Tour Spider

BY
Md. Roman Bhuiyan
ID:152-15-5658
Piyas Ahmed Sady
ID:151-15-4834
Ekra Rahman Chowdhury
ID: 152-15-5821

This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering.

Supervised By

Md. Jueal Mia
Lecturer Department of CSE
Daffodil International University

Co-supervised By

Anup Majumder
Lecturer
Department of CSE
Daffodil International University

DAFFODIL INTERNATIONAL UNIVERSITY
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APPROVAL

This Project titled **"Tour Spider"**, submitted by Md. Roman Bhuiyan, ID No: 152-15-5658, Piyas Ahmed Sady, ID No: 151-15-4834 and Ekra Rahman Chowdhury, ID No: 152-15-5821 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 02-05-2019.

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We hereby declare that, this project has been done by us under the supervision of **Md. Jueal Mia, Lecturer, and Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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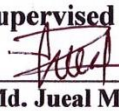
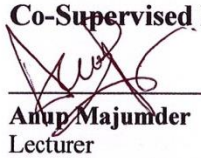


Md. Jueal Mia
Lecturer
Department of CSE
Daffodil International University

Co-Supervised By:



Anup Majumder
Lecturer
Department of CSE
Daffodil International University

Submitted by:

Md.Roman Bhuiyan
ID: 152-15-5658
Department of CSE
Daffodil International University

Piyas Ahmed Sady
ID: 151-15-4834
Department of CSE
Daffodil International University

Ekra Rahman Chowdhury
ID: 152-15-5821
Department of CSE
Daffodil International University

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ABSTRACT

This report is a description of our project – **"Tour Spider"**. Tour Spider is such kind of android based application by which any traveler can search their expected historical places or others renowned places, and nearby banks, restaurants, bus services and route, weather forecast and events. The main aim of this application is to serve traveler. Now a day many of our young generation and smart people is travel lover. They all are very interested in traveling within a month or two or three. Tour spider will be very helpful for these travelers. This application is friendlier and so that user can easily find out the features what they need by their smart phone. This application serves the travelers for a better tour. Sometimes the traveler have faces many problems of money, food, weather, transports and many others. By using this application they can find out all of above perfectly. They also get the direction of different bus route. After development session of this application we have tested it by different user and found it to be well build application which works perfectly.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Tourism has become a popular global reprieve activity. UNWTO (United Nations World Tourism Organization) long term outlook projects in the growth of international arrivals worldwide to be nearly 4.5% per year between 2010- 2020despiteongoingeconomic challenges.

Day By day the demand of tourism is increasing. For this reason **"Tour Spider** "is implemented as an app. Tour Spider will be a revolutionary android based tour guide related mobile application. This application will help the tourists to search all they needed from the same platform. Our Tour Spider application will also provide instructions of latest information of Banks, restaurants, historical places, transports and route etc. Finally this application will help the tourists to get all information easily.

1.2Background

As we have stated before, keeping in mind the goodwill of our traveler we have decided to build an application that will provide proper essential latest information. Following the idea, we build a useful application which contains are traveling method(Banks, Restaurants, Weather, Hotels and Historical Places etc.) and event method(Starting date & time, Destination, Bus and Route, Persons, Hotel Name, Ending date & time).

Using the traveling Method user can easily find how to travel in proper way. Using our app user can find important contact list of Bus counter Office and Hotel Manager. In event Method area we already have given various type of information for completing a Tour.

Finally, in Question Bank, which is the most important & unique feature of our project; here user can easily submit their problem and other user can suggest on that problem.

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1.3 Motivation

The main motivation of **Tour Spider** application is to make a proper and complete tour related app. By using this app user can find easily traveling and event method, and submit their problem and get feedback from other users. It also creates user friendly features that helps user to find out how to communicate Bus counter office and hotel manager easiest way in minimum time.
Another motivation is, since our country will move forward to digitalization so we want bring digitalization in TOUR sector.

1.4 Project Objective

- Providing proper information about TOUR sector.
- Providing information of Tourism and Historical places.
- Providing useful contact list of Bus Counter Office and Hotel Manager.
- Traveler can easily submit their tour related problem in this app.
- After submitting the problem, this app will send the problem as a notification to all users.

1.5Project Scope

- Providing information regarding Banks, Restaurants, Hotels, Transports and Weathers.
- Designing a Database for storing related data.
- Get notification from other users when share's their problem.

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CHAPTER 2

Background

2.1 Introduction

In the area of peregrination we have worked for many days for the development of many sectors which needed in travel. For the amelioration of tourists we developed an application which contains Banks, restaurants, Historical places, Weather info, transports and routes.

2.2 Related Works

There has been some related works in the past regarding peregrination. For example, there are some applications named:

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2.2.1 Tour Bangladesh

Tour Bangladesh is the must have free tour app for travelers to know historical Bangladesh, natural Bangladesh, beautiful Bangladesh & all amazing places of Bangladesh. Travel Bangladesh for archaeological, religious, recreational &kid's tour spots around whole country. [1]

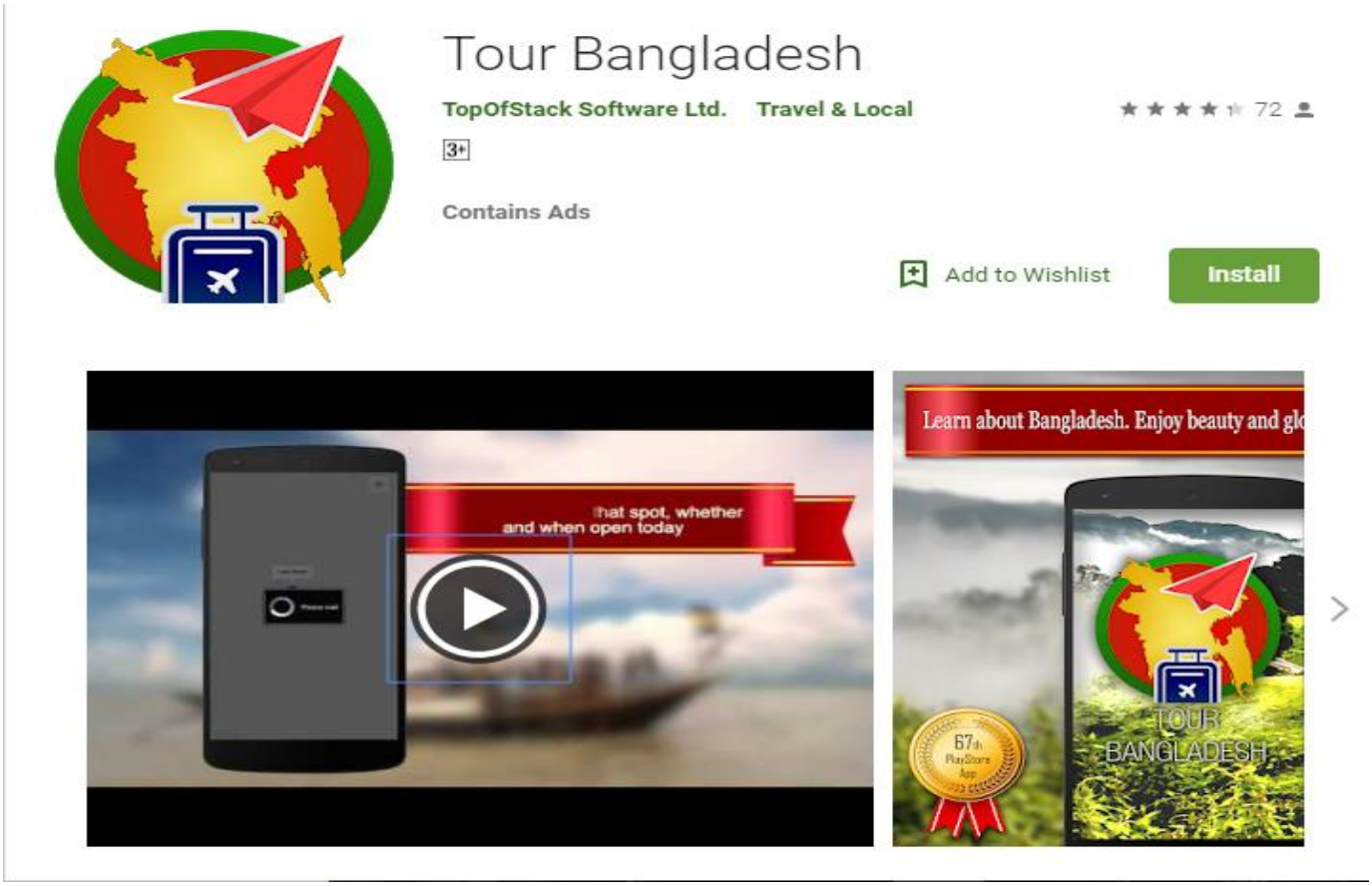

Figure 2.2.1: Tour Bangladesh.

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2.2.2 Travel BD

Travel BD app will help users to find and visit nearby tourist location. This app also shows location on map, distance & real time direction. [2]

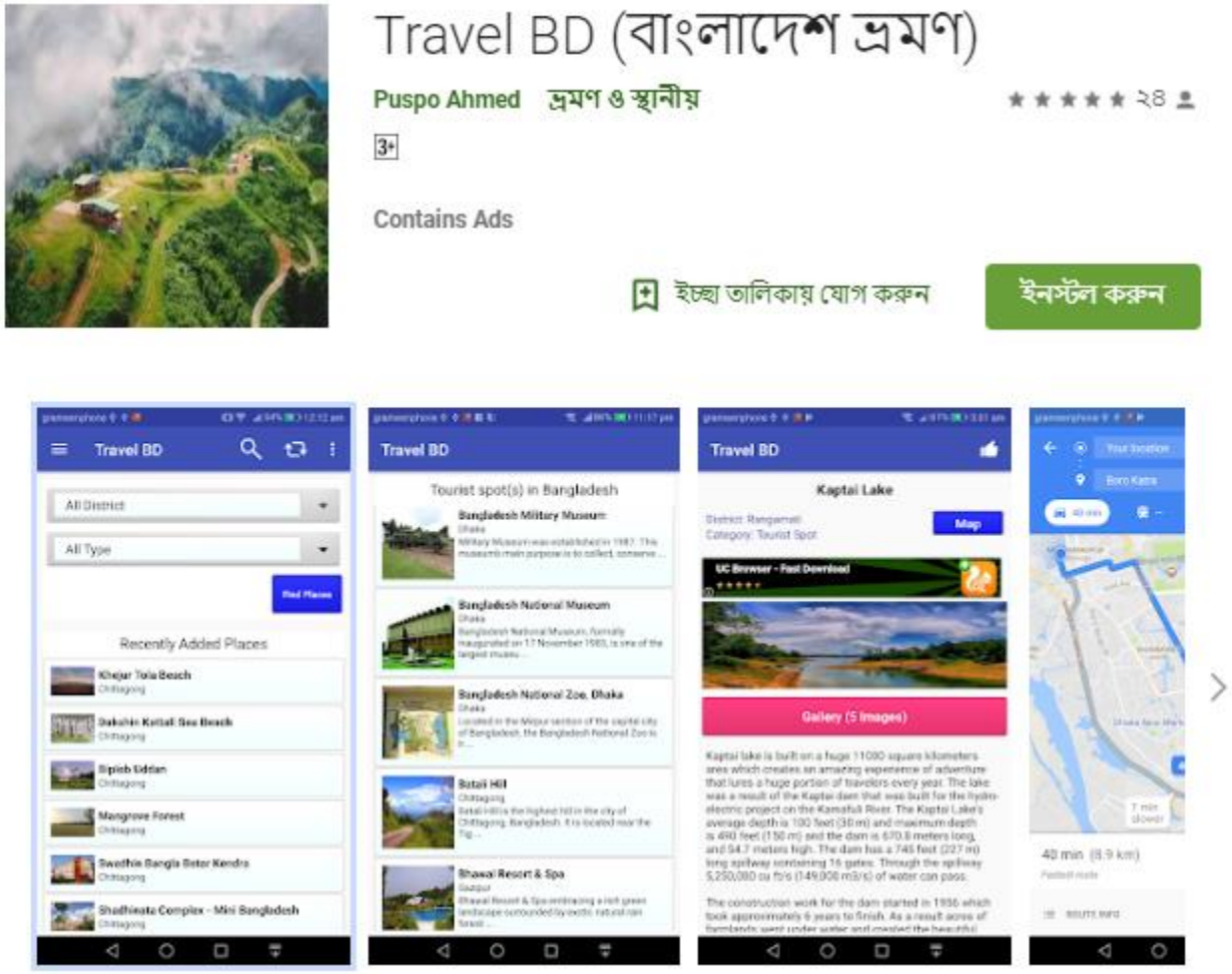

Figure 2.2.2: Travel BD.

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2.2.3 Travel Guide Bangladesh

Travel Guide Bangladesh app has been decorated for travelers by giving such information like transportation details, costing, how& where to go and stay in various famous places of Bangladesh. [3]

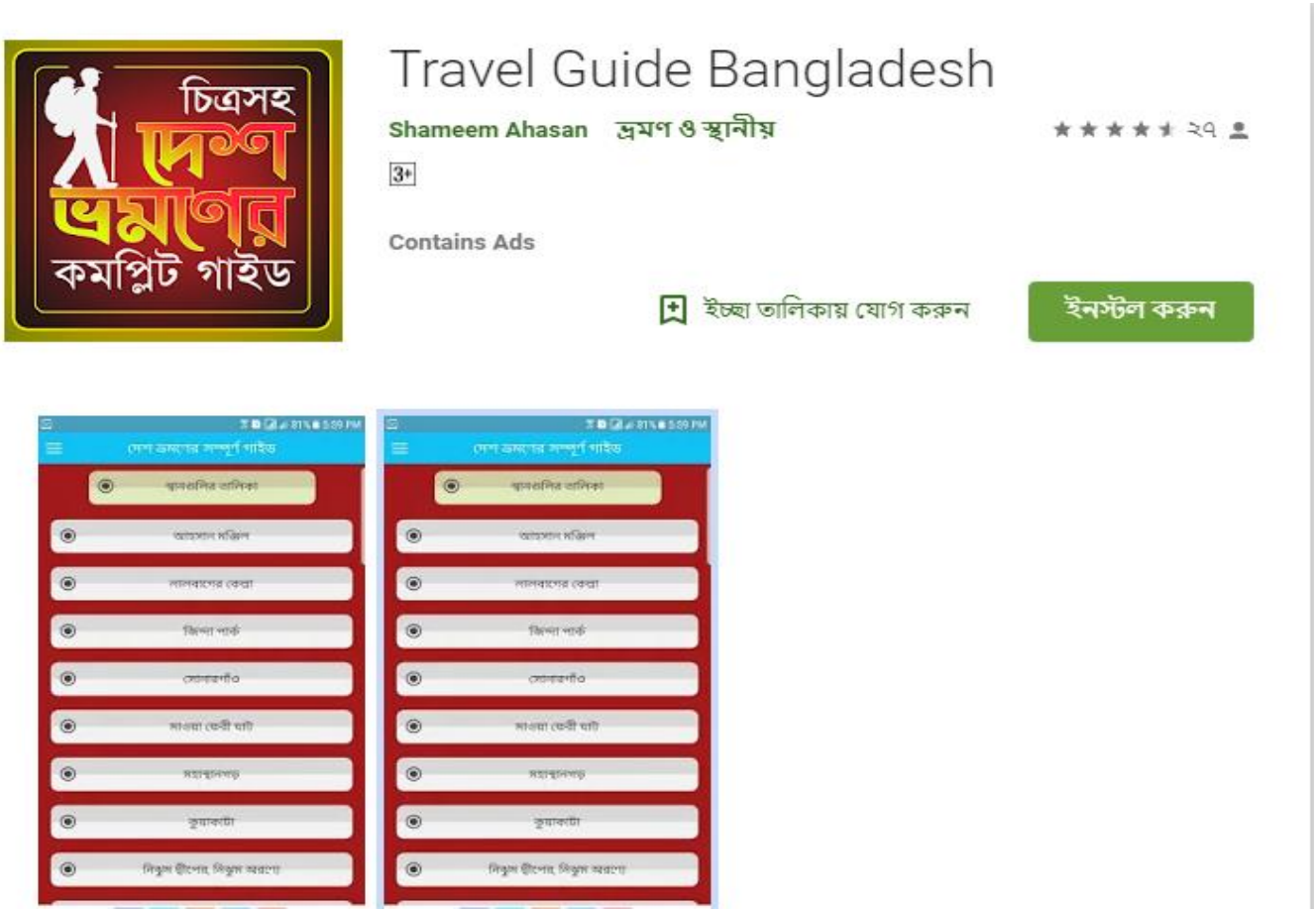

Figure 2.2.3: Travel Guide Bangladesh.

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2.3 Comparative Studies

There is some existing application which has some limitations. Most of the applications have some problem. Different applications contain different features but there is no app which contains all features in one application such as traveling method and event method.

But in one application we provide lots of features such as Banks, Restaurants, Weather Info, Historical place and transports, important contact list of Bus Counter Office and Hotel manager. Tour related problem solving and problem sharing along with feedback. It also allows phone calling.

2.4 Challenges

Interactive Application:

In android based projects one of the major concerns is interactions. Now a day's all the latest device use different types of sensor for offering various features.

Keeping the application sample and clear:

Complex apps aren't user friendly, user will be become fade up of using app and give bad rating. So the function of the app should be very simple and clear.

Dealing with the different screen devices:

In Android app market there is various types of screen ratio devices exists. So pour challenge is to keep in mind of various types of existing device for designing an app.

Performance:

One of the important challenges is to design well performing and bug free android app which needs minimum charge of battery.

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CHAPTER 3

Requirement Specification

3.1 Data Flow Diagram (DFD)

A Data Flow Diagram (DFD) graphically representing the function, or process taking, manipulate, store and distribute data between a system and its environment and between components of a system. Its represent unlike a basic structured flowchart which focuses on control flow, or a UML activity workflow diagram, which offering both control and data flows as a unified model

Figure 3.1: Data Flow Diagram (DFD) of the system

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3.2 Business Process Model (BPM)

Business Process Model is the operation of show up process of an enterprise, so that the present process may be resolved, improved, and automated. The term ‘business model’ is thus used for a spacious range of unceremonious and ceremonious descriptions to show up core perspective of including motive, operational process and policies

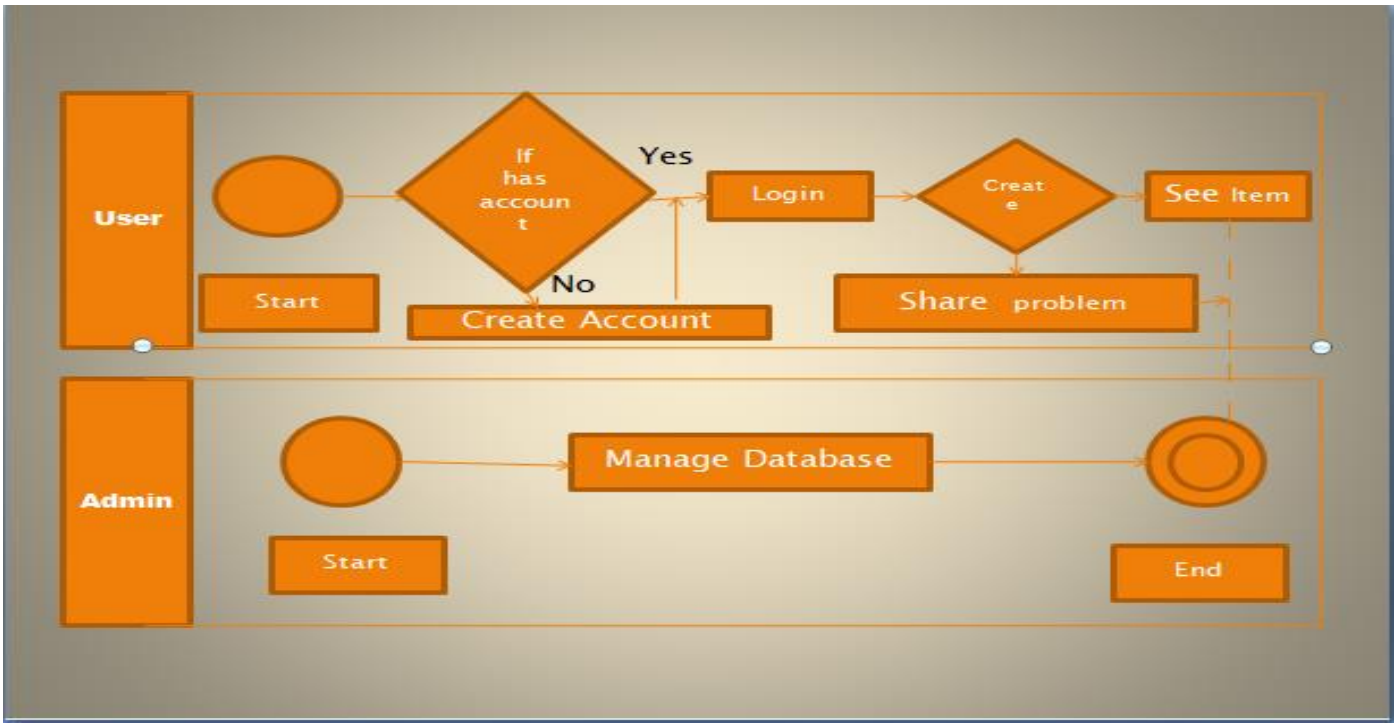

Figure 3.2: Business Process Modeling (BPM)

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3.3 Unified Modeling Language (UML)

The Unified Modeling Language (UML) is a general purpose, development, modeling language in the field of software engineering that is intended to provide a standard way to visualize the design of a system. [4]

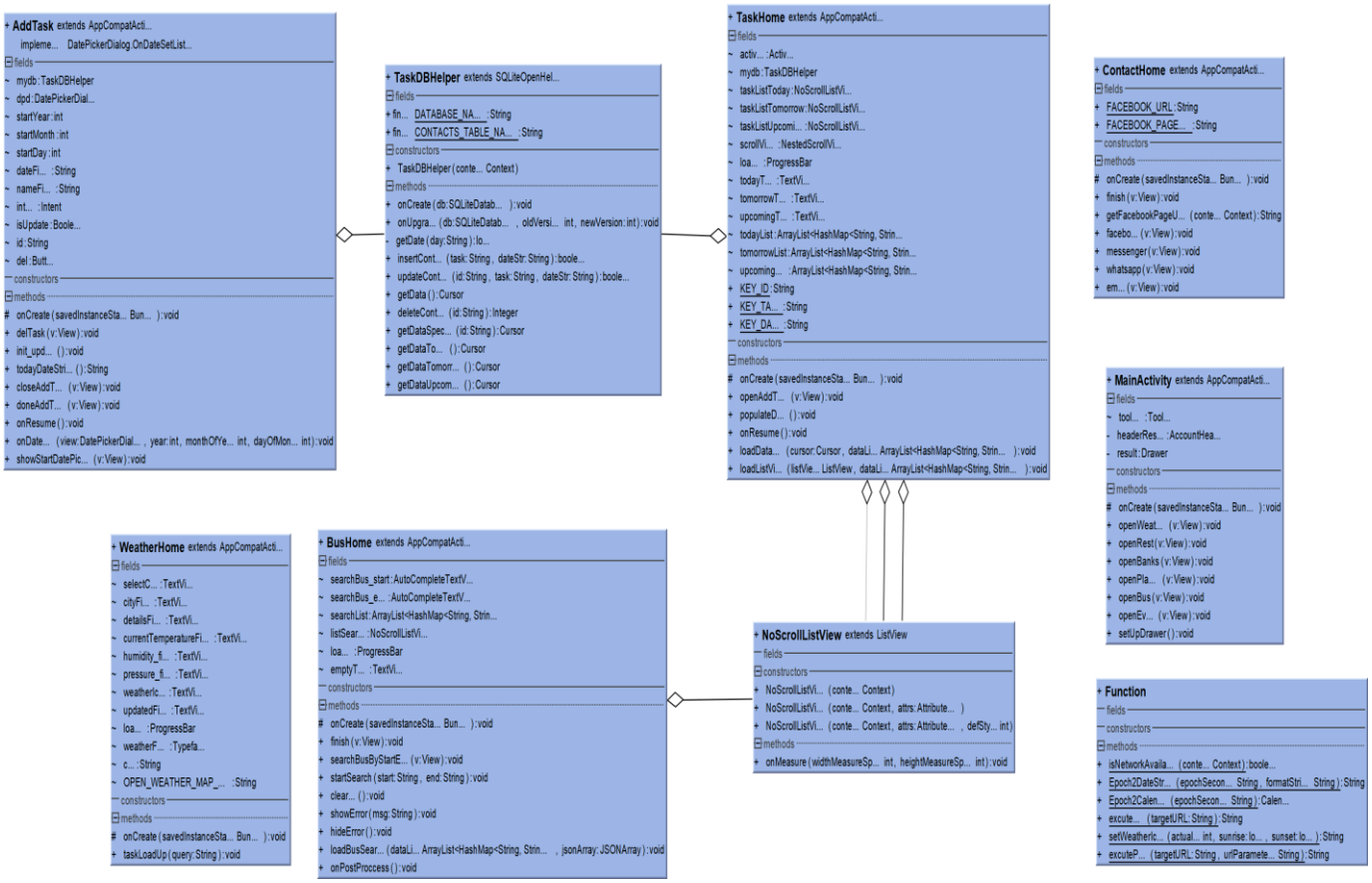

Figure 3.3: Unified Modeling Language (UML)

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Chapter 4

Design Specification

4.1 Server & Database Design

Server & database design is the process of producing a detailed data model of database.

Figure value dictates the database design of our developed application which situated in our dedicated server. This database acts as host of data from which the application can fetch data whenever it needs. The First, Second and Third part of designated database design in show in figure.

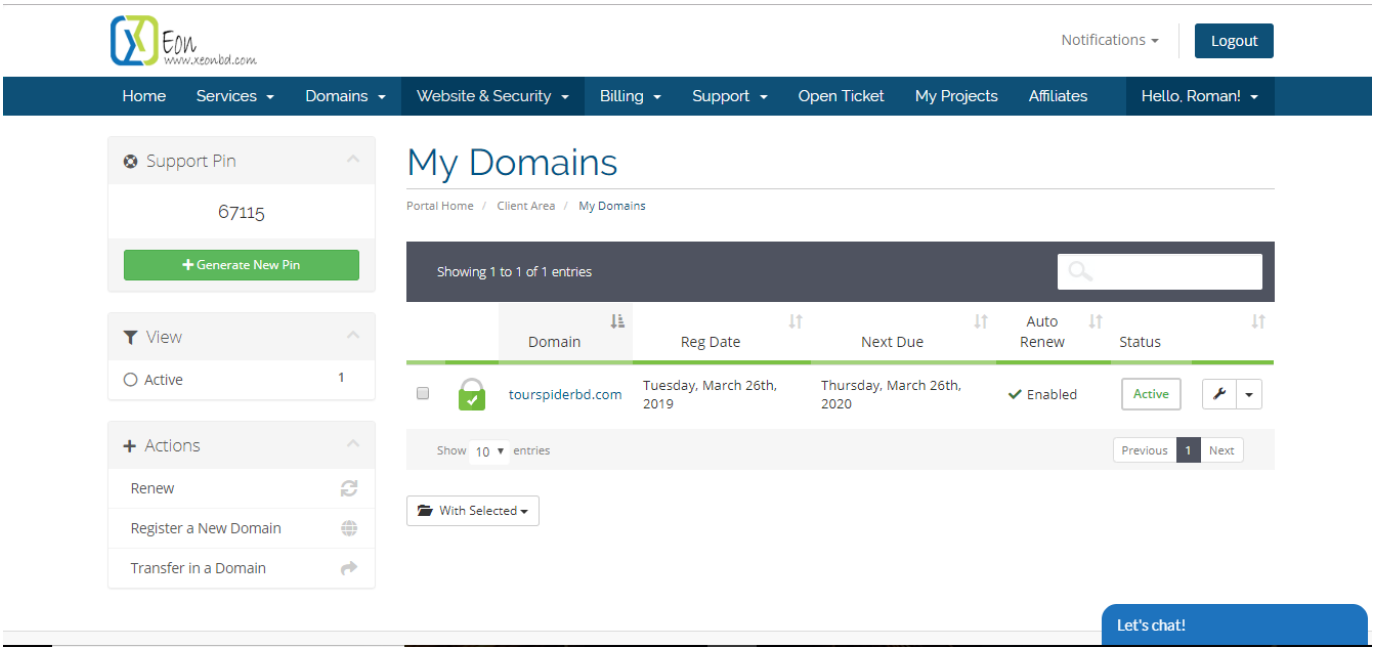

Figure 4.1.1: Server & Database Design for mobile app (part 1)

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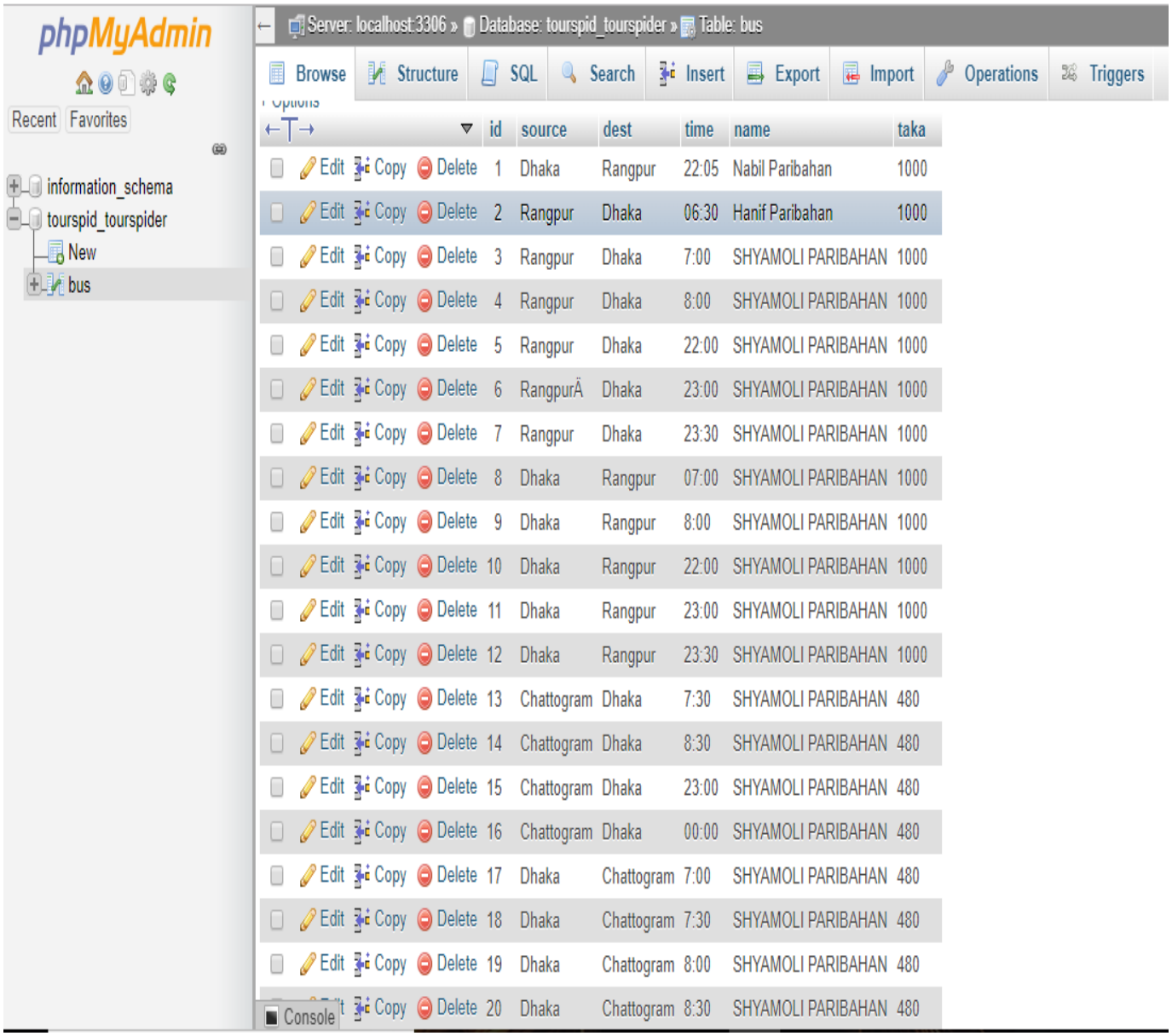

Figure 4.1.2: Server & Database Design for mobile app (part 2)

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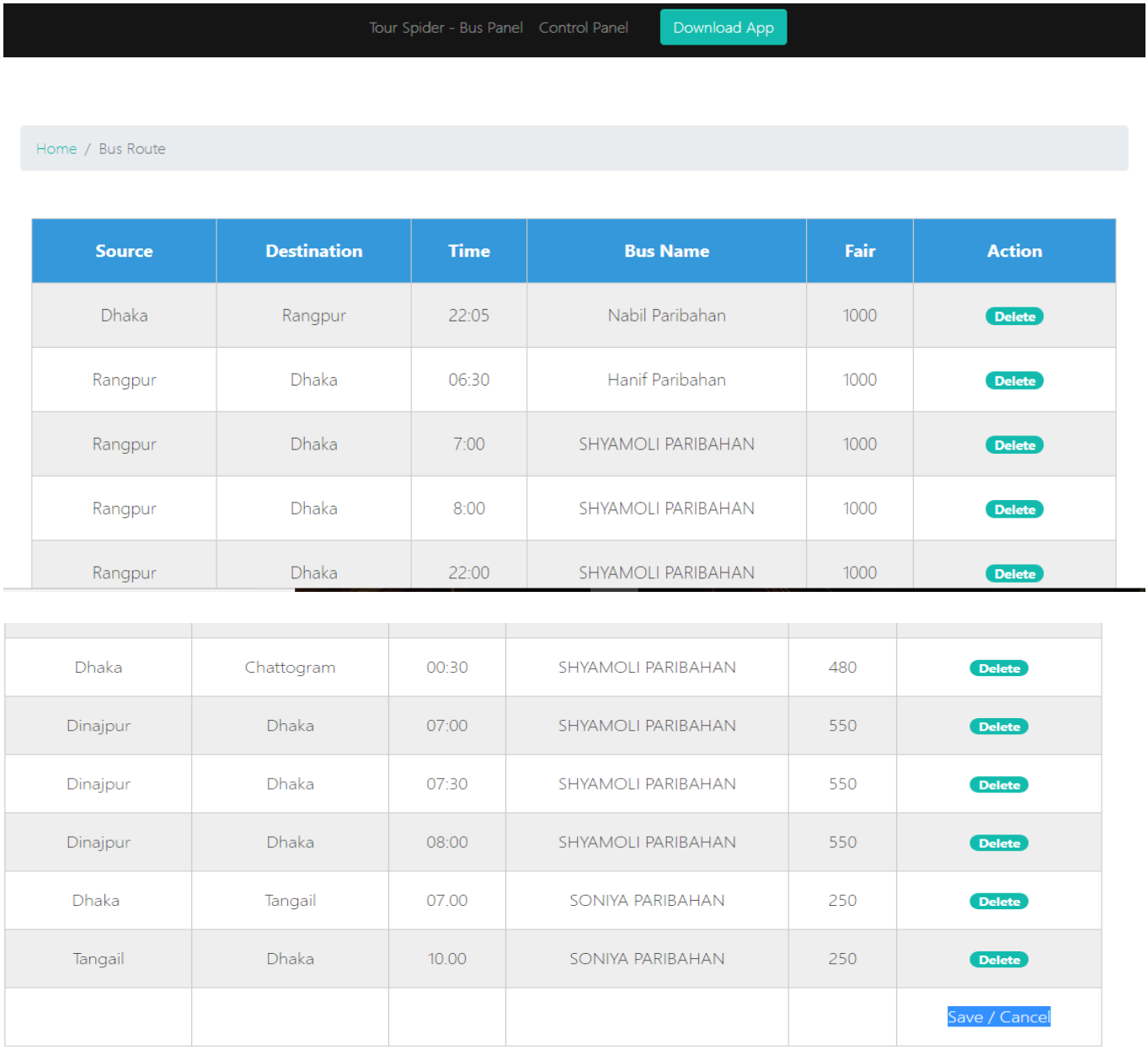

Figure 4.1.3: Server & Database Design for mobile app (part 3)

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4.2 UI Design

User Interface (UI) that allows user to interact with the mobile devices or other electronic devices. UI Design usually refers to the design of Graphical User Interface (GUI), but can also refer to others, such as natural and voice user interface.

4.2.1 Home Screen

Home Screen shows six items like Event management, Restaurants, Banks, Historical places, Weather updates and Bus Service.

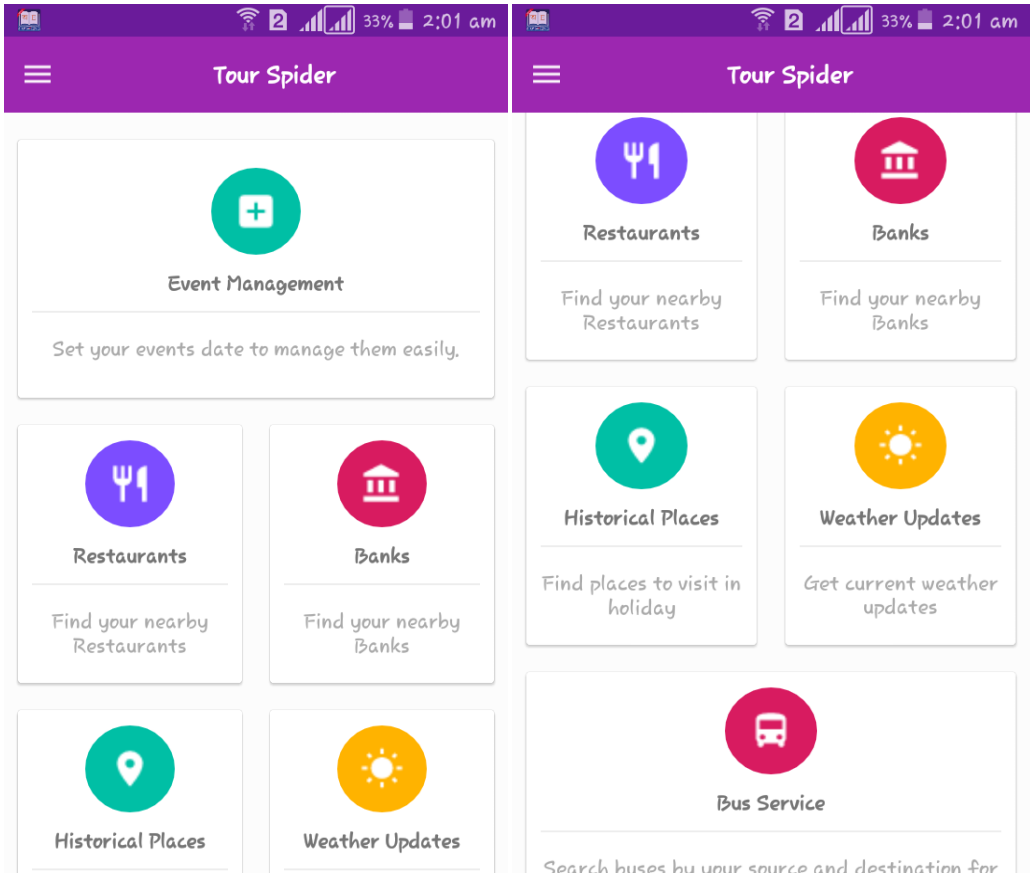

Figure 4.2.1: Home Screen

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4.2.2 Features Drawer and About Us

In the app drawer we can find out all the features include Event management, Banks, Restaurants, Historical Places, Weather Updates and Bus Services. In about us we have added **TOUR SPIDER** developer details like Name, Email, Messenger, Whatsapp and Tour Spider face book page.

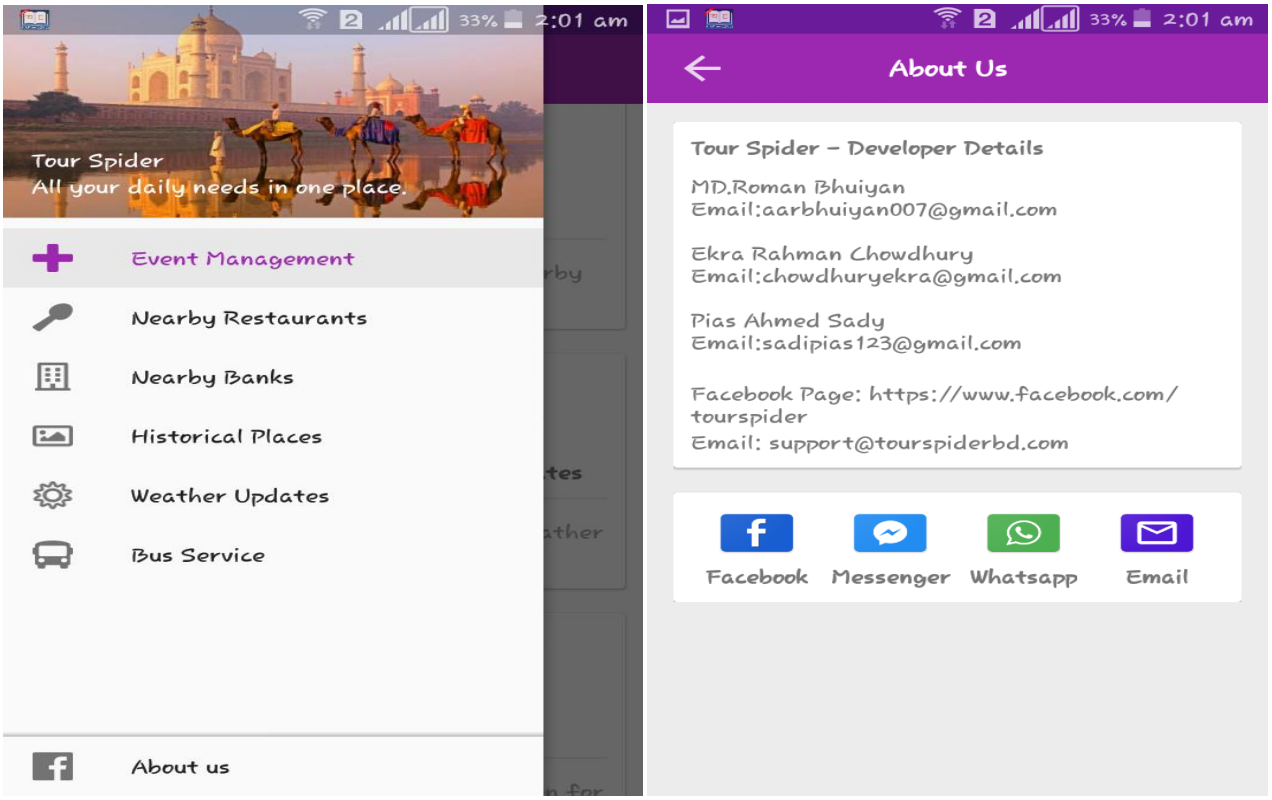

Figure 4.2.2: Features Drawer and About Us

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4.2.3 Event Management

It’s works as like To-Do-List that we can create an event with event name and date. We also can delete an event and again we can add an event including event name and date.

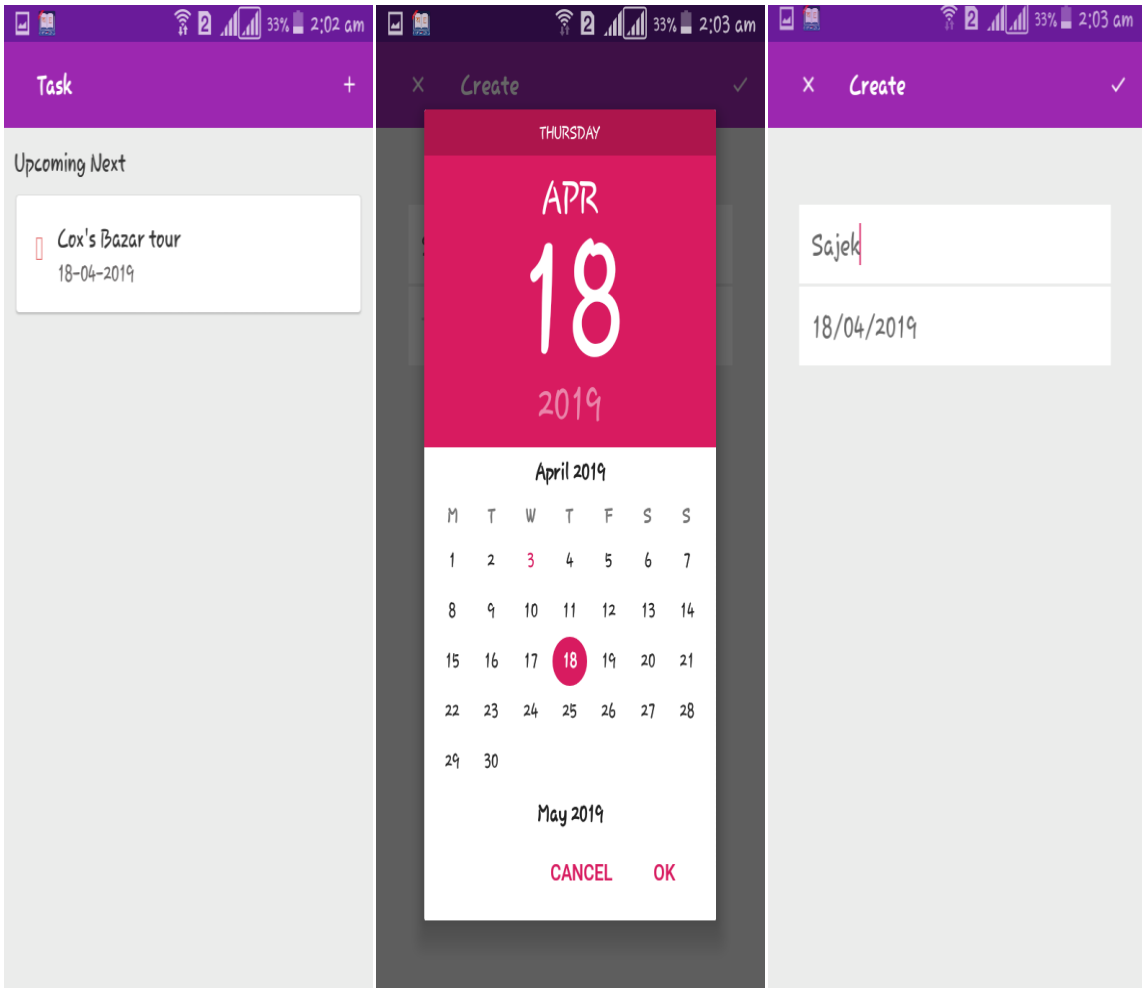

Figure 4.2.3: Event Management

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4.2.4 Restaurants

While we reach in a tourists place we must need to eat properly for our health perfection. For this reason, we need a perfect restaurant nearby and our app will help them to find out a better restaurant.

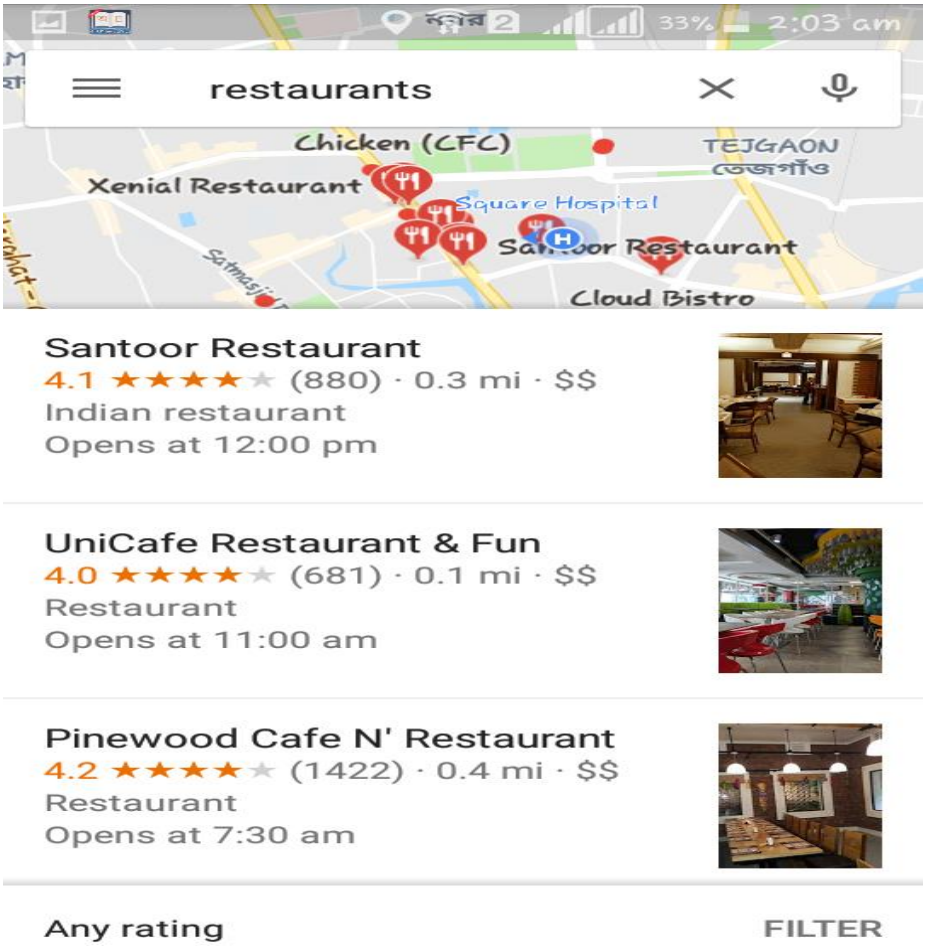

Figure 4.2.4: Restaurants

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4.2.5 Banks

When any tourists go out for a tour he or she must needed money. For cash out their own money they must go to nearby banks. For this reason we added banks feature in our application.

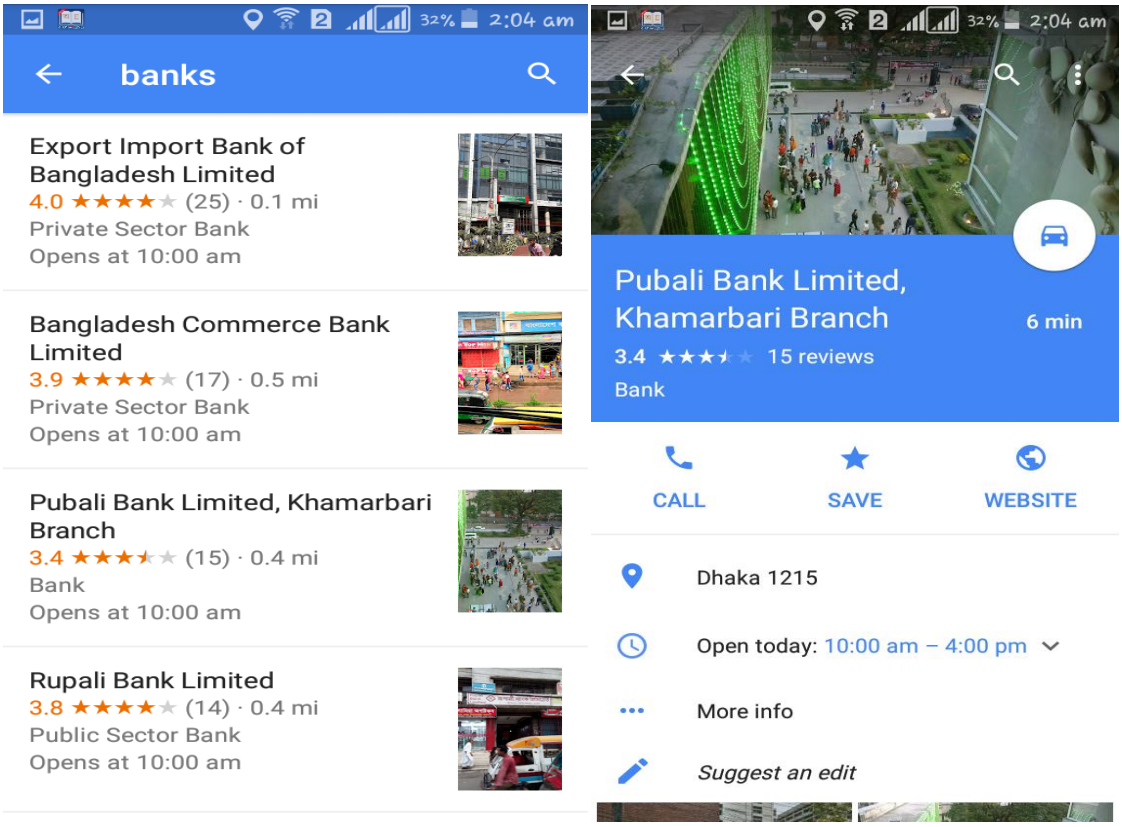

Figure 4.2.5 Banks

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4.2.6 Historical Places

When any of us want to go any historical, religious and recreational places we may not familiar of that place. For this reason we added this portion to help any tourists for a better and perfect travel.

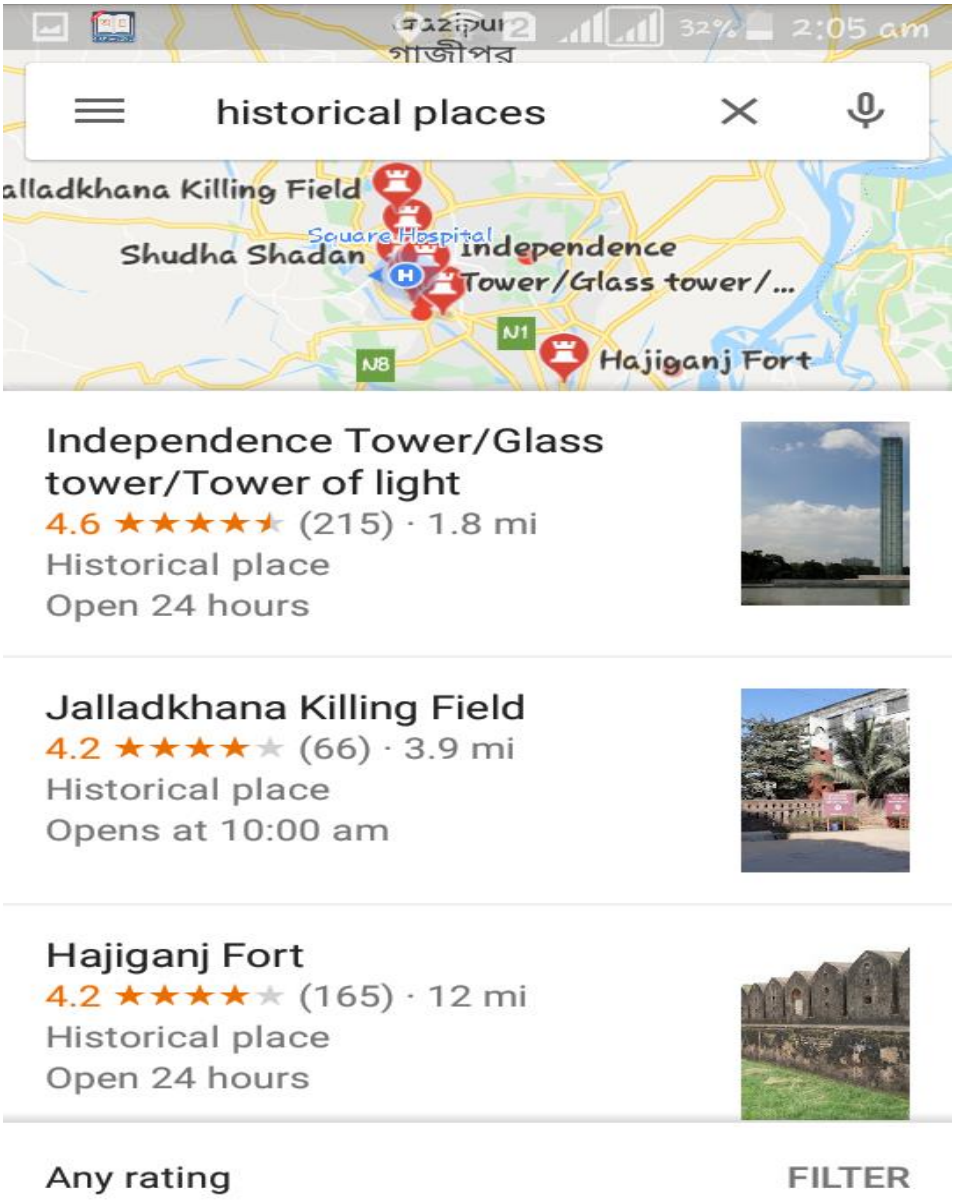

Figure 4.2.6: Historical Places

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4.2.7 Weather Updates

In weather updates we updated here haze, humidity and pressure of that place. By using this portion we can know the updates of weather of any places.[5]

Figure 4.2.7: Weather Updates (Part 1)

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4.2.7.1 Change City

In weather updates user can see another city's weather by change city name. To see the weather update of another city or places through our app user click on the change city option and input there a city name then finally click on the change button to see the weather update of that place.

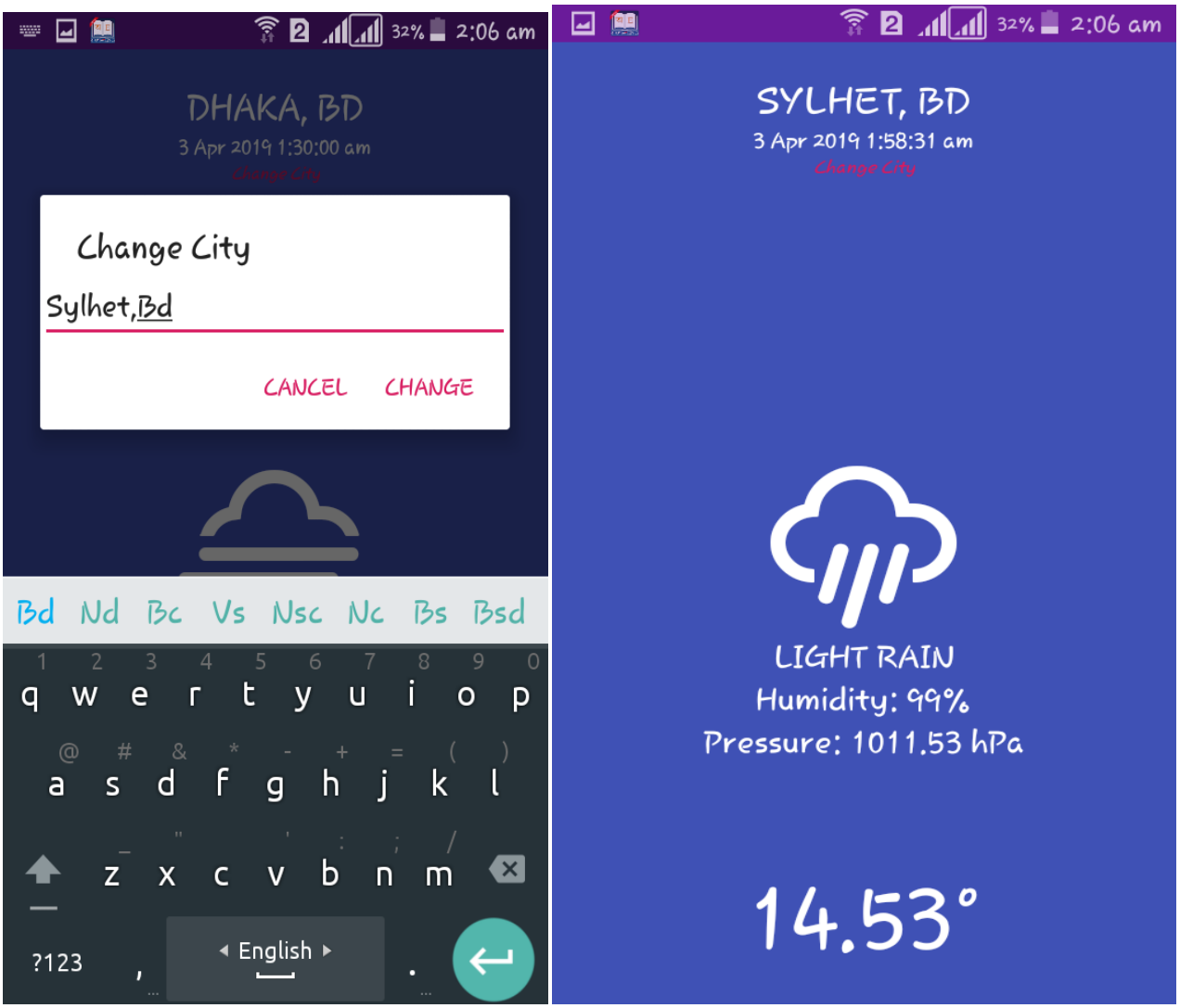

Figure 4.2.7.1: Weather Updates (Part 2)

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4.2.8 Bus Services

The most important feature of our app is Bus Service. Through this feature user can easily find out bus service details. Firstly user should go to the Bus Search option then input current location name and then input destination location name and finally clicking on the SEARCH BUS option user will get the total information of that buses.

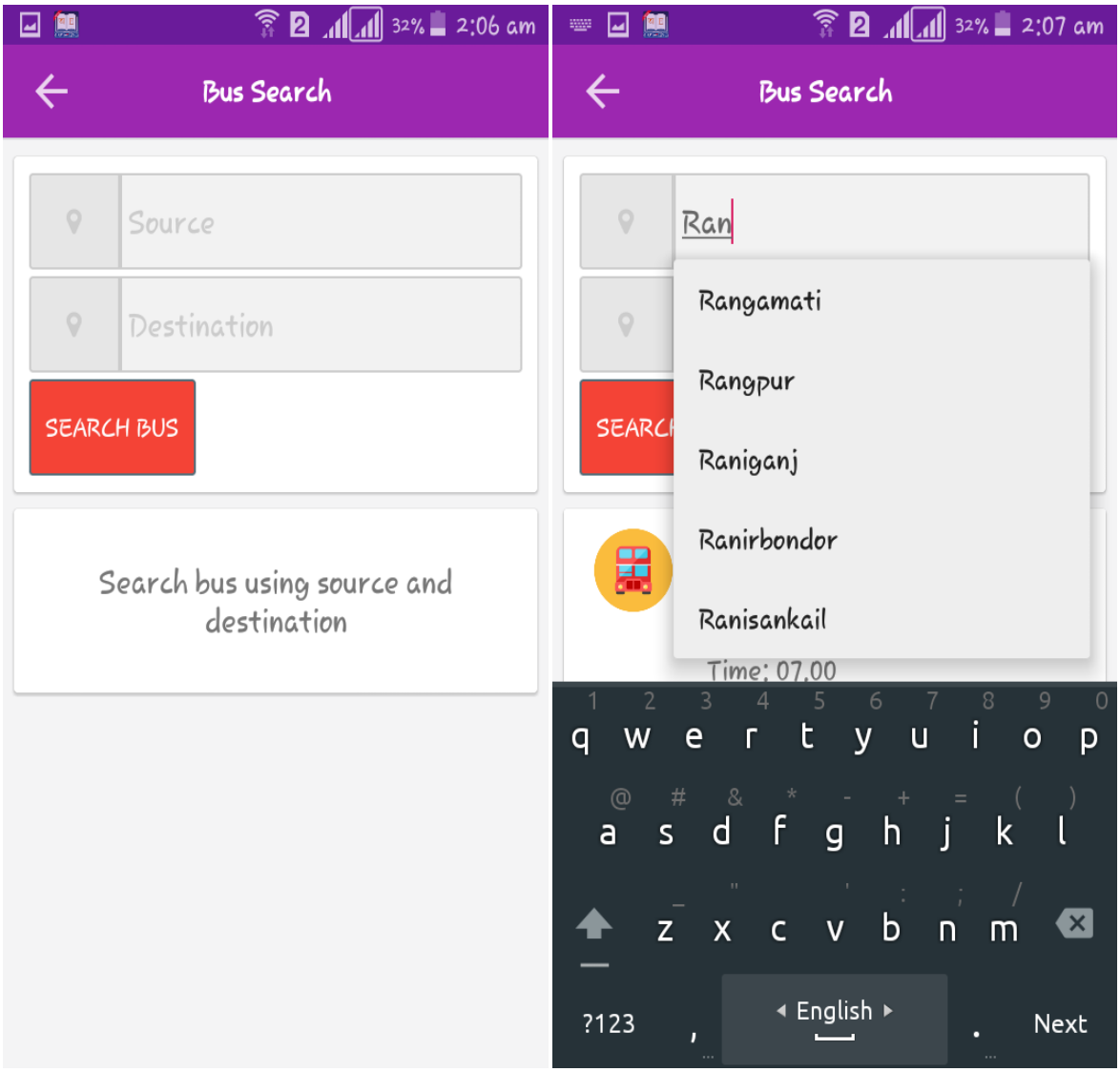

Figure 4.2.8: Bus Services (Part 1)

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4.2.8 Bus services

After getting all bus information user can also see the route direction and time duration to reach from current location to destination location.

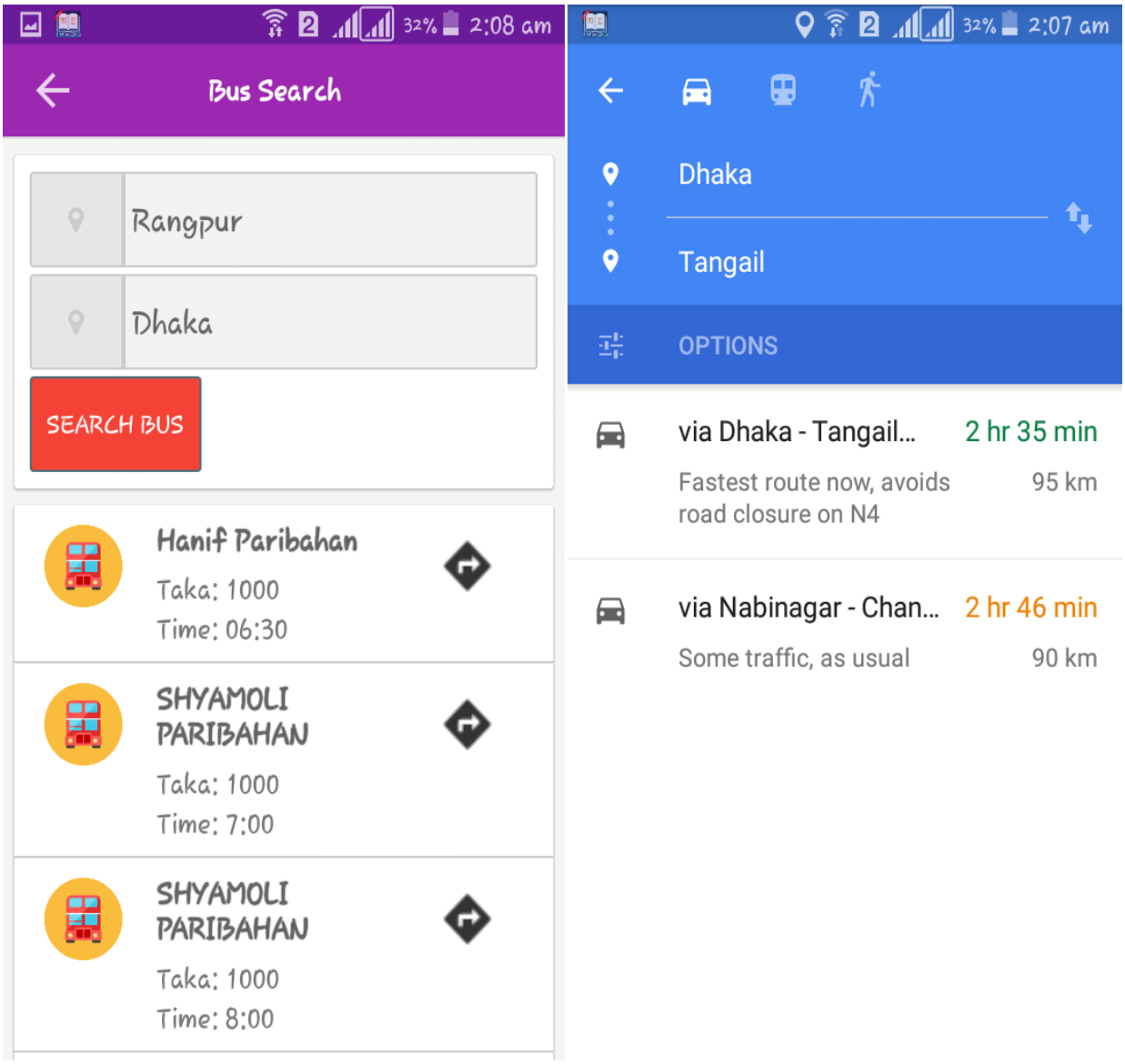

Figure 4.2.8: Bus Services (part 2)

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4.3 Design Requirements

- **React Native**
- **XEON**
- **Android Studio**
- **Android SDK**
- **Microsoft Visual Studio**
- **Android Virtual Device (AVD)**

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CHAPTER 5

Testing and Evaluation

5.1 Usability Test

For testing usability, we tests the ease with which the user interfaces can use based on our application. We test our application among some user whether it is user friendly or not. We run a survey among 40 users aged between 20-50 where 25 of them were male and 15 were female. Few questions were included in this survey which had parameters to confirm the success of this survey. The output of the survey is given below as a bar chart:

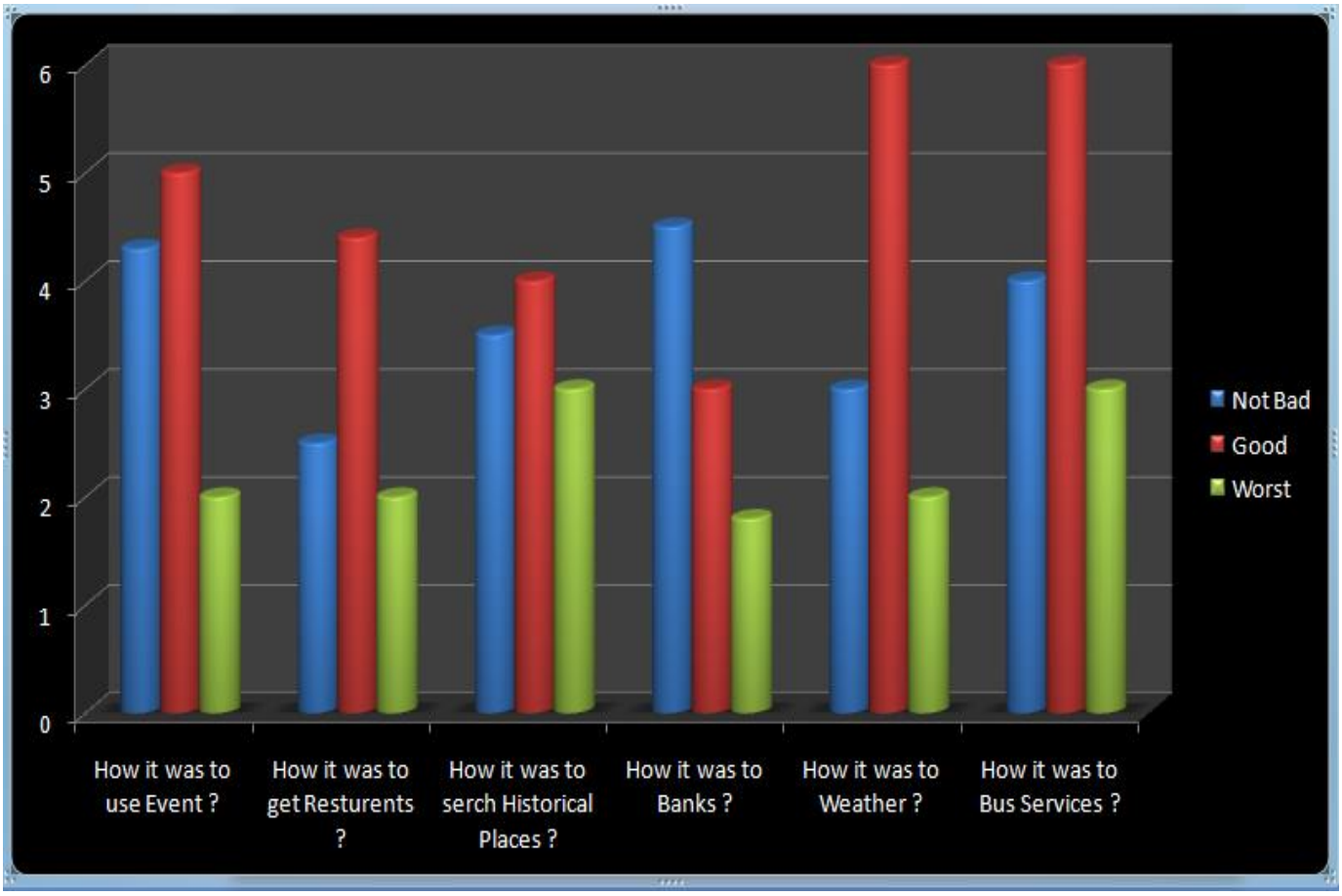

Figure5.1: Survey Result

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So, after surveying on our TOUR SPIDER application we can take a benefit of results of usability testing to the end user:

- Good and user friendly application.
- Easiest application to use.
- Application is easily accepted by users.
- Shortens the information for new user.
- Best User Interface **(UI).**

5.2 Unit Test

A unit test is generally exercises the functionality of the smallest possible unit of code (which could be a method, class, or component) in a repeatable way. We should build unit tests when we need to verify the logic of specific code in our app. The unit test was done in the time of implementing the codes of this application and also upon completion of this project.

The result of the Unit test is shown in Table no1:

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5.2 Result of Unit Test

Table 1: Result of Unit Test-[6]

Test Case	Test Input	Expected Output	Actual Output	Result
Interface visibility	Tested on AVD	Interface are display correctly	Interface are display correctly	Pass
Response Each Button	Tested on AVD	Display correct activity	Display correctly	Pass
Network connectivity	Tested on AVD	It should connect with internet	Successfully connected	Pass
Search Button	Tested on AVD	Search correctly	Successfully searched	Pass
Weather Information	Tested on AVD	Display correctly	Successfully informed	Pass

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CHAPTER 6

Conclusion and Future Work

6.1 Conclusion

Tour Spider is an android based mobile application which supports our travel seeker people in the sector of peregrination. It is such kind of application which provides many tour related information such as Event Management, Banks, Restaurants, weather info and Bus services. It also provide our traveler a very simple way of traveling. Our application is such kind of application by which traveler can find out all the basic needs of traveling. We think that this application will be legendary creation in android application platform.

6.2 Future Work

We want to build a comprehensive tour related app which will cover every sector of traveling of Bangladesh as well as around the world so that the tour seeker and related all businessmen will be benefited from each other easily. In near future we will implement our application as a worldwide platform of tour which will be technologically very swift and strong and easy to use. Our application will be very user friendly and it also decreases costing of our users. And it also helps our country's economy when it will be implemented globally

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REFERENCES

[1] Play.google.com. (2019). [Online] Available at:
https://play.google.com/store/apps/details?id=com.tos.tourism&hl=en

[2] Play.google.com. (2019). [online] Available at:
https://play.google.com/store/apps/details?id=puspo.ahmed.travelbd

[3] Play.google.com. (2019). [online] Available at:
https://play.google.com/store/apps/details?id=app.marszone.travelguide

[4] En.wikipedia.org. (2019).'Unified Modeling Language' [online] Available at:
https://www.tutorialspoint.com/uml

[5] Open Weather map (2019) [online] Available at:
https://openweathermap.org/api

[6] Unit Test (2019) [Online] Available at:
http://softwaretestingfundamentals.com/unit-testing.

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