3.5 Operating Environment

Android is the significant platform for open source mobile applications. It uses Linux kernel-based as default operating system; using Android SDK to build user applications in Java. Android is more flexible when it can be developed in both Mac and Windows systems. Using the add-on Android SDK, we not only can develop but also can run and test the application on both of the emulators and real Android devices.

- Operating System: Windows 7 or above
- IDE: Android Studio
- Android OS 4.0.4 (API Level 15) or above.
- Software: Android SDK (Software Development Kit), Java SE 7 or higher
- Android Device: Android phone
- The mobile should have GPS and GPRS features.

3.6. Competitive Analysis

There are many mobile travel applications available such as travel, ToGo, TravelReminder, TravelGuide, TravelAgent, that are providing location related information, location-dependent services and some websites providing tips, advice, and travel packages to places all over the world, such as tripadvisor.com, Kayak.com, Orbitz.com, Nomadicmatt.com, Travelocity.com, and Travel + Leisure. These existing systems just provide the list of all available hotels, restaurants, shops, parks and tourist attractions with a location tracker using google maps.

3.7 System Design & Architecture
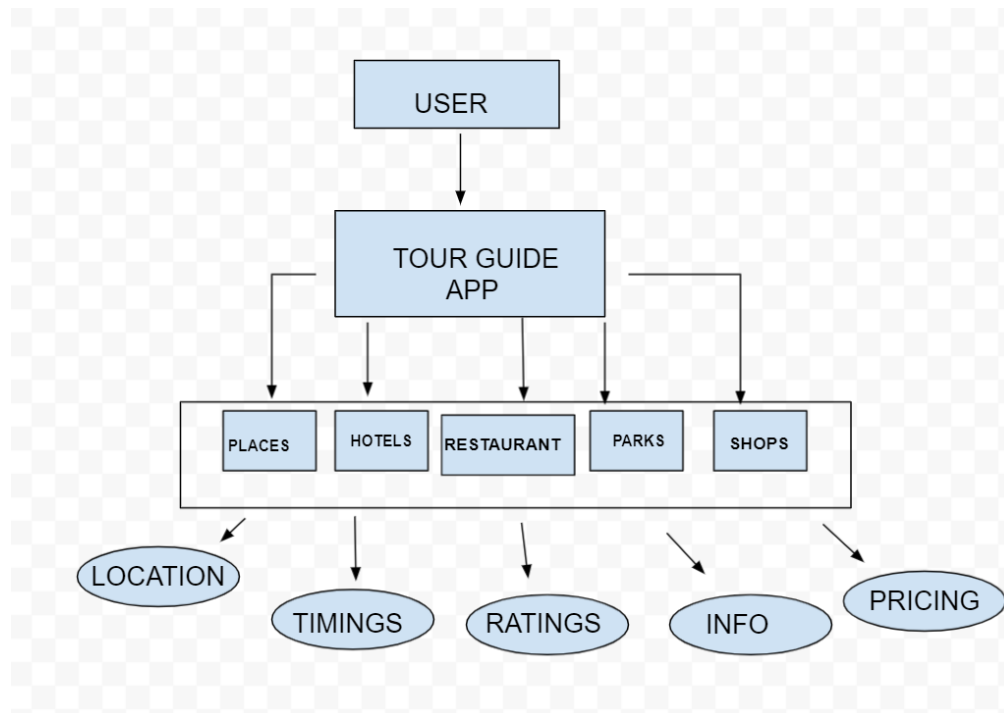
Fig. Tour Guide Architecture

Users can login to the Tour guide app and navigate through the pages using the bottom navigation bar.

The bottom navigation bar consists of: Places, Hotels, Restaurants, Parks, Shops. The bottom navigation bar can be seen as a common functionality in each activity page which enables the user for easy navigation. The bar shows the features available to the tourist i.e places, parks, restaurants, hotels, shops in the city of mysore. On clicking on any cardviews present in these pages, will take the user to the website of the clicked attraction in case the user requires more details about the attraction or wants to book a hotel reservation as shown in the image. Each cardviews can be expanded and collapsed to view the information. Also few cardviews have phone numbers of the respective attraction in case the user wants to make a call. Clicking on the phone icon, will take them directly to the dial page where they can edit, save, delete, and call the number.

CHAPTER-4

Methodology & Implementation

CHAPTER 4

Methodology & Implementation

4.1 Methodology

This research project is expected to improve the existing long manual way of doing the process. To achieve this, a design-oriented research method has been used. Design oriented Research method is basically a problem-solving model . The five steps of design oriented method followed in this research project work are problem identification, solution suggestion, development of the application, evaluation and conclusion.

4.1.1 Problem Identification

The first thing to do in this research project work is to conduct a comprehensive review of research projects to acquire a deeper understanding of the research project area and its problem domain. This includes visiting the tour sites. Existing works related to this research project have been assessed to identify and point out direction in providing solutions to the problems.

4.1.2 Solution Suggestion

The second phase of this research project is to determine different solutions for the identified problems. The suggested solution for the problems was developing an android based tour guide mobile application.

4.1.3 Development of the Research Project

 By putting photos of the sites with the link of information on the tour guide application, the users can get information they need at any time anywhere so the process of developing the tour guide mobile application has incorporated this service in order to get the exact information of the tour sites.

4.1.4 Evaluation

Finally, the tour guide application has been evaluated by using different software testing mechanisms such as user, system and unit testing.

4.1.5 Conclusion

The results found during the evaluation phase and the achievements of the tour guide mobile application have been discussed and summarized.

4.2 Implementation

The application is designed and implemented by using Android Studio and the Android API 15 has been used as the target system for the development of the application.

In the main page we implemented bottom navigation with five options i.e, places, parks, restaurants, hotels and shops.

4.2.1 Places

- Each Item View displays the following data for Places -
    - Name
    - Rating
    - Place Type in text and icon representation
    - Image of the Place
    - Place Timings
    - Entry Fee
    - Location address in text (expanded form) and as an action button (collapsed form)
    - Description of the Place (expanded form)
- Clicking on the Item View takes the user to the Website of the Place if present. When not present, a snackbar with the message, *"No link available!"* will be displayed.
- Clicking on the Location Icon button (in collapsed form) or on the Location text (in

expanded form) will launch Google Maps for the location.

4.2.2 Parks

- Each Item View displays the following data for Parks -
    - Name
    - Rating
    - Image of the Park
    - Park Timings
    - Entry Fee
    - Location address in text (expanded form) and as an action button (collapsed form)
    - Description of the Park (expanded form)
- Clicking on the Item View takes the user to the Website of the Park if present. When not present, a snackbar with the message, *"No link available!"* will be displayed.
- Clicking on the Location Icon button (in collapsed form) or on the Location text (in expanded form) will launch Google Maps for the location.

4.2.3 Hotels

- Each Item View displays the following data for Hotels -
    - Name
    - Traveller Rating
    - Hotel Star Rating using icon representation
    - Image of the Hotel
    - Rate per Night for a couple to stay
    - Location address in text (expanded form) and as an action button (collapsed form)
    - Contact Number in text (expanded form) and as an action button (collapsed form)
- Clicking on the Item View takes the user to the Website of the Hotel if present. When not present, a snackbar with the message, *"No link available!"* will be displayed.
- Clicking on the Location Icon button (in collapsed form) or on the Location text (in expanded form) will launch Google Maps for the location.
- Clicking on the Phone Icon button (in collapsed form) or on the Contact Number text (in expanded form) will launch the Dialer for the Contact Number.

- If Contact Number is absent, the Phone Icon button (in collapsed form) will be hidden away and the Contact Number text field (in expanded form) will display, *"No contact available!"*.

4.2.4 Restaurants

- Each Item View displays the following data for Restaurants -
    - Name
    - Cuisine Types
    - Foodie Rating
    - Image of the Restaurant
    - Restaurant Timings
    - Cost of dining, averaged for two persons
    - Location address in text (expanded form) and as an action button (collapsed form)
    - Contact Number in text (expanded form) and as an action button (collapsed form)
- Clicking on the Item View takes the user to the **Website** of the Restaurant if present. When not present, a snackbar with the message, *"No link available!"* will be displayed.
- Clicking on the **Location** Icon button (in collapsed form) or on the Location text (in expanded form) will launch Google Maps for the location.
- Clicking on the **Phone** Icon button (in collapsed form) or on the Contact Number text (in expanded form) will launch the Dialer for the Contact Number.
- If Contact Number is absent, the Phone Icon button (in collapsed form) will be hidden away and the Contact Number text field (in expanded form) will display, ***"No contact available!"***.

4.2.5 Shopping

- Each Item View displays the following data for Shops -
    - Name
    - Shop Type
    - Rating
    - Image of the Shop
    - Shop Timings
    - Location address in text (expanded form) and as an action button (collapsed form)
- Clicking on the Item View takes the user to the Website of the Shop if present. When not present, a snackbar with the message, *"No link available!"* will be displayed.
- Clicking on the Location Icon button (in collapsed form) or on the Location text (in expanded form) will launch Google Maps for the location.
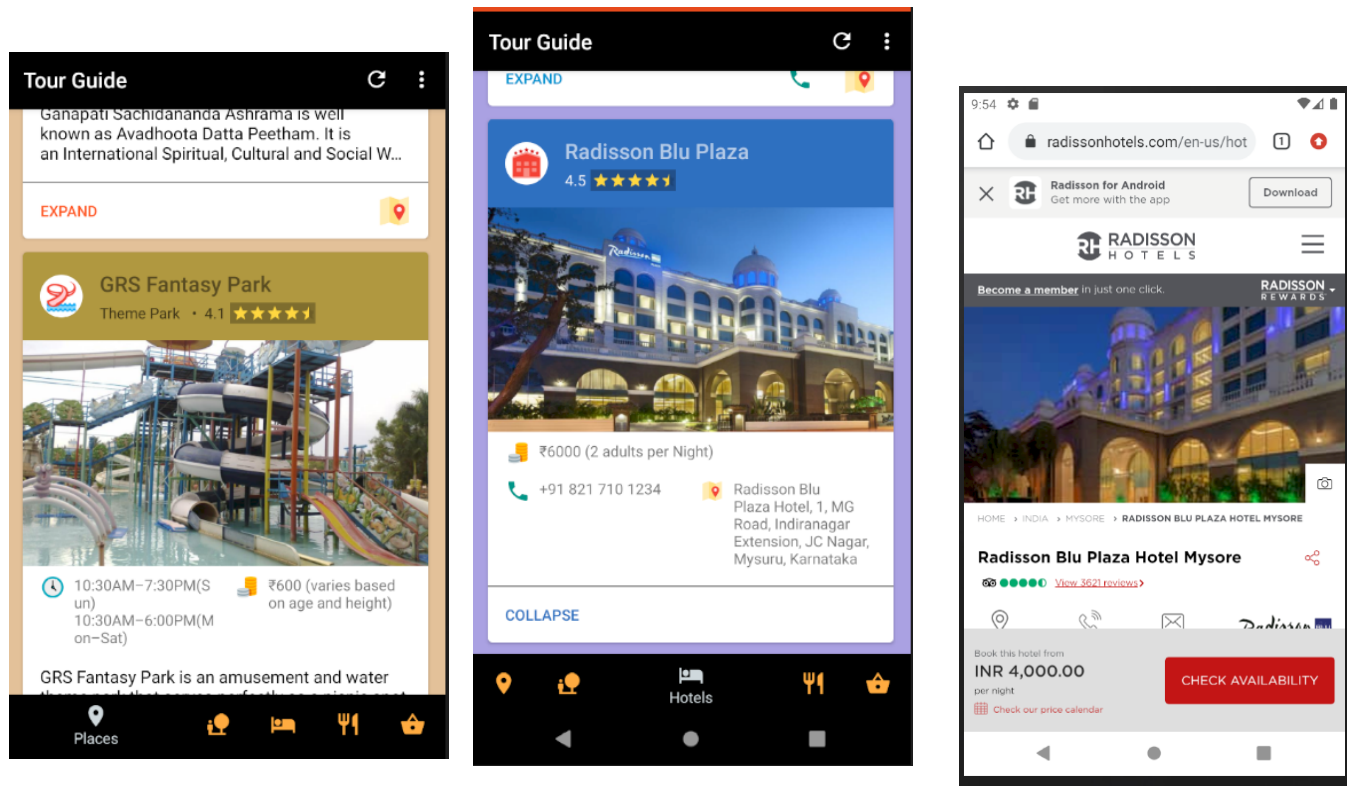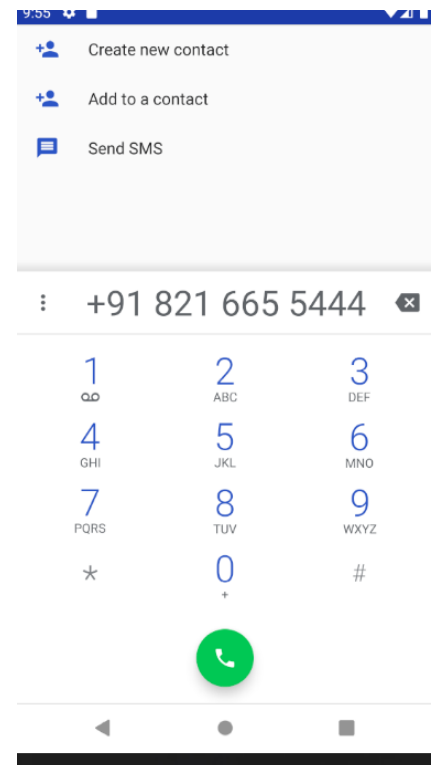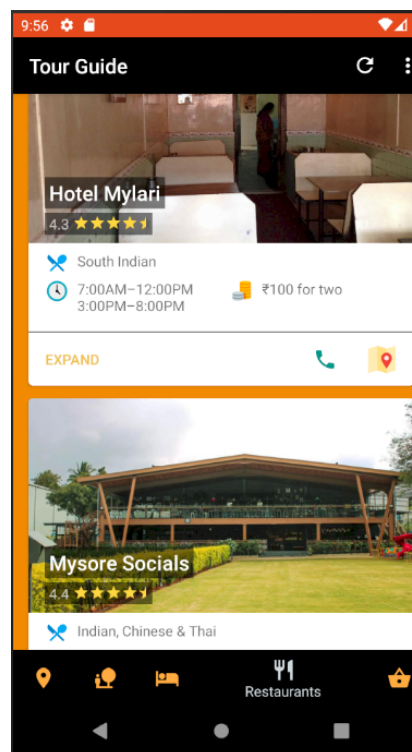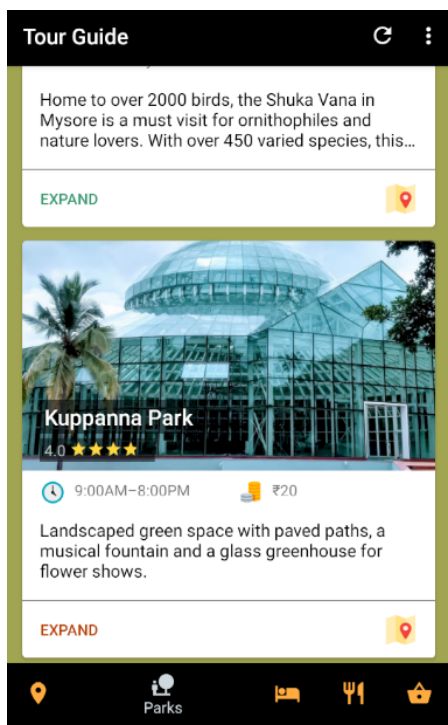
CHAPTER-5

Result & Analysis

Chapter 5

Result & Analysis

The final outcome of the project is the online version of Tourist Guide Android mobile application that contains several activities all together which are described below:

The Places page acts as a homepage despite not being one as this is the first activity page which opens up when the emulator is run. It contains various places the tourists can visit and it's shown in the form of several cardviews. It's a scrollable page where each cardview will contain the information of that particular tourist location along with the timings and ratings as shown below. Each cardview has a location icon embedded to it, when clicked, takes the user to the google maps app and they can easily navigate their way to their respective destination.

The bottom navigation bar can be seen as a common functionality in each activity page which enables the user for easy navigation. The bar shows the features available to the tourist i.e places, parks, restaurants, hotels, shops in the city of mysore. On clicking on any cardviews present in these pages, will take the user to the website of the clicked attraction in case the user requires more details about the attraction or wants to book a hotel reservation as shown in the image. Each cardviews can be expanded and collapsed to view the information. Also few cardviews have phone numbers of the respective attraction in case the user wants to make a call. Clicking on the phone icon, will take them directly to the dial page where they can edit, save, delete, and call the number.

CHAPTER-6

Conclusion & Future Scope

CHAPTER 6

Conclusion & Future Scope

Conclusion

From the analysis of the result, we can conclude that our tour guide app is able to meet up the requirement for the traveler for a great traveling experience. As a conclusion, the design of the smart travel guide is able to perform as expected and can be further analyzed for future enhancement so that new features could be focused to produce a better solution by improving the effectiveness of the app. It enables free, secure, fast and easy usage. We can also conclude that the use of tour guides will definitely benefit the user by saving storage and time of the user which in turn makes this app user and practice-friendly. Hence, we have successfully drafted our project report on the proposed system. The proposed system offers a tour guide, which could be used by travelers on their journey.

Keeping travelers" need in consideration and the current trend to the use of android devices, we have developed our Tour Guide Android Application. The application is able to meet most of the requirements that are commonly asked by the travelers, Besides, the simplicity of using the application has been maintained. The app can be helpful for people who are newcomers to Mysore city.

References

- Ferdaus, Jannatul & Nguyen, Hang & Nasrin, Shamima. (2015). Android Application: Travel Guide. 10.13140/RG.2.1.4865.4569.

- Nilanchala, Javatechig | Resources for Developers, 'Android ScrollView Example | JavaTechig', 2015. [Online]. Available: http://javatechig.com/android/android-scrollviewexample. [Accessed: 11-May-2015].

- H. Shu, City Guide over Android, 1st ed. Norway: Norweigian University of Science and Technology, 2010, pp. 5-95.

- Iversen and M. Eierman, Learning Mobile App Development. Pearson Education, Inc, 2013, pp. 1-350.

Appendix -1

(Poster)

Appendix -2

Screenshots of Working App