Rahnuma
A Guide Hiring Application

AHMED MASOOD SIDDIQUE
01-134132-014
MUHAMMAD SUFIAN
01-134132-130

Bachelor of Science in Computer Science

Supervisor: Dr. Arif Ur Rahman

Department of Computer Science
Bahria University, Islamabad

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Certificate

We accept the work contained in the report titled "Rahnuma
A Guide Hiring Application", written by Mr. Ahmed Masood Siddique and Mr. Muhammad Sufian as a confirmation to the required standard for the partial fulfillment of the degree of Bachelor of Science in Computer Science.

Approved by . . . :

Supervisor: Dr. Arif Ur Rahman (Assistant Professor)

_____

Internal Examiner:

_____

External Examiner:

_____

Project Coordinator: Dr. Arif Ur Rahman (Assistant Professor)

_____

Head of the Department: Dr. Faisal Bashir (Associate Professor)

_____

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Abstract

A tourist requires a tour guide for an extravagant experience. The professionalism and knowledge of a tour guide are what make's a tour experience outstanding. They are what craft the variation between a budget and a quality expedition. Tour guides are critical for an overall quality tour experience.The reason which makes a tour not as good as it should be lies with in the fact that acquiring a well mannered guide is extremely difficult task in an unknown destination. This project is basically an implementation based project on the on-demand work force and the literature review is focused on other applications used for hiring personnel for everyday jobs or more complex jobs like freelancer. The on-demand workforce strategy was kept in mind while researching about this project. Many research papers and Project reports related to this project are thoroughly studied but only those closely related are used during development. The focus was to find out how the developers could use mobile application development to implement these hiring application work in the real world. After all this, the work on the actual application finally started. The application will allow users to book a tour guide or to advertise/register themselves as a tour guide. Allow tour guide to define a tour route and tourists to rate a tour guide. The application will consist of two apps one for the tour guide and one for the tourist, or two modules in a single application. The tourists will be able to rate tour guides. The tourists will choose the right tour guide based on packages and prices.The Internet must be available on the mobile device for both the tourist and the guide.

Acknowledgments

"I don't love studying. I hate studying.
I like learning. Learning is beautiful."

Natalie Portman

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Acronyms and Abbreviations

ADT Android Development Tools
API Application Programming Interface
APP Application
CSS Cascading Style Sheets
ERD Entity Relationship Diagram
GUI Graphical User Interface
HTML Hyper Text Markup Language
IDE Integrated Development Environment
MVC Model View Controller
SQL Structured Query Language
SRS Software Requirements Specification
USD United States Dollar

Chapter 1

Introduction

With the increase in appeal for an on-demand workforce and the availability of technology where ever it is required in form of smartphones, it is becoming essential to develop mobile applications that can provide the necessary user interface and services to attend to these needs in a user-friendly manner.

The aim of this project was to create a mobile application that may help tourists visiting foreign and unknown tourist destinations to hire a reliable and trusted guide, who may assist them to explore more in less period. Details about the project are as follows.

1.1 Overview

"Rahnuma" is a mobile application which provides the ability to hire a tour guide on fingertips it also provides the opportunity for city locals to provide tours to visitors and show the colors of their city, this also gives tour guides the opportunity to make some income and in turn benefit the local economy. The application gives tourists the ability to hire tour guide without any inconvenience of visiting travel agencies or tour offices. The guides are rated by users and then are prioritized according to their rating. The rating is based on the performance and quality of service.

1.2 Problem Description

The main problem faced by new tourists when they visit a new country/city is that they don't know where to visit and where not to visit for this reason they hire tour guides, But the problem most of the tourist's face is finding a reliable guide. For this, they must visit tourism offices and select suitable tour guides which the tourism companies nor the government's tourism department never provides and it takes precious time, this application solves that problem by giving the user all in one tour guide application.

1.3   Project Objectives

The objectives of this application is letting customers hire local guides spontaneously with their mobile phones instead of making reservations ahead of time on PCs/desktops and to provide tour guides to tourists visiting the city without any complications and a platform for the locals to apply as guides and pass the selection criteria to become a guide and start earning.

1.4   Project Scope

The applications will allow users to book a tour guide or to advertise/register themselves as a tour guide. Allow tour guide to registering as a member and tourists to hire and rate a tour guide. The application will consist of two apps one for the tour guide and one for the tourist. The tourists will be able to rate tour guides. The tourists will choose the right tour guide based on packages and prices. Allow users to search/view tour guides by their attributes.The Internet must be available on the mobile device for both the tourist and the guide.

1.5   Tools And Technologies Used

This system has three categories of components. Two android applications which are developed on IntelliJ Android studio which uses the Android native platform. The website is developed using CodeIgniter. The database was a relational SQL database model and was developed using MySQL workbench. All the components were integrated using the MVC (Model View Controller) model.

Chapter 2

Literature Review

This project is basically an implementation based project and the literature review is focused on other applications used for hiring personnel. Many research papers and Project reports related to this project are thoroughly studied but only those closely related are used during development. The focus was to find out how the developers could use mobile application development to implement these hiring application work in the real world.

The future of the workplace is one person using a typical of six devices to do her work. Along the same lines, the number of desks per individual are decreased as people modify work to more suitable times and locations and employees prefer to use their personal devices for work, well-known as Bring Your Own Device. After all this, the work on the actual application finally started.

2.1 The On-Demand Economy Is Growing, and Not Just for the Young and Wealthy

The on-demand market is huge and getting generously proportioned. Economic actions centered around online platforms, where independent sellers can suggest merchandise or services to clients, are attracting major buyer notice and spending, according to new statistics from the National Technology Readiness Survey NTRS since 1999.

The on-demand economy is getting the attention of more than 22.4 million customers per annual and 57.6billion dollars in expenditure. The major category of on-demand expenditure is online marketplaces (e.g. Ebay, Etsy), with 16.3 million customers every month spending approximately 36 billion dollars yearly. transport (e.g. Uber, Lyft) comes in second with 7.3 million monthly customers.

Technical start-ups like Uber and Airbnb include the mainstream of on-demand firms, but chief corporations are starting to go into the on-demand market. GM's investment

and corporation with Lyft, and hotel giant Accor's current attainment of Airbnb opponent "Onefinestay" are latest examples.

Big firms came to a conclusion that the on-demand economy is becoming too big a chance to neglect. They as well see that it's too dangerous to overlook. Like all major disruptions, on-demand economy start-ups are testing business incumbents with innovative business models and new ways of winning clients. Existing companies will require embracing the on-demand market and transform their service systems to meet customer demand or find themselves disrupted by those who do embrace this shift [5].

2.2 HANDY

HANDY is creating a big industry out of little jobs. The corporation finds its clientele, freelance accessible in the right place and at the right time. All the employee needs is a credit card and a phone on which Handy's application is installed, and everything from spring cleaning to flat-pack-furniture assembling gets taken care of by professionals who receive a usual of 18 bucks an hour. The corporation has 200 full-time workforces. Founded in 2011, it has earned 40 million US Dollars in venture capital.

Handy is one of a great number of start-ups created around systems which match jobs with self-governing contractors on the go and therefore provide employment and services on demand. Individuals can use the applications on their mobile devices to get their flats cleaned by Handy or Homejoy, their provisions bought and delivered by Instacart, their garments washed by Washio and their flowers delivered by BloomThat. Fancy Hands will present them with own assistants who can reserve trips or bargain with the cable business. SpoonRocket will deliver a restaurant-quality food to the gate within ten minutes. These were only some examples to support the cause of on-demand workforce mobile applications.

Firms make sense once the price of organizing things within the organization is less than the cost of outsourcing things from the marketplace; they are a way of handling the elevated transaction costs when you need to do something fairly complicated. Now that the majority public keeps smartphones in their pockets which can keep them linked with each other, identify where they are, comprehend their social network and so on, the transaction costs concerned in finding individuals to do things can be decreased by a considerable margin.

This has a variety of unplanned consequences, all of which are becoming main characteristics of the on-demand market. One is further splitting up of labor. Another is the facility to tap underused ability. This applies not just to people's time, but moreover to their resources. The on-demand market is in a lot of ways an extension of what has been called the "sharing economy" [6].

2.3 The Motivations and Experiences of the On-Demand Mobile Workforce

On-demand mobile workforce applications match objective everyday jobs and willing people. These systems present to assist preserve resources, make more efficient courses of action, and boost market effectiveness for micro and mid-level responsibilities. This research paper reports on the motivations and experiences of persons who frequently complete jobs posted in on-demand mobile workforce marketplaces. The study exposed the major motivators for participating in an on-demand mobile workforce include needs for monetary reward and power over schedule and job selection. The report also reveals chief reasons for job selection, which involve situational factors, suitable physical location, and job client profile information. On-demand mobile labor force services are within the group of "crowdsourcing", which connects large groups of the workforce with dispersed micro-tasks that merge into a bigger product. Crowdsourcing has received important attention in the research community [7].

2.4 Rent-A-Guide

Rent-A-Guide is one of the largest arrangement as it comes to prepackaged tours provided by personal and private guides. They boast over 5600 tours in 81 countries.it is not only a plain depository, But It is a booking website that supplies a continuous and complete experience [8].

2.5 ZipCar

Zipcar company was established nearly a decade ago. In the beginning, the business that established public to rent by the hour, pay as you go car sharing developed at a snail's pace. however, the dawn of the smartphone has assisted redesign the way Zipcar functions, significantly expanding its application. Zipcar's iPhone's application has been downloaded by 400,000 people, who utilize it to trace the closest vacant car for driving and even honk its horn to find it if it cannot be accurately located by the applications gps [9].

2.6 Tours by locals

Tours by locals is a website that merges the finest of trips, tours, expeditions and guides. Ont his wesite, the guides present you with packaged tours across the city, varying from days to weeks. All the route and trip is comprehensively detailed, together with the cost. One can explore the ratings and assessment for particular tours by local guides prior to booking someone [1].

2.7   CAREEM

Careem is an international transportation corporation working an app-based car reservation facility centered in Dubai. Customers can make requests for instant or later planned pickups using the Careem smartphone application. As of March 2016, Careem is accessible in 11 countries and over 40 cities through the MENASA region with strategies to grow additional facilities and products, and enlarge operations into further countries soon. It was originally established as a website-based facility for business car reservations, and it then advanced to become an application after requests amplified, and changed from being a car hiring facility targeted at business clients to a serve targeting persons considering booking a native car rental for ordinary use. The creators frequently stress in meetings with presses that the corporation was created on the principle that Careem would modify its operations and facilities to each marketplace that they go into, thus making it a local corporation that knows how to aid the customers' needs [2].

2.8   UBER

Uber is a transportation company headquartered in San Francisco, CA. It offers the Uber mobile app, which you can use to submit a trip request, which is automatically sent to an Uber driver nearest to you, alerting the driver to your location. The driver, who will be driving his or her own personal car, will then come pick you up and bring you to your requested destination. The app automatically figures out the navigational route for the driver, calculates the distance and fare, and transfers the payment to the driver, without you having to say a word or even grab your wallet [3].

2.9   Designing for Labour: Uber and the On-Demand Mobile Work-force

We have started here to plan some new openings for strategy and investigation in understanding the connection among technology, workforce, and design. This also produces new accountabilities: Identifying our potential role in scheming on-demand labor marketplaces and functioning with the ecology adjoining these new marketplaces. This involves taking the welfares and dangers that organizations like Uber bring extremely, chiefly, for those who depend on them for their living permanently. Our objective has been to shape not only how technology is altering employment, but also to realize the multifaceted relations among markets, technology and those who work. It is here we see thought-provoking possible for yet to come future investigation. After studying all these projects and their reports we decided to work on this project to make the user able to hire "a guide" remotely

that is without desktop or laptops using their mobile device and an internet connection. This application will be developed in Android Java using Android Studio [4].

Chapter 3

Requirement Specifications

3.1 Existing System

Existing market products/applications provide the ability to hire taxis and logistics solutions these applications provide the user with a simple user interface so that it is not difficult to use for everyone. The user is shown a map on the screen to choose his location and then drop a pin on the same map as his/her destination. The calculations are done on the basis of the business model, services acquired and distance traveled. The users and drivers are saved in a single database. These applications have two types of users those are drivers, who provide the services and the customer who will acquire these services.

3.2 Proposed System

The main purpose of this project is to introduce an android application into the market to allow users to hire a guide, decide a route. As all other applications, this will also serve two categories of users namely the "Guides" and the others as the "Tourists". In this project, we use following technologies.

- Java

- SQL databases

- HTML

- PHP

- CSS

- JavaScript

With following key features

- Hire a guide. (for tourist)

- Select a route. (for tourist)

- User friendly interface

- Register as a guide. (for guide)

The proposed system will have two options for the tourist application package a sign-up option and a sign in option and the same for the guide application package. These separate modules will be created in an android java and will use the Wi-Fi for internet access. In this project, basically the focus on mobile application is to provide the user a solution on fingertips in their homes without visiting tour offices, rent a car offices or any other physical location, as well as to facilitate jobless people in the community to temporarily or permanently register themselves as tour guides resulting in improving the local economy.

3.3   Functional Requirements

3.3.1   For Tourist Application

1. Sign up.

2. Select route/design route.

3. Request a Guide.

4. After confirmation contact the guide.

3.3.2   For Guide Application

1. Sign up.

2. Design routes.

3. Set rates.

4. View jobs.

5. Select jobs to complete.

6. View previous jobs.

3.4   Requirement Specifications

1. User Requirements: The users of this application which can have a direct or indirect contact with the application or database are identified below:

   Developer: Complete control of all aspects of this application any time a change is introduced the whole application updates or change the user interface.

   Technical User: These users will be the Database administrators, they will have full commands over the databases and can control the number of users as well as administrates them. They cannot redesign or change the application as well as the design of the database but can alter the contents of the database. These are known as the naive users of this application.

   Non-Technical User:

   (a) Tourists Tourists will basically download the "Tourist" application and register as the customers that will require the services provided by the guides. They will have an account to acquire the services needed.

   (b) Guides Guides will download and install/ use the "Guide" application and follow some certain clearance protocols to register themselves as guides. the guide will be messaged as soon as tourist wants to negotiate terms.

2. System Requirements

   - Functional Requirements
     (a) Support large number of users.
     (b) Create separate objects for each unique user.
     (c) Treat guides as a different class.
     (d) Treat tourists as a different class.
     (e) Validate guide registration strictly. (license, valid identification card, other clearances)
     (f) Allow local people to register as guides.
   - Non-functional Requirement
     (a) Usability.
     (b) Performance.
     (c) Capacity.
     (d) Maintenance.
     (e) Operations.
     (f) Security.
     (g) Attractive layout.
     (h) Easy to use user interface.

3.5 Use Cases

Deliver a summary of the main purposes that the system will execute. Establish the purposes to be comprehensible to users.

- Tourist User scenario of this application:
  (a) The user must have an android device.
  (b) The user must have an internet connection.
  (c) the user will download the desired, in this case, tourist application and install after agreeing to the terms and conditions.
  (d) The user then register as a member and provide the details as necessary.
  (e) A list of cities is displayed from which the desired cities of the visit are selected.
  (f) The guides providing that exact routes are displayed.
  (g) User then selects the best offer.
  (h) The contract, as well as other necessary details, are provided to the user to set up a meeting point or contact for further negotiations.

- Guide User scenario of this application:
  (a) The user must have an android device.
  (b) The user must have an internet connection.
  (c) the user will download the desired, in this case, guide application and install after agreeing to the terms and conditions.
  (d) The user then register as a member and provide the details as necessary.
  (e) The city of origin is decided based on details provided in registration.
  (f) The pricing of trips is done via contact between tourist and guide.
  (g) Further details of the packages are provided by the user to be displayed to the tourist.
  (h) A job is selected and tourist information is provided.
  (i) Further negations are made by contact.

- Administrator User scenario of this application:
  (a) The administrator visits the on-line portal.
  (b) Log-in is performed using username and password.
  (c) Required data is accessed using search options.
  (d) Both tourist user and guide user data are accessed, edited using this portal.

3.6   Software Requirements

The software requirements for Tourist application are:

- Development Tool:
  - (a) Android Studio.
  - (b) MySQL Workbench.
  - (c) Phpmyadmin.
  - (d) Xampp server.
- Operating System:
  - (a) Android operating system Ice-cream sandwich 4.0 or above.
  - (b) Google maps API.

The software requirements for Online admin portal are:

- Development Tool and Technologies:
  - (a) CodeIgniter.
  - (b) HTML.
  - (c) PHP.
  - (d) AJAX
  - (e) CSS.
  - (f) JavaScript.
  - (g) Web Browser
- Operating System
  - (a) • Any windows or Linux based system.

3. Hardware Requirements: The hardware requirements for tourist and guide applications is shown in Table 3.1.

Hardware	Client
Processor	Dual Core 1.8 or above
Memory	1GB or above
Device	Android

Table 3.1: Hardware Requirements Smart Phone

The hardware requirements for online admin portal are shown in Table 3.2.

Hardware	Client
ROM	2GB or above
Memory	2GB or above
Device	Windows or Linux based machine.

Table 3.2: Hardware Requirements Browser

Chapter 4

System Design

Every application residing in everyday non-technical user's smartphones needs a really simple and easy to use GUI as well as a neat and clean database design, thus making it resilient against errors. In this chapter, the Applications are observed each feature associated with their design.

4.1 Design Constraints

When designing a mobile application, the differences between mobile devices and computers must be kept in mind. following are some of the main constraints of a mobile device.

(a) Smaller screen size.

(b) One screen appears at a time

(c) Shorter battery life

(d) Unstable wireless network connections

(e) Slower processor speeds

(f) Less available memory

(g) Multiple device Access

(h) Synchronization

keeping in mind these constraints, the development of the applications was done in android java on the native android platform.

4.2 Design Methodology

This system will be developed using the object-oriented technique as the system architecture shows that this system has three modules, other components and a database used to make and complete this system.the GUI of the system is based on the MVC model.

4.3 High Level Design

The below-given designs show how this system will be designed. Figure 4.1 shows the working of the system.
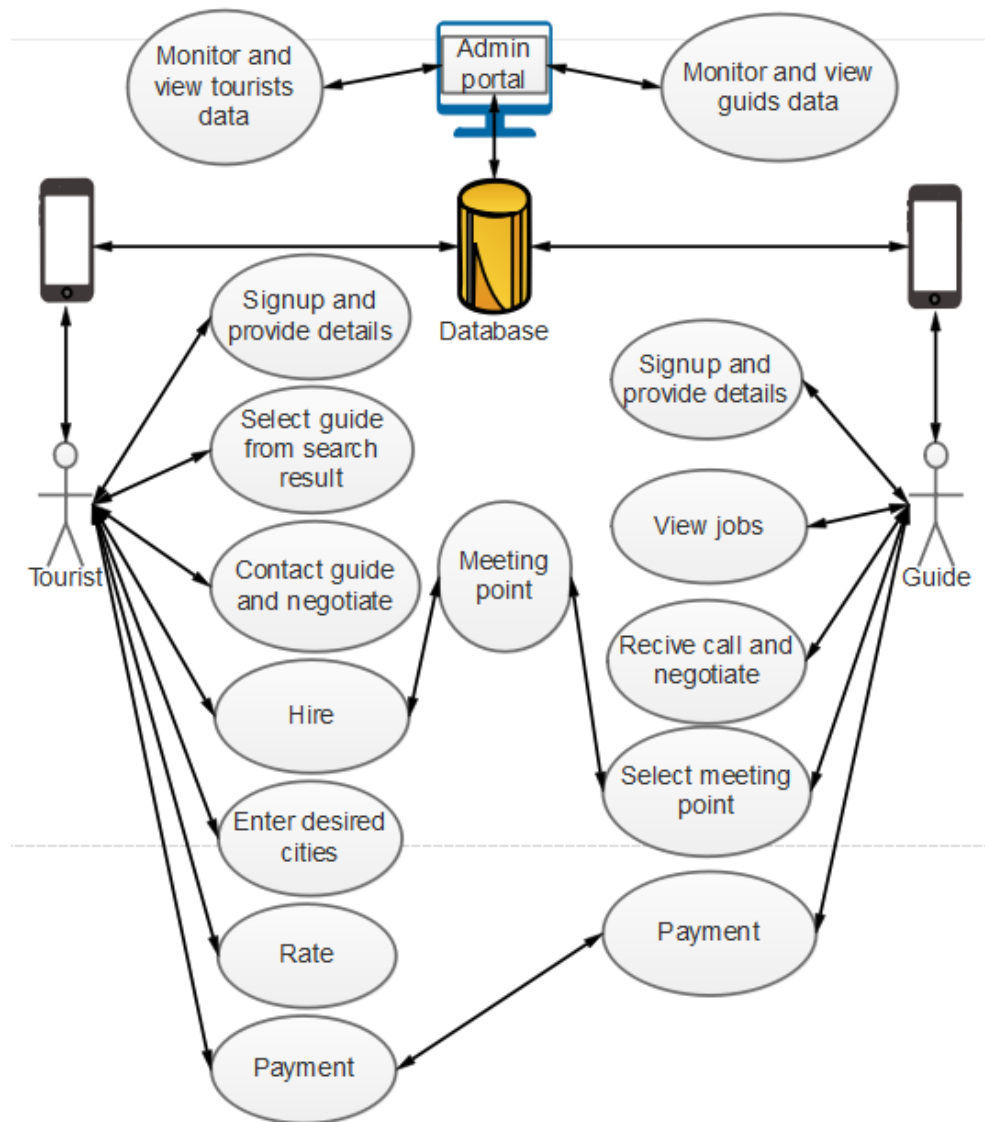
Figure 4.1: Use-Case Diagram

This use-case diagram basically shows the user's interaction with the system. further detail elements discussed in the Architecture. Typical viewpoints are:

(a) Conceptual View: In Figure 4.2 shows the logical functional elements of the system. Each component represents a similar grouping of functionality.
In package diagram shows the backend working on the system and the front end of the system that how the system will be accessed by the users.

(b) Process: In Figure 4.2 shows the run-time view of the system. The components are threads or processes or distributed applications
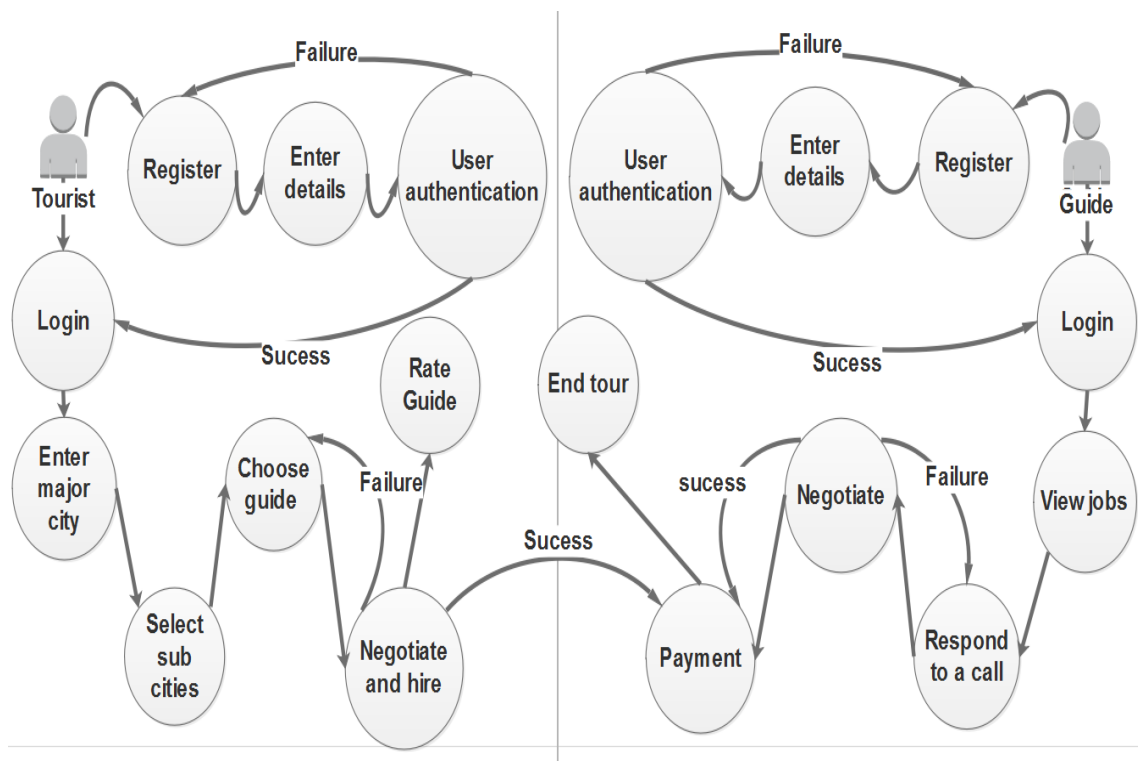
Figure 4.2: State Diagram

The state diagram shows the complete flow of the system. The diagram shows brief explanation of the system.

4. Physical: The tourist and guide modules of this system will be deployed to Android Operating system. The online administrator portal will be accessed from any web browser.

4.4 Entity Relationship Diagram

The database tables and the relationships between them is shown in the figure 4.3

There are a total of eight tables, which are as follows.

(a) Tourist.

(b) Guide.

(c) Tour.

(d) Sub Tour.

(e) Main City.

(f) Sub city.

(g) Guide rating.

(h) Message.
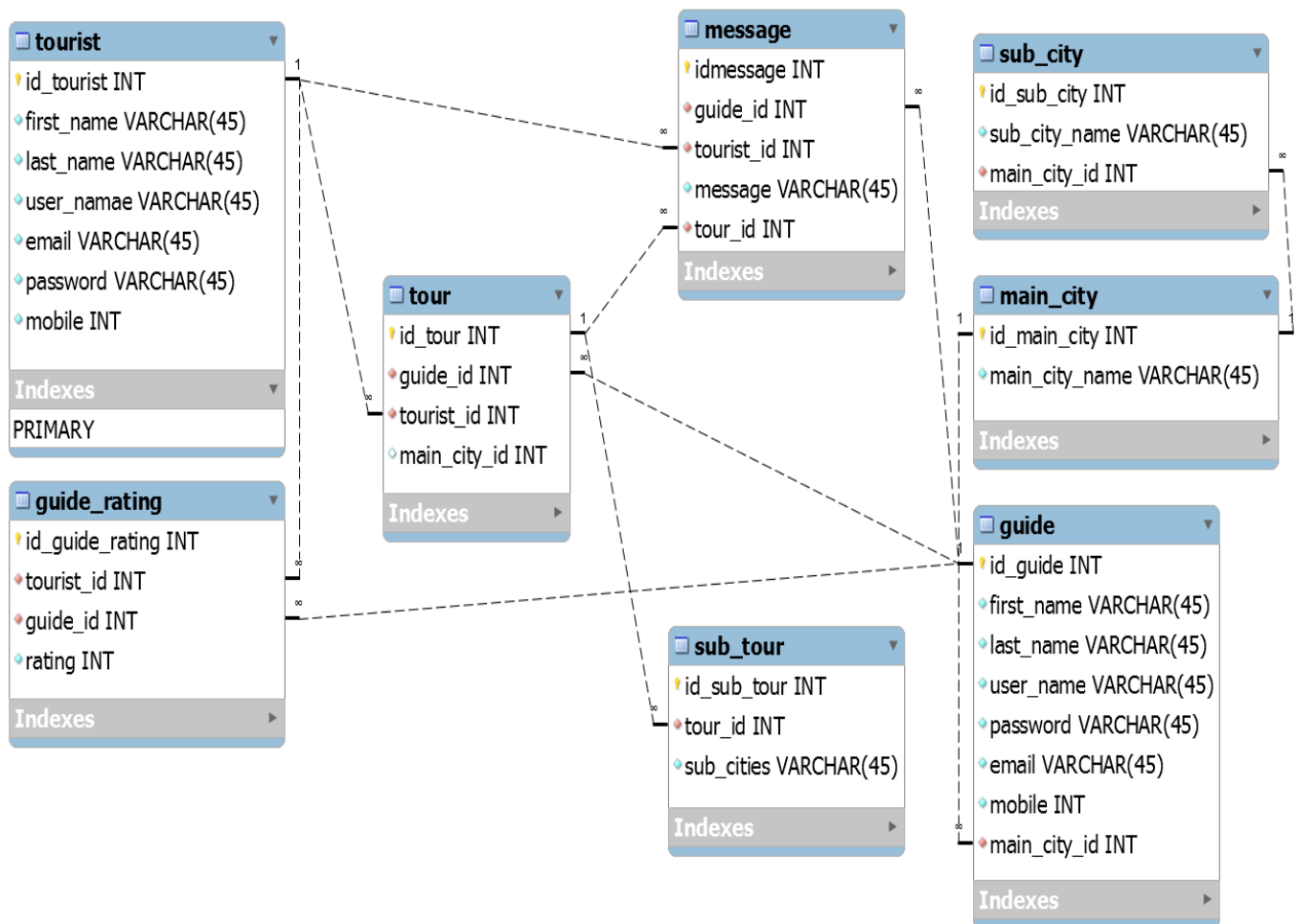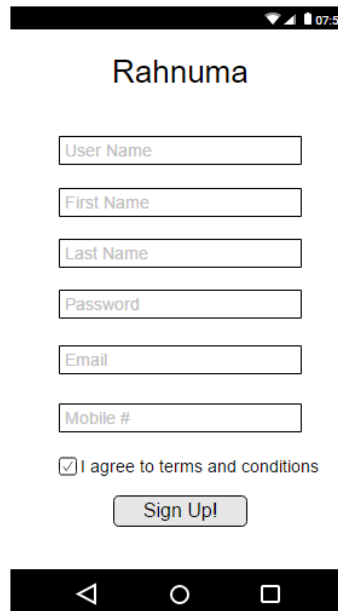
Figure 4.3: ERD

4.5 Graphical User Interface Prototype
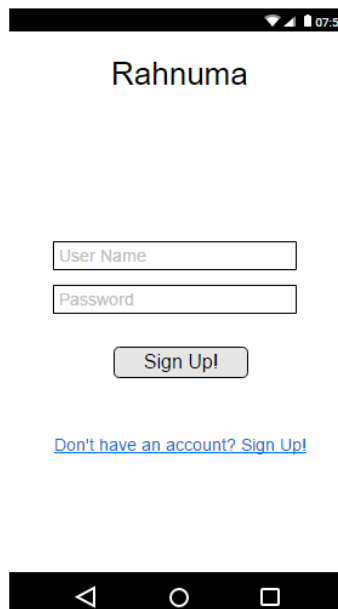
Following are the prototype mockups of the user's applications. these are just the representation of what the application might look like once complete

Figure 4.4: Tourist sign up

The sign-up screen for the tourist is shown in figure 4.4, here the user may fill the required fields and create an account.

Figure 4.5: Tourist sign in

The figure 4.5 shows the sign in screen for the tourist application, where the user may enter his username and password to log in or press the link for signing up if he/she does not have an account.

Figure 4.6: Tourist major city selection

The figure 4.6 is where the tourist selects the initial or major city, basically which is the starting point, where they will meet the guide and where the tour will start.
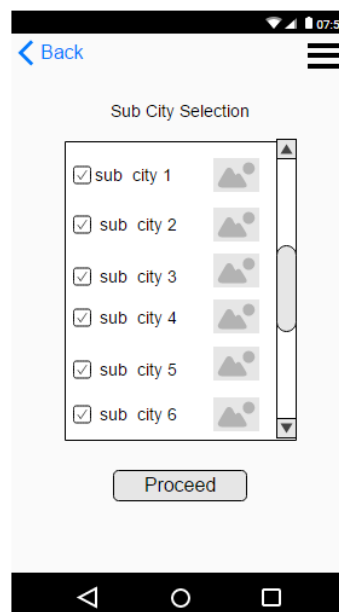

Figure 4.7: Tourist sub city selection

The figure 4.7 is the interface for the selection of sub cities related to the major city, these are the tourist destinations near the major city.
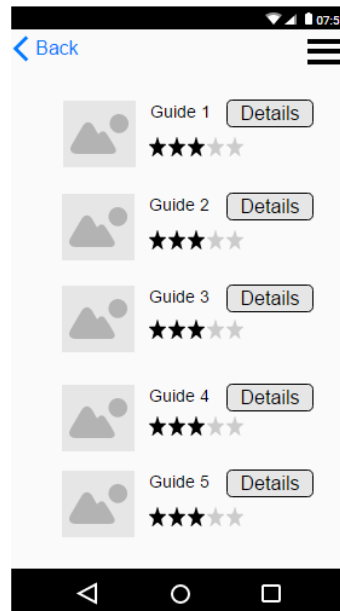

Figure 4.8: Tourist result guides list

The resulting list of guides is shown in figure 4.8. The list only consists of guides related to the search terms.
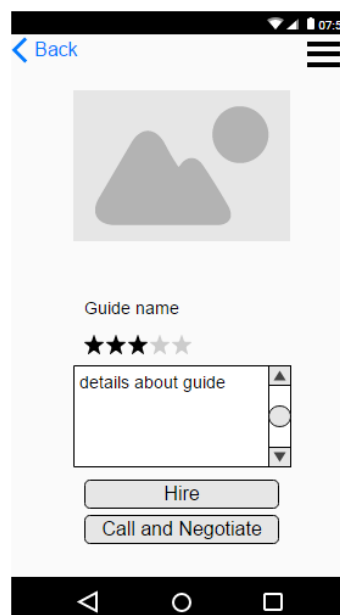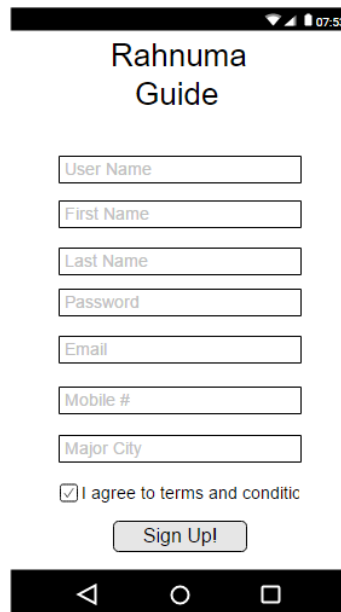

Figure 4.9: Tourist guide details

The details of the guide are shown in 4.9. this includes the guides photo, name, rating
and his phone number for further negotiations.
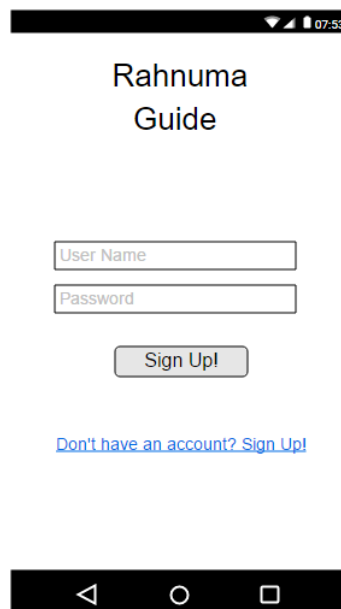
Figure 4.10: Guide sign up

The sign-up screen for the Guide is shown in figure 4.10, here the user may fill the
required fields as well as his/her selection of major city and create an account.

Figure 4.11: Guide sign in

The figure 4.11 shows the sign in screen for the guide application, where the user may enter his username and password to log in or press the link for signing up if he/she does not have an account.
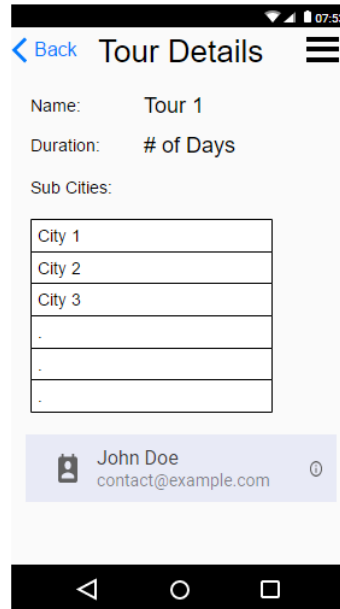

Figure 4.12: Guide job or tour details

The tour details are represented by the figure 4.12, the name of the tour, the duration, sites related and the contact of the person related to the tour are displayed in this view.
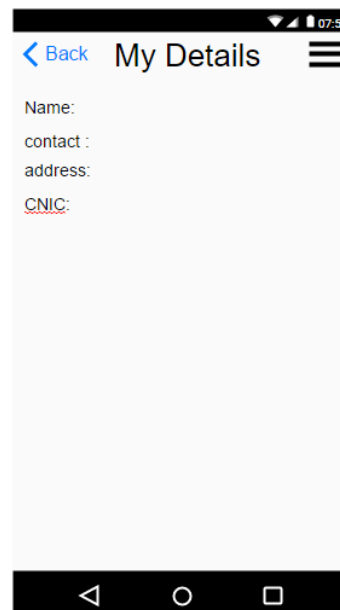

Figure 4.13: Guide my details

The personal details of the guide can be viewed on this screen which is represented in figure 4.13.
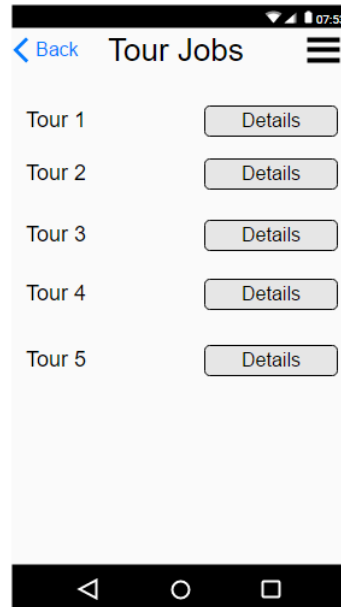

Figure 4.14: Guide posted jobs

The guide can view his previous jobs on posted jobs view which is represented in the figure 4.14.
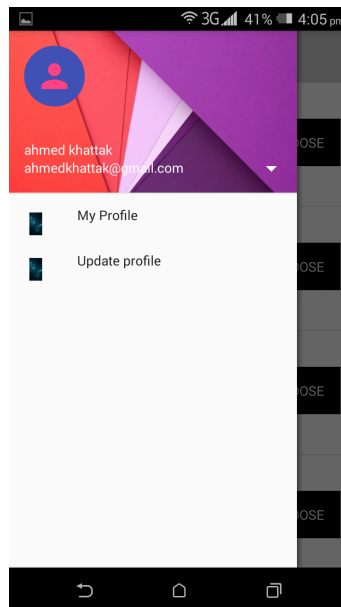

Figure 4.15: Guide sidebar

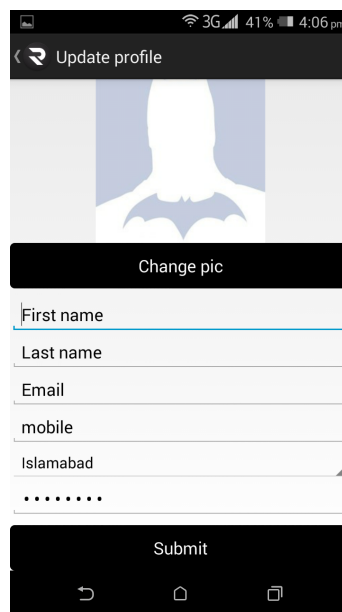The Guide can edit or view their details using this sidebar.4.15.

Figure 4.16: Guide update

The Guide can update his details via this screen. he can upload an image as well as change his contact if required..4.16.

Chapter 5

System Implementation

In this chapter, there is system implementation, its technical specifications, algorithms and software components. it also includes the system architecture details of this system.

5.1 System Architecture

Rahnuma is a guide hiring system. It has three modules (Guide Application, Tourist Application, online administrator portal) connected to a single database that is also connected with an administrator portal that is used to view and edit this database. The main function of this application is to store the data of guide and tourist to a single database and using this data help tourist to hire a guide. the following figure describes the system architecture well 5.1.

The architecture in terms of System internal functions, components, Functionality of the modules, Communication between the modules, "Rahnuma" system has no physical components. The internal system has different activities and classes which are linked with each other's using PHP. The applications are linked using a central database which is deployed on a web host, where it is administrated by a super admin. These functions are linked with different activities.
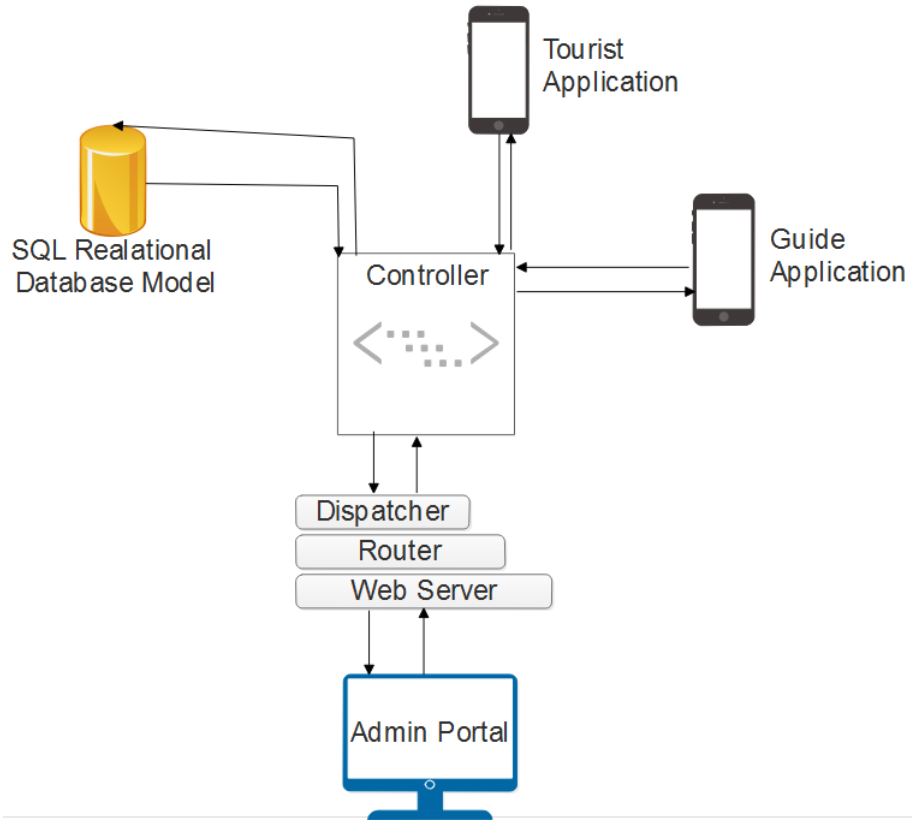
Figure 5.1: System Architecture

5.2   Tools and Technology Used

"Rahnuma" the applications are implemented and developed on Android Studio, as it provides the necessary developer tools and services for the android native platform and android java programming language. It is based on JetBrains' IntelliJ IDEA software. Designed exclusively for Android applications development, it is offered for download on Windows, MacOS and Linux and has replaced Eclipse ADT as Google's prime IDE for indigenous Android application development shown in Figure 5.1. The database is created using MySQL WorkBench 6.3 CE and the language used is SQL. The website/Admin portal is created using CodeIgniter using PHP, HTML,AJAX, CSS and Java Script shown in figure 5.2 and figure 5.3.
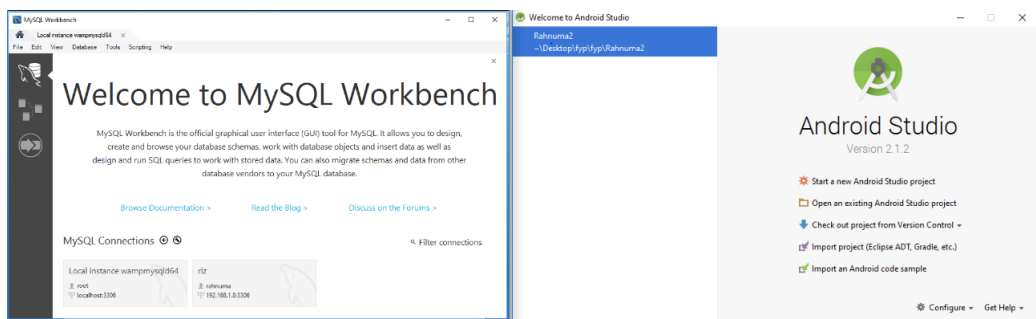

Figure 5.2: ToolUsed
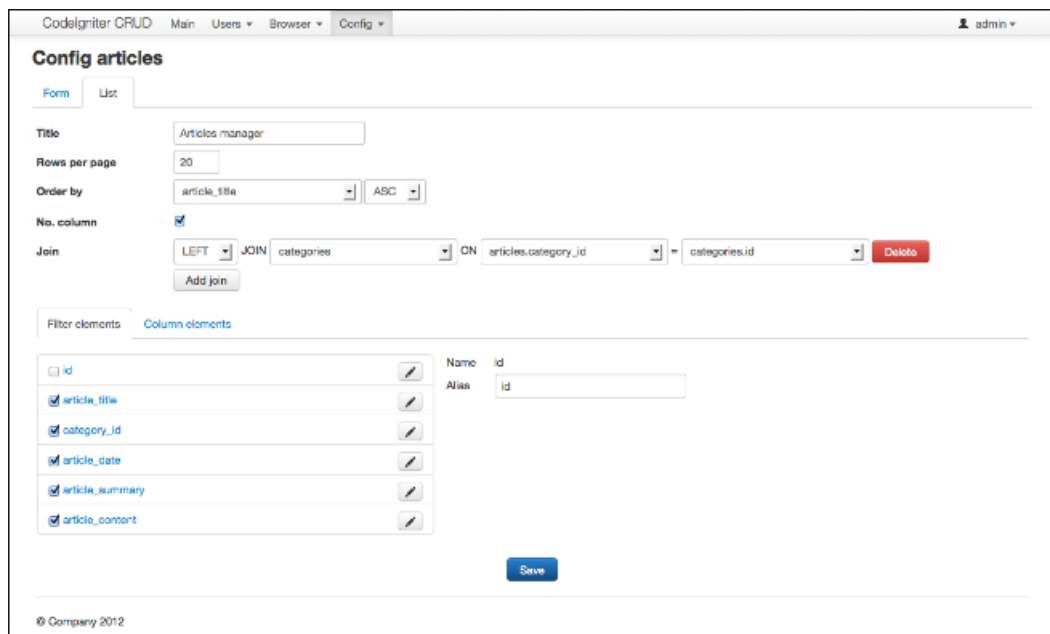
Figure 5.3: Codeignitor

- Libraries Used: There are many built-in functions and APIs used in "Rahnuma" implementation

  1. okhttp3.Call;

  2. okhttp3.Callback;

  3. okhttp3.FormBody;

  4. okhttp3.OkHttpClient;

  5. okhttp3.Request;

  6. okhttp3.RequestBody;

  7. android.content.Intent;

  8. android.os.Bundle;

  9. android.support.v7.app.AppCompatActivity;

5.3 Application Access Security

"Rahnuma" applications are secure unless someone performs a human error by losing his/her mobile device. The details are password encrypted so that except the user (guide/tourist) and super admin no one can access them. The applications will have no link with one's bank accounts, personal or social accounts or monetary resources.

Chapter 6

System Testing and Evaluation

In this chapter the testing and evaluation of Rahnuma application. we are going to do software testing technique to evaluate the final result of the application that will tell the accuracy and constraints.

6.1   Software testing techniques

Software testing is the process of assessing a system and components with intention of finding whether or not the system convinces the specific requirements. More precisely, it may also be defined as the procedure of inspection and evaluate whether the system is completing the responsibilities it was meant to do. The subsequent are several of the software testing practices that have been used to test the applications.

- Function Test

- Unit Testing

- Integration Testing

- System Testing

- Performance Testing

- Security Testing

- Acceptance Testing

6.1.1   Function Testing

In this testing instead of testing the whole system, the main focus is to test the components and functions of the system and their interaction with each other. It can also be defined as giving inputs to the functions to get output. It has following types.

6.1.2   Unit Testing

Testing the programs files individually if they are working properly. All resources, functions, and android activities have been tested and are working fine.

6.1.3   Integration Testing

Testing the programs, files and various processes to validate if they have been incorporated together properly. The incorporation of all functions, resources and android activities have been tested and has created reasonable outcomes.

6.1.4   System Testing

Testing the performance of the whole system structure and to the system testing is to validate the nonfunctional requirements of the system. The system appears to accomplish all the compulsory nonfunctional requirements.

6.1.5   Performance Testing

The process of testing the performance of the system can be defined as the Software performance testing. This procedure involves how dependable, precise and efficient the system is more closely, we verify all features concerning the system's performance.

6.1.6   Security Testing

The security requirements of the system are tested in this process. The system doesn't have any firm precautions procedures since it does not have any private information regarding users Monetary resources. But the user must be cautious as his contact details will be required for communication between the guide and user which will be forwarded to the guide with the users permission if he/she desires.

6.1.7   Acceptance Testing

Acceptance testing is done to validate that the system is it all set for completion. Acceptance testing exposes faults, errors and slips in the SRS.

6.2   Test Cases

following are the test cases that were performed and the results are also stated within.

Test id	1
Title	Start tourist application.
Test steps	Click the tourist application icon to start.
Expected Result	Application is opened.
Test result	Pass

Table 6.1: Test case 1

The table 6.1 shows the test case for opening the tourist application. As most android applications tend to crash before even opening up, this is caused due to the fact that maybe the previous session was not terminated properly or the cache or ram was not able to cater the needs of the memory required to run the application, thus this test was performed to make sure all the memory allocations were done properly.

Test id	2
Title	Start guide application.
Test steps	Click the guide application icon to start.
Expected Result	Application is opened.
Test result	Pass

Table 6.2: Test case 2

The table 6.2 shows the test case for running the Guide application. The reason for performing this test was the same as the test case defined in table 6.1 , but for the guide application.

Test id	3
Title	Register as a guide
Test steps	1.Click the guide application icon to start. 2.Provide details. 3.Click register Button. 4.Go to sign-in page. 5.Enter user name and password and press sign in.
Expected Result	Registration done, sign in screen is shown and user is logged in.
Test result	Pass

Table 6.3: Test case 3

The table 6.3 shows the test case for a guide to register using the guide application sign-up page, As the guide opens his designated application he is directed to the sign in page. There is a link for the guide to sign up if there is not already an account. after providing the details required for sign-up, the guide registers and is redirected to the sign-in page where username and password is inserted and sign in is performed.

Test id	4
Title	Register as a tourist
Test steps	1.Click the tourist application icon to start. 2.Provide details. 3.Click register Button. 4.Go to sign-in page. 5.Enter user name and password and press sign in.
Expected Result	Registration done, sign in screen is shown and user is logged in.
Test result	Pass

Table 6.4: Test case 4

The table 6.4 shows the test case for a Tourist to register using the Tourist application sign-up page, As the Tourist opens his designated application he is directed to the sign in page. There is a link for the guide to sign up if there is not already an account. after providing the details required for sign-up, the guide registers and is redirected to the sign-in page where user name and password is inserted and sign in is performed.

Test id	5
Title	Hire a guide
Test steps	1.Sign in 2.Select major city 3.Select sub cities. 4.Select the guide from list. 5.Negotiate prices. 6.Start tour.
Expected Result	Hired a guide.
Test result	Pass

Table 6.5: Test case 5

The test case for the table 6.5 confirms the process of hiring using the tourist application. The sign-in is performed which takes the user to the major city selection view, here the major city is selected. The next view is the Subcity selection after which a list of guides is displayed matching the entered details, a guides is selected from the list whose contact is given for further negotiations and meeting point. Finally the tour is started.

Test id	6
Title	Login as admin at admin portal.
Test steps	1.Open browser. 2.Enter credentials. 3.Press sign in button.
Expected Result	Successfully signed in.
Test result	Pass

Table 6.6: Test case 6

This test case confirms the working of the admin portal log-in. Any web browser can be used to access the admin portal. The user enters his credentials and press the sign in button for a successful log-in. The table 6.6 represents this test case.

Test id	7
Title	View users details via admin portal
Test steps	1.Sign in 2.Enter user id and search. 3.Check details.
Expected Result	Successfully viewed details.
Test result	Pass

<div align="center">Table 6.7: Test case 7</div>

This test case was used to check if the admin portal is capable of displaying users using search and see their details. the table 6.7 is for this test case. As always log-in is done, and search terms are added to search the exact user.

Chapter 7

Conclusions And Future Work

7.1 Conclusions

Of all the books on this earth, the greatest stories are found on the pages of a passport. Rahnuma follows the same philosophy. Our Earth is a wonderful place and worth exploring. A tourist requires a tour guide for an extravagant experience. The professionalism and knowledge of a tour guide are what make's a tour experience outstanding. They are what craft the variation between a budget and a quality expedition. Tour guides are critical for an overall quality tour experience.

"Rahnuma" is a platform where travelers meet guides. "Rahnuma" registers tour guides and saves the personal information into a workbench database. The registration of tour guides provides security to the tourists. The tourist may not know about many major and attractive destinations. Tourists can hire guides via a hassle free and simple process. After completion of this application, we have learned intermediate java and have gained some expertise in android java as well as PHP programming language that enabled us to initiate communication between an application and database. We learned many different APIs of android.

In the end, we have tried our best to develop a product/system that will create jobs for the local community and provide a very friendly and simple to use interface for tourists to hire guides and in the process explore many unknown/secret destinations and make memories.

7.2 Future Work

The abundance of mobile devices everywhere, together with the development of cloud computing and advances in mobile device protection and security, is transforming businesses and bringing to realism a beyond doubt mobile workforce.

In future cloud services can be used to store and manage the database of this application, online payments can be included, real-time location sharing and an international application can also be created. This project in collaboration with the tourism department of a country can become a very successful and beneficial to the tourists and promote tourism as well as benefit the local economy and provide jobs for the jobless or professional guides.

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Chapter 8

User Manual

The user manual describes the GUI of the application. It also allows the user to have a look at the process before actually running the application, So that he may not be confused. Following are the actual screen shots of the application.

The sign-up screen for the tourist is shown in figure 8.1, here the user may fill the required fields and create an account.
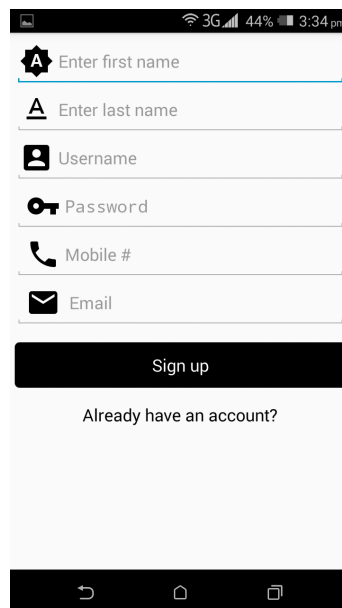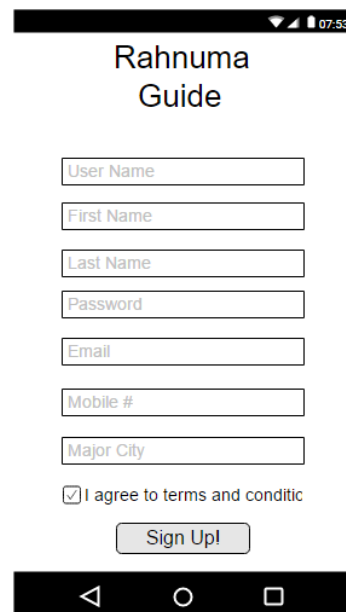

Figure 8.1: Tourist sign up

The figure 8.2 shows the sign in screen for the tourist application, where the user may enter his username and password to log in or press the link for signing up if he/she does not have an account.
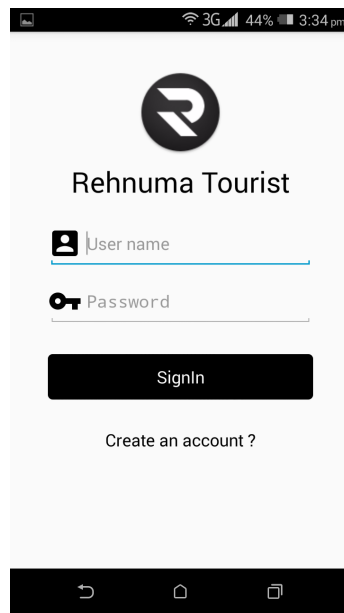
Figure 8.2: Tourist sign in

The figure 8.3 is where the tourist selects the initial or major city, basically which is the starting point, where they will meet the guide and where the tour will start.

Figure 8.3: Tourist major city selection

The figure 8.4 is the interface for the selection of sub cities related to the major city, these are the tourist destinations near the major city.
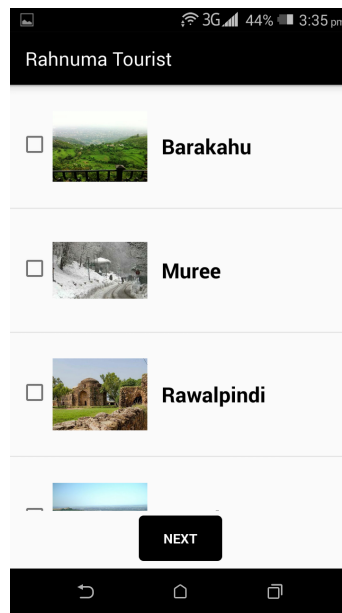
Figure 8.4: Tourist sub city selection

The resulting list of guides is shown in figure 8.5. The list only consists of guides related to the search terms.
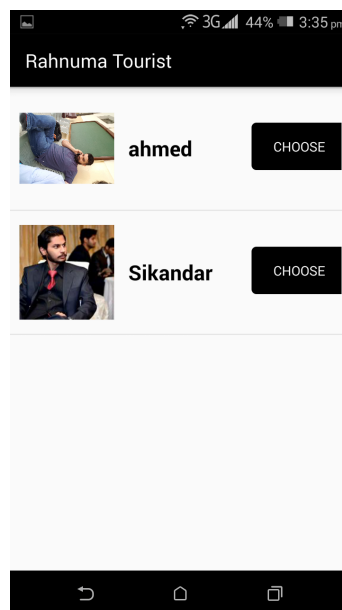
Figure 8.5: Tourist result guides list

The details of the guide are shown in 8.6. this includes the guides photo, name, rating and his phone number for further negotiations.
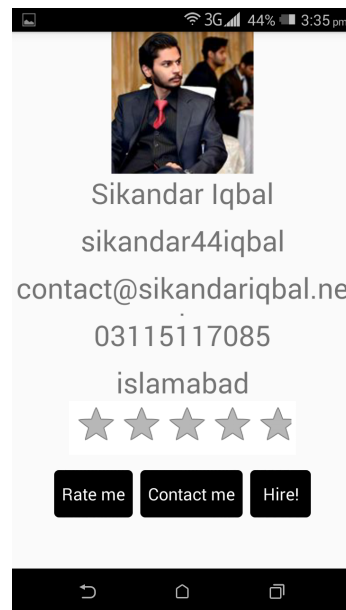
Figure 8.6: Tourist guide details

The sign-up screen for the Guide is shown in figure 8.7, here the user may fill the required fields as well as his/her selection of major city and create an account.

Figure 8.7: Guide sign up

The figure 8.8 shows the sign in screen for the guide application, where the user may enter his username and password to log in or press the link for signing up if he/she does not have an account.
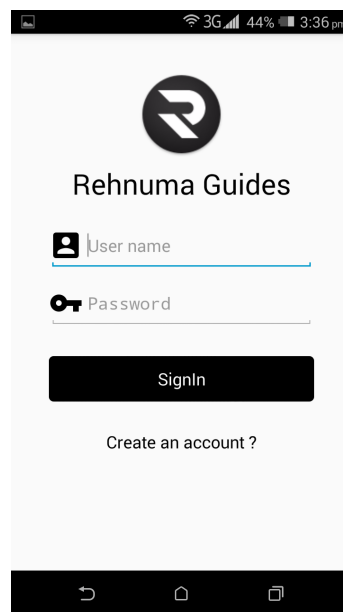
Figure 8.8: Guide sign in

The tour details are represented by the figure 8.9, the name of the tour, the duration, sites related and the contact of the person related to the tour are displayed in this view.
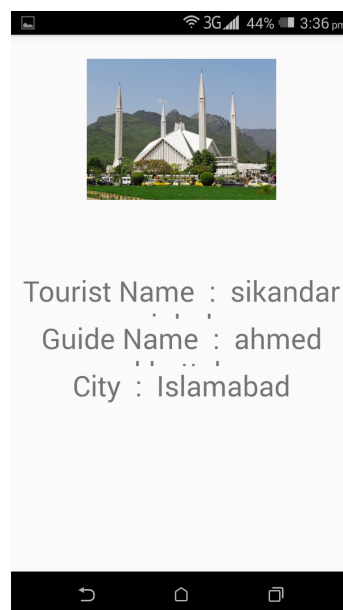
Figure 8.9: Guide job or tour details

The personal details of the guide can be viewed on this screen which is represented in figure 8.10.
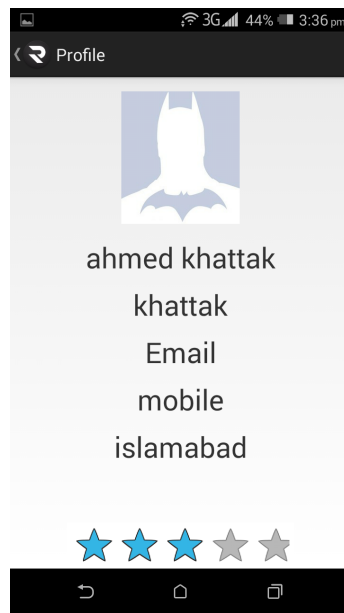
Figure 8.10: Guide my details

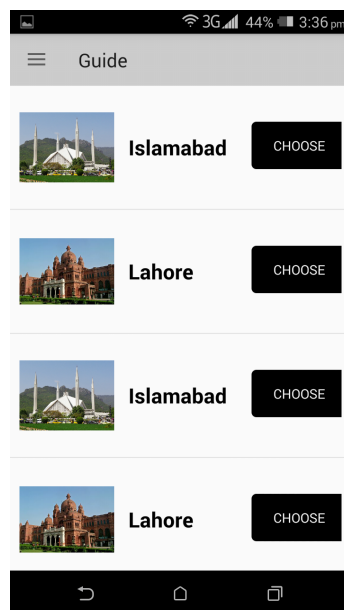The guide can view his previous jobs on posted jobs view which is represented in the figure 8.11.

Figure 8.11: Guide posted jobs

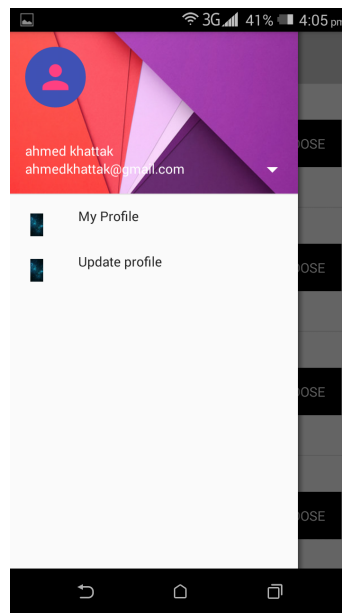The Guide can edit or view their details using this sidebar.8.12.

Figure 8.12: Guide sidebar

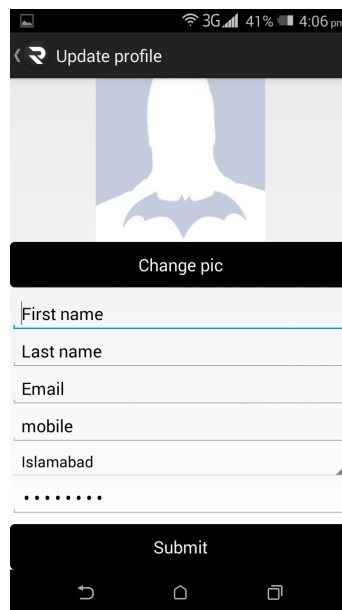The Guide can update his details via this screen. he can upload an image as well as change his contact if required..8.13.

Figure 8.13: Guide update