A Major Project Report on

Women's Arena (Safety & Health)
- An Android app!!!

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Abstract

Women's security is a critical issue in today's world and it's very much needed for every individual to be acting over such an issue. This documents describes a GPS and GSM based "women security system" that provides the combination of GPS device as well as provide alerts and messages with an emergency button trigger In today's world, it is not safe for a person to travel alone at night especially for women; it will be high time to travel alone because a woman is not highly strong as men to protect herself from them. Nowadays, women security and safety are the main issues and the challenge to reduce the violence against them is needed day by day. So, this project presents an Android Smartphone application "Women's Arena" and the way by which it acts as a 24x7 personal safety and security. It is primarily developed a unique approach for strengthening woman's personal security and safety. Even though, this application is also helpful for older people, senior citizens and children. This app also contains another module for the safety maps. This module provides the various safe places when travelling from one particular place to another. This app also consists of a women's period tracker that makes accurate and reliable predictions of menstruation, ovulation and fertile days. Also the app consists of Question and Answer Forum so that the user can discuss about the various ideas and share the knowledge regarding the various topics. The app also has another module for all beauty and health related articles useful for your daily life. This contains tips for beauty, health, hair, eyes, skin, dandruff, lip care, nails, oral care, pregnancy and more.

Keywords: Smartphone, Android, iperiod, database,ibeauty

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Chapter 1

Introduction

Today in this modern world of technology, everyone is busy with their Smartphone and apps. Mobile apps ease human life by minimizing effort and time. Mobile apps facilitate accessing data from anywhere at any time.

In today's world, it is not safe for a person to travel alone at night especially for women; it will be high time to travel alone because a woman is not highly strong as men to protect herself from them. Nowadays, women security and safety are the main issues and the challenge to reduce the violence against them is needed day by day. So, this project presents an Android Smartphone application "Women's Arena" and the way by which it acts as a 24x7 personal safety and security. It is primarily developed a unique approach for strengthening woman's personal security and safety. Even though, this application is also helpful for older people, senior citizens and children.

The best way to minimize your chances of becoming a victim of violent crime is to identify and call on resources to help you out of dangerous situations. Whether you're in immediate trouble or get separated from friends during a night out and don't know how to get home, having these apps on your phone can reduce your risk and bring assistance when you need it. A host of new apps have been developed to provide security systems to women on their phones. Here we introduce an app which ensures the safety of women. This helps to identify and call on resources to help the one out of dangerous situations. This reduces risk and brings assistance when we need it and help us to identify the location of the one in danger.

This application is basically developed as a unique approach for strengthening women personal security and safety. This application is also useful for older people, senior citizens and children to help and secure them. Even, it is useful for both the business as well as personal use and it will alert the caregiver or the emergency contacts with the help of emergency buttons provided in the application.

This app also contains another module for the safety maps. This module provides the various safe places when travelling from one particular place to another. Also the app consists of Question and Answer Forum so that the user can discuss about the various ideas and share the knowledge regarding the various topics. The app also has another module for all beauty and health related articles useful for your daily life. This

contains tips for beauty, health, hair, eyes, skin, dandruff, lip care, nails, oral care, pregnancy and more.

This app also consists of a women's period tracker that makes accurate and reliable predictions of menstruation, ovulation and fertile days. All women, even those with irregular cycles, can rely on this app. Log your period days in a handy calendar, schedule menstrual cycle reminders use the due date calculator, follow a pregnancy calendar and take full control of your health.

Our motto in developing this app is to provide a complete package of combination of security, health and beauty to women through smart phone as today most of the people are carrying smart phones to wherever they go.

1.1 Project Overview

With the recent and fast developments in technology, smart phones offer many advanced services rather than just making calls, so the number of smart phone users increases day by day. User can install and run many smart phone applications that make life easier or enjoyable and secure.

The major goal of our project is to make women feel secure when she is travelling alone in an unknown area. This app has an exciting feature that is simple to operate, i.e. at the time of emergency, the user can trigger the phone app with pressing the phone off button within 2 seconds or directly by clicking the app emergency icon, then app will send out a predefined text message "I'm in danger please help me", to the registered contacts of your choice which automatically includes address and exact location of yours.

This app also contains a map list in which secure area like police station, ATM lounge, and other well lit area with 24hrs security and CCTV recording are pinned. In case of any emergency she can take shelter in any such locations.

It also provides notification about your menstruation period, beauty and health tips.

1.2   Problem Statement

Whenever the user is in emergency, then the user may not have enough time to dial the number of the people which user wants to contact. So the user has to dial a number to call a police or send a Short Messaging Service (SMS) to the particular

subscriber code, after they received the service they will get in touch with you later. But in case of emergency you don't have enough time to unlock your phone with pattern or code and call or type message.

Also we have various separate modules for women's need and requirement like the menstrual period tracker, beauty and health tips app, safe location places app, Forum for discussing the problems and ideas regarding various topics.

So, this app provides a complete package of combination of security, health and beauty to women through smart phone as today most of the people are carrying smart phones to wherever they go.

1.3   Objectives

The goal of this project is to create an effective and efficient user experience system. The project is a complete package for women's' security, health and beauty. To achieve this project, it focuses on interaction design, information design, multimedia technology, as well as user experience design. Considering the independent choice of different users, this app provides various ways for them to make their own safety plans, beauty and health tips and discuss and share various queries they are interested to discuss in.

The final design is presented as an interactive prototype which demonstrates the functionality of the user interface and experience and is used for usability testing. The main objectives for developing this app and its features are listed as:

- To contact emergency service with a simple gesture on screen or lock key without having to unlock phone.

- To provide a safety map with all secure location pinned and shortest way to reach.

- To receive the notification about upcoming menstrual period time.

- To get details women's period that makes accurate and reliable predictions of menstruation, ovulation and fertile days.

- To anonymously talk, discuss and share idea about various women's health and personal related problems with other users (user may include nurses and doctors).

- To record and securely save audio and video as evidence in case of emergency.

- To get health and beauty related tips within a single simple app.

1.4   Significance of the Study

An idea requires methodology and vision to be developed. Significance of our study will make user (Especially women) more aware about their safety, need, their beauty and health tips and a forum for discussing their ideas.

Our project has targeted user (women) from age group 16-35 highly and moderately for other age groups. We aim this app to be presented to user (women) as a help guide to plan their better times. This system will make women feel somewhat secure while travelling as every emergency contact will be with her travelling and in case of emergency will be there for her. Old system of having to manually dial emergency number will be replaced with a new way where a simple tap on screen will do so for her.

This system will also help women who cannot talk about health and personal related problems openly as they can anonymously talk with doctors and nurses about so. This system will keep information of menstruation period, also provides the beauty and health information.

1.5   Scope and Limitation

1.5.1 Scope

'Women's Arena' is must have mobile app for every woman where they can get information of secure area, their info of menstruation period, keep emergency contacts, get health and beauty tips. This app is also must for women who cannot talk freely about their health related problems. Here they can talk about it with doctors and nurses anonymously without having to logging in.

Instead of having to download different apps for different purposes, 'Women's Arena' is only needed app. everything is included in a single app which will save time and space of having to download multiple apps. This app will also be useful is reducing women crime rate and help in maintaining peaceful society.

1.5.2   Limitation

Since it is a mobile application so without the proper connection of internet every feature listed will be inaccessible. The user Smartphone must contain adequate balance for sending message to the listed emergency contacts. All the details have to be updated into the system so a proper computer skilled manpower is required from the administrator side. Since, it is just a mobile app so it cannot stop crime from taking place. This is a mobile app so cannot be operated from web browser.

Chapter 2

Literature Review

As a part of literature survey, we investigated some applications of women safety that already exist in market. The aim is to observe how these applications work and to see how they can be improved and how are they different. To date it is identified that the following Android Apps of women security are good and are offering relatively similar service.

2.1   Related Work

1. Circle of 6:

 Circle of 6 is also useful for high school students or any female of any age who wants an easy-to-use system to alert friends when she's in a threatening situation. The app also contains pre-programmed national hotline numbers and a local number you can customize for campus security, police or 911. Circle of 6 is the winner of the Department of Health and Human Services / White House "Apps Against Abuse" Challenge and its four developers have significant expertise in the fields of sexual violence prevention, mobile technology, graphic design and healthy relationship building.

2. Hollaback:

The app also contains pre-programmed national hotline numbers and a local number you can customize for campus security, police or 911. Circle of 6 is the winner of the Department of Health and Human Services / White House "Apps Against Abuse" Challenge and its four developers have significant expertise in the fields of sexual violence prevention, mobile technology, graphic design and healthy relationship building. Three in fact are women.

3. Fight back:

Using the Fight back app, the user can simply click a button on her phone to send an SOS message in the form of text message, Facebook message or email to the group of contacts whom she has pre-configured on her phone for such emergency cases. GPS (Global Positioning system) helps to track the user's location details and sends this

information along with the SOS message. It allows one to send quick panic alerts to trustworthy contacts and ensure safety in case of danger situations. For this app to function properly, the user should be in online mode with good GPRS connection.

4. Help Alert:

This safety app is designed not only for protecting women against sexual crimes, but also for general public to protect them in emergency cases of robbery, kidnapping, accidents, etc. It continuously sends longitudinal and latitudinal location of the person experiencing emergency situation to his / her chosen group of contacts.

Help Alert is a free Android app that enhances safety and security of the user by seeking timely help during emergency situations.

5. VithU

Channel V has named the application "VithU" and it is accessible on the Google Play Store essentially VithU is the crisis and emergency application that, at the click of the power button of your android cell phone two times successively starts conveying cautious messages like clockwork in every two minutes to your contacts that you bolster into the application as the designated receivers. The VithU application does so assuming that you might want to be secured; this is the most ideal way. The message that is sent from the app to the guardian says that "I'm in a risk, I require assistance", if its not too much trouble take after my area. The recipient will get a connection to your area like clockwork in every two minutes giving them your upgraded area locations.

6. NiDARR

NiDARR, a Smartphone application designed to provide individuals with a secure and private platform to stay connected to their circles, report gender-based violence and maximize their safety to prevent violence has been developed by ujyalo foundation in Nepal.

NiDARR, meaning "fearless" in Nepali, enables the users to send messages to their safety contact circles with their current location, use an Instant Rescue Button and Panic Button to set up a false alarm to alert their surrounding in a sticky situation, and

report gender-based violence with pictures and audio relevant to the incident from anywhere in Nepal.

7. IOS 11

Apple added a new feature to iOS 11 that makes it easier to get help in an emergency, Called Emergency SOS, the feature turns your sleep/wake button into a panic button and you should set it up now before you need it. When you turn on the Emergency SOS feature, the button on the right-hand side of your phone can quickly call emergency services all you need to do is click the sleep/wake button rapidly five times.

2.1.1 Existing System

There are many different and discrete applications and systems are used to provide different functionalities and feature for beauty, health, safety and menstrual period. But there is not a single system that provides a complete package of all these features. Also those systems only used to give message about period routine but would not provide any notification about coming menstrual period dates.

Those systems would not give any tips on health, beauty, balanced diet and other important contacts nearby.

2.1.2   Proposed System and its Advantages

The prime objective of "Women's Arena" is to create a fully pledged android application designed for women's safety and security. "Women's Arena" has an interesting feature that is simple to operate, pressing the lock button multiple times will send out a predefined text message "I'm in danger please help me", to the registered contacts of your choice which automatically includes address and exact location of yours. Even in the absence of network the application will send messages by retrieving last accessible location.

Advantages

- This is an integrated app that combines the features of 5 different functionalities provided by different app.

- This app when pressing the lock button multiple times will send out a predefined text message "I'm in danger please help me", to the registered contacts of your choice which automatically includes address and exact location of yours

- This app has extra features which will trace the locations and contacts of nearby hospitals and police stations. It works even in absence of network by retrieving the last accessible location.

- It has various separate modules for women's need and requirement like the menstrual period tracker, beauty and health tips app, and safe location places app.

- Forum for discussing the problems and ideas regarding various topics of women's health and personal problems.

Chapter 3

Methodology

3.1   Software Development Lifecycle

Software development is not a straight forward task. It contains continuous process of requirement analysis, design, implementation and testing. Any software is developed in any one of the software development model. We use the incremental Model in our project.
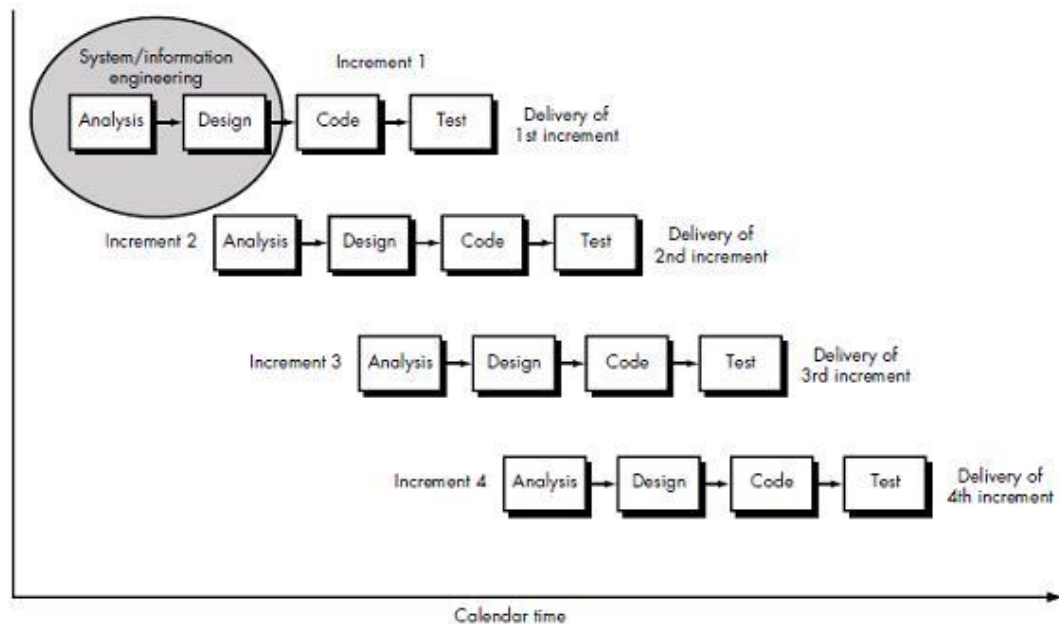

Figure 3.1: Incremental model

Our system held with the concept of the incremental model. Incremental model combines elements of the linear sequential model (applied repetitively) with the iterative philosophy of prototyping. Each linear sequential produces a deliverable "increment" of software.

3.1.1   System Analysis

The goal of systems analysis is to determine where the problems is an attempt to fix the system. This step involves breaking down the system in different pieces and drawing to analyze the situation, analyzing project goal, breaking need to be created and attempting to engage users so that definite requirements can be defined.

3.1.2   System Design

In systems design functions and operations are described in detail, including screen layouts, business rules, process diagrams, and tables of business rules, business process diagrams, pseudo code and a complete entity relationship diagram with a full data dictionary. The output of this stage will describe the system as a collection of modules or subsystems.

3.1.3 Coding

Modular and subsystem programming code will be accomplished during this stage. This phase involves implementing the system by using front end a XML and back end as Java. Other technical used for developing this application are Photoshop, java script.

3.1.4 Testing

The designed system will be tested to ensure that it works correctly and efficiently. In this phase, with each testing, if change is evitable, then the process is analyzed from the very beginning and carried out until all the requirements are fulfilled.

Unit testing and module testing are done in this stage by the developers before the integration of main project. Unit, system and user acceptance testing are often performed. This is a grey area as many different opinions exist as to what the stages of testing are and how much if any iteration occurs.

So, using this incremental model which is iterative linear sequential model, in the first increment we just created a design for our project and secondly during the next increment we developed a module for our safety map. Similarly, after the third increment we developed another module and we continued this approach until all modules are developed.

3.1.5 Iteration

- **First Iteration:**
  - ➢ Research about the requirement of the system
  - ➢ Analyze whether requirement is available or not
  - ➢ Develop mock-up

- **Second Iteration:**

- ➢ Design Program
- ➢ Coding

- **Third Iteration:**
  - ➢ Testing System Module
  - ➢ Develop Prototype

- **Fourth Iteration:**
  - ➢ Overall System Testing
  - ➢ Documentation

3.2   Technology Used

- Android Application Development: Android Studio
- Designing: Adobe Photoshop CS6
- Managing Source Code: Bit bucket
- Application Testing: Android Smartphone
- XML and Java in Android, for extensive frontend and backend application development
- JSON to transmit data objects consisting of attribute–value pairs
- Google APIs for Google Maps
- Firebase for authentication and server.
- Shared Preference as database.

Android Studio

Android Studio is used as programming platform for developing our application.

Android Studio is the official IDE for Android application development, based on InteliJIDEA. On top of the capabilities you expect from IntelliJ, Android Studio offers:

- Flexible Gradle-based build system

- Build variants and multiple apk file generation

- Code templates to help you build common app features Rich layout editor with support for drag and drop theme editing

- Lint tools to catch performance, usability, version compatibility, and other problems

- ProGuard and app-signing capabilities

- Built-in support for Google cloud platform, making it easy to integrate Google Cloud Messaging and App Engine

Android Virtual Device (AVD) Manager: Genymotion and Physical Device

Genymotion and physical devices are used as emulator to preview the app.

AVD Manager has updated screens with links to help you select the most popular device configurations, screen sizes and resolutions for your app previews.

Click the Android Virtual Device Manager in the toolbar to open it and create new virtual devices for running your app in the emulator.

The AVD Manager comes with emulators for Nexus 6 and Nexus 9 devices and also supports creating custom Android device skins based on specific emulator properties and assigning those skins to hardware profiles. Android Studio installs the Intel® x 86 Hardware Accelerated Execution Manager (HAXM) emulator accelerators and creates a default emulator for quick app prototyping.

And for the live testing we use Sony Xperia for verification of the system that was going to be developed.

Compatibility:

Android 4.0 or above

Version 1.5

3.3 Feasibility Study

The feasibility study is performed to determine whether the proposed system is viable considering the Technical, Operational and Economical factors. After going through feasibility study we can have a clear-cut view of the system's benefits and drawbacks.

Technical Feasibility

The proposed system is developed using android studio, XML as front-end tool and Java as the back end. The proposed system needs a android phone above than. As application is very user friendly and GUI OS it is very easy to use. All the required hardware and software are readily available in the market. Hence the system is technically feasible.

Operational Feasibility

The proposed system is operationally feasible because of the following reasons.

- The users are benefited more as this app aims and serves for the various functionalities and features required to them.
- The cost of the proposed system is almost negligible when compared to the benefits gained.

Economical Feasibility

As the necessary hardware and software are available in the market at a low cost, the initial investment is the only cost incurred and does not need any further enhancements. Hence it is economically feasible.

The system is feasible in all respects and hence it encourages taking up the system design.

3.4 Work Division

S.N.	Name	Role	Key Activities
1	Ruby Saud	Project Manager	• Back End Developer, • XML Developer, • Resource, • Validation, • Resource Allocation, and • Project Planning.
2	Bijaya KC	Quality Manager	• Data selection, • Resource Validation, • Notification Manager, • Firebase Real time Database.
3	Samundra Subedi	Developer	• Android API Map Integration, • Maps Display Designer, • QA server, • Documentation.
4	Kiran Kapali	Developer	• Front End Developer, • XML developer, • Layout Creation • Firebase Authentication, • Image Server Service

5	Prabin Khanal	Tester	- Testing Application, - Photoshop (Image Editor), - User Experience Check, - Testing Validity, and - Validation of Application.

Table 3.1: Division of works with team members

3.5 System Overview

Software Descriptions

Introduction

Purpose: The main purpose for preparing this document is to give a general insight into the analysis and requirements of the existing system or situation and for determining the operating characteristics of the system.

Scope: This Document plays a vital role in the development life cycle (SDLC) and it describes the complete requirement of the system. It is meant for use by the developers and will be the basic during testing phase. Any changes made to the requirements in the future will have to go through formal change approval process.

Overview of the Developers' Responsibilities

The developer is responsible for:

- Developing the system, this meets the SRS and solving all the requirements of the system.
- Demonstrating the system and make available in play store for the users.
- Submitting the required user manual describing the system interfaces to work on it and also the documents of the system.
- Conducting any user training that might be needed for using the application.

3.6 System Description

The major goal of our project is to help in assuring women's security wherever they go. Crimes against women are increasing rapidly like rape, acid attack, domestic violence, feticide, dowry & girl trafficking. Our system provides the women safety map in which she can locate secure sites like police station & highly lit area with 24hours' security and CCTV monitoring. This system also includes her periodic time to be safe, known about her last period. Additionally, this system gives hundreds of useful quick beauty tips, trends and ideas. Health tips, emergency contact details, and Forum for Question and Answer where the user share our many health related and personal problems being anonymous are also provided to the users.

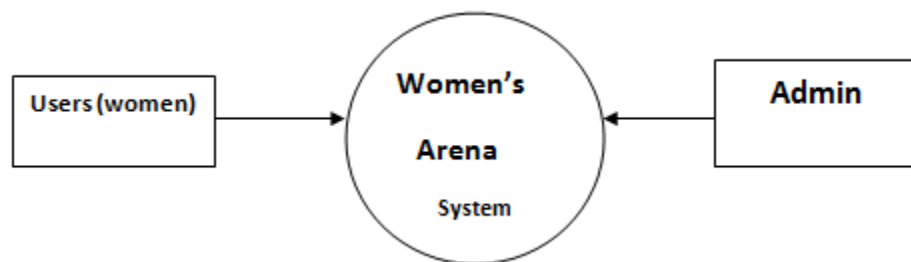The Context diagram is shown in the figure 3.2:

Figure 3.2: Context Diagram of the system

3.7 Developed System modules

The ' Women Arena' has been modularized into following modules:

3.7.1 iPeriod:

iPeriod is a smart and simple way to track women's cycle. It makes accurate and reliable predictions of menstruation and ovulation period. All women, even those with irregular cycles, can rely on iperiod. Log your days in a handy calendar, schedule cycle reminders, records PMI symptoms, and take full control of your health. It includes-

- schedule reminders and get notifications of ovulation, menstruation

- keep your cycle and symptoms history and analyze it.

3.7.2 SafetyPin:

SafetyPin is a social enterprise providing a number of technology solutions to make our cities safer for women. In this module, we provide the list of location from one place to another so that the user can choose her destination and find some safer places and wait until some other person or means can be found to reach the destination.

In case of emergency situation, the user can find the nearest safety location like governments offices, Police office, ATM booth, nearby shops and various nearby safety places areas for women and others.

3.7.3 Emergency contacts:

The app picks up your exact GPS location and shares the location and emergency template message to the group emergency contact number. At the time of emergency, the user can trigger the phone app pressing the phone off button within 2 seconds or directly by clicking the app emergency icon.

Of course, the person whose location is being shared can choose when their location can be disclosed but the app also keeps track of all previous locations and will let users send a message alert when necessary.

This module also provides first four emergency contact numbers i.e. police station, ambulance, blood bank, fire extinguisher. Also different important contacts over followings areas:

- Hospitals

- Police stations

- Ambulance

- Fire Brigade etc

3.7.4 iBeauty:

This module gives hundreds of useful quick beauty tips, latest trends and ideas. Also this module provides the various health tips for the ladies to keep themselves fit and healthy. Beauty and health tips include:

- Skin care tips
- Hair care tips

- Nail care tips
- Lip tips
- Eye care tips
- Eyebrows tips
- Some Nutrients women need most
- Diet tips for weight loss
- Healthy aging tips
- Fitness tips for women
- sanitary tips during period
- balanced diet for pregnant women
- information about contraceptive method
- general health cure tips and many more.

3.7.5   Q&A Forum

In this module, user can talk about their health related problems with many other app users. User can anonymously share their problems and discuss their ideas and views. The user may be of different groups, race, ethnicity and profession so that the various ideas and knowledge can be shared among them. This means no need to provide details and can anonymously share their problems.

3.7.6   Suggestion and Contact:

Here user can suggest ideas to further develop this app and make it more user-friendly. They can also Contact us through provided email address for queries. Furthermore, this section consists of:

  i.   **About Us**

   It provides information about developers.

  ii.   **About App**

   It provides the information of the app about version, compatibility for the device.

  iii. **Send Email and Call Us**

   It provides the email and contact number of developers for the suggestions.

3.8   System Design

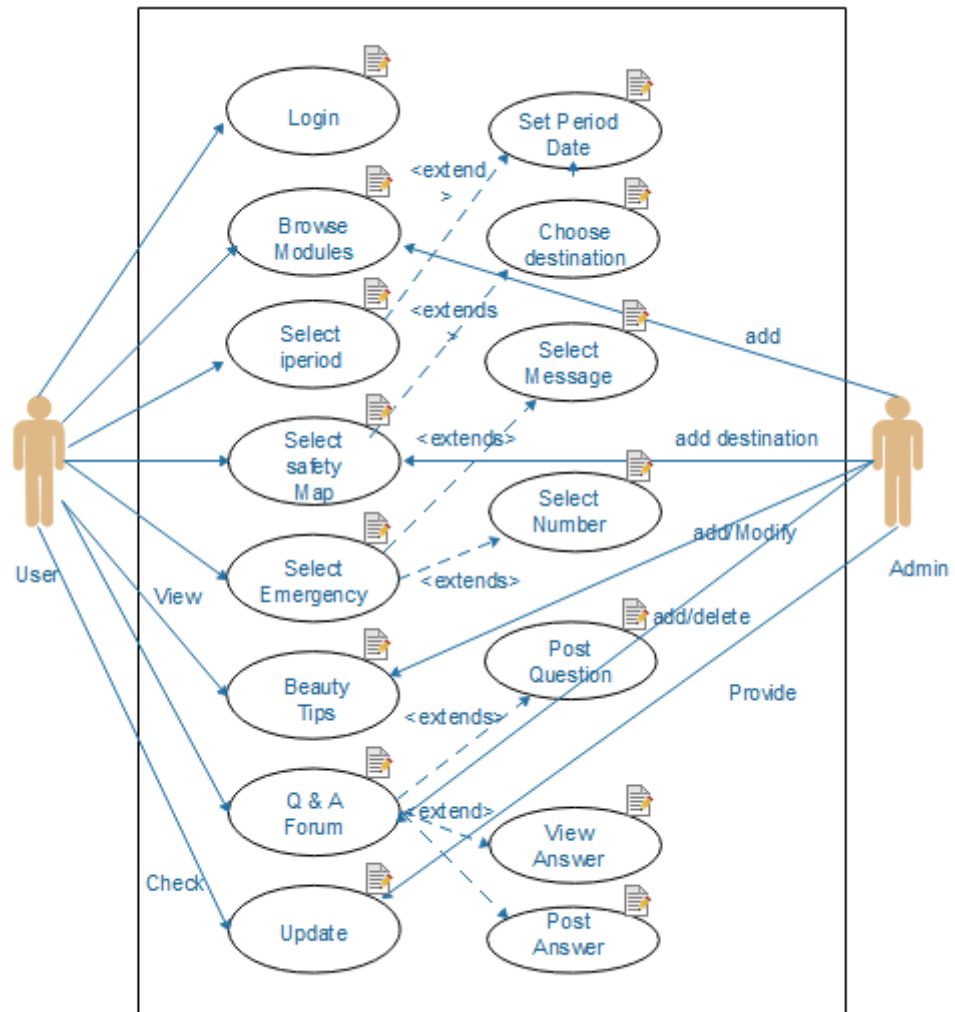### 3.8.1   Use Case Diagram

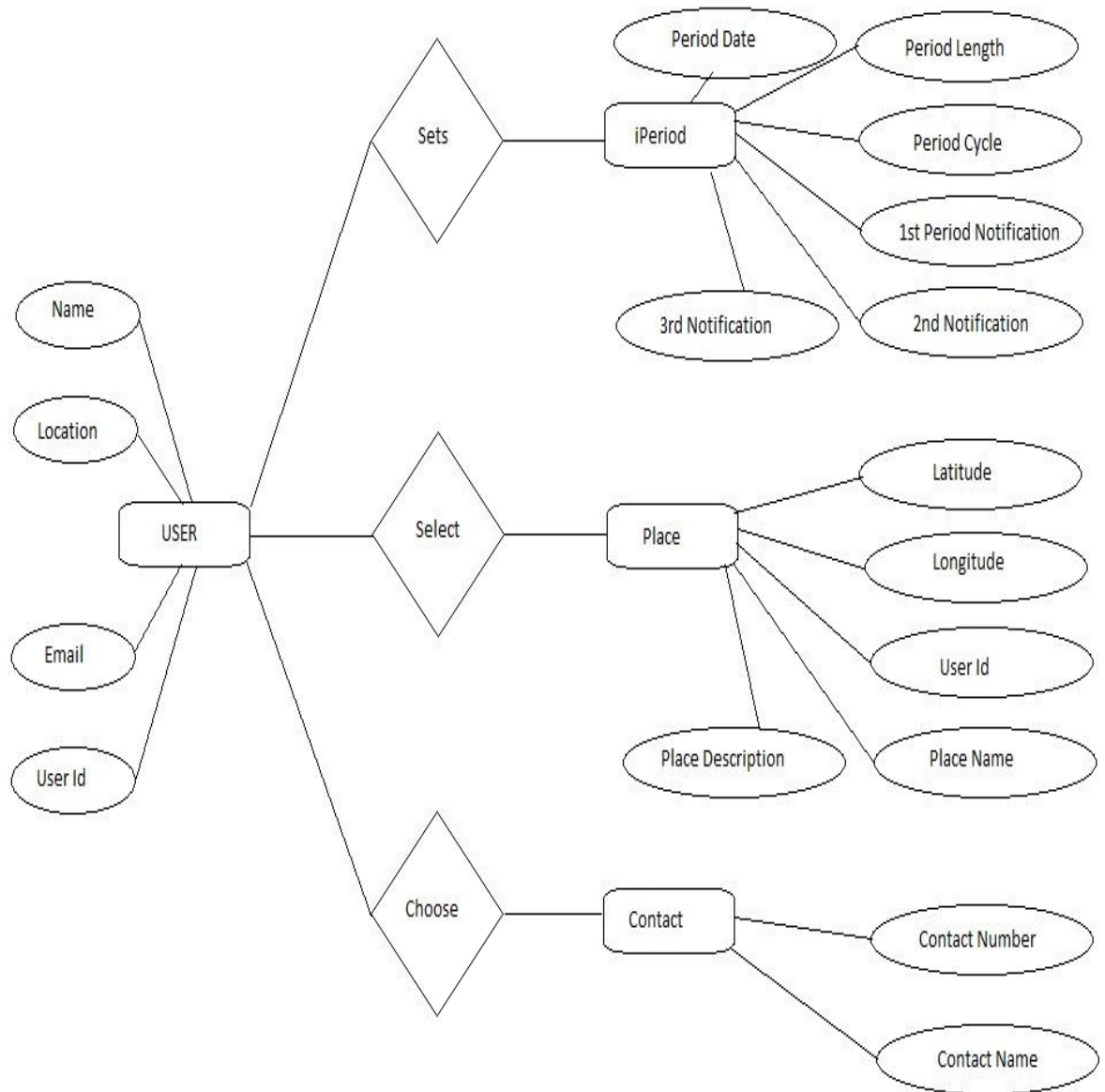Figure 3.3: Use Case Diagram

3.8.2   ER Diagram

Figure 3.4: ER diagram

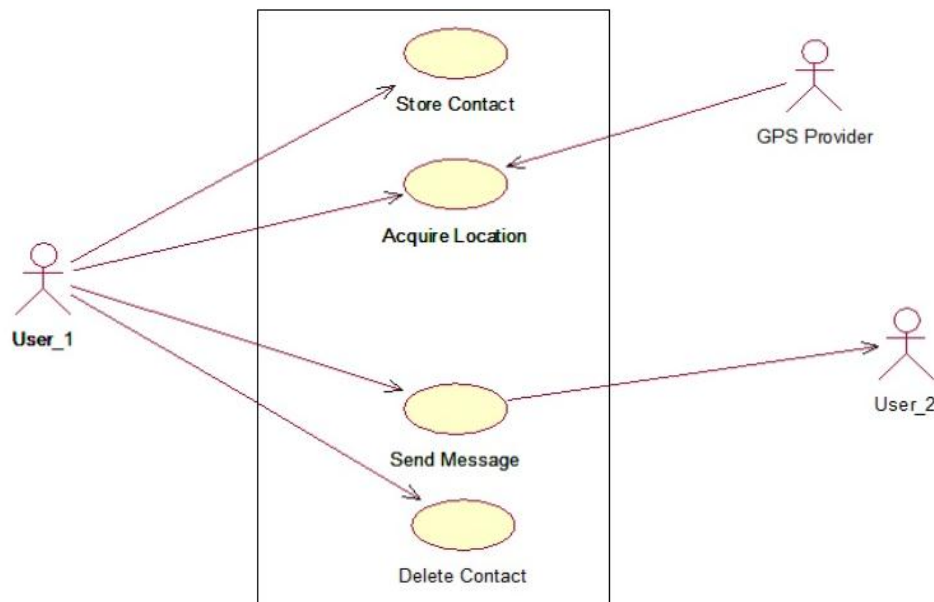### 3.8.3 Use Case diagram for Emergency module

Figure 3.5: Use case diagram for emergency module

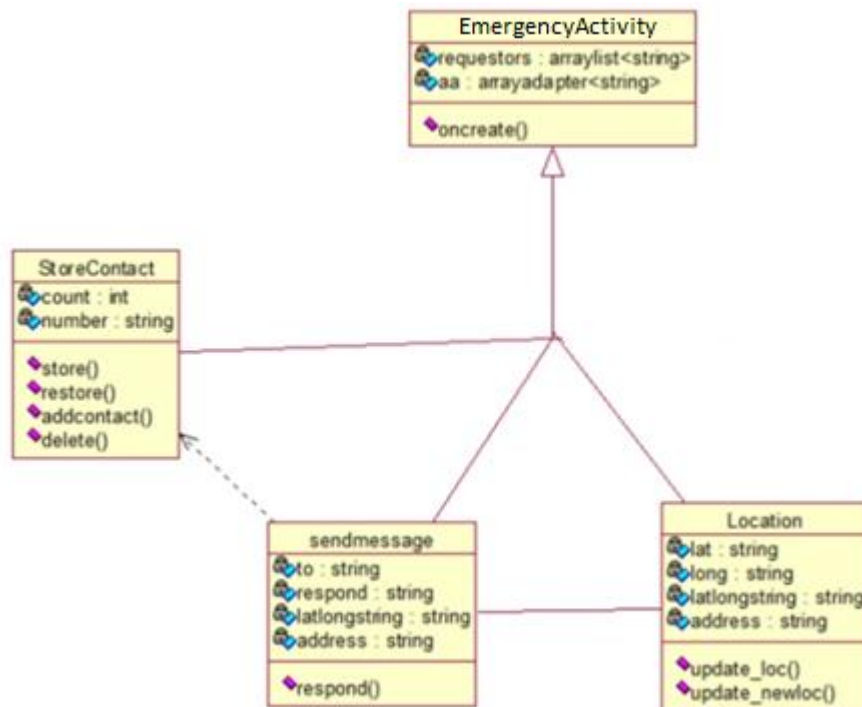### 3.8.4 Class diagram for Emergency Activity

Figure 3.6: Class diagram for emergency module
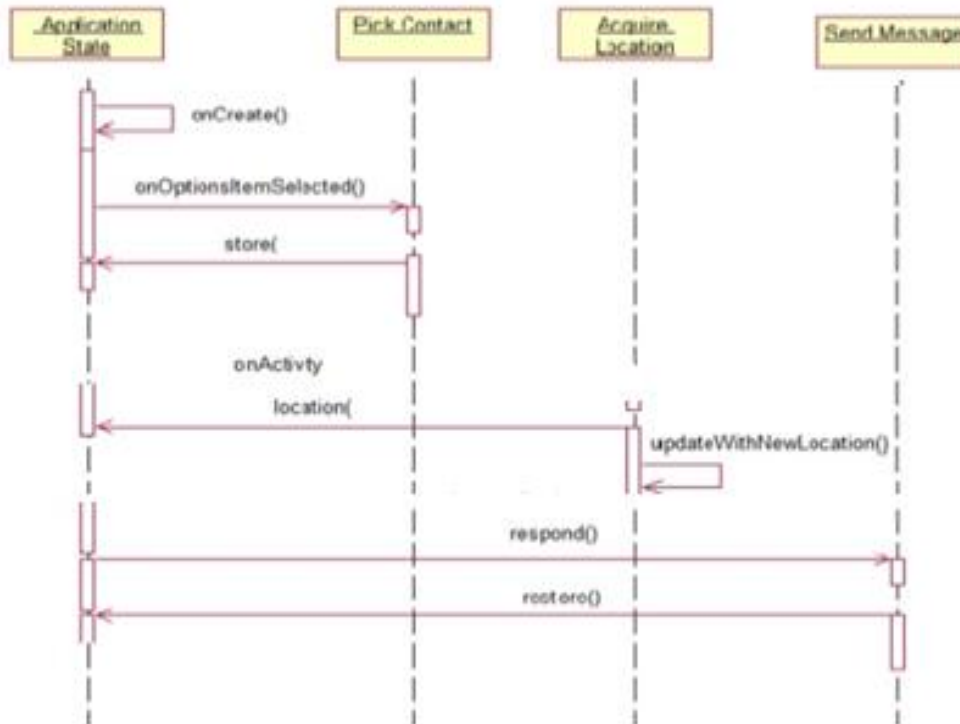
3.8.5 Sequence diagram for Emergency

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Figure 3.7: Sequence diagram for Emergency Module

3.9   Working Environment

This application can be used by any android users with android version IceCreamSandwich (API level 14) or higher. It is supported both in android phones and android tablets. Minimum system requirement:

RAM: 256MB or higher

Free space: Greater than 15MB

Chapter 5

Project Deliverables

The major goal of our project is to help in assuring women's security wherever they go. Crimes against women are increasing rapidly like rape, acid attack, domestic violence, feticide, dowry & girl trafficking. Our system provides the women safety map in which she can locate secure sites like police station & highly lit area with 24 hours' security and CCTV monitoring. This system also includes her periodic time to be safe, known about her last period. Additionally, this system gives hundreds of useful quick beauty tips, trends and ideas. Health tips, emergency contact details, and QA forum where we share our many sexual related problems being anonymous are also provided to the users.

So, on completion of this project the following output will be achieved.

- User can track their menstruation period every month and get the notification before some days of her period to stay alert.
- To get details women's period that makes accurate and reliable predictions of menstruation, ovulation and fertile days.
- To get the location of safer places when travelling from one place to another.
- User can contact emergency service with simple method (pressing lock button multiple times) in case of emergency.
- User can get loads of health and beauty related tips.
- User can contact doctors and nurses (if they are users) and have anonymous discussions about health, sex and other personal related problems.

Chapter 6

Project Testing

To make sure all the elements of our system developed function properly, we created test cases for our work, where validation, reliability and user acceptance were tested.

Testing Table

Test No	Unit	Test	Expected Result	Test Outcome
1.	Layout	Check proper layout for every activity.	Layout of every activity is successfully created	Successful
2.	Google Map API	Display respective markers on secure locations	Markers are placed on every secure locations created.	Successful
3.	Notification	Pre Notification prior to period date.	Notification 2 days prior to expected period date.	Successful
4.	Login	Login with username and password.	User can register with username and password.	Failed
5.	Login	Login with email phone number and password.	User can successfully register.	Successful
6.	Forum	Questions and comment sorting on basis of date.	User can successfully add questions and comment also rate answers.	Successful
7.	Beauty	Images loading without crashing from server.	Images loaded successfully and added as cache in app for offline view.	Successful

Table 6.1: Testing table

Chapter 7

Conclusion and Future Work

7.1 Conclusion

In this report, an android app mainly focused on women's safety has been presented. It also focuses on other activities i.e. iPeriod, Safety map, QA forum and beauty tips. The key feature of this app is to provide some feeling of security to women of this society. It also provides a map with safe places pinned which can be helpful to people who wants to walk securely in unsafe places, as safe places with 24 hours' security or cctv monitoring like ATM, hospital, police station, has been pinned with respective markers. For now, static map from NCIT Balkumari to New Baneshwor, Sallaghari, Bhaktapur and Labim Mall, Pulchwok has been successfully applied and tested. This app also focuses on iPeriod which keeps details about women's period date, ovulation date. Period Calendar, Ovulation date is successfully added and pre notification for period date has been successfully tested. For now, user will receive a notification 2 days prior to expected period date.

The main focus of this app 'Emergency Activity' lets you keep 3 contacts as emergency and will send an emergency message with lat-long if you press power button 5 times in a row. This service was developed keeping in mind emergency situations occurring time to time where people do not have enough time to unlock their smartphones and contact emergency services. The service was successfully tested on our system. Next activity contains QA which is a forum for discussion of different health and sex related problems occurring in daily life of women. Keeping in mind shyness of women to visit doctor or consult family over such problems, this forum lets user to post their problems or comment over other's problem without their details being leaked. In other words, their user id will be hidden. So they can freely share and get solutions for their problems. Our last activity iBeauty contains various tips over health and beauty of women, which are all drawn from valid source and will be regularly updated in future

The person with tablet or mobile with android version IceCreamSandwitch (API level 14) or higher can download and use it. We have tried our best to make the application.

This project gives many ideas about creating the android application using java and xml. It helps us to tackle with many problems that come across while doing project.

7.2 Further Work

Women's Arena is a big application. Due to limitation of time we are not able to provide more feature on this application.

1. Design can be more enhanced.

2. Own server can be made for QA forum and iBeauty.

3. Automatic functioning of voice and video recorder and locking of device can be added if emergency activity is activated.

4. Safety map can be made dynamic instead of present static map.

5. iPeriod can be added with more feature.

Chapter 8

Time Schedule

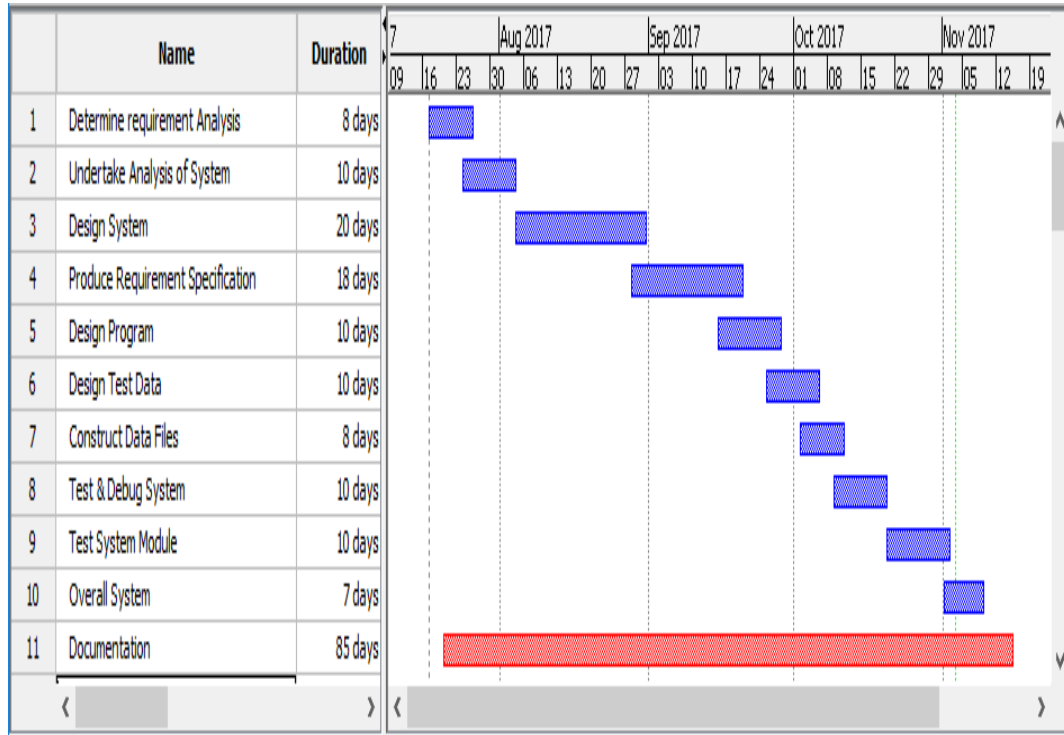The time scheduling of our project is shown in Gantt chart below:

	Name	Duration	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017
1	Determine requirement Analysis	8 days					
2	Undertake Analysis of System	10 days					
3	Design System	20 days					
4	Produce Requirement Specification	18 days					
5	Design Program	10 days					
6	Design Test Data	10 days					
7	Construct Data Files	8 days					
8	Test & Debug System	10 days					
9	Test System Module	10 days					
10	Overall System	7 days					
11	Documentation	85 days					

Table 8.1: Gantt chart for Overall Phase

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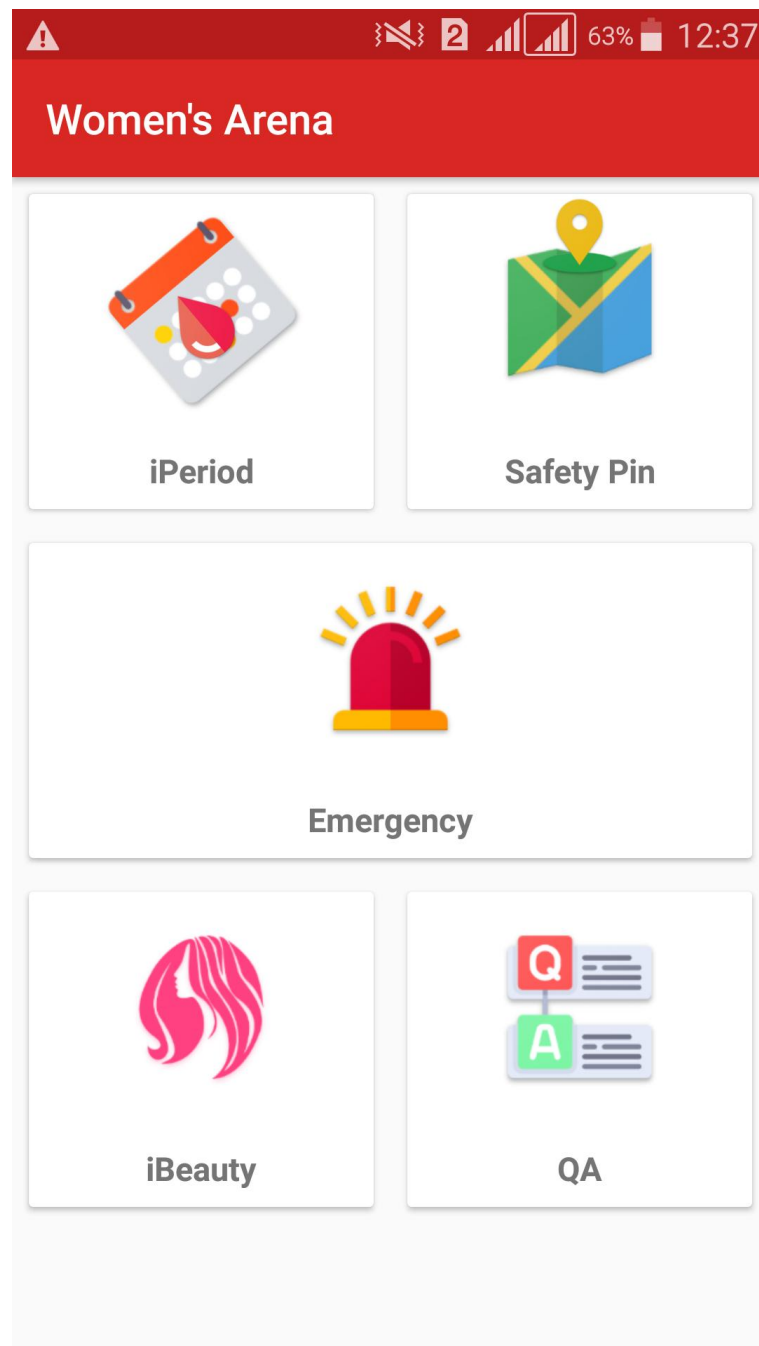
Appendix A

Screenshots of developed systems
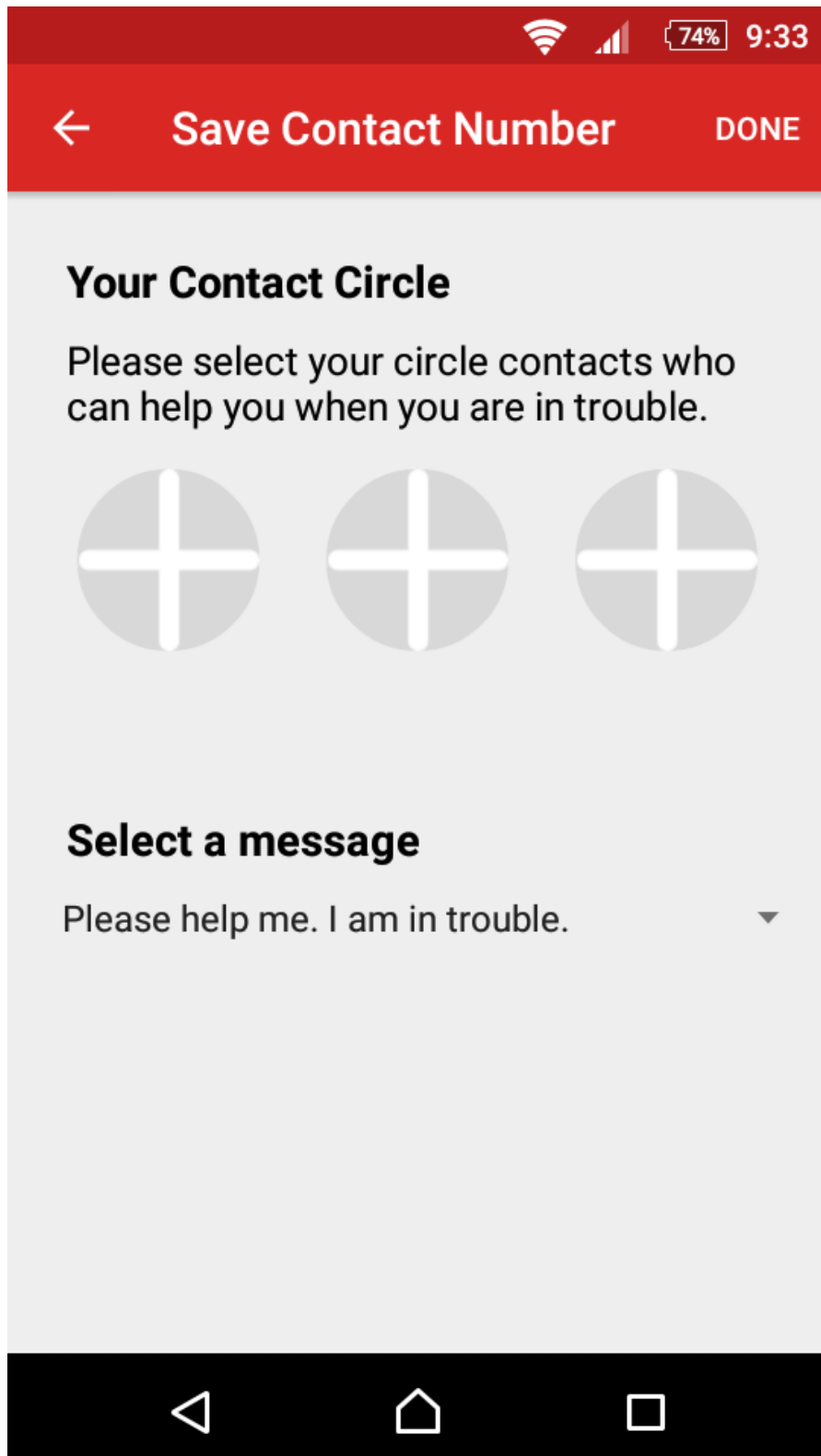

Figure A.1: Home Page

Figure A.2: User Register

Figure A.3: Select Emergency Contact and message
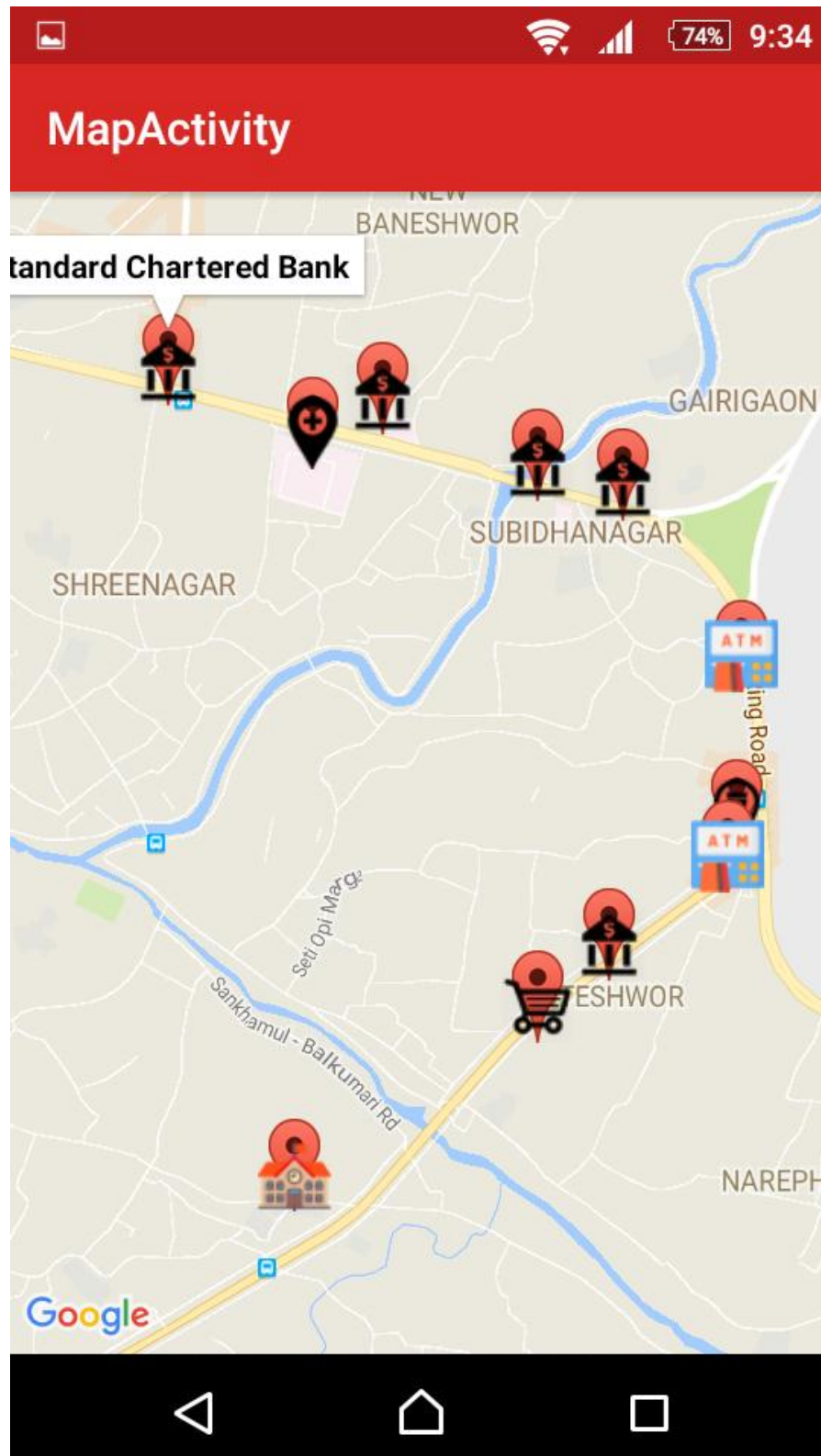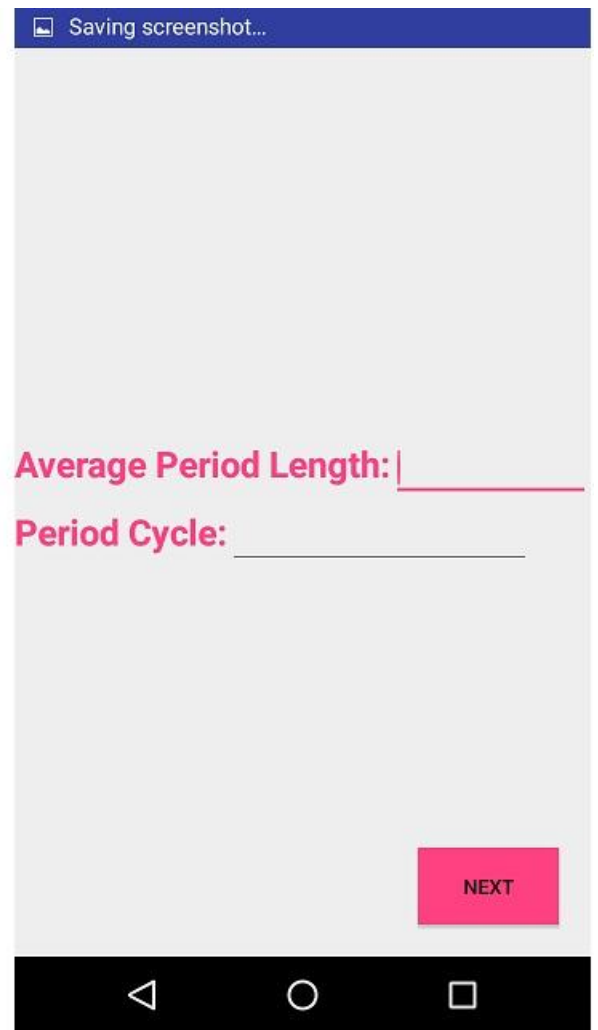
Figure A.4: Safety Map

Figure A.5: Iperiod Activity to (a) choose period date, (b) enter period length and
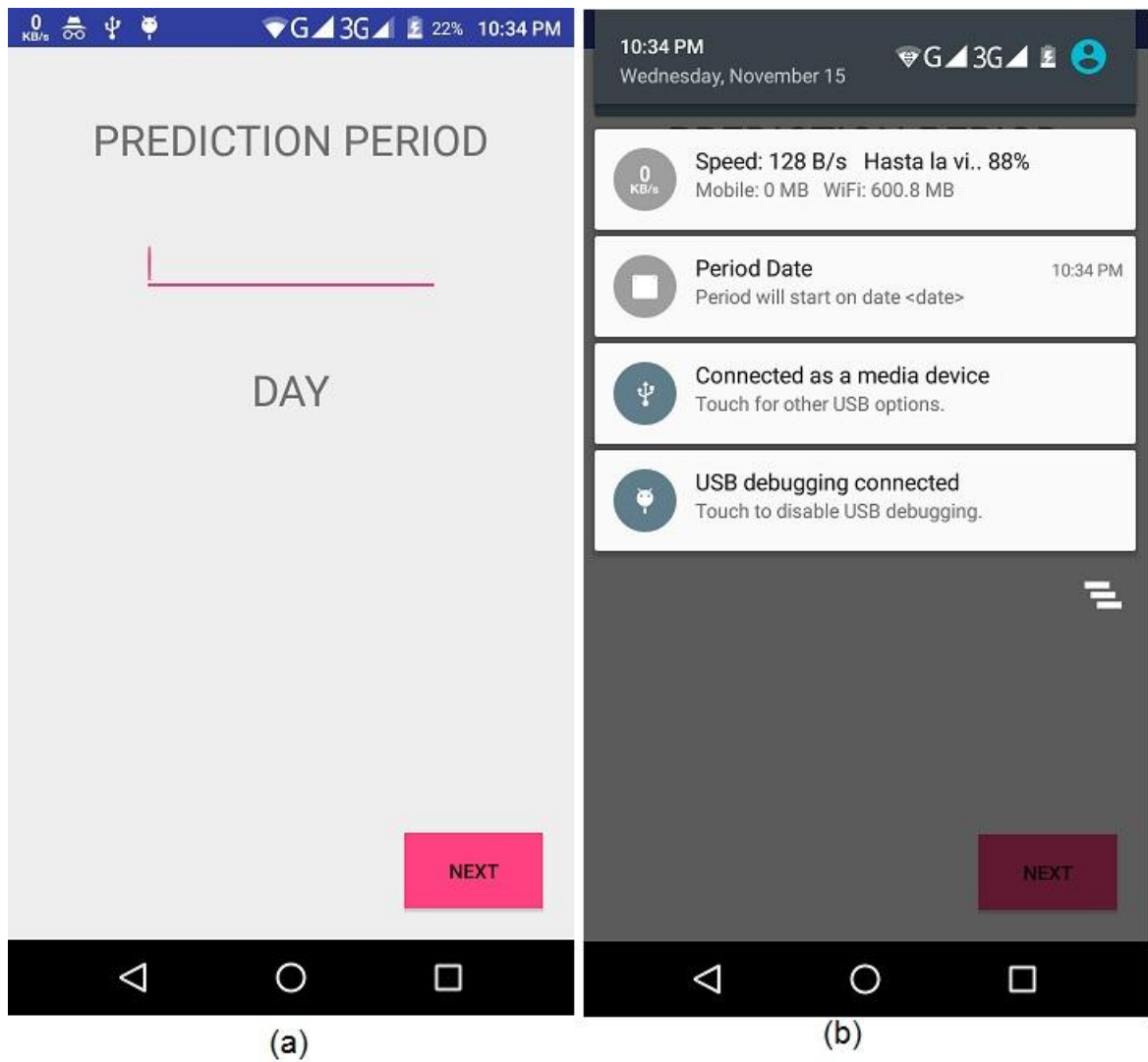cycle

Figure A.6: Iperiod Activity to (a) enter period prediction, (b) show notification
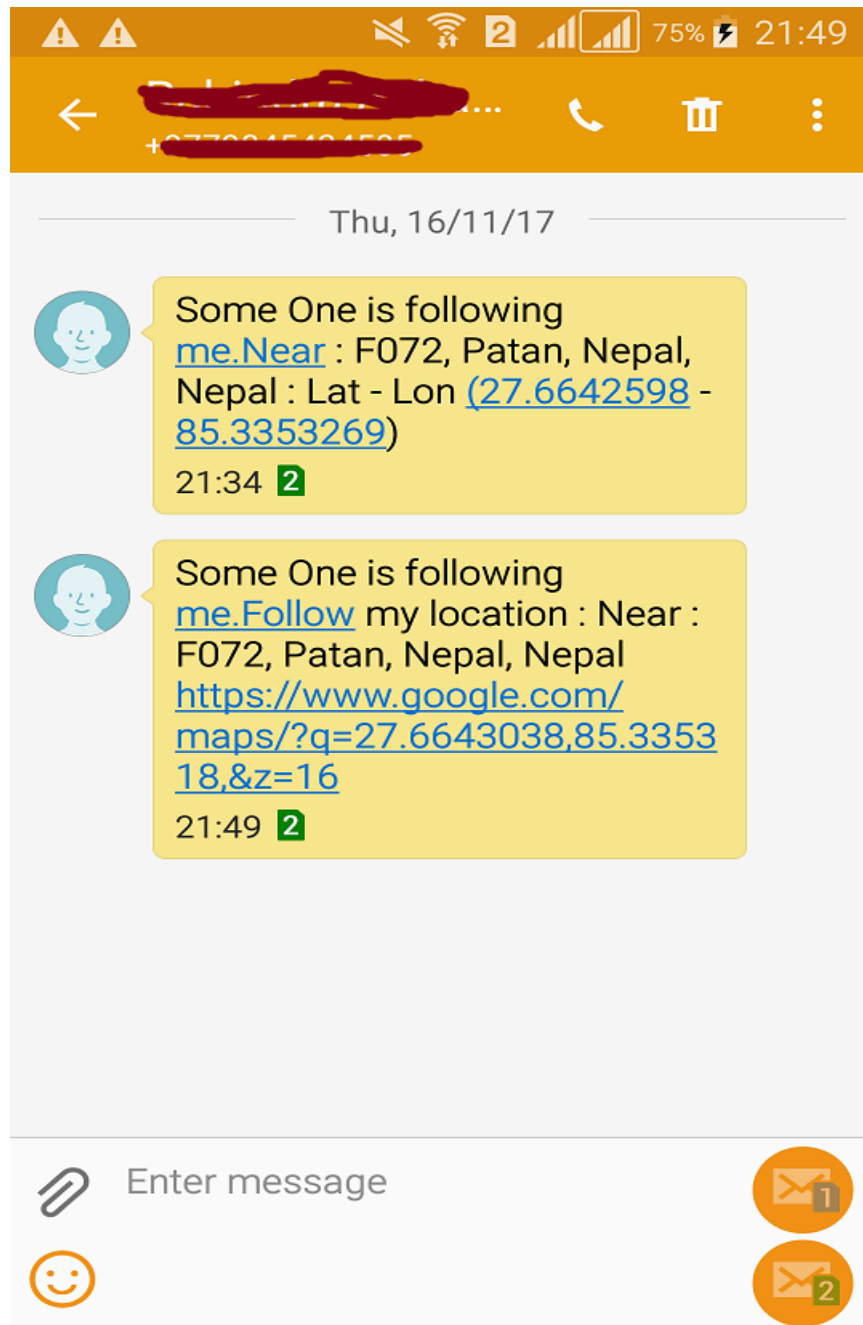
Figure A.7: Beauty Tips in Ibeauty Activity

Figure A.8: Emergency Message Received