NEARBY AND LOCATION ALARM APP

BY

MD. SIYAM SARKER
ID: 142-15-3497

HASIBUL KARIM SHAKIL
ID: 142-15-3490

KOUSHIK KUMAR MONDAL
ID: 142-15-3791

Department of Computer Science and Engineering
Daffodil International University

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

Supervised By

MD. SADEKUR RAHMAN
Assistant Professor
Department of CSE
Daffodil International University

DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

MAY 2018

APPROVAL

This Report titled **"Nearby And Location Alarm''**, submitted by Md. Siyam Sarker, Hasibul Karim Shakil and Koushik Kumar Mondal to the Department of Computer Science & Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Software Engineering and approved as to its style and contents. The presentation has been held on 7th April, 2018.

<u>BOARD OF EXAMINERS</u>

Dr. Syed Akhter Hossain   **Chairman**
Professor and Head
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Dr. Sheak Rashed Haider Noori   **Internal Examiner**
Associate Professor and Associate Head
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Md. Zahid Hasan   **Internal Examiner**
Assistant Professor
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Dr. Mohammad Shorif Uddin   **External Examiner**
Professor
Department of Computer Science and Engineering

DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Md. Sadekur Rahman,Assistant Professor, Department of CSE,**Daffodil International University. We also declare that neither this project nor any part of this project has been submitted else where for award of any degree or diploma.

Supervised by:

_____

Md. Sadekur Rahman
Assistant Professor
Department of Computer Science and Engineering
Daffodil International University

Submitted by:

_____

Md. Siyam Sarker
ID: 142-15-3497
Department of CSE
Daffodil International University

_____

Hasibul Karim Shakil
ID: 142-15-3490
Department of CSE
Daffodil International University

_____

Koushik Kumar Mondal
ID: 142-15-3791
Department of CSE
Daffodil International University

ACKNOWLEDGEMENT

First we express our heartiest thanks and gratefulness to almighty for His divine blessing that makes us possible to complete this project successfully.

The success and final outcome of this project required guidance and assistance from some people and we are extremely privileged to have got this all along the completion of our project. All that we have done is only due to such supervision and assistance and we would not forget to thank them.

We are highly indebted to **Md. Sadekur Rahman**, Assistant Professor, Department of CSE Daffodil International University, for his endless patience, scholarly guidance, continual encouragement, constant and energetic supervision, valuable advice, reading many inferior draft and correcting them at all stages have made it possible to complete this project.

We would like to express our heartiest gratitude to **Dr. Syed Akhter Hossain, the Head, Department of CSE**, for his kind help to finish my project and also to other faculty member and the staff of CSE department of Daffodil International University.

We would also like to thank our entire course mate in Daffodil International University, who has inspired us while completing this project.

Finally, we must acknowledge with due respect the constant support and patients of our parents.

ABSTRACT

Now a days we live in an era of technology, smart phone become a part of our daily life. It is no longer a communication device only but also an essential part of our working life. Android is being popular day by day because of its flexible usability and open source development. At the current situation android hold almost 85% of total smartphone market. In our project we have developed an android based application named "**Nearby and Location Alarm**", at this application we tried to combined various location based services. The main purpose of our application is to provide various location based services in one place. The app provides nearby service and it also has an alarm system that will work when user set the alarm to specific place and come near the place. The most interesting part about the alarm section is that it will work without any internet connection and provide the distance between user's current location and destination randomly. We use java and xml for developing the app, Google also help us by providing APIs. The application won't work in the android emulator because emulator doesn't have GPS but it was tasted in various real android devices with version equal or greater than 5.1 and found working successfully.

TABLE OF CONTENTS

CONTENTS	PAGE

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

We belong to the era of technology Smartphone technology is rising beyond expectation websites are converted into app computer applications are developed as mobile app which has become a part of a programmer's daily life.

1.1 Introduction

As a final year student normally we have to take a project or internship. After we informed this we thought a lot of time what should we do? Soon later we finally made the decision to takeover project. There are so many things that encourage us to do so. After we decide to take project we were a bit confuse that which platform or in which field we should work. Finally we came to the point and found android platform as a pretty good OS that not only work on mobile but also on the tablet PCs. Therefore now a day this platform is getting so much popularity. Although we had not enough knowledge of this platform but we had a lot of confidence. We had a basic knowledge of java and the android are JAVA based. Then we decided to develop an app which will be able to help searching desired locations like ATM booths, Hospitals, Shopping malls, Bus stops, Schools, Restaurants. So we started to the perspective but soon after we thought there are already so many nearby mapping applications on the marketplace. Then we decided we have to do something different so that our application must be differ from those. The most unique part of our application is that you can set an alarm for your destination (where you want to go). When you will reach at your location the alarm will be ringing and it will alert you that you have come at your desired location. The another important part about our project that it is not fully online application like other location based app ,user can turn off Internet connection after setting the desired location he/she wants to go. The android app is also a navigator it gathers users current location and display real-time navigation. We hope our application will be more effective to search and get the correct locations.

1.2 Motivation

We motivated from some daily life problem, we found that people who lived big cities like Dhaka sometime can't found the desired location although they stand just in front of it because no one tells them that it is your desired place,Google map can be a solution in this case but looking at smartphone screen whole the time is not possible and it is risky too.Another problem is that Google map need internet connection to run. In this case our app can be a great solution once user set the destination it will no longer need internet connection and alarm will ring automatically when user reached near the destination.

1.3 Objectives

Objective of our mobile application are mentioned below:

- ❖ Help user to see current location in map in both general and GPS view.
- ❖ To provide a platform for user to search for specific location.
- ❖ To provide nearby places like ATM, School etc.
- ❖ To provide user to set alarm on specific place.

1.4 Expected Outcome

"Nearby and Location Alarm"is anandroid based application that is developed to provide location based services and setting alarm on desired place. The primary outcome of this application is finding nearby places by using a very simple UI and decrease the complexity of finding new places. We expect that finding new places will no longer be a problem by using the app and internet will no longer be a big issue for using location alarm service.

1.5 Report Layout

In chapter -1 of the report, we introduce to our project application and discussed about its motivation, objectives expected outcomes.

In chapter -2 of the report, we discuss about the background circumstances of our project. We also talk about the related work, the scope and challenges of the project, the comparison to many other candidate systems.

In the chapter-3, we specified the requirement of the project. In this section we defined Technology, hardware and software requirement, System Development Lifecycle model, logical and system design, Use case diagram and class diagram. We also discussed about functional, nonfunctional and design requirement.

In the chapter -4, we discuss about Installing and Configuring All Support Tools and we specified the front end design of the project.

In the chapter-5, we exhibited the implementation of the whole project and we tested the every section of the project weather the application is working as expected.

In the chapter-6, we discussed about conclusion and the scope for further development of the project.

CHAPTER 2
BACKGROUND

Generally by "project Background" we mean the formal documentation of the project. In this part we expect to study about the related works done by others and also analysis their work to find new scopes.

2.1 Introduction

At this 21th century we are too much dependent on technology .Every corner of our life we found technology. At this era smartphone has a huge impact in our daily life it's like a partner in our daily life on the other hand the truth is peoples are no longer help each other as before so we must help our self or we should take help from technology .Sometime people are looking for someplace that is some step ahead from but there is no one to tell that in that case your smartphone can be your guide .we tried to make your smartphone as your guide that's why we encouraged to build this application.

2.2 Related Work

As android is open source and there are millions of android developer over the world so we found some app similar to our project in Google play store for providing location alarm service.
Here we listed some high index app that we have found in Google play store

  ❖ Location Alarm
  ❖ Alarm-me
  ❖ Arrived-Location Alarm
  ❖ GPS Location Alarm

These apps are pretty good at their work.

2.3 Comparative Studies

When we started looking for an effective location alarm service we didn't find our expected result in those application mentioned above. Most of the app needs continuous

internetconnection to run. On the other hand some app has a complex user interface and they don't show the distance between user's current location and destination. People like us who lives in a country where internet is expensive need something where internet uses can be minimized so we intended to make a location alarm app that will cost less minimize and provide more services.

2.4 Scope of the problem

As we have already seen that existing system has some problem and they can be more user friendly .At this situation we wanted to build an app that will not only be a location alarm but also a nearby app and which will cost less internet and provide more information about location. In that case Google APIs can be a great solution implementing Google map and Google place API will be a smart way to provide such type of service. As we wanted to make a location alarm service to for picking place we can use Google place API. It is a widget provided by Google for picking place. Again we wanted to minimize internet cost as we know Google map need internet connection to load so in the alarm part we can use service inspite of map for gathering location information we also display the distance between user's current location and destination which is not available in existing system. Finally we try to combine location based services in one place so that people don't have to go here and there for their desired service.

2.5 Challenges

When we perform any activity, we have to face some obstacles. No work can completely be smooth. Similarly, to develop our project we have to face some challenges here. Since there are many applications in this platform so it will be very difficult to attract user towards us.in that case we have to make the UI user friendly as much as we can. Also we have to put some more content that will make our app acceptable to user.All those things might be challenging for us.

CHAPTER 3

REQUIREMENT SPECIFICATION

In requirements specification section we try to create those documents those capture the complete description about how our system will perform.

3.1: SDLC (Software Development Life Cycle)

Software Development Life Cycle (SDLC) is a sequence of structure that is followed to develop project in software engineering[18].
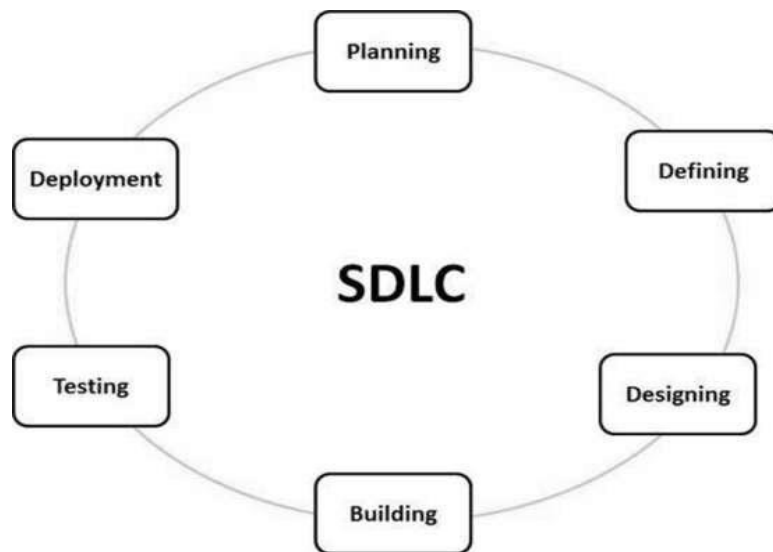The structure represents the graphical representation of SDLC.

Fig 3.1: SDLC model

SDLC Models

There are various software development life cycle models defined and designed which are followed during the software development process[18].

➢ Waterfall Model
➢ Iterative Model
➢ Spiral Model
➢ V-Model
➢ Big Bang Model

- ➢ Agile Model
- ➢ RAD Model

We develop our system through Waterfall model .The waterfall model works with some sequence, we developed similar software as (Nearby and location Alarm) so we already know all the phases we needed during development. Small overview of waterfall model is given below

Waterfall model

Waterfall model it is the simplest software development model. At this model we can go to the next stage only after the previous is done, as told before we develop similar project before so we know exactly when to go next. Everything was perfectly planed for our project so we find no difficulties during development. If there was error or issues in the previous stage this model will not work .In our case the project has three parts and second one can't be started after finishing first one waterfall gives as advantage in that case. We can't go back to previous stage at this model but in our case actually we don't have to [18].
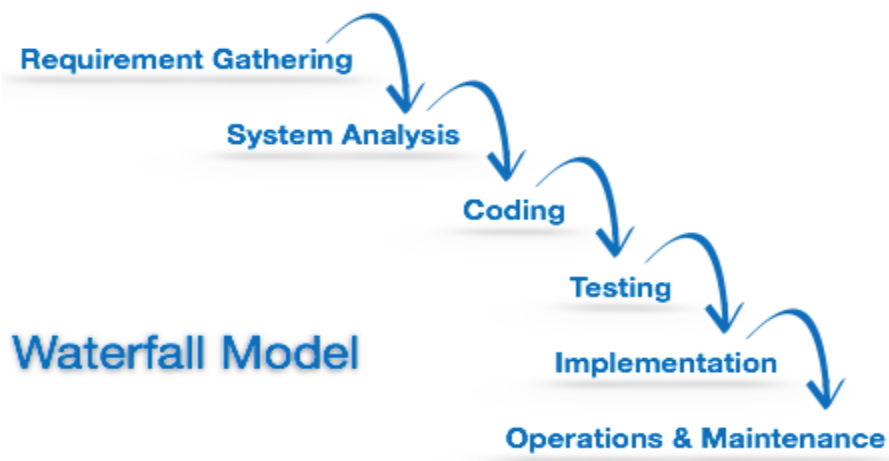
The processes of this model are given bellow:

Fig 3.2: Waterfall model [18]

Requirement Gathering: We gathered some requirements as well as some information's about our application on 9 November 2017.

System Analysis: In this step we decide a roadmap of our plan and try to bring up the best software model suitable for our project.We analysis about our system limitations, our system

related problems and the changes to be done in existing systems beforehand,Then we identify and address the impact of our project on organization and personnel[18].

Coding: We first start coding for our project from 21st November 2017.

Testing: We test 70% of our system development process on 19 December 2017. Some errors occur. But we solve those occurs with our efforts and hard working.

Implementation: Our system is android based. After completing the testing, we ran it on a mobile on 1st January 2018. It works properly and we develop its design several time.

Operation and Maintenance: Our system maintained time if anything update needed we update it in this stage we face hidden bugs and real world implementation we fix it.

3.2 Business Process Modeling

Business process modeling is a technique for representing the workflow of a system. Diagram base as "flow diagram", are the main characteristic of the methodology. Here we define our business model logical diagram and system design we also include class diagram of our project for better understanding[17].

System Modules

      The mobile application has below modules

- **Map:** This module is responsible to display map wherein the current location of user display nearby location and search result.
- **Navigation Drawer:** This module show various services provided by our app.
- **Place Picker:** This module allow user to pick location for setting alarm.
- **Alarm Generator:** This module is responsible to ring the alarm if user reached near the destination

Logical and System design of our system

Logical design represents the logic behind screen and system design represents the systematic approach on screen [17]

Generally our project can be divided into three parts

1) Showing current location.
2) Showing searched location(both for manual and nearby).

3) Ring alarm when reached

Flowchart of these three phases is given below

3.2.1 Current location

When user open the app and click on current location button map get current location coordinate via GPS and point the marker to that location.

In this case both GPS service and Internet must be turn on. GPS is needed for getting coordinate and Internet is needed for loading map.
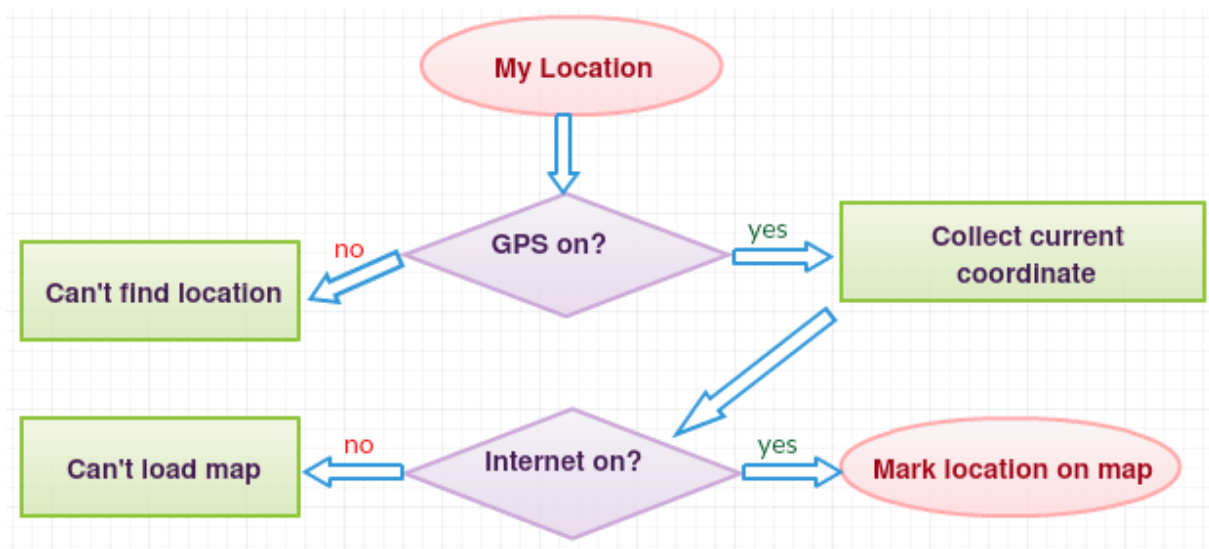

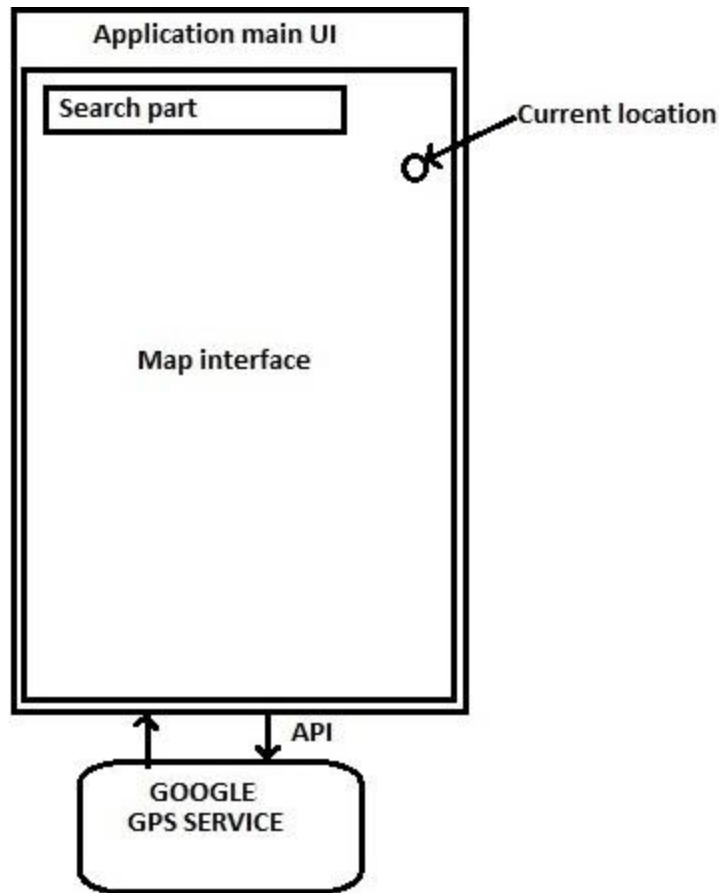Fig 3.3:Logical design of current location

Fig 3.4: System design of current location

fig 3.4 show about current location at this part there is a tiny button on the layout at top right corner, when user press it a location request sent to Google server through an API and they sent locations latitude and longitude by using satellite and GPS hardware installed inside users smart device.

3.2.2 Search and nearby Location

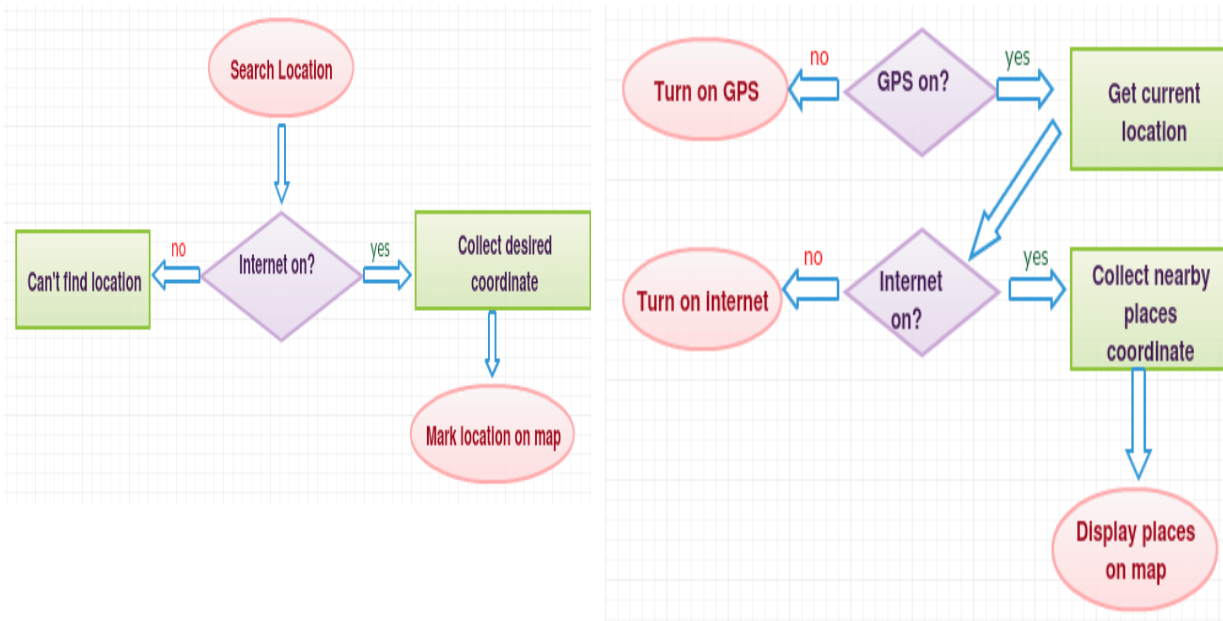At the opening activity user will find a search option here he can search place and at the navigation drawer nearby options are available.

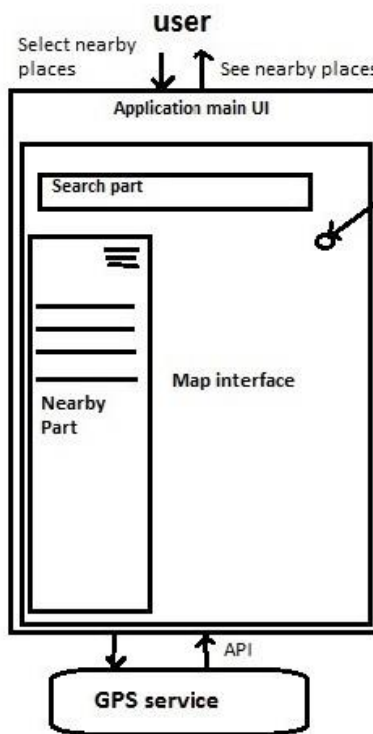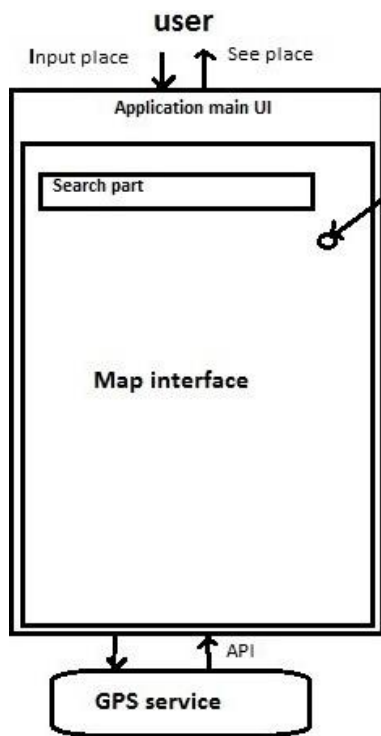Fig: 3.5: Logical design for Search and Nearby Places

Fig 3.6: System design of Search   Fig 3.7: System design of Nearby Places

Fig 3.6 show how search part work ,its similar to the current location part user put name of a place and press search button ,request sent to the server and they send location information of that place map take latitude and longitude value and move the marker to that specific location. Fig 3.7 represent nearby construction user open navigation drawer and select a nearby place then ,then users current locations information sent to Google server and they find associated nearby places near users current location and sent as Json Object program retrieve data from it and Show to the map for this process an API is needed called Nearby API.

3.2.3 Alarm

The module alarm is for setting and ringing alarm when user reached at desired location it's a continuous process and running until user reached at selected location.
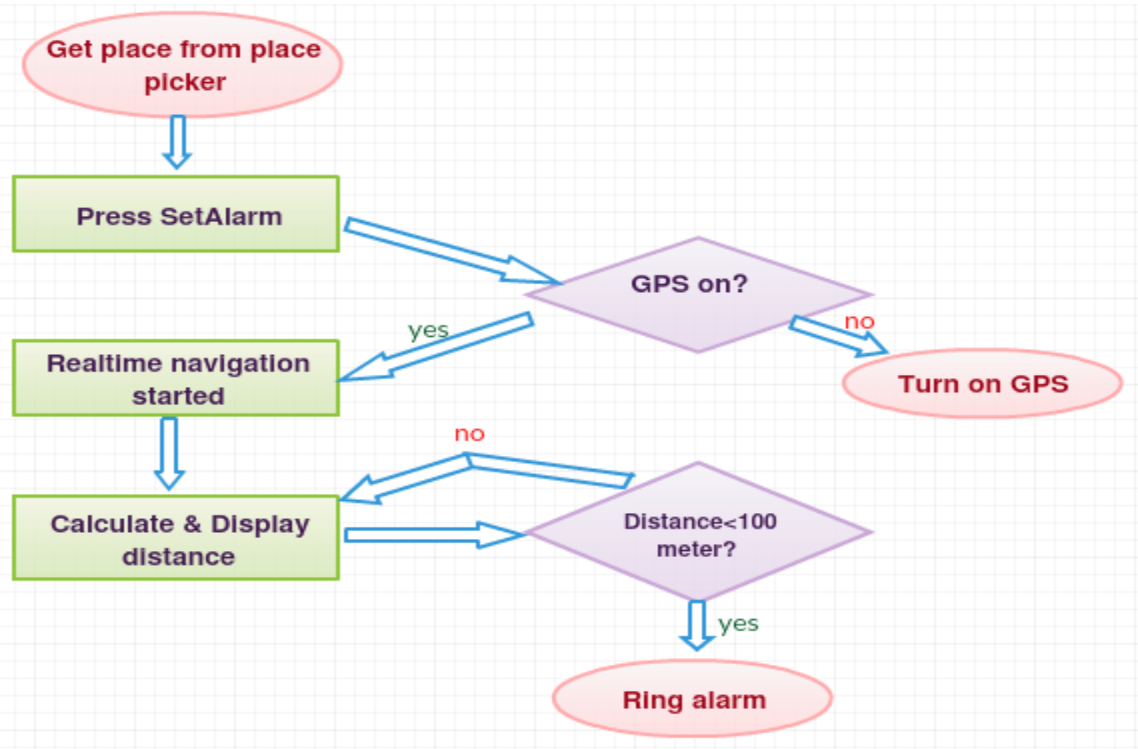

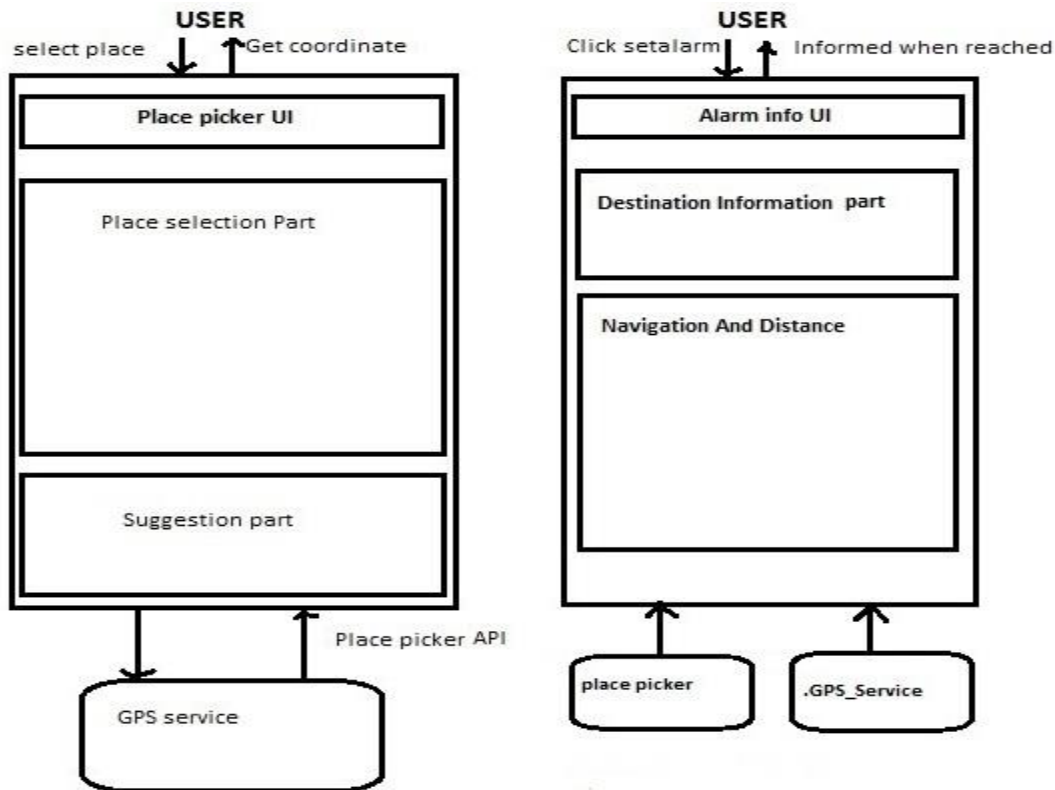Fig: 3.8: Logical design of Alarm

Fig 3.9: System design of Place Picker   Fig 3.10: System design of Alarm

Fig 3.9 show how Google place picker works, place picker is a built in widget which is a part of Google place API for android. The widget allow user to pick a specific location.

Fig 3.10 show the design of alarm part when user press "Setalarm" button this activity opened. This part take destination information from placepicker and get users location information from .GPS_Service, The service continuously trace users location using device GPS hardware and display to alarm activity. Distance between destination and current location calculated and displayed if distance is <100 meter then alarm started this part keep working until user press stop button.

3.3 Requirement Collection and Analysis

Requirement collection and analysis is one of the primary conditions of application development. For deployment, there are two types of requirements, one is the functional requirement and the other is non-functional requirement. Functional requirements is those activities that's the application software can perform. On the other hand, Non-functional

requirements define the personality of an application, as like the application is how much efficient, performance issue of the application and many more.

3.3.1 Functional Requirement

From the point of view of our system, it should have many functional requirements like, a search option where user can search specific place we should have add satellite view for more details we should have add zoom in and zoom out button for clear image. We should add a simple validation section for setting alarm to avoid unnecessary user like malware.

3.3.2 Non-functional Requirement

Non-functional requirements are help to being more efficient; optimize performance, memory consuming, smoother operation, and load on quickly as possible to our application. Application UI should be user friendly and gorgeous for excellent user experience.

3.3.3 Use Case Modeling and Description

Use case is a description of how a user will use the system to accomplish his business goals. It represents a functional or an action within the system. The two main components of a use case diagram are use cases and actors. Actor in a use case diagram is any entity that performs a role in one given system.

In use case diagram the below figures show that-
- ❖ User and server are actors.
- ❖ And the attributes are associated with actors.
- ❖ These attributes include some sub-attributes.

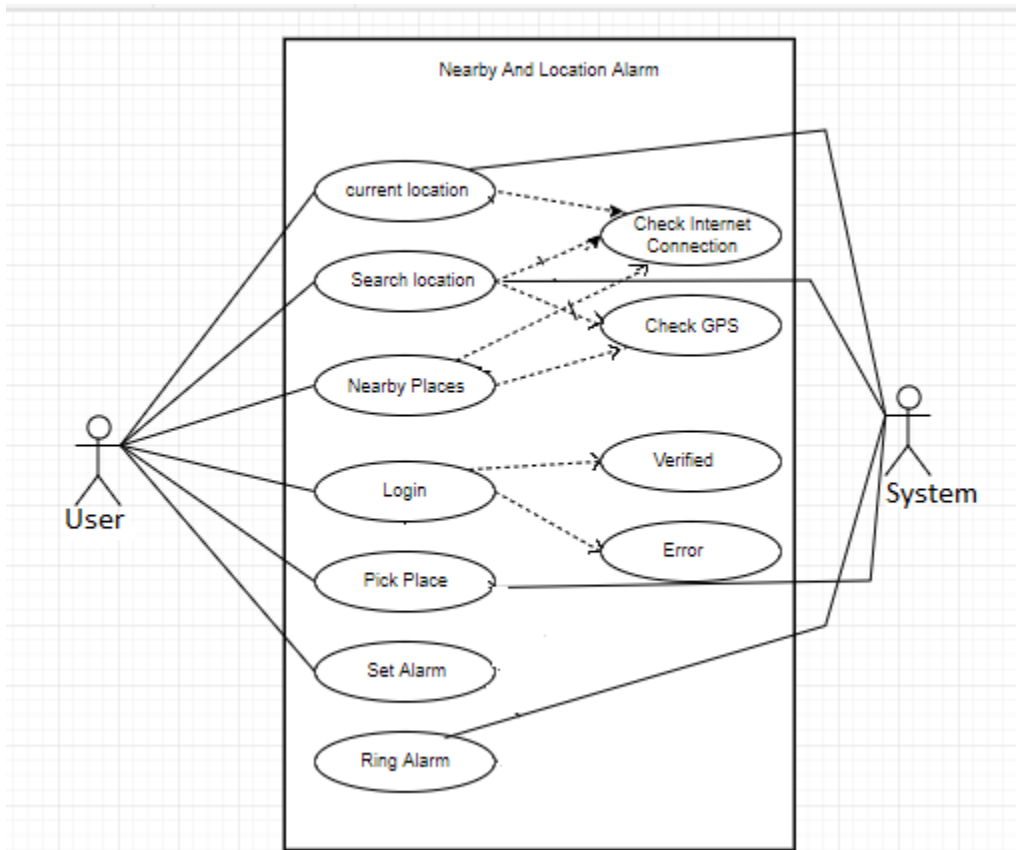Particular actors are associated with particular attributes

Fig 3.11 use case diagram

3.4 Class diagram of our system

Class diagram show relationship among classes .Designing class diagram might be the most difficult and important part for developing a project. After making an efficient class diagram coding become easier. Class diagram of our project given below:-
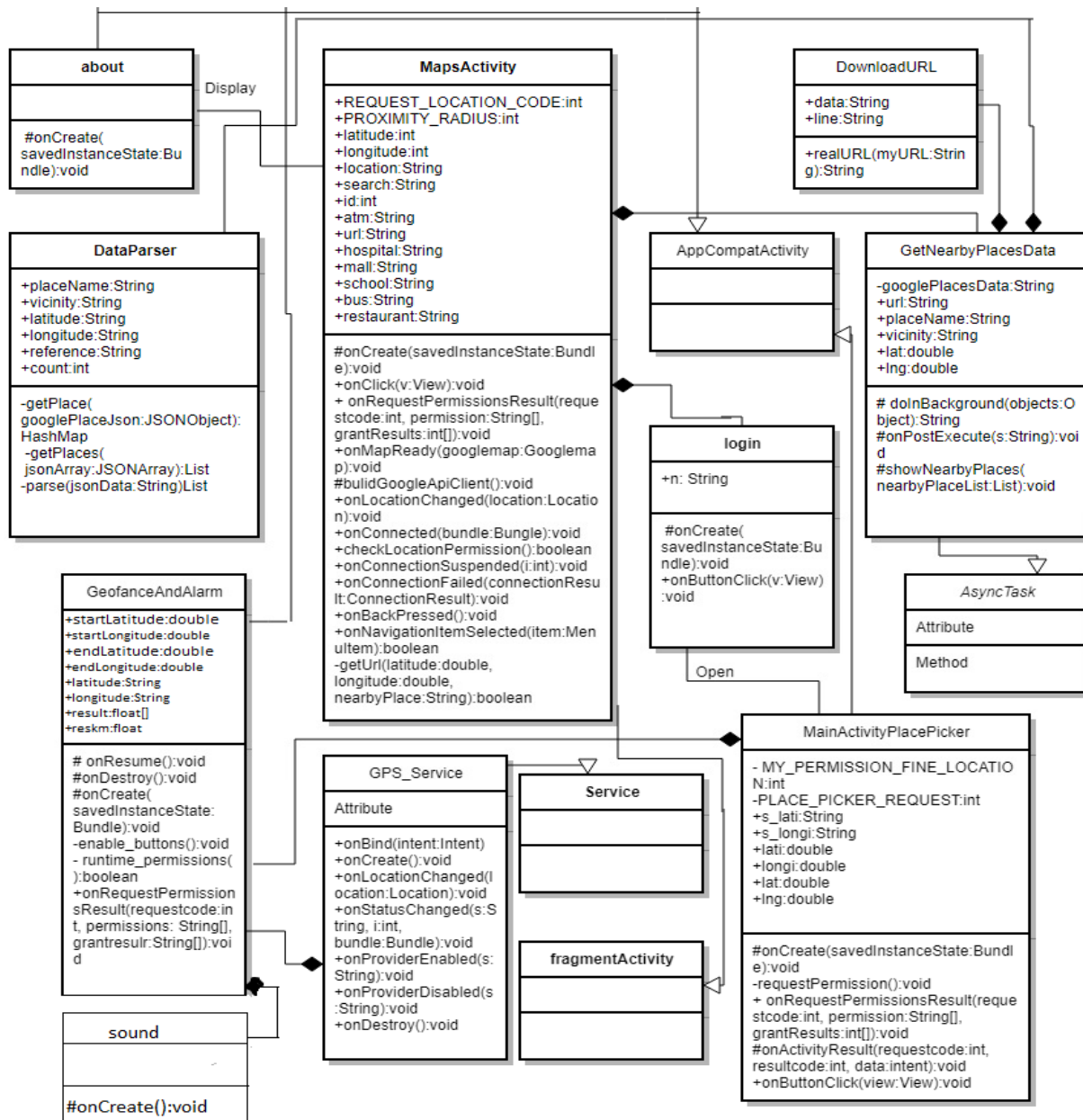
Fig 3.12: Class diagram of Nearby and Location Alarm

3.5 Design Requirements

The design requirements for our project will differs us from the other projects, because our project will working on our specific problem statement and the product, system, or experience that we are designing. We designed our project for some specific segment that is providing nearby places and selling alarm on specific place. We try to provide the all things to our application that are necessary for a user to operate our application easily.

- ❖ In our application we should provide a simple user interface for simplify the uses in that case we can use navigation drawer which provide many operation in one simple place.

- ❖ We should add satellite view option for all the services that will help user to see details we can also link up our application with Google map built in app for more operation like showing distance and path of nearby places.

- ❖ In our application we should provide a simple validation form for user to avoid setting unnecessary alarm by mistake.

CHAPTER 4

DESIGN SPECIFICATION

Design Specification is a statement of how a design is developed. In the section of Design Specification we try to show the design of our mobile apps. We also discussed about many tools and platforms, which we use to develop our application

4.1 Application design

Layouts

Content main

The main layout is the beginning UI. This layout contains a search bar and search button where user put place to search. This layout also has a button for opening navigation drawer.
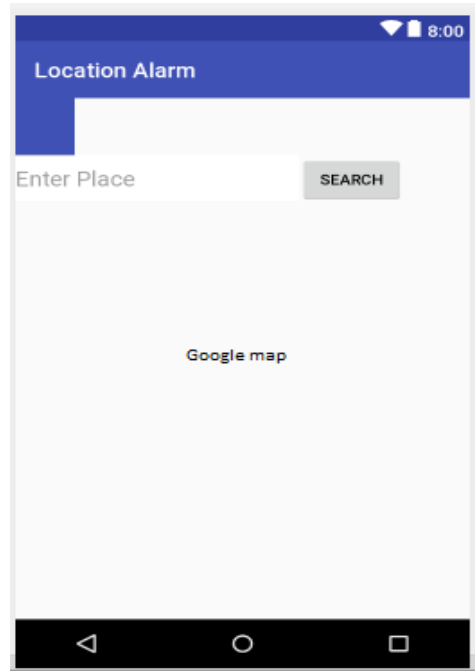
Fig 4.1: main Layout

nav_header

This layout show the header of navigation drawer.
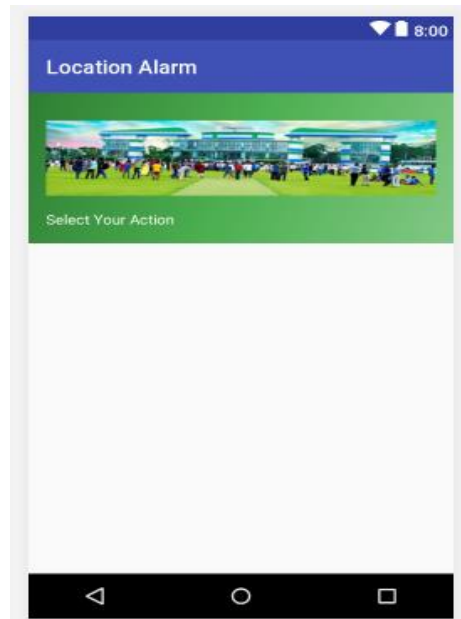
Fig 4.2: nav_header Layout

activity_maps

This layout show the list of navigation item what user can use for specific operation.
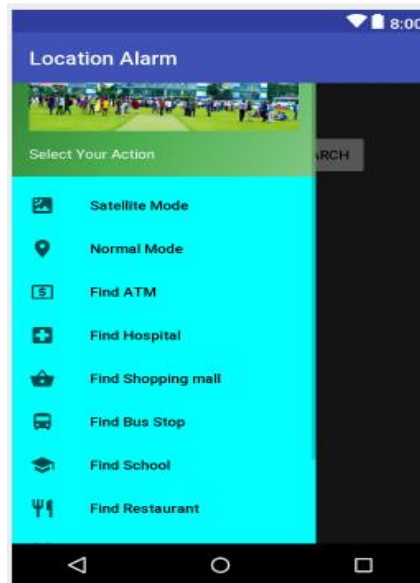

Fig 4.3: activity_maps Layout

activity_login

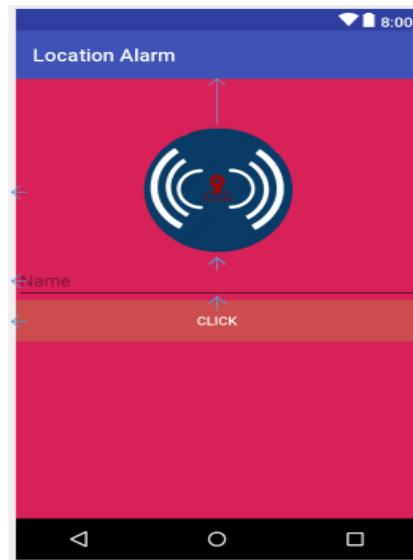This layout ask user for name to enter inside alarm part.

Fig 4.4: activity_login Layout

Activity_main_place_picker

This layout show name, coordinate and address of place user picked from placePicker to set alarm.
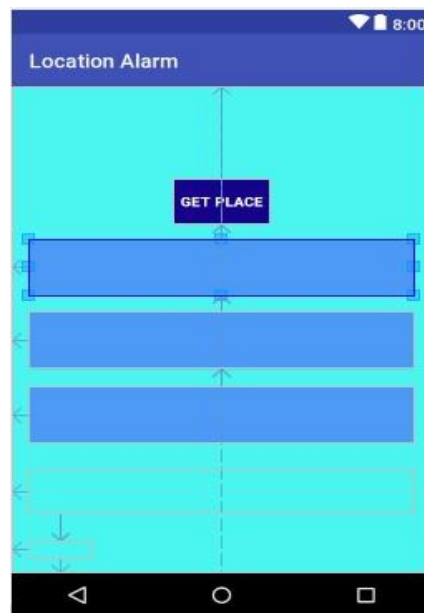

Fig 4.5: Activity_main_place_picker Layout

Activity_geofance_and_alarm

This layout show destination coordinate , users current location coordinate which update every three second and distance between destination and current location.
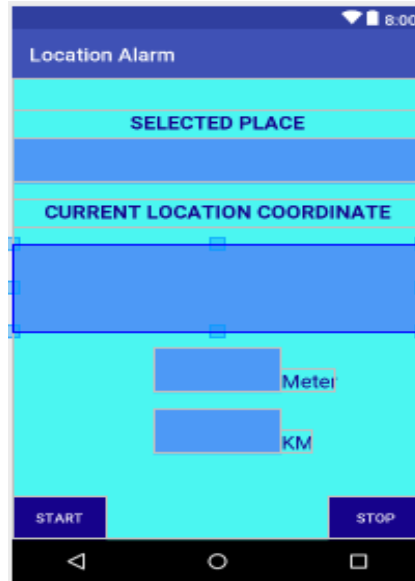

Fig 4.6: activity_geofance_and_alarm Layout

Activity_about

This layout show short information about developer of the application, user can mail us through this layout.

Fig 4.7: activity_about Layout

Activity-sound

When user reached destination this layout come in front with a stop button by pressing which alarm will stop.
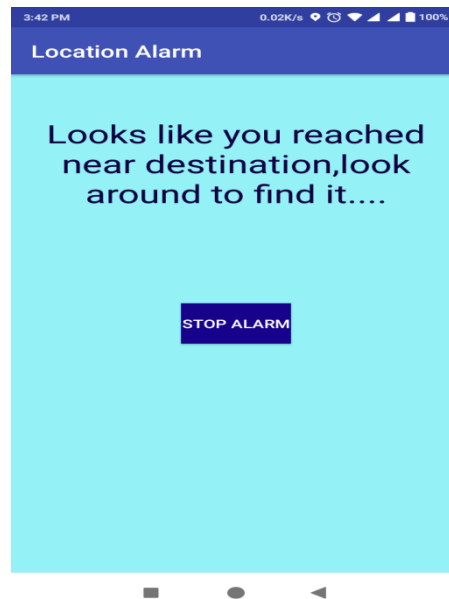

Fig 4.8: activity_sound Layout

4.2 Interaction Design and UX

Interaction design is a discipline that observes the interaction between a system and its user. Actually interaction design is the processes which understand the user problem domain, process the problem and find out the results, perform actions by the respecting results and solve the problem. In our system we tried to make better interaction between user and system for better performance [21].

For UX we are tried to give some fantastic experience by our application. We keep our system simple and easier for better experience and performance for the user. We worked so hard to decrease the data loading time and internet uses on our application and that effort will be continued.

4.3 Implementation requirement

4.3.1 Installing and Configuring All Support Tools

Now it's time to get this Android going, but before I can do so, I need to install and configure a few tools, including SDKs:

❖ Java JDK*: Lays the foundation for the Android SDK.*

❖ Android SDK provides access to Android libraries and allows me to develop forAndroid.

❖ Android Studio IDE (integrated development environment):Brings together Java, the AndroidSDK, and the Android ADT (Android Development Tools), and provides tools for me to write my Android programs.

❖ Android ADT*: Does a lot of the grunt work for me, such as creating the files* andstructure required for an Android app.

A benefit of working with open-source software is that most of the time, I can get the tools to develop the software for free. Android is no exception to that rule. All the tools that I need to develop rich Android applications are free of charge.

4.3.2 Installing the JDK

It's important to install java JDK for developing android application. As I want to work with android 5.0.1 or higher it's not necessary to install specific JDK version. Android version beyond 2.0.1 no longer check version so any JDK version can be installed. We used currently update version of JDK 8 for our project.

4.3.3 Installing the Android SDK

The Android SDK is composed of a debugger, Android libraries, a device emulator, documentation, sample code, and tutorials. It's so important because I can't develop any Android apps without it [12]. I successfully downloaded the android-sdk_r20-windows which is android SDK version 26.0.1. For the purposes of my project, I installed version 5.1 (API 22) and I also downloaded the documentation and samples that correspond with Android version 5.1(API 22) through the SDK Manager.

4.3.4 Installing the Android Studio

Android studio is the official IDE (Integrated Development Environment) for android operation system built onJetBrains' IntelliJ IDEA software[3]. We used android studio 3.2.1 at initial state of our project later updated to 3.0.1 which is currently the updated version.

4.3.5 Basic Android Overview

Android deliver a complete set of software for mobile devices. It is championed by Google and owned by Open Handset Alliance. Android is a comprehensive platform, which means it is a complete software stack for a mobile device. It provides all the tools frameworks for developing mobile apps quickly and easily.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of APIs

The "Nearby and location alarm" is an app based on Google APIs we successfully add APIs to our app. Four APIs is implemented to our app first one is Google place API for debug apk associated with debug SH1 fingerprint, second one is Google place API for release apk associated with release SH1 fingerprint, third one is Google place API for nearby places and last one is Google place picker API for picking place from map.

5.2 Implementation of Front-end Design

Since android devices are smaller in size, so the design should be defined shortly including key component of the system. It's very challenging to develop a gorgeous front-end design.

Because, for developing a design for android devices, all the time u have to consider the display dimension of android device, it's very tough to balance the design with android display size. For interactive design we always try to be simple in UI design and we try some material design for make the application beautiful. But the most challenging portion is, to make our application, device independent, because there are many type of Smartphone that support android, among them some device have very week headwear component, in small pressure those devices behave like weird. Beyond different device can be different in version. So we have to design a system which can support all the devices and we have to ensure that, the system that supports most of the android version. We attached our application front-end implemented design below.
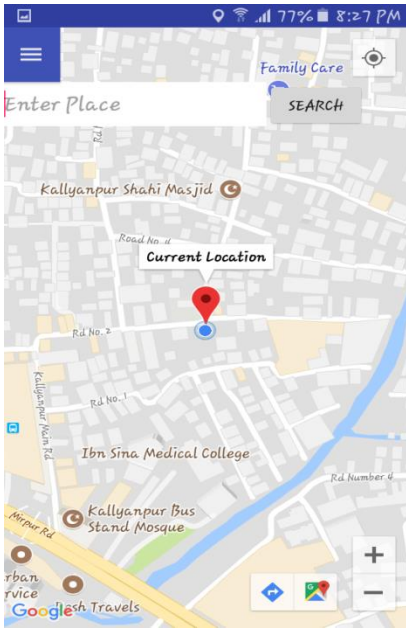
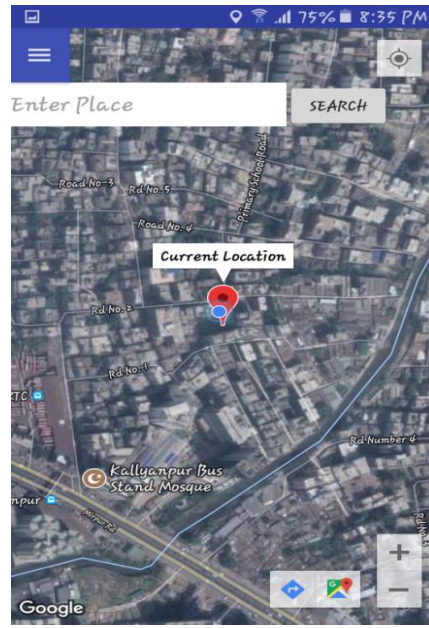Fig 5.1: Screenshot current location 1

Fig 5.2: Screenshot current location 2

Fig 5.1 and 5.2 show user's current location in both normal and satellite mode user can see his/her current location by clicking the button at top right corner
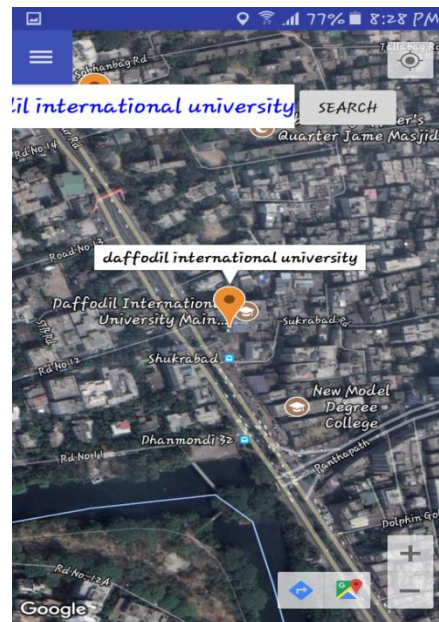

Fig 5.3: Screenshot search location 1

Fig 5.4: Screenshot search location 1

Fig 5.3 and 5.4 show the search result of place .user can input the name of the place in text field and hit the search button for result.
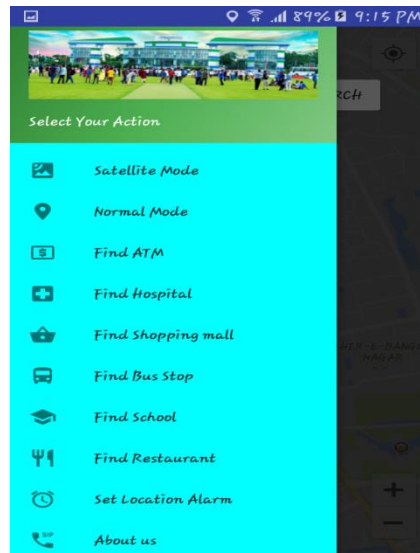

Fig 5.5: Screenshot Navigation Drawer

Fig 5.5 show the navigation drawer it will be open by clicking navigation button of sliding the window left to right navigation drawer show the services we provided in our application.
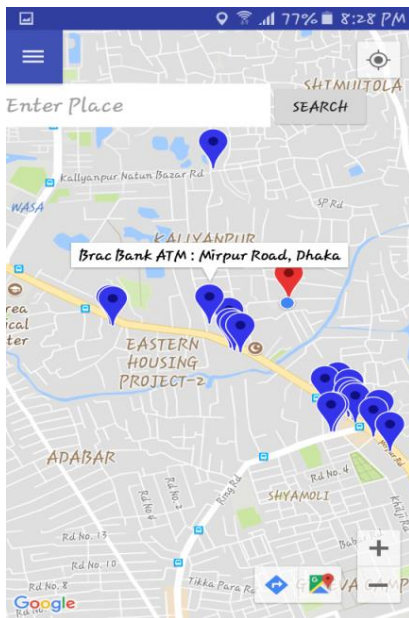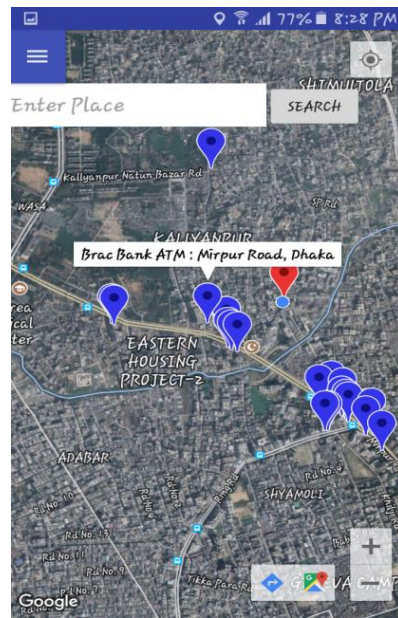

Fig 5.6: Screenshot ATM 1

Fig 5.7: Screenshot ATM 2

Fig 5.6 and 5.7 show nearby ATM booth in normal and satellite mode when user touch the screen name of the place will appear.
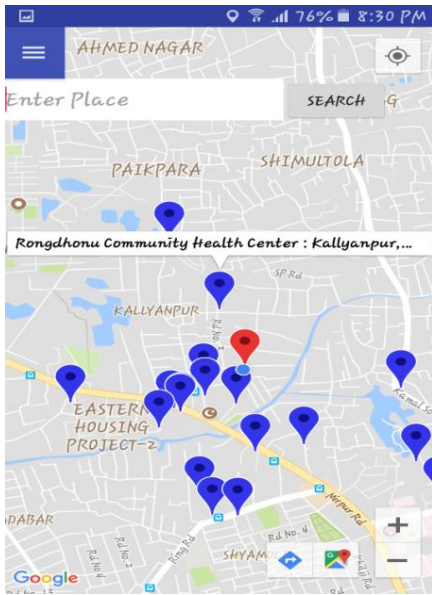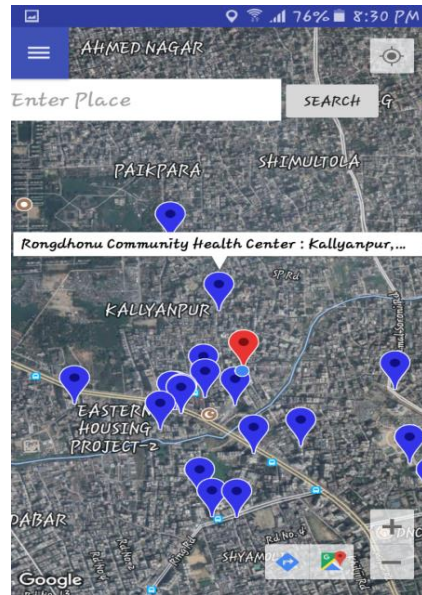

Fig 5.8: Screenshot Hospital 1   Fig 5.9: Screenshot Hospital 2

Fig 5.8 and 5.9 show nearby hospital in normal and satellite mode when user click "find hospital" button nearby hospitals will be displayed.
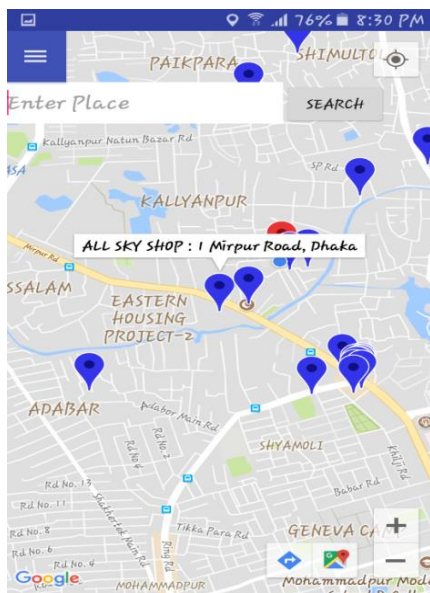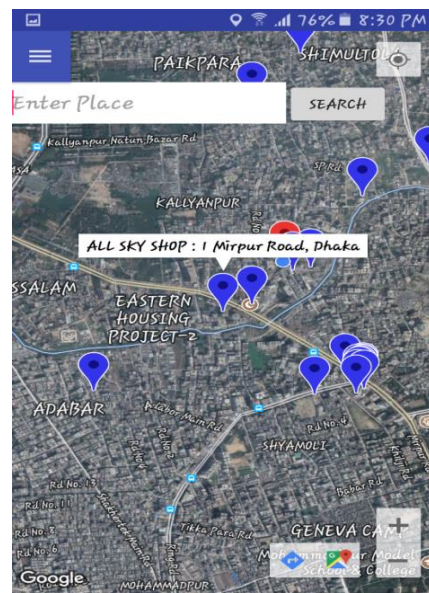

Fig 5.10: Screenshot Shopping mall 1   Fig 5.11: Screenshot Shopping mall 2

Fig 5.10 and 5.11 show nearby shopping mall in normal and satellite mode when user click "find shopping mall" button nearby shopping malls will be displayed.
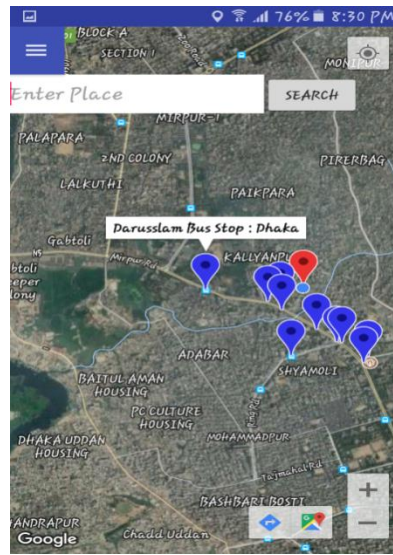

Fig 5.12: Screenshot Bus Stop 1

Fig 5.13: Screenshot Bus Stop 2

Fig 5.13 and 5.13 show nearby bus stop in normal and satellite mode when user click "find bus stop" button nearby bus stops will be displayed.
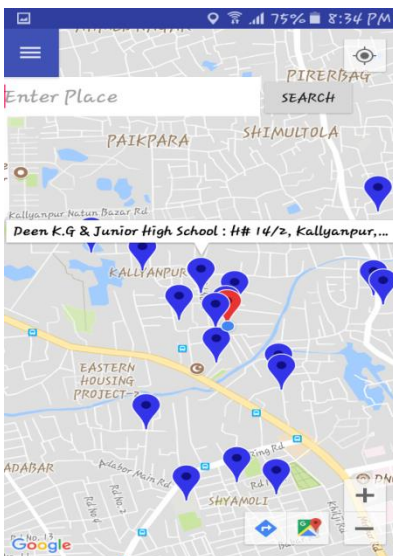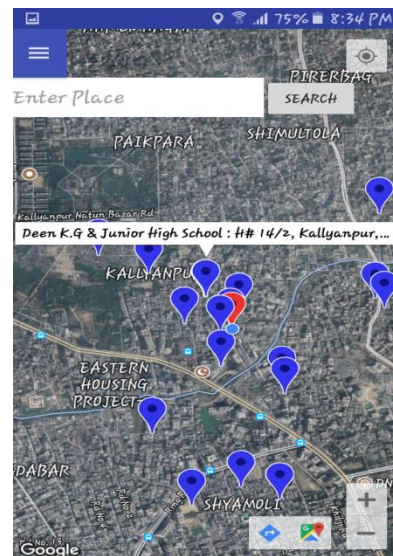

Fig 5.14: Screenshot School 1

Fig 5.15: Screenshot School 2

Fig 5.14 and 5.15 show nearby school in normal and satellite mode when user click "find school" button nearby schools will be displayed.
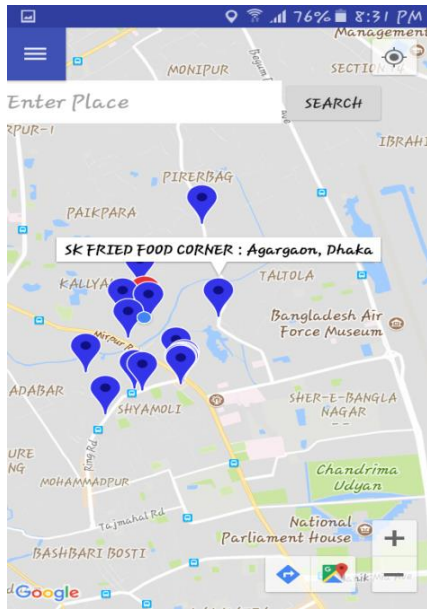
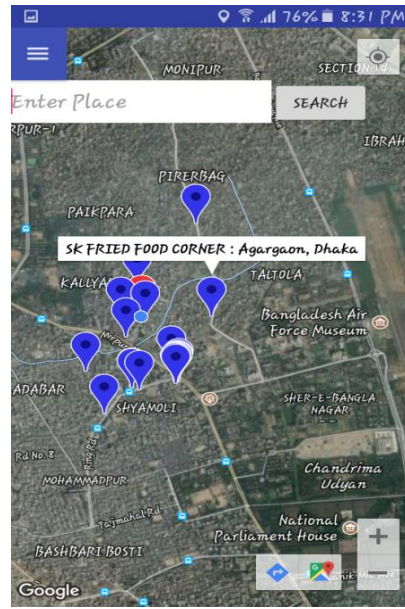Fig 5.16: Screenshot Restaurant 1   Fig 5.17: Screenshot Restaurant 2

Fig 5.16 and 5.17 show nearby restaurant in normal and satellite mode when user click "find restaurant" button nearby restaurants will be displayed.
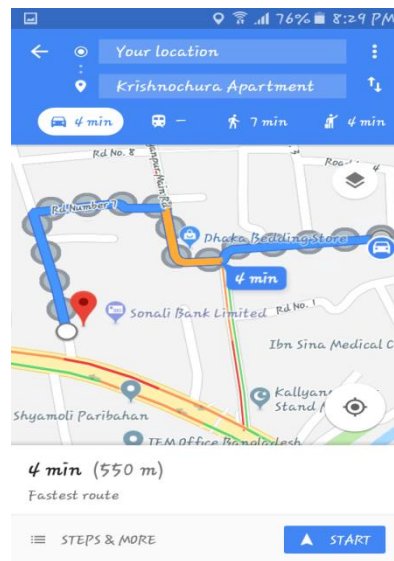

Fig 5.18: Screenshot Direction from Google map

Fig 5.18 show the direction and distance between users and selected nearby place. If user click the "Arrow" located in the right bottom of the UI our application will redirect user to Google map app and these information will be displayed.
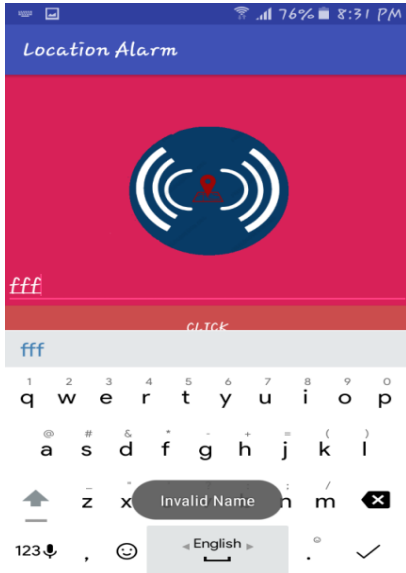
Fig 5.19: Screenshot invalid name
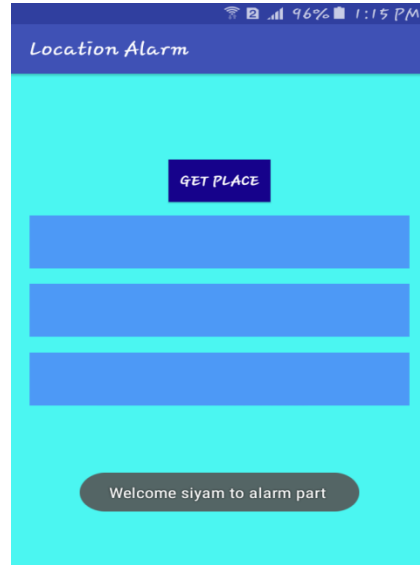
Fig 5.20: Screenshot valid name

Fig 5.19 and 5.20 show the validation option to get entered inside alarm part in valid name like "rrrr","222","26fsd", 'r' will not be considered user must provide a valid name to enter inside alarm part.
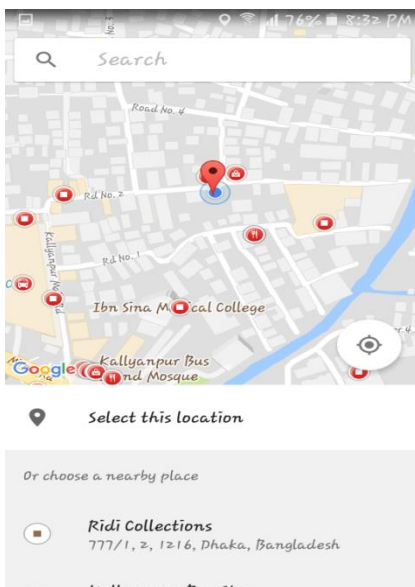
Fig 5.21: Screenshot place picker 1
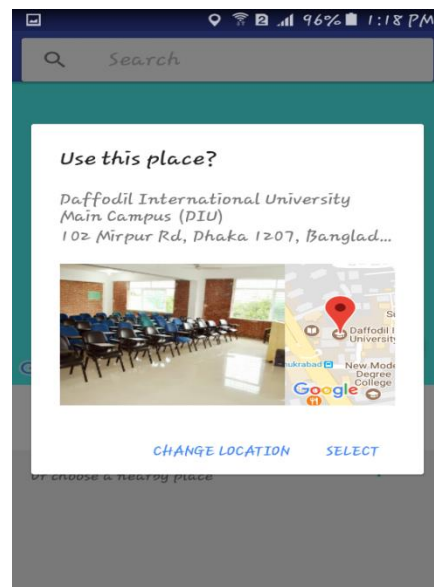
Fig 5.22: Screenshot place picker 2

Fig 5.21 and 5.22 show place picker widget for picking a place to set alarm user can pick a place by scrolling the map or by search in the search bar or by suggestion in the suggestion section.

Fig 5.23: Screenshot selected place

Fig 5.23 show the information of selected place.

Fig 5.24: Screenshot alarm info
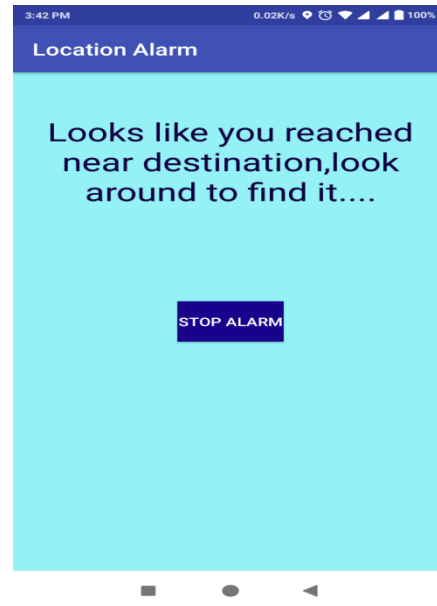
Fig 5.25: Screenshot ringing alarm

Fig 5.24 show the name of the destination users current location coordinate and distance between users current location and user. User have to click "start" button for starting calculation by clicking "stop" calculation will be stopped.
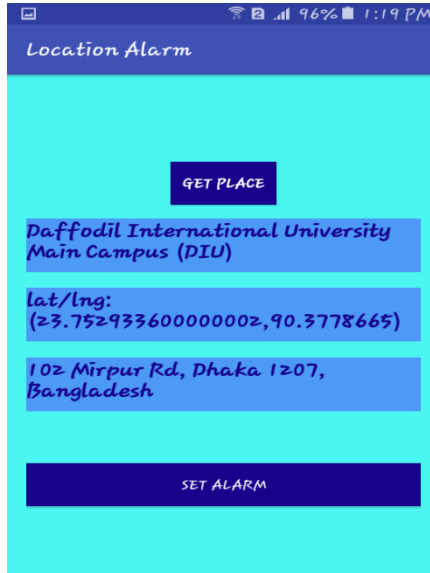
Fig 5.25 display alarming portion when user reached at the desired place alarm will appear. "Stop Alarm" button will turn off alarm.

Fig 5.26: Screenshot about 1   Fig 5.27: Screenshot about 2
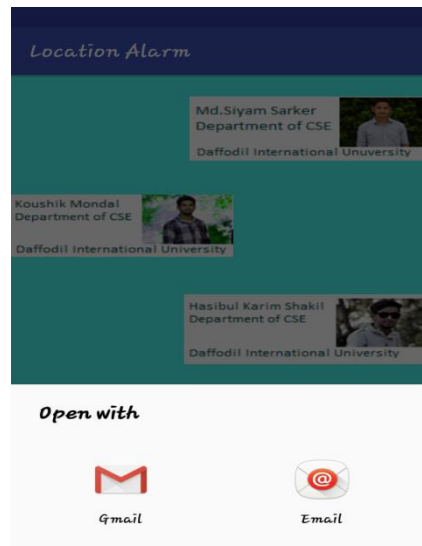
Fig 5.26 and 5.27 show little information about developer .A mail address has been given for communication.

5.3 Implementation and Interaction

The architecture of a software system defines the structure, behavior and conceptual model of a system.

In real world, interaction can found almost everywhere. Interaction is the key to make a system dynamic and attractive to user. It's very necessary to make a system interactive and we also try to. As mentioned in earlier, we also include some unique feature to interact our system like offline alarm system and distance calculator. Our application is successfully implemented and the interaction of our application with the users is quiet impressive.

5.4 Testing Implementation

The "Nearby and Location Alarm" work fine with android device which android version is equal or greater than 5.1. The interface is dynamic so it creates no problem with various sizes of android devices all the features like all nearby places and alarm system work fine in almost every android device.

5.5 Test Results and Reports

Test report is needed to reflect testing results in a formal way, which gives an opportunity to estimate testing result quickly. It is a document that records data obtained from an
Evaluation experiment in an organization manner, describe the environmental or operating conditions, and shows the comparison of test results with objectives.
In chapter 5.4, we shown the test case, test input, expected output, actual output and finally we find our results and the test result was quite successful. Our application is satisfied by the user. Usability testing examines the following feature of the app.

- How easy it is to use the application?
- How easy it is to learn the application?
- How convenient is the application to end-user?

So at the end we can carry out the results as the benefits of usability testing to the end of the user or learner.

- Better quality application.
- Application is easier to use.
- Application is more readily accepted by users.
- Shortens the information for the new users.
- Better UI for interaction.
- Some innovative idea for users.
- Can be expected that "Nearby and Location Alarm" will improving location alarm system.

Test result

Our application has not published in market yet. We tested our apps our five friends they gave some feedback as well as advise to us that how we can make our system more developed and

user friendly. We have appreciated and welcome their convenient feedback. Their importance review helped us to make our apps more attractive and well organized then before. We hope we will be able to meet the public demand based on their suggestions, recommendations, views etc.

Table 5.1: Test result

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I think that I would like to use the app frequently.				Friend1 Friend3	Friend5 Friend4 Friend2
I found that the mobile app is unnecessarily complex.	Friend3 Friend2	Friend4 Friend1 Friend5			
I thought that the app is easy to use.				Friend1 Friend2 Friend3	Friend4 Friend5
I found that various function on this app is well integrated.		Friend4	Friend1 Friend5	Friend2 Friend3	
I thought there was too much inconsistency in this app.	Friend2 Friend5 Friend4	Friend1 Friend3			
I think that most people would learn the app quickly.				Friend5 Friend1 Friend3 Friend2	Friend4
I found this mobile app is very awkward to use.		Friend1 Friend4	Friend3 Friend5	Friend2	
I felt good using this app.			Friend4	Friend1 Friend2 Friend3	Friend5
I found that the alarm service doesn't use too much internet.			Friend2	Friend4 Friend1	Friend5 Friend3

Decision

Our friend's feedbacks on different views were much important to make our apps better. We tried to work through their feedback. The general public can easily use our apps. In future we will develop our apps more and more so that it can be used greatly and general public can get more advantage from here.

CHAPTER 6

CONCLUSION

6.1 Discussion and Conclusion

The conclusion that comes out from this project is that the android is much popular Mobile OS and Tablet OS. This great project acquired by Google in 2005. It is a smart mobile operating system and also most popular at today's. So there are huge opportunities of android programming at todays and also in near future these opportunities will be increase more. Even the most exciting thing here that android is an open source development basis. So being an android programming developer we are feeling much proud .We think the work that related to creativity is more exciting matter. There are millions and millions android application are stored in the android market Google play. We are very glad to taking an android project. In our project we tried to help people who want go a place which they don't recognize well and don't have enough time or scope to look at Google navigator. There are several application used by one single android device in today's, almost many work done by those device. So technology brings easiest way to do everything by a mobile device through several serving application that installed. As a developer it's our job to more development that makes more user serving. That's it.

6.2 Limitations

Our application has some limitation we will overcome this limitation in future.

- ❖ The applicationdoesn't run in android devices which version is less than 5.1.
- ❖ User cannot make choice for alarm tune and turning off vibration.
- ❖ The application can only be used 1000 time a day as we use free APIs to make the app.

6.3 Scope for further development

We use free API to develop the project which allow 1000 request a day, If people response well we will try to purchase premium API's. Here user can't choose the tune for alarm we will try to fix that. If anything important suggested by any user we will try to make change according to that suggestion.

REFFERENCES

[1] Android Developers. (n.d.). Retrieved from

https://plus.google.com/u/0/communities/117113066196803562064

[Accessed 15th June 2017]

[2] Create a Navigation Drawer. (2018, April 05). Retrieved from

https://developer.android.com/training/implementing-navigation/nav-drawer.html [Accessed

16th July 2017]

[3] Android StudioThe Official IDE for Android. (2018, March 27). Retrieved from

https://developer.android.com/studio/index.html [Accessed 18th July 2017]

[4] Projects Reports Sample - Final Year Students Android - PHP - iOS. (2016, March 23).

Retrieved from http://www.pratikbutani.com/2016/03/projects-reports-sample-for-final-year-

students-android-php-ios/ [Accessed 20th July 2017]

 [6] (n.d.). Retrieved from https://developers.google.com/maps/faq#using-google-maps-apis

[Accessed 21th July 2017]

[7](n.d.). Retrieved from https://developers.google.com/places/android-api/

[Accessed 22th July 2017]

[8] Place Picker | Google Places API for Android | Google Developers. (n.d.). Retrieved

from https://developers.google.com/places/android-api/placepicker

[Accessed 20th August 2017]

[9] Birch, J. (2015, October 28). Exploring Google Play Services: Place Picker &

Autocomplete. Retrieved from https://medium.com/exploring-android/exploring-play-

services-place-picker-autocomplete-150809f739fe

[Accessed 10th November 2017]

[10] Creating a Background Service. (2018, March 09). Retrieved from

https://developer.android.com/training/run-background-service/create-service.html

[Accessed 13th November 2017]

[11] Creating a Background Service. (2018, March 09). Retrieved from

https://developer.android.com/training/run-background-service/create-service.html[Accessed

17th November 2017]

[12] Android SDK tutorial for beginners. (2018, February 01). Retrieved from https://www.androidauthority.com/android-sdk-tutorial-beginners-634376/[Accessed 18th November 2018]

[13] Calculating distance between two geographic locations. (n.d.). Retrieved from https://stackoverflow.com/questions/8049612/calculating-distance-between-two-geographic-locations [Accessed 23th November 2017]

[14] Alarm-Me (Location Alarm) - Apps on Google Play. (n.d.). Retrieved from https://play.google.com/store/apps/details?id=com.prax6apps.alarm_me&hl=en [Accessed: 24th November 2017]

[15] Parashchenko, R. (n.d.).Software testing test report templates. Retrieved from https://strongqa.com/qa-portal/testing-docs-templates/test-report [Accessed: 25th November 2017]

[16] IDC: Smartphone OS Market Share. (n.d.). Retrieved from https://www.idc.com/promo/smartphone-market-share/os [Accessed:10th April 2018]

[17] Marsic, I. (n.d.). Retrieved from http://www.ece.rutgers.edu/~marsic/books/SE/ [Accessed: 31th May 2017]

[18] SDLC Models Explained: Agile, Waterfall, V-Shaped, Iterative, Spiral | Existek Blog. (2017, September 15). Retrieved from https://existek.com/blog/sdlc-models/ [Accessed: 21June 2017]

[19] Configure PC: https://developer.oculus.com/documentation/mobilesdk/1.0.4/ concepts/mobile-studio-setup-android-win/[Accessed: 13June 2017]

[20] Android overview: Internet: https://www.safaribooksonline.com/library/view/ learning-android-2nd/9781449336226/ch01.html[Accessed: 10June 2017]

[21] Siang, T. (n.d.). What is Interaction Design? Retrieved from https://www.interaction-design.org/literature/article/what-is-interaction-design [Accessed: 10June 2017]

APPENDIX

As students of computer science and engineering it's our duty to reach technology to everyone. From our responsibility we intended to make a project that can help general people in their daily life and from the thought we make the "Nearby and Location Alarm" that is such a kind of app that will be helpful for every single people around the world. We three people contribute in this project Md. SiyamSarker as project manager, Koushik Kumar Mondal and HasibulKarimShakil as member. We planned this project in April 2017 and it's finally been completed in February 2018. During the development we learn then implemented that knowledge and this process was not easy at all. It was a great pleasure working with honorable Md. SadekurRahman sir. Without his help we may not complete the project. The whole project is based on Google APIs it's a great service provided by Google without it the project may not be completed learning the implementation of APIs was a great pleasure. During the development we also have come to know android has a huge amount of library and coding is much easier by working with these libraries. Another great tool provided by android is service, service is something that work in background and do excellent job for us we learn and implemented service in Alarm part of our project. The experiences we gather through the project was awesome and we hope these experiences will bring some extra benefits for us in our working life as a proud android developer.

PLAGIARISM REPORT