

An Android Based Mobile Application Traveler

BY

Md. Minhazul Abedin Niloy

ID: 161-15-6840

Md. Alinewaz Chowdhury

ID: 161-15-6790

Md. Abdul Muttalib Imran

ID: 161-15-6921

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

Shaon Bhatta Shuvo

Senior Lecturer

Department of CSE

Daffodil International University



DAFFODIL INTERNATIONAL UNIVERSITY
DHAKA, BANGLADESH
DECEMBER 2019

APPROVAL

This Project/internship titled “**Traveler**”, submitted by Md. Minhazul Abedin Niloy, ID No: 161-15-6840, Md. Alineaz Chowdhury, ID No: 161-15-6790, Md. Abdul Muttalib Imran, ID No: 161-15-6921, 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 05.12.2019

BOARD OF EXAMINERS



Dr. Syed Akhter Hossain
Professor and Head

Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Chairman



Saiful Islam
Senior Lecturer

Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



Shaon Bhatta Shuvo
Senior Lecturer

Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



Dr. Dewan Md. Farid
Associate Professor

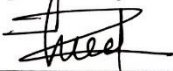
Department of Computer Science and Engineering
United International University

External Examiner

DECLARATION

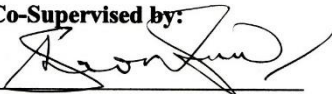
I hereby announce that, this project has been done by Md. Minhazul Abedin Niloy(161-15-6840), Md. Alinewaz Chowdhury(161-15-6790) and Md. Abdul Muttalib Imran(161-15-6921) under the supervision of **Md. Jueal Mia, Lecturer, Department of CSE** in Daffodil International University. I also announce that neither this project nor any of this project has been presented elsewhere for reward to any degree or diploma.

Supervised by:



Md. Jueal Mia
Lecturer
Department of CSE
Daffodil International University

Co-Supervised by:



Shaon Bhatta Shuvo
Lecturer
Department of CSE
Daffodil International University

Submitted by:



Md. Minhazul Abedin Niloy
ID: 161-15-6840
Department of CSE
Daffodil International University



Md. Alinewaz Chowdhury
ID: 161-15-6790
Department of CSE
Daffodil International University



Md. Abdul Muttalib Imran
ID: 161-15-6921
Department of CSE
Daffodil International University

©Daffodil International University

iii

ACKNOWLEDGMENT

At the beginning, we want to thanks to the great and almighty Allah for blessing us to do this project with lots of patience. It was totally difficult to complete the work without his help. We also want to thanks to our respective parents, teachers, friends, senior brothers and sisters who always tolerate our pain at any cost and always at our side to do this boring work and always support us when we were getting bored of doing this project. Sometimes we were drop down from our task but at that time they help us to recover that circumstance quickly.

We are thanks to our beloved indebtedness to **Md. Jueal Mia, Lecturer**, Department of Computer Science and Engineering at Daffodil International University Dhaka. He is a person with lots of positivity who always take care of us and our project also. His careful guidance, consultant, encouragements, valuable time and advice and correcting our any task of the project made us confident. That's why finally it was possible to complete our project.

We also praised to our faculty members of the CSE Department of Daffodil International University. All of them were lots of friendly. When we faced any problem they help their best to solve our tasks anywhere they were. Sometimes maybe they were busy with their personal work but when we were in front of their door they welcome us with a smile.

We also want to thanks our classmates, friends and batch mates who always encourage us to discuss any issue about our project.

And finally, we want to thanks to us (Md.Minhazul Abedin Niloy, Md.Alinewaz Chowdhury and Md.Abdul Muttalib Imran). It was not only a project it was a lesson which teaches us how to help each other, how to work on a group and how to build a communication stronger. Sometimes when any error occurs again and again and some of us failed to solve the reason, we got depressed. At that time we one another encourage us to try again. The project made us a family.

ABSTRACT

It's maybe totally impossible to find a person who dislikes traveling. A person having with the same workplace and the same work for a specific period of time make him/her bored, depressed and destroy his focus on work. So traveling a new place may make his mind with lots of refreshment and enjoyment. But people are always busy by work. They have no more time to research about whether a new traveling place is found. Actually, finding a traveling place using Google needs much time. So what it happens if they find all the traveling places all over the world at one place? Yes, our mission is to build a communication platform where travel lovers can get only the traveling point and their all details at one place. Searching a place in Google is one kind of a waste of time. Because our project is the complete red mark where the travel seeker will able to find their expected location and all the details of the place at our app. It will help rescue their valuable time, energy and strength. We also concern about the people who love group traveling. A group of people plans to travel a place anywhere but when the time knocking at door maximum time it got canceled because one or more people got any serious problem. It is really disgusting. So we develop a system where the registered people of our app can make the opportunity to make a group travel. They will able to make a group and can chat or contact with one another.

TABLE OF CONTENTS

CONTENTS	PAGE NO
Approval	II
Declaration	III
Acknowledgement	IV
Abstract	V
Table of Contents	VI
List of Figures	VIII
List of Tables	IX
CHAPTER	
CHAPTER 1: INTRODUCTION	01-03
1.1 Introduction	1
1.2 Motivation	2
1.3 Objectives	2
1.4 Expected Outcome	3
1.5 Report Layout	3
CHAPTER 2: BACKGROUND	04-07
2.1 Introduction	4
2.2 Related Works	4
2.3 Comparative Studies	5
2.4 Scope of the Problem	5
2.5 Challenges	6
CHAPTER 3: REQUIREMENTS SPECIFICATION	08-15
3.1 Business Process Modeling	8
3.2 Requirement Collection and Analysis	10
3.3 Use Case Modeling and Description	11
3.4 Data Model	13
3.5 Design Requirements	14

CHAPTER 4: DESIGN SPECIFICATION	16-21
4.1 Front-end Design	16
4.2 Back-end Design	19
4.3 Interaction Design and UX	20
4.4 Implementations Requirements	21
CHAPTER 5: IMPLEMENTATION AND TESTING	22-24
5.1 Implementation of Database	22
5.2 Implementation of Front-end Design	22
5.3 Implementation of Interaction	22
5.4 Testing Implementation	22
5.5 Test Result and Report	23
CHAPTER 6: CONCLUSION AND FUTURE SCOPE	25-25
6.1 Discussion and Conclusion	25
6.2 Scope for Future Developments	25
REFERENCES	26-26
APPENDIX	27-27
Appendix: Project Reflection	27
Plagiarism Report	28

LIST OF FIGURES

FIGURES	PAGE NO
Figure 3.1 Business process model	9
Figure 3.2 Use case model	12
Figure 3.4 Logical data model	13
Figure 3.5 Design requirements	14
Figure 4.1 Front end design	16
Figure 4.2 Back end design	19
Figure 4.3 Interaction and UX design	20
Figure 7.1 Snippets of code	27

LIST OF TABLES

TABLES	PAGE NO
5.1 Integration test	23
5.2 System test	24

CHAPTER 1

INTRODUCTION

1.1 Introduction

It is impossible to find a people who would not like to travel around the world. “The world is nothing but a book and those who don’t travel read only one page” is a famous phrase by Saint Augustine. Most of the people around the world enjoy going out to various places or countries to observe different types of peoples, foods and cultures. There is no refreshing activities like traveling that everyone can work. There are lots of people around us who they take traveling as a fantasy, and love to travel without having any preparation and plan. They just go out with a backpacker which prove that people who search for new spot, don’t care about how the day will pass or where he/she will sleep. Traveling means not only going out, but it also salutary too. Nowadays, it’s an era of technology where just using the Internet we can gain knowledge and news about various places, peoples and cultures. But having knowledge from internet is not same as by having knowledge from real traveling. The experience of traveling give people the advantage to meditate and feel the elegance of the creation and the riddle that hidden under the world.

A group of people or a person who love travel can notice the equalities and inequalities of each country by facing new places, climates, laws and several things that are separate from the country they belongs to. Traveler have been learning about different countries by experiencing new places and new peoples and gathering knowledge about geographical factors by visiting different places. People who travel outside from his/her country, have chance to gather knowledge about various nations, their cultures and languages. Having a new place or nations or cultures get us opportunities to learn about their way of lifestyle, their feelings, their traditional food, music, clothes, their laws of manner, their way of living and their way of hospitality with others. We may be found Japanese and Italian food over the world but the fact is that the taste of these food will vary from cities to cities. We are bound to thanks to the world for his kindness. By our developed app people could be able to know about all the travelling spot at one place and can gather knowledge about different places and different culture by our registered user feedback. When one person will visit a new place then he can upload a group of picture and could be able to write his feelings about that specific place. That help others user to know about this spot.

1.2 Motivation

It is really tough to complete a work without any planning hard work and time maintenance. We were determined to do a better work and will make a best possible output. Our self-motivation was our strength and how accurately we've complete our work was by our self-motivation. Some key factor are given here that helps us to complete the project:

- First of all, people around us help us to motivate to complete it before time.
- Make something different from the existing.
- Develop something that helps all people of Bangladesh also all over the world.
- Work with such a thing that will help to build our future life.
- To learn something new and grow up our skills, building software and much more.
- Develop something that is useful for our regular lives.

1.3 Objectives

We want to develop such a type of application mainly based on android and IOS supported platform. Mainly our target was to cover only the smartphone users to make their smartphone life enjoying and smooth with our application. Our objectives was very simple. We try to develop an app that will show users only the visiting and historical place over the world at one app. There will be a customized map in our application that will show all the information, photos, user reviews, details and something more about the place. Where everything is found in Google so why people use our app? This is the main objectives to develop this application is to having all the information about any visiting place at one platform will save users time and energy.

- A customized map that will show only the visit able places, hotels, hospitals, health care, transportation system, bus stoppage, train station, airports. All the rest of the map will not be shown
- There will be a review section which will helps to decide users to visit the place or not.
- Let users know about any latest place is discovered.
- Users can be able to create a group to ensure a group travel and can able to contact with them.
- Users can build a community by reviewing about any place, sharing and uploading pictures and videos.

1.4 Expected Outcome

Before visiting any tourist place, it's most important to know some basic point about that place. Is it perfect time for going there? Or is there any hotel available? Or how to go there? Or something like that. We get focused about how a user can get maximum output by our app. Our target was to let them know about that place before visiting it and let them get the best recommendation for which types of hotels should they choose on the basis of other users reviews.

- Visiting a new place obviously helps to get a new experience and enrich knowledge.
- User can improve review section by commenting, adding pictures and videos and sharing their feelings.
- Enable users to make group by the application and can be able to happen a group tour.
- Able to make new friends and a community.

1.5 Report Layout

We arrange our report paper by some of chapters and each chapter contains our project contents. By the way in chapter 2 we talk about the background of our system and the reason we are working with this project. In chapter 3 we talk about the requirements need to build up the app and also talk about the implementation system how we treat with this app. In chapter 4 we discuss about the most important part of our application. Here we talk about how we design our app like interface, UX, front and back end design. Chapter 5 is about testing of our app. Here we discuss about bug, validation and error testing. And chapter 6 is the last a final section where we talk about the upcoming future technology system and the conclusions of our work.

CHAPTER 2 BACKGROUND

2.1 Introduction

We are living such an era where everything surrounding us is blessed by modern technology. We are blessed by lots of smart electronics products like a smartphone, laptop, computer, smart car, bike, television, fridge, robots, and many more electronic devices. And day by day people are buying these types of products to make their life smarter, more comfortable and more enjoying. As a traveler, all of these electric products can help us to make our journey of travel easy. But how modern technology will make our life easy? There are no people found who love traveling. Traveling is a thing that changes our mind, refreshes our heavy load of work pressure and rise our sense. It can make our family bonding stronger. There are lots of traveling spots around the world. But one important thing is one person can't decide which place he/she should choose. The budget is the most important fact of traveling. People may choose a place by the transport budget but sometimes its cross up their budget by hotel cost, food cost, ticket/visiting cost and many more. So it's more important to choose a place by the overall budget. Before traveling any spot a person doesn't know about is there any hotels available? Is there any transportation system available? Is there any hospital available? By our application the can find all the information in one place. At first, they need to choose a place they want to visit then they can check all the information by our review section. They can find all the price range of hotels, fare rate of transport any something more by our app. It will save their time.

2.2 Related Works

Before working with any idea or application, it's most important to find out is there any application exists related to our work. It helps to make the work more unique and improve the features. Before starting we did research on different travel related guide like what actually users want and how to privilege them such a way from where they get the best output from our apps. And the important thing is there we found some outstanding apps that are working based on users requirements. They were well balanced and there were some features, recommendation and user reviews like Google Maps, Trip Advisor, Sky scanner, Airbnb etc.

Google Maps is a travel apps. Over 200 countries it has maps and information on public transformation in more than 15,000 cities. It allows users to choose a shortest route destination. It allows user to use the map offline. User can get pictures of millions of places, reviews and also find top-rated restaurants and local businesses. [1]

Trip Advisor helps to search the best air service at a low cost, hotels with best price and restaurants, and other travel-related content. You need to sign-in to use the app. It ensure the opportunities of travel forum. You can explore restaurants by food type, range, or ratings, and even discover options near you. [2]

Airbnb is a travel guide that allows users to search for a unique accommodations over the world. It helps user to find business tour, home rental. It also allows users to store travel experiences. [3]

Sky scanner is an award-winning travel app that provides user the best flights air fare anywhere over the world. They helps to explore flight deals for both domestic and international destinations for their users. User can book flight tickets directly from the app and also search for cheap hotels and car rentals. [4]

2.3 Comparative Studies

There are lots of developer around the world but it's a matter of sorrow that there are not many good traveling app which can cover users all demand at one place. But one thing is there are some good application like Google Map, Trip Advisor that are working according to users need.

Now-a-days it's become a trend to travel. [5] Younger people age between 18-25 are making lots travel anywhere the world where older are focus on positive review about any place. [6]

Another point is people from different types have different decisions about traveling. Some of them asks their family, friends, neighbors about their traveling experience before travel any place. [7]

2.4 Scope of the Problem

It's an important part of any application that how user friendly the application is. How the application cooperate with our users while they playing with it. In this part we will talk about which type of problem users and admins suffer while they use it. Here we've mark out some problem and try to give the best solutions based on those problems.

- How users will upload pictures and videos on our database?
- How user can access the user community like commenting and chatting?
- Why our app is available for android platform only?
- How do we understand which is the best option for users?

The possible solutions to give up these scope of the problem may be:

- Users are given the opportunity to upload pictures and videos they love any place most and think this is the best picture they captured. But one thing is that they can't upload it directly. When they upload any picture or videos it will store our database to need permission and one of our admin will upload it after its proper validity.
- It's the most important and interesting part of our app. Yes it's our review section where users can discuss about any place by commenting or chatting. They can elaborate their thinking by sharing their broad knowledge about that place so that others user can choose a best place to travel. They can also able to make a group of traveling
- Now-a-days android is one of the most popular and running platform over the world. It's easy to carry a smart phone anywhere and it's comfortable too. That's why most of the people are using android smartphone. We take this advantage to grow up our app and spread it to all over the world. We also working another platform called IOS and web app to maximize our service all types of users.
- It's important to find out which place is best for travel by overall recommendation. Because there are some people who have to think about their amount of budget. They may be choose a place but overall cost like hotel cost, food cost finally they decide to leave the tour. We gather knowledge about any places and nearest cheap rated hotel cost, food cost and transportation cost to make users travel cheaper and less of cost.

2.5 Challenges

The journey of building this app was very worst. There were lots of challenges while working with this app. There were a heavy loaded of database for users, admins, pictures, videos and many more. We've to work with lots of third party APIs to make our app more user friendly.

The core problems we faced while working is listed below:

- Security system like user login and registration.
- It's really tough only for the admins to upload places related pictures and videos. So we work with commenting and review system to make it more easier
- We've to use different types of API to make our app faster, more featured, more useful and user friendly.
- One of the main part is review section. User thinking is important to carry an app. We worked a lot to improve our comment system.

- User upload lots of pictures and videos. We had to research a lot about which pictures they uploaded was it valid about that place or was it fraud then we have upload it.

CHAPTER 3

REQUIREMENTS SPECIFICATION

3.1 Business Process Modeling

It's an important part before start working any app is develop a working model. It nothing but a model which describe how an application will works in its different phases and how every single part of application will be organized. It's more important that what we are going to build is it acceptable or is it user friendly for zero to advanced level people even who don't have any idea about computer or mobile. So before starting the model of structure is most important part where we easily show how the diagram and how the logic actually works. It will helps our user to better understand about our app.

So why we need a business model?

- It show us the structure of our work
- Easily describe the diagram and logic
- Make it understood what we are going through the app.
- Help others to about our working process.
- Ensure quick working method.

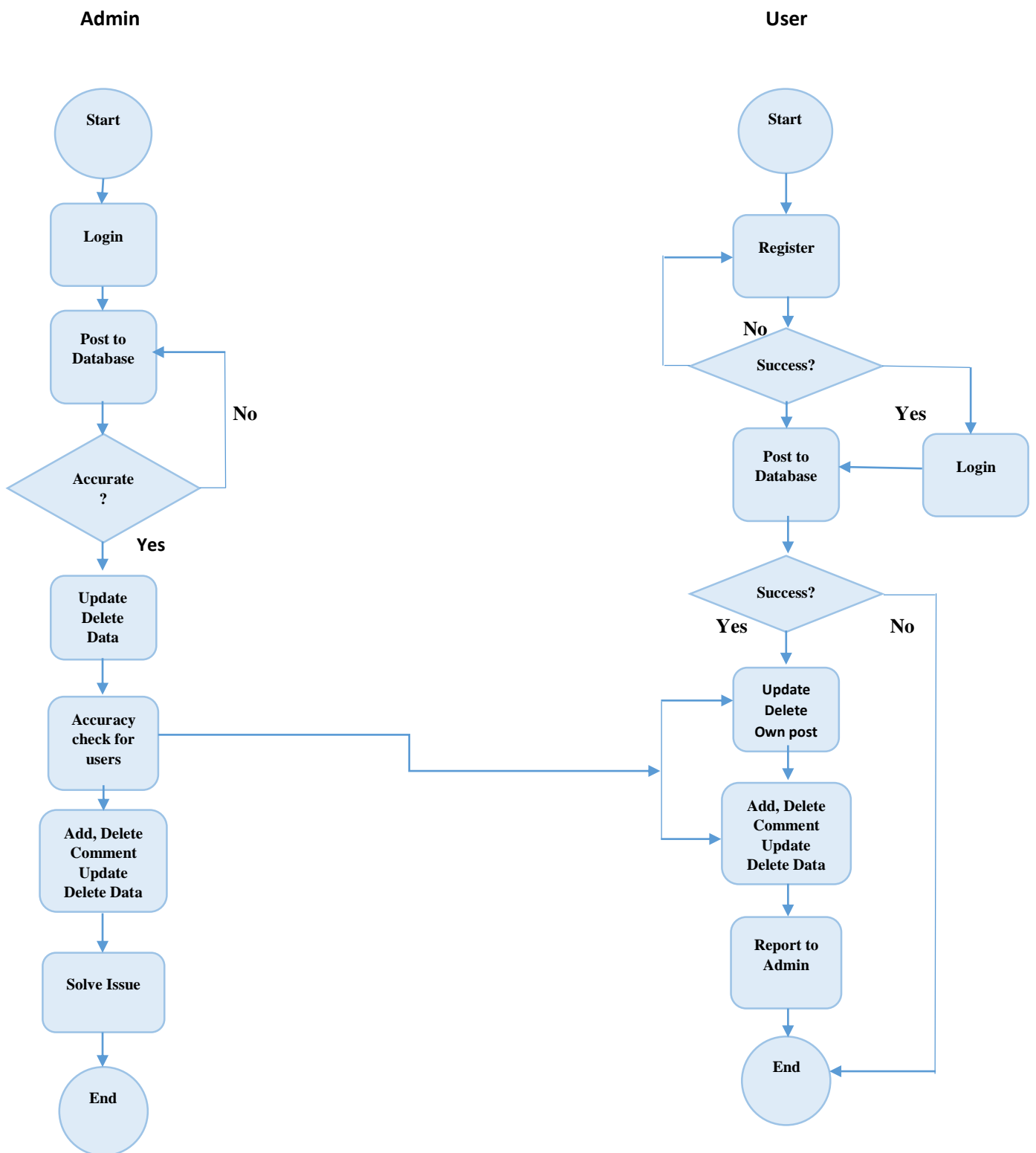


Figure 3.1: Business Process Modeling

Figure 3.1 Tel us the working process of our application for admins and users with step by step with exact logics and flow charts. There are some phases belongs to the diagram.

- Identification phase(login and registration)
- Update and error verification
- Comment section for review
- Complain section to admin if anything happen
- Users problem phase solve by admin

We've used a flow chart to discuss how our app will work and how the business process model implementing. At the beginning we need to access the app so that we need to login or registering to get the full features of adding post or comment or something updating or deleting or modify. Admin will be able to see the activity what the user is posting updating or deleting.

3.2 Requirement Collection and Analysis

Initial Requirements

Initial requirements is such types of requirements without which the functionality of our system will not be complete or we can't perform any operation. This is totally impossible to do anything without these requirements. They are given here:

- A huge amount of database. We use firebase to store data, posts, pictures, videos and many more.
- At the backend, xml design model layout and Java language was used to build up our application.
- User identification details such as name, address, email, phone number etc incase if anything happens
- Advanced cloud store to store and retrieve data properly.

Admin requirements

Admin is the person or group of people who have the super power to maintain a server. He can roles over any server or can follow up anything happening related the server. To maintain the whole system a admin is so important. Here are some roles given that belongs to an admin:

- Can upload the database and also the map too. If there any new tourist place is found he can upload it on the map.
- Can edit, delete, update or modify any post of comment or pictures or videos of any users post.
- Can solve users place related any issue.
- Can see all the information of any user.

Users Requirements:

It's another important issue that belongs to our users is they must have some requirements to use our app. Without their help we can't run our app. They are the person who can spread our work over the world. There are some roles given below for users:

- They must need having a android smartphone.
- To enter into our system or app they need to login or registering.
- Need to upload pictures, videos and comment about any place after visiting it so that other users can know about the latest correct information about that places.
- They can edit, delete and update their own comments or post but can't others.
- If they face any serious issue they can contact with us by email.

Software requirements:

- Android Studio(Android code editor IDE)
- Java (Android native language)
- XML design layout

Hardware Requirements:

- Android supported smartphone with internet connection

3.3 Use Case Modelling and Description

Use case model is such types of model which can describe any kind of system easily. Use case model can describe interaction between any system and its user. A user can be either a machine or any bloody human. We develop a use case model that is able to describe some formula to organize our work requirements to make it easier to our user. It also describe about different types of target for user and their limitation if requirements.

Why use case model in our application?

The reason why we used use case model in our app it was a simple thing. There are lots of people around the world who is not familiar with technical related matter. So we design a use case model to show them (non-technical people) how our system actually works and they can easily get what actually going on it and how the function works and how they interact with one another by our application. There are some key points below:

- Implementation of our project work
- Working specification of the system

- Show the different types of user roles(Admins and Users)
- Make user confidence and expectation rise high

Use case model we worked in our system:

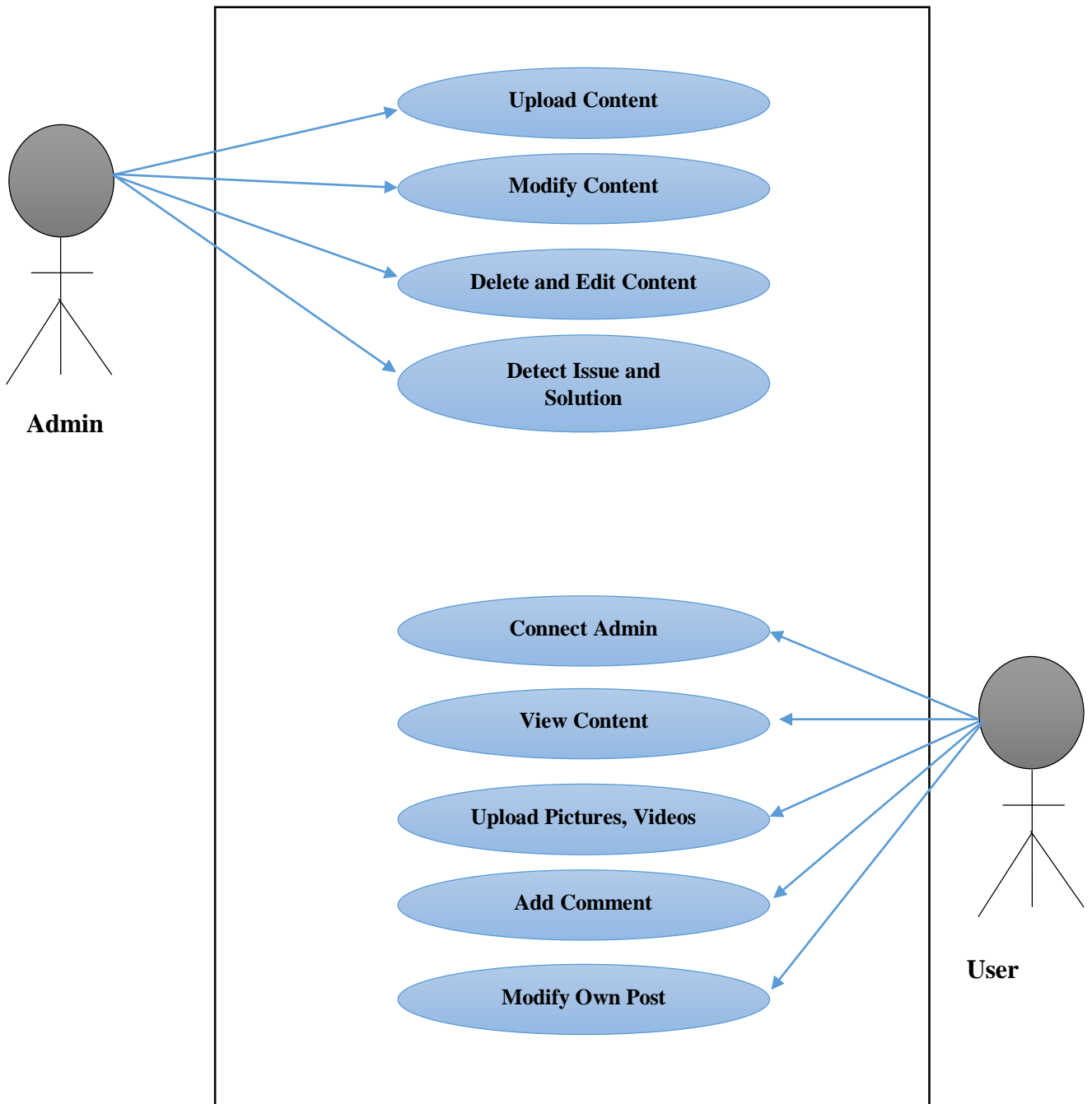


Figure 3.3: Use Case Model

There are two types of user in our application one is admin and another is general user. Admin is the most important part for our app who will control the overall system. He can upload or change any content, can delete or modify anything over the system. Users can show all the

content over the app and by login he/she can comment, upload pictures and videos and can be able to share their feelings with other people. They can be able to contact with admin if there any problem occur and our admin will solve their issues.

3.4 Logical Data Model

Logical data model which are also known as ERD model. This is a kind of model that inform us about which sort of data we are applying in our application. We've conducted Firebase as in our back-end data storage to connect and store our all types of data and also retrieve any types of data from data storage. Firebase has its own data storage system such as collection of data and documents of data. They all have unique key to identify themselves. Also all of our user have a unique hash key to make theme different from others.

User Data
userID(hash) unique userName(string) userMail(string) unique userImage(string) userPassword(string)

Fig 3.4.1 User & Admin data

Picture Data
pictureID (hash) unique pictureTitle(string) pictureDescription(string)

Fig 3.4.2 Picture data

Video Data
videoID(hash) unique videoThumbnail(string) videoTitle(string) videoDescription(string)

Fig 3.4.3 Video parsing data

Video Comment Data
commentID (hash) unique comment(string) commentImage(string) commenterName(string) videoId(hash) unique publishedAt(date)

Fig 3.4.4 Video comments data

Comment Data
commentID (hash) unique comment(string) userImage(string) userName(string) userId(hash) unique publishedAt(date)

Fig 3.4.5 Comments data

3.5 Design Requirements

To understand the activity of different person like admin and users, design requirements is the most important part of any application. It helps any application to make it complete and efficient. We can know about the management also by design requirements

What is the main purpose of design requirements?

It's really tough to complete a project after starting. But there are some way to make any project easier. And the most common way is to draw a model/design before start working with any

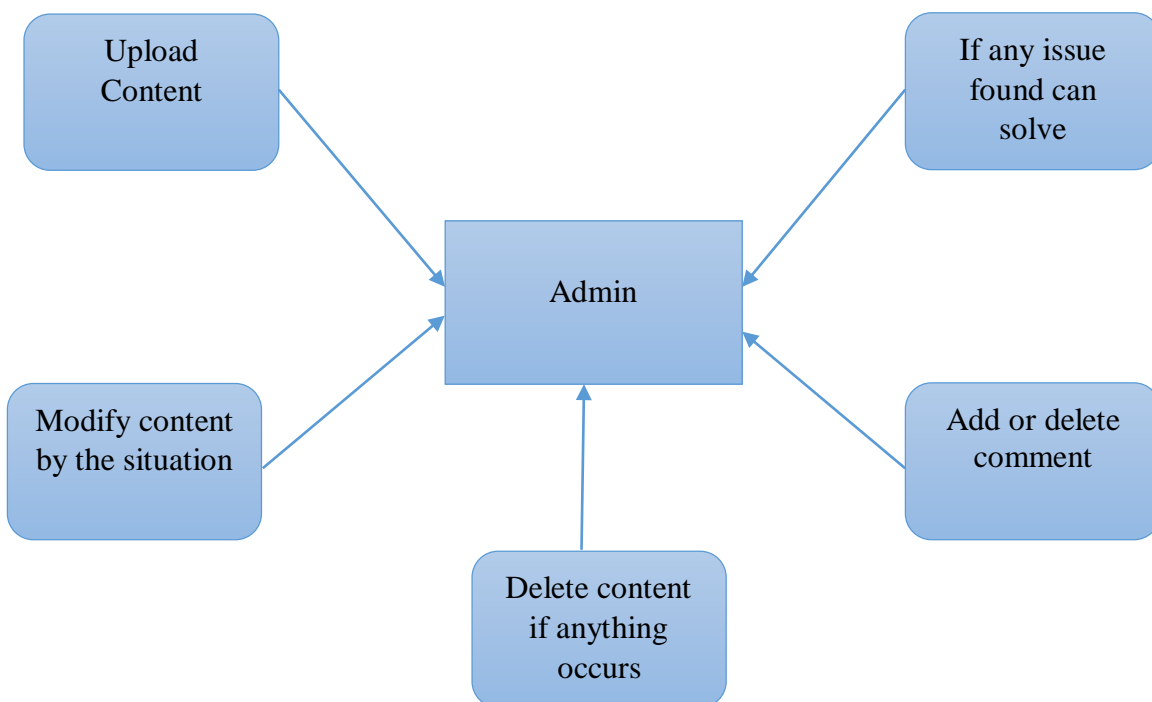


Figure 3.5.1: Design requirements for admin

project. A design which helps to understand what we are going to implementing and what the result it will give us after completion. If the design is perfect then it'll make our work easy and we can implement it quickly.

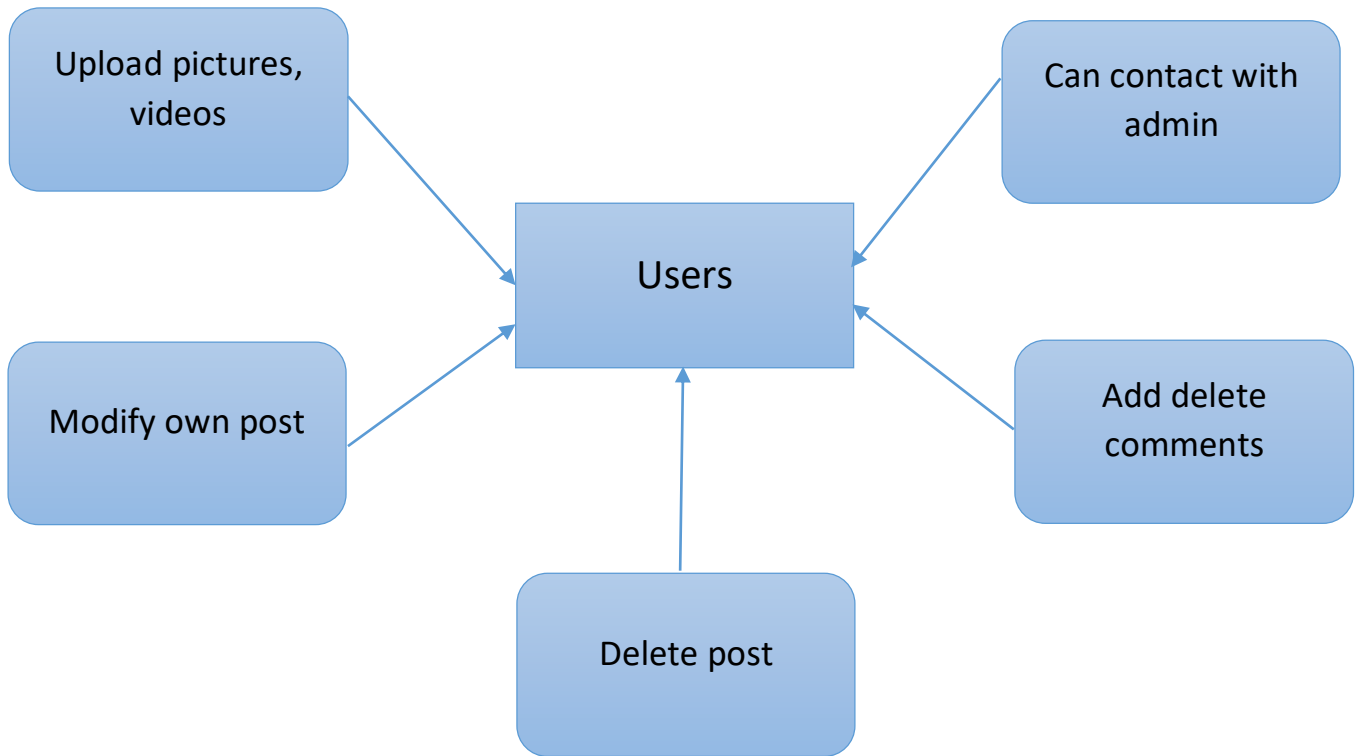


Figure 3.5.2: Design requirements for user

In the above figure there are two types of user one is admin and another is users. Admin have the super power to control the whole system of our application. He can upload any content, places, post and can modify, delete, add anything when it is necessary. He can see all information about the general users. Other hand user can access by login and then they can add comments, pictures, video as they visit any place over the world.

CHAPTER 4

DESIGN SPECIFICATION

4.1 UI design (Front-End design)

User interface or Front end design is one of the main part of an application, in where the users do their action for their requirement, This part of an application is responsible for the user satisfaction, a user how much satisfied with an application it's highly depend on this sector. We try to make a beautiful and eye catching design for our users, where our app user will found a good experience by using this application, we use some designing library design for make this application look professional, and we try to make it user friendly.

Why design pattern is effective?

An user friendly front end design depend on well design and a user friendly interface design, and it can help to success an application, a good application can be fail for a bad user interface design. And we found that every successful app has a beautiful and user-friendly interface.

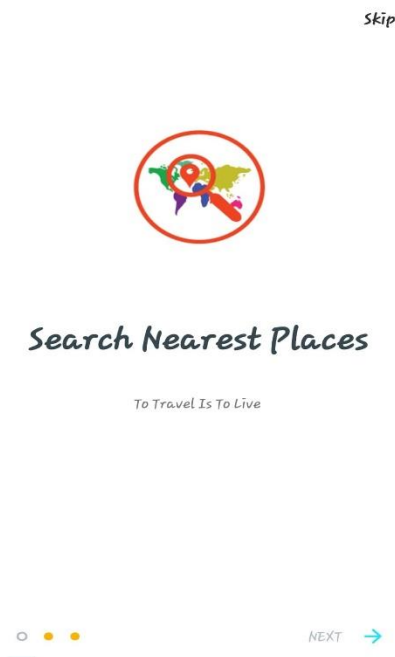


Fig 4.1.1: Tips screen

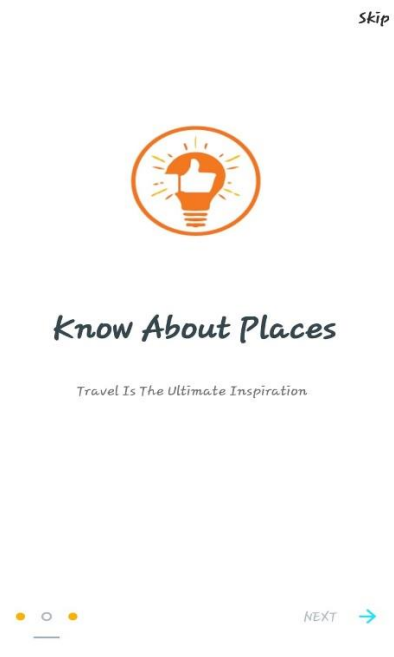


Fig 4.1.2: Tips screen



Now Let's Explore

Change Your Location And You Just May Change Yourself

GET STARTED

Fig 4.1.3: Started screen

Hello!

Gender
 Male Female

Fig 4.1.4 Signup screen

Login

[Forget Password?](#)

Or Connect With

Fig 4.1.5 Login screen

Niloy
niloy007.nk@gmail.com

- Home
- Visited
- Settings
- About

Communicate

- Share
- Logout

Fig 4.1.6 Navigation

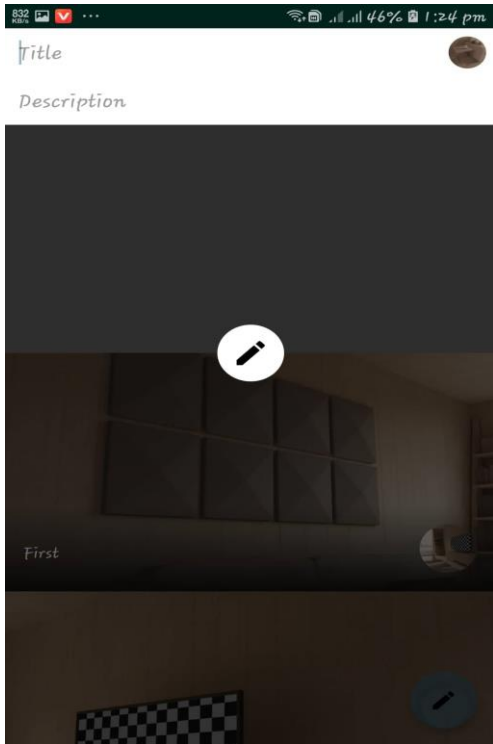


Fig 4.1.7 Posting screen

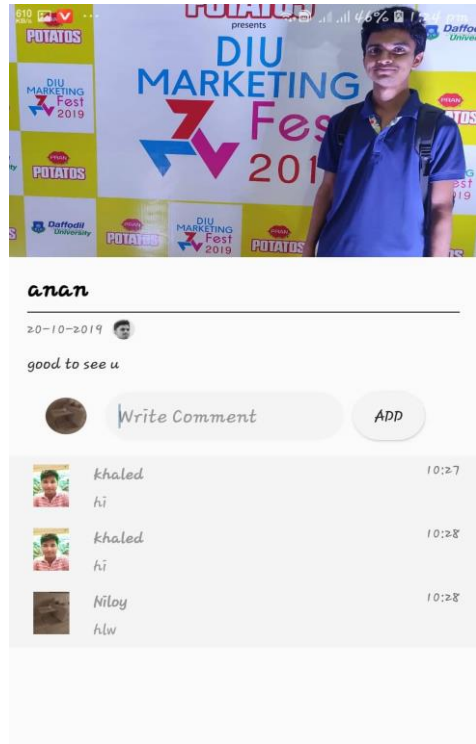


Fig 4.1.8 Comment screen

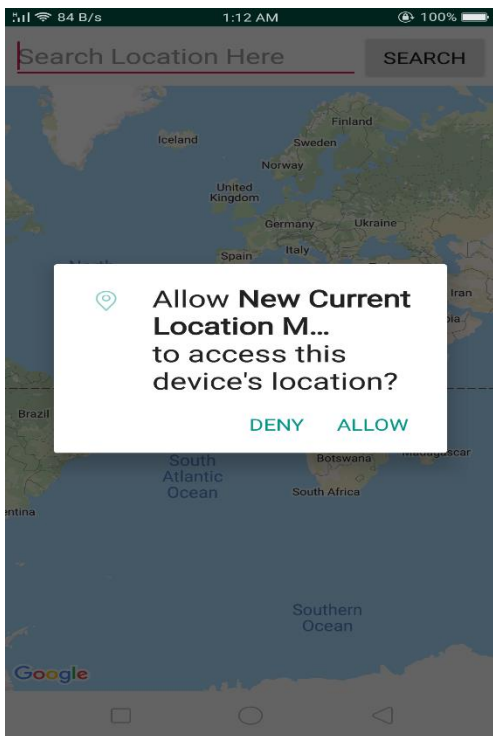


Fig 4.1.9 Permission screen



Fig4.1.10 Location

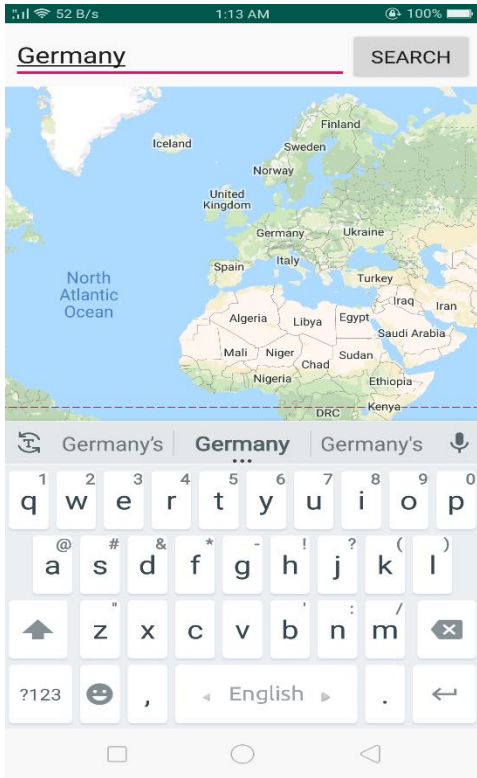


Fig 4.1.11 Search screen

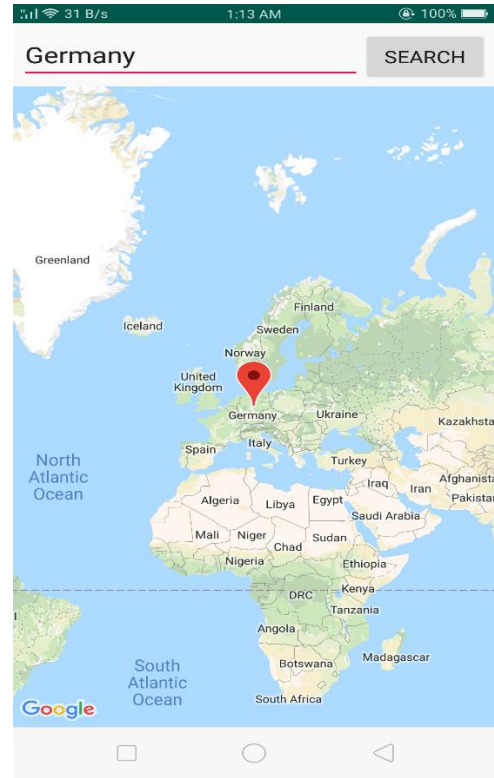


Fig 4.1.12 Result screen

4.2 Back-end design

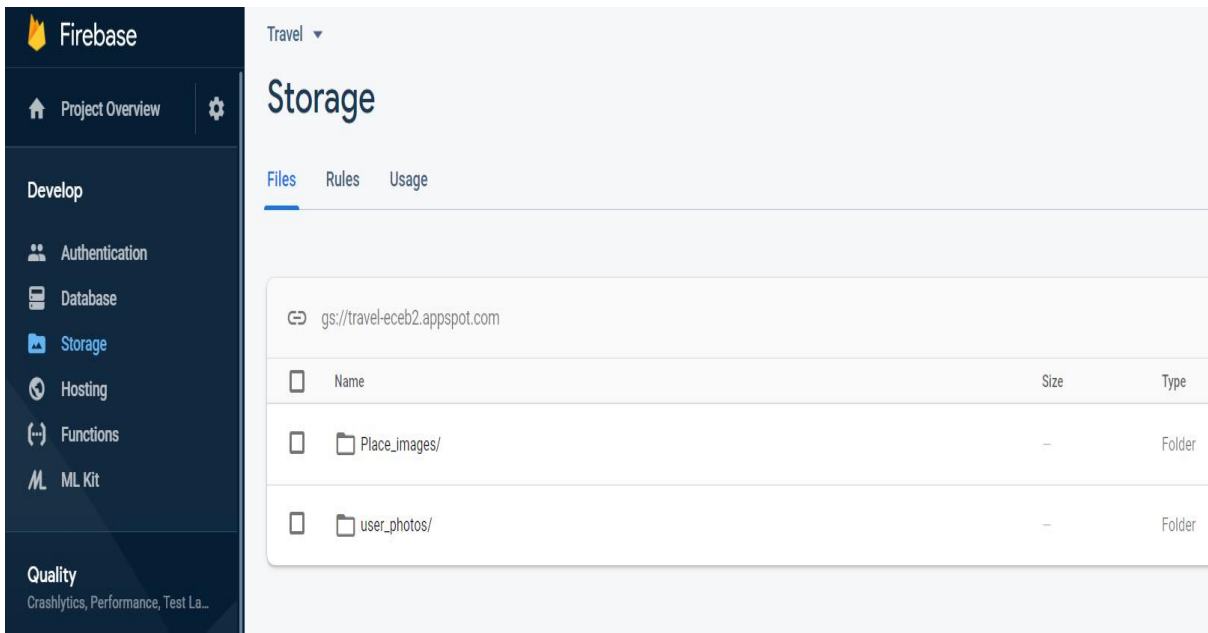


Fig 4.1.13 Database

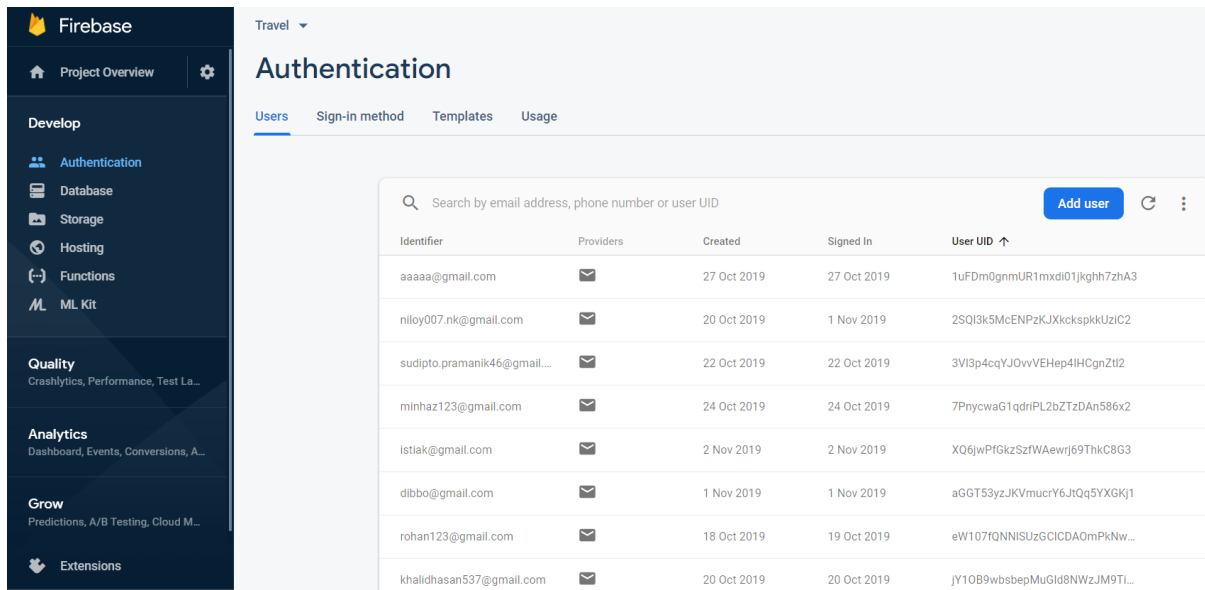


Fig 4.1.14 Database

4.3 Interaction and user experience design (UX)

UX design is very essential for an application. And interaction is one big part of User experience design. Interaction of an application make sure execution about what user do with this app. So we can say that interaction is actually user and application connection. So that means the application functionalities and features of an application highly depend on interaction. And we can say about UX design that, UX design is actually the frontend UI activates of an application those users normally use for action that means what we can see in the UI design, UX design define where it should be. So UI design deal with user directly but the UX design deal with user experience, and it also responsible for provide meaningful and relevant user experience, without the perfect combination of user experience design and interaction, an successful software is nothing but a dream.

Why we focus on user experience design pattern and interaction with earnest intent?

A good UI is essential for any application and a good interaction functions is very essential for the system to be useful to users, so we can say that the key of success for an application is nothing but a good concept with proper implement of with eye-catching and meaningful design pattern. Also UX design need to be utilized properly for give users the best experience. So we have implement our applications with lot of functions.

The pattern we follow for our application:

- Interaction base on users.
- Android material based design.
- Graphics processing unit (GUI) for device.

- Ensure activities and navigation for each of use.
- Proper system workfellow for activities and fragments.

4.4 Implementation requirements

In our application much more effective and useful we tried so many stuff by prototyping and reparsing on various website watching many tutorial. And we got many idea for many famous application that we install and check on our phone. And we also make many small software for make us self-prepared. At first we gather many information from others related project those we collected from many website , and then we sturdy on those project and we found some drawback on those project then we gather information for solved those problem , and now we solved those problems with our this application . We use java for our main language with support of Kotlin.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of back end database

Database is the data store that is used to store all kinds of data. We used the firebase fire-store for its easy implementation. We also use cloud based NOSQL database which hold data in some field of collection and documents in JSON format. Any primary and foreign key were not used in our database to connect different collection.

Installation requirements:

- Firebase Fire-store (Database backend)
- Firebase Storage (Image store)
- Firebase JSON API (Firebase connection)
- Java (Primary language)

5.2 Implementation of front end design

Front end is the most and most important part of any app. This is the only part by which a user can decide either he will use it or not. If the front end design is attractive then it will grow more users. In front end design section we used XML to improve our application. XML helps to implement our layout structure and others design part like image, text, edit text, button etc. We also used different types of design library to develop UI design.

- XML (Structure design)
- Adobe Illustrator and Photoshop(icon and image design)
- Java (Function implementation)
- Some libraries

5.3 Implementation of interactions

After completing user interface designing, it's time to implement others features to get a better look for our app. We added login, register, splash screen, intro screen, database, API based services like customized map. We also develop a feedback section for commenting, pictures and videos upload and admin push notification. We build a communication system with admin and users to make our app more efficient and if they suffer any problem then they can complain about it.

5.4 Testing implementation

After completing a project it's time to check, review or testing is it fit for market and users. Is it working properly and smoother. Having bug or error is simple in any project. We can recover it by checking run time errors and compile time error. We can test our app by every functionality that we've improved is working normally or not. We can check it by sending email, commenting, uploading pictures and videos, checking login, registration is working properly or not. We also check if our user is able to send email to admin and if the data is properly stored in database. We can match the registered data with database that is it valid or not.

5.5 Test Results and reports

After finishing project work it's important to check or test application to make it smooth to users. Actually testing result discuss about how an application is useful in different conditions. Basically there are two types of test we do

- Integration test
- System test

Table 5.1: Integration Test Table

Test case ID	Test case object	Test case description	Expected outcome
1	Check login system working properly or not	Verification to get full features of main application	Successfully entered to our application
2	Check contents uploaded to database or not	Checking content upload, data are being uploaded successfully in our database	To upload complete content details to backend
3	Check push notification are sending data or not	Notification working properly with correct information and data to our users	To send correct data to users

Table 5.2: System Test Table

Functions	Description	% Execute	% Passed	% Pending	Remarks
Upload contents to database	Data of all contents added successfully and we can monitor it.	100%	100%	0	
Data input	All data input values added correctly in post section in data fields	100%	100%	0	
Update data	Uploading accurate data, and sending it back to database to update any contents	100%	100%	0	
Issue section	Sending mail to admin if there is any problem happens suddenly	100%	100%	0	
Validation	Bad formatted e-mail or data will not receive by database	100%	100%	0	
Authentication	User was able to login successfully by their given authentic data	100%	100%	0	
JSON data	JSON retrieve all the data whenever we need from different APIs	100%	100%	0	

CHAPTER 6

CONCLUSION AND FUTURE SCOPE

6.1 Discussion and conclusion

Before start working with this project we just simply think about we are going to make something that will different from others and will be used for our daily activities as usual, that will make our life a little bit easier. There are a big amount of people in our country where we are growing as a developed country day by day and our information technology is also growing high. As a result we have enough smartphone user and enough internet communication is available all over the country. We have lots of traveling spot over the country that are traveled by local and foreign tourist. But the fact is maximum of the tourist place is not known to people. That's why we want to develop an application where all tourist point will be located here not only Bangladesh but also over the world too. Our mission was to make interesting and easier their traveling. Our target was to help people by finding tourist places and its nearby hotels, bus and train station and airports too in one place so that tourist don't need to waste their time by searching them on different place. But the starting was not good enough. We need to collect the solutions of implementation and we collects all these resources from You tube, Google, Stack Overflow, Github and some others website. And finally, our dedication, hard work, patience and community make it possible to complete the project. It was a journey which teaches us how to start from zero and we learnt lot form it.

6.2 Scope for future developments

It is the first edition of our application and as we are learning day by day so the implementation will never end. As technology changes by the time, same as our application will update with the time and demand to make it more user friendly, featured and digitalized. We make it to roll over the world, named as Bangladeshi developer. There are some future plans for our work

- We want to add more tourist places over the world and the place is waiting to invent.
- More smart and attractive user interface features
- More user friendly, efficient and powerful application
- Strong user community and more facilities for them.
- Our own API to improve application performance

References

- [1] The Verge. (2019). *Google wants Travel and Maps to be the place you plan your trips from start to finish*. [online] Available at: <https://www.theverge.com/2019/8/8/20764235/google-travel-flights-maps-planning-vacation-deals-ar-live-view-navigation>[Accessed 27 Nov. 2019]
- [2] Katwala, A. (2019). *Why one-star Trip Advisor reviews are one of the web's last real joys*. [online] Wired.co.uk. Available at: <https://www.wired.co.uk/article/trip-advisor-uk-reviews-one-star> [Accessed 27 Nov 2019]
- [3] En.wikipedia.org. (2019). *Airbnb*. [online] Available at: <https://en.wikipedia.org/wiki/Airbnb> [Accessed 27 Nov. 2019]
- [4] En.wikipedia.org. (2019). *Skyscanner*. [online] Available at: <https://en.wikipedia.org/wiki/Skyscanner> [Accessed 27 Nov. 2019].
- [5] AirTreks. (2019). *17 Reasons Why Around the World Travel Is Good For You*. [online] Available at: <https://www.airtreks.com/ready/17-reasons-why-travel-is-good-for-you> [Accessed 27 Nov. 2019]
- [6] Trageser, C. (2019). *How travel has changed from one generation to the next*. [online] Mashable. Available at: <https://mashable.com/2016/05/31/travelers-in-2016/>[Accessed 27 Nov. 2019]
- [7] Makepeace, C. (2019). *15 Helpful Tips for Planning a Trip you'll love (step by step guide)*. [online] y Travel Blog. Available at: <https://www.ytravelblog.com/planning-a-trip/>[Accessed 27 Nov. 2019]
- Nomadic Matt's Travel Site. (2019). *How to Plan a Trip to a Place You Know Nothing About*. [online] Available at: <https://www.nomadicmatt.com/travel-blogs/planning-unknown-destination/>[Accessed 27 Nov. 2019]

APPENDIX

Appendix: Project reflection

Project reflection is nothing but shows us the structures, fields, folders and all other project files how we organized all of them in our work. It also shows the way how we develop our code as well as our project. It is nothing but a process or system that give us idea of every project management tasks.

In our project, while we working with it we achieved lots of thing such as how to manage them as any situation comes against that problems, how to face challenge, how to run against a big work. It shown us how to research and collect information. This project was such a work that helps us to face any situation it occurs and how to calm down and go towards the target.

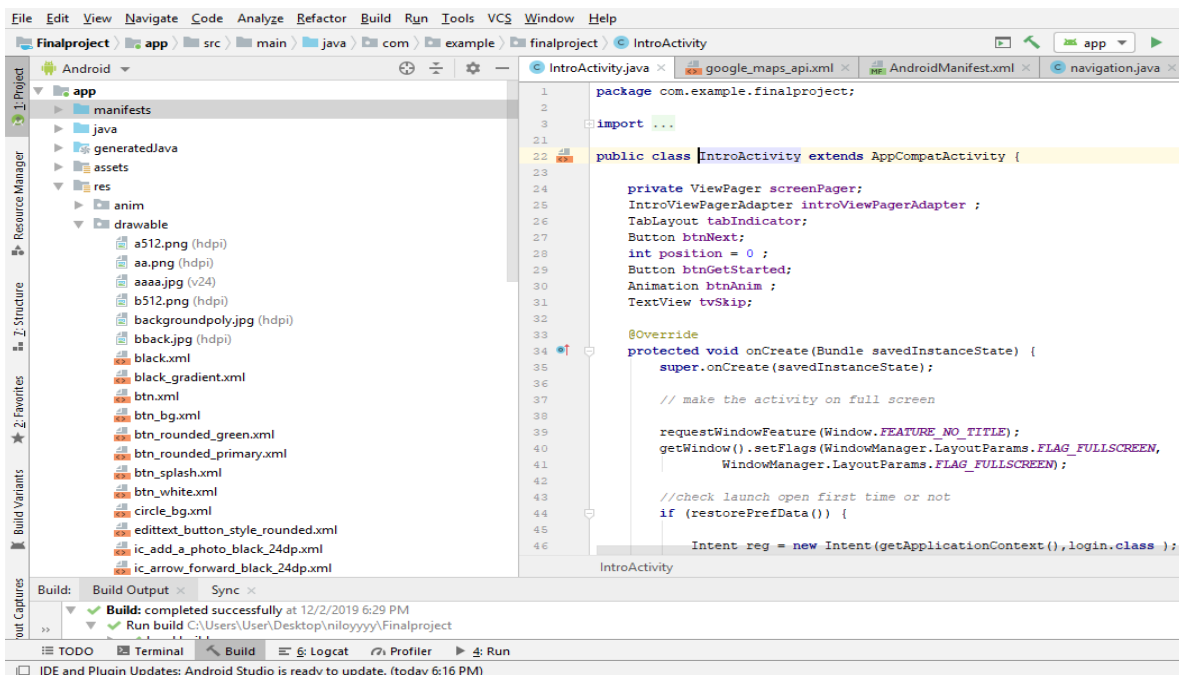


Figure 7.1 Snippets of code

tarveler

ORIGINALITY REPORT

9%

SIMILARITY INDEX

6%

INTERNET SOURCES

0%

PUBLICATIONS

9%

STUDENT PAPERS

PRIMARY SOURCES

1

Submitted to Daffodil International University

Student Paper

7%

2

Submitted to The Hong Kong Polytechnic University

Student Paper

1%

3

Submitted to Technical College System of Georgia

Student Paper

<1%

4

dspace.daffodilvarsity.edu.bd:8080

Internet Source

<1%

5

Submitted to American University of the Middle East

Student Paper

<1%

6

dspace.library.daffodilvarsity.edu.bd:8080

Internet Source

<1%

7

Submitted to Regis University

Student Paper

<1%