ADVANCED WOMENS' SAFETY MONITORING SYSTEM ON ANDROID MOBILE PLATFORM

APARNA V S

12PCA001

A Project Report Submitted to

Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore-641043

In Partial fulfillment of the Requirements for the

Masters' Degree in Computer Applications

March-2015

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Signature of the Supervisor **Signature of the Head of the Department**

Signature of the External Examiner

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SYNOPSIS

The project **"Advanced Womens' Safety Monitoring System on Android Mobile Platform"** helps the user to register personal details and download the android application from the website with all the rights to use. By installing that application in the users android Smartphone the user can send complaints and help request and if any problem occurred means user can send location using GPS. All are aware of importance of human life. Women's are not as physically strong as men in an emergency situation a helping hand would be a relief for them. The best way to minimize the chance of becoming a victim of violent crime (robbery, sexual assault, rape, domestic violence) is to identify and call on resources to help women out of dangerous situation.

A host of new apps have been developed to provide security system to women on their phones. According to WHO (2013) survey the crime against the women are increasing. Women are not safe in bus and train. This application is used to solve the problems of women. The product is an android application that possesses modules of GPS and is capable of sending alert to parents and police. It can also be called as a women monitoring system. Whenever a woman want to use this facility she can switch on this system. It has modules of global positioning system (GPS), global system for mobile communication (GSM)**.** Upon activation the unit sends a basic information about user, with current location to the monitoring station. The monitoring station receives the information.

This application is developed using java, php, and android as frond end tools and MYSQL as back end tool and tested its performance.

CONTENTS

1. INTRODUCTION

The project **"Advanced Womens' Safety Monitoring System on Android Mobile Platform"** helps the user to register personal details and download the android application from the website with all the rights to use. By installing that application in the users android Smartphone the user can send complaints, check for blacklisted places and if any problem occurred means user can send location using GPS. Women are adept at mobilizing diverse groups for a common cause. They often work across ethnic, religious, political, and cultural divides to promote peace. All are aware of importance of women's safety, but must realize that they should be properly protected. Women's are not as physically strong as men in an emergency situation a helping hand would be a relief for them. The best way to minimize chance of becoming a victim of violent crime (robbery, sexual assault, rape, domestic violence) is to identify and call on resources to help women out of dangerous situation.

The monitoring station receives the information. The current location is marked on the Google map. The location gets update, so the monitoring station can monitor the user's location and takes necessary action. The monitoring station and user are under the control of the admin. The admin can view all the process happening in monitoring station. The admin provide the details about the areas which are dangerous.

Whether women are in immediate trouble or get separated from friends during a night out and don't know how to get home, having these apps on their phone can reduce their risk and bring assistance when they need it. Although several were originally developed for students to reduce the risk of sexual assaults on campus they are suitable for all women. In the light of recent outrage in Delhi which shook the nation and woke us to the safety issue for our daughters, people are gearing up in different way to fight back. A host of new apps have been developed to provide security system to women on their phones.

Now a day the crime against the women are increasing. Woman is not safe in bus and train. This application is used to solve the problems of women. The product is an android application that possesses modules of GPS and is capable of sending alert to parents and police. Also say that it is a women monitoring system. Whenever women

want to use these facilities then only can switch on this system. It has modules of global positioning system (GPS), global system for mobile communication (GSM)**.** Upon activation the unit sends basic information about user, with current location to the monitoring station. The monitoring station receives the information. It display the basic details including her name, address in the user information display. The current location is marked on the Google map. The location gets updates at particular interval of time. This application can monitor her location and takes necessary action.

The main aim of this project is to protect women when there is an emergency. The main advantage of this project is that it user friendly and affordable to everyone. The project is developed on the basis of PHP and Java as front end tool and MYSQL as back end tool. And some of the JQUERY features also included in the design process. PHP is used for the designing, coding and it is slight variance of HTML. MYSQL is used as the database; it is used to storing and retrieving data. There are several coding for connecting the database as well as storing data.

Here introduce an app which ensures the protection of women against violence or abuse. This helps to identify and call on resources to help the one out of dangerous situation this reduce risk and bring assistance when user need it and help to identify the location of the one in danger.

1.1. OBJECTIVES OF THE PROJECT

The main objective of this project is to ensure the continues safety of women.The second objective of this application is to reduces risk and brings assistance when a user need help and also to identify the location of the one in danger. Monitoring stations provides continuous monitoring and alert about danger.

1.2. JUSTIFICATION OF THE PROJECT

Woman in the Vedic age was enjoying a higher status. She was the nerve center of the domestic work and was its empress. Domestic happiness and conjugal happiness are constant topics mentioned in the *Rig Veda*. The seer of the *samhitas* was never tired of speaking the bond that binds a happy home governed by a woman. But Now-a-Days Violence affects the life of millions of women and girls in all socio-economic classes around the world. It cuts across cultural and religious barriers and takes a variety of forms, from domestic abuse to the child marriages and female circumcision. Violence against women is largely unreported. Fear and stigma often prevent women from reporting incidents of violence or seeking assistance. In fact, 80 percent of women who have been physically abused by their partners have never informed the Police, NGOs or shelters.

Violence against women takes many forms – physical, sexual, psychological and economic. These forms of violence are interrelated and affect women from before birth to old age. Some types of violence, such as trafficking, cross national boundaries. Women who experience violence suffer a range of health problems and their ability to participate in public life is diminished. Violence against women harms families and communities across generations and reinforces other violence prevalent in society. Violence against women also impoverishes women, their families, communities and nations. Violence against women is not confined to a specific culture, region or country, or to particular groups of women within a society. The roots of violence against women lie in persistent discrimination against women. Up to 70 per cent of women experience violence in their lifetime. Violence by an intimate partner The most common form of violence experienced by women globally is physical violence inflicted by an intimate partner, with women beaten, coerced into sex or otherwise abused. A World Health Organization (WHO) study in 11 countries found that the percentage of women who had been subjected to sexual violence by an intimate partner ranged from 6 per cent in Japan to 59 per cent in Ethiopia die from homicide are killed by their current or former husbands or partners.

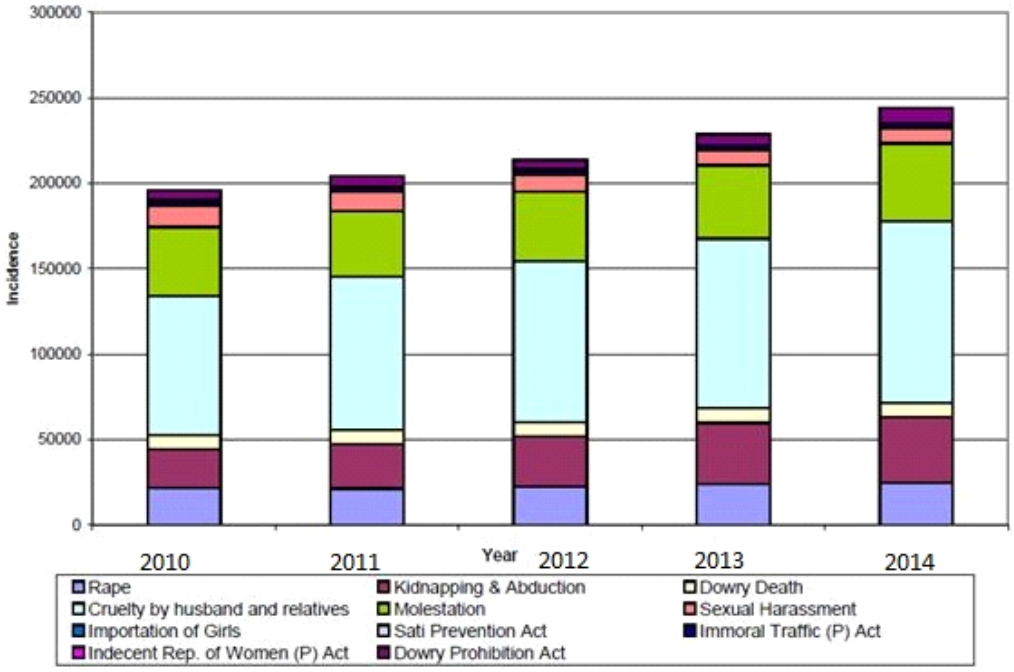


Fig: 1.1 Crime head wise incidence of crime against women

- Dating violence
- Domestic and intimate partner violence
- Emotional abuse
- Human trafficking
- Same-sex relationship violence
- Sexual assault and abuse
- Stalking
- Violence against immigrant and refugee women
- Violence against women at work
- Violence against women with disabilities

According to WHO (2013) [1] survey about Crime head wise incidence of crime against women (fig: 1.1). A decreasing trend in rape cases has been observed during 2010 – 2011.Thereafter an increasing trend in the incidence of rape has been observed during the periods 2011- 2014. These cases have reported a decline of 0.3% in the year 2009 over 2008, an increase of 3.6% in 2010 over 2009 and an increase of 9.2% in the year 2011 over the year 2010 and further increase of 3.0% in the year 2012 over 2011. Madhya Pradesh has reported highest number of rape cases (3,425) accounting for 13.7% of total such cases reported in the country. Mizoram has reported the highest crime rate of 20.8 as compared to national average of 4.3. Rape cases have been further categorized as incest rape and other rape cases.

Incest rape

Incest rape cases have increased by 46.8% from 267 cases in 2011 to 392 cases in 2012 as compared to 3.0% increase in overall rape cases. Maharashtra (77 cases) has accounted for the highest (19.6%) of the total such cases reported in the country.

Rape victims

There were 24,915 victims of rape out of 24,923 reported rape cases in the country during the year 2012. 12.5% (3,125) of the total victims of rape were girls under 14 years of age, while 23.9% (5,957 victims) were teenaged girls (14-18 years). 50.2% (12,511 victims) were women in the age-group 18-30 years. However, 12.8% (3,187 victims) victims were in the age-group of 30-50 years while 0.05% (135 victims) was over 50 years of age. Offenders were known to the victims in as many as in 24,470 (98.2%) cases. Parents / close family members were involved in 1.6% (393 out of 24,470 cases) of these cases, neighbors were involved in 34.7% cases (8,484 out of 24,470 cases) and relatives were involved in 6.5% (1,585 out of 24,470 cases) cases.

Kidnapping & abduction (Sec. 363-373 IPC)

These cases have reported an increase of 7.6% during the year as compared to previous year (35,565 cases). Uttar Pradesh with 7,910 cases has accounted for 22.2% of

the total cases at the national level. Delhi UT has reported the highest crime rate at 25.3 as compared to the national average of 6.5.

Dowry Deaths (Sec. 302, 304B IPC)

The cases of dowry deaths have decreased by 4.5% during the year 2012 over the previous year (8,618 cases). 27.3% of the total such cases reported in the country were reported from Uttar Pradesh (2,244 cases) alone followed by Bihar (1,275 cases) (15.5%). The highest rate of crime (2.7) was reported from Bihar as compared to the national average of 1.4.

Torture (cruelty by husband or his relatives) (Sec. 498-A IPC)

'Torture' cases in the country have increased by 7.5% over the previous year (99,135 cases). 18.7% of these were reported from West Bengal (19,865 cases) followed by Andhra Pradesh 12.6% (13,389 cases) and Rajasthan 12.5% (13,312). The highest crime rate of 47.8 was reported from Tripura as compared to the national rate at18.2.

Assault on women with intent to outrage her modesty (Sec. 354 IPC)

Incidents of Assault on Women with Intent to outrage her Modesty in the country have increased by 5.5% over the previous year (42,968 cases).Madhya Pradesh has reported the highest incidence (6,655) amounting to 14.7% of total such incidences. Kerala has reported the highest crime rate (20.9) as compared to the National average of 7.7.

Insult to the modesty of women (Sec. 509 IPC)

The number of such cases has increased by 7% during the year over the previous year (8,570 cases). Andhra Pradesh has reported 40.5% (3,714 cases) followed by Maharashtra 14.1% (1,294 cases) of total incidences during the year 2012. Andhra Pradesh has reported the highest crime rate (8.7) as compared to the national average of 1.6.

Importation of girl from foreign country

A decrease of 26.2% has been observed in crime head as 59 cases were reported during the year 2012 as compared to 80 cases in the previous year (2011). Karnataka (32 cases) and West Bengal (12 cases) have together contributed 93.2% of total such cases at the national level.

According to new surveys and statistics the violence against women is increasing day by day .There is a high need of an effective solutions and precautions to prevent the harassment and violence against women. The modern technologies can make a suitable remedy for this. Smart phones and android technology are very popular and commonly used technology in today world which can make as effective solution and precaution to prevent the harassment and violence against women.

1.3 ABOUT THE ORGANIZATION

Equadriga software Pvt Ltd is an Information Technology Company specializing in Web Development, E-Commerce Applications, and Mobile Application, Face book Application and Software development. It is a young and dynamic company, providing a highly professional level of service in site design, internet application development, and e-commerce and software solutions. Our team consists of experienced professionals using the most advanced design and development tools.

The company has been very choosy in selecting staff and associates and has over the period developed a strong network of IT professionals. Having a passion for "Excellence in Execution," experienced professionals and a sincere desire to service your specific needs, allows us to accomplish our objectives. ATS has been surviving on performance.

It dedicated Professionals work round the clock, to satisfy customer needs. Equadriga is proud to say has been associated with Growth and would like to keep it that way. Its internal culture fosters mutually beneficial relationships with its clients and people. They take responsibility for their performance in every decision and action they take. Their expertise offers an ability to understand and drive the impact of customer satisfaction and loyalty on the bottom line. They are growth oriented, risk inclined, decentralized in decision making, biased towards action, performance driven, inspirational and strive to identify things which, when made better, improve people's lives

2. SYSTEM SPECIFICATION.

2.1 SOFTWARE SPECIFICATION

Front end	:	JAVA and PHP
Back end	:	MYSQL
Operating system	:	WINDOWS 7
Mobile os	:	VERSION 2.3.6 GINGERBREAD
IDE	:	ECLIPSE Indigo 3.7

2.2 HARDWARE SPECIFICATION

Processor	:	Intel Core i3 2.30GHz
Ram	:	2GB
Hard disk	:	500 GB
Android mobile	:	GT-S5360

2.3 SOFTWARE DESCRIPTION

Front End tools of this project are java and php. The form designing was done by using php and execution and action implementation of the form designing is done by using java coding. Data base table designing and data base connectivity are done by using MYSQL queries.

Frond End

Java

Initially the language was called as “oak” but it was renamed as “Java” in 1995. The primary motivation of this language was the need for a platform-independent (i.e., architecture neutral) language that could be used to create software to be embedded in various consumer electronic devices.

PHP

Hypertext Preprocessor. In its early development by a guy named Erasmus Leadoff, it was called Personal Home Page tools. When it developed into a full-blown language, the name changed to be more in line with its expanded functionality.

The PHP language’s syntax is similar to the syntax of C, so if you have experience with C, you’ll be comfortable with PHP.PHP is actually simpler then C because it doesn’t use some of the more difficult concepts of C.PHP also doesn’t include the low-level Programming capabilities of C because PHP is designed to program Web sites and doesn’t require those capabilities. PHP is particularly strong in its ability to interact with database.

Back End: MYSQL

MySQL and PHP are frequently used together. They are often caller the dynamic duo. MySQL provides the database part, and PHP provides the application part of your Web database application.

MySQL is a fast, easy-to-use RDBMS used for database on many Web sites. Speed was the developers’ main focus from the beginning. In the interest of speed, they

Made the decision to offer fewer features then their major competitors (for instance, Oracle and Sybase). However, even though MySQL is less full featured than its commercial competitors, it has all the features needed by the large majority of database developers .It's easier to install and use then its commercial competitors, and the difference in price is strongly in MySQL's favor.

Operating System

Windows 7

Windows 7 is an operating system produced by Microsoft for use on personal computer, including home and business desktops, laptops, net books, tablet PCs, and media center PCs. Windows 7 is succeeded by Windows 8. Presentations given by Microsoft in 2008 focused on multi-touch support, an updated Windows shell with a new task bar, referred to internally as the super bar, a home networking system called Home Group, performance improvements.

Windows 7 includes improved globalization support through a new Extended Linguistic services API to provide multilingual support. Windows 7 includes ea new networking API with support for building SOAP based web services in native code; new features to simplify development of installation packages and shorten application install times.

Android OS

Android is a Linux-based operating system designed primarily for touch screen mobile devices such as Smartphone and tablet computers. The Global Positioning System (GPS) is a space-based satellite navigation system that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites. Google Maps is a web mapping service application and technology provided by Google which powers many map-based services, including the Google Maps website, Google Ride Finder etc.

3. SYSTEM STUDY AND ANALYSIS

3.1 EXISTING SYSTEM

The existing system is giving complaints in police station after the incident had occurred. So it takes time for the actions to be taken. It will not help to take prevention or immediate action against the issue. The main limitation is complaints can be given only after the incident occurred. Some applications are there to protect ourselves, mainly designed for iOS .These are just applications. That is it does not ensure full security. The system does not have a monitoring station for checking updates from users. The system is benefitted only for an iphone user. As it is very costly, normal people can't make use of it. Earlier, There is no security software for women's. That time women's faces lot of problems in our society. If any threatening situation has occurred, it is not reliable to contact with authority at real time. There are no facilities for girls. Even mobile phone is not comfortable to in for all the authorized people quickly.

The observation is helpful to understand and study the entire system. By observing, it is possible to understand the working of the existing system. It also validates the data gathered by other means. It also gave a better understanding about the poor working of the existing system.

Disadvantages

- Time consuming process by giving written complaints.
- It leads to consumption of time. Slow process for taking action against culprits.
- No monitoring station to help public
- Applications in iphone are costlier

3.2 PROPOSED SYSTEM

In order to meet the shortcomings of the existing system, a new system is introduced. The proposed system is an application that can be installed in android smart phones. The proposed system has three panels. They are admin, monitoring station and user. First the user has to register in the website. It consists of a website and an android mobile application. Public who want to use this system should register through the website and they can download the free android application too.

The next step is to download the android application. If the user is at any dangerous situation the user can send emergency alerts to the monitoring station. The monitoring station receives the information. It displays the basic details including her name, address in the user information display. The location of the user is traced at the monitoring station. The proposed system is mainly aimed for android Smartphone users. Through this application users can send complaints, send the location, and also can view the areas which are not safe.

The apps include various features, including sending text messages, e-mails, IMs, or even Tweets to close friends (containing approximate location,]audio snippets and pictures) or emitting a loud intermittent "shrill whistle" in the manner of a rape alarm. Additional features include preventive alerts. Some apps allow customizing the alert message sent and the ringtone that signals the reception of a new alert. They normally include different triggering mechanisms to cope with different emergency situations.

This womens' safety apps designed to keep you and your friends safer. It's packed with features for both everyday safety and real emergencies, making it the ultimate safety tool for you and everyone you love. These apps put safety in your hand for free.

Advantages

- Faster responsiveness.
- Easy to use.
- It take less time.
- Location transparency.
- No additional installation is needed.
- Reduction of crimes in the society and to take corrective actions against issues.
- Providing security to the public within less time.
- Location tracking is provided to find the location of the user.
- Easy to use by the user.
- Multi user system, data accuracy and flexibility are some other aspect.

3.3 FEASIBILITY STUDY

Feasibility study involves the analysis of the proposed system to find out its visibility. The project to be considered feasible only if the proposed system is useful. Thus the purpose of the feasibility is to gather and to analyze.

There are three types of feasibilities.

- Technical Feasibility
- Operational Feasibility
- Economic Feasibility

3.3.1 Technical feasibility

The Project "**Advanced Women's Safety Monitoring System on Android Mobile Platform**" has been developed with Frontend as android, Backend as MYSQL. The android is current growing technology. It does not require any specific platform to

run the application. Due to avoid malware attack antivirus is needed so I suggest to buy a licensed antivirus.

3.3.2 Operational feasibility

Proposed system is operationally feasible because it is supported by all persons and it is handled by other persons and who is now the system can maintain the system by getting knowledge about the processes in the system.

3.3.3 Economic feasibility

The proposed system reduces the cost of the application because the suggest tool is cost free. It is easily to modify according to new trends and advanced techniques in the current technology.

Compared to the existing systems this proposed women security app is more reliable one. It has faster responsiveness .And Easy to use and it has more user friendly interfaces. It takes less time to response. Proposed system is operationally, technically and economically feasible.

4. SYSTEM DESIGN

4.1. SYSTEM ARCHITECTURE

The system design of women safety monitoring and alert system is very systematic as well as user friendly. The system architecture of this project is very simple to use but it gives more important to security and authorized access.

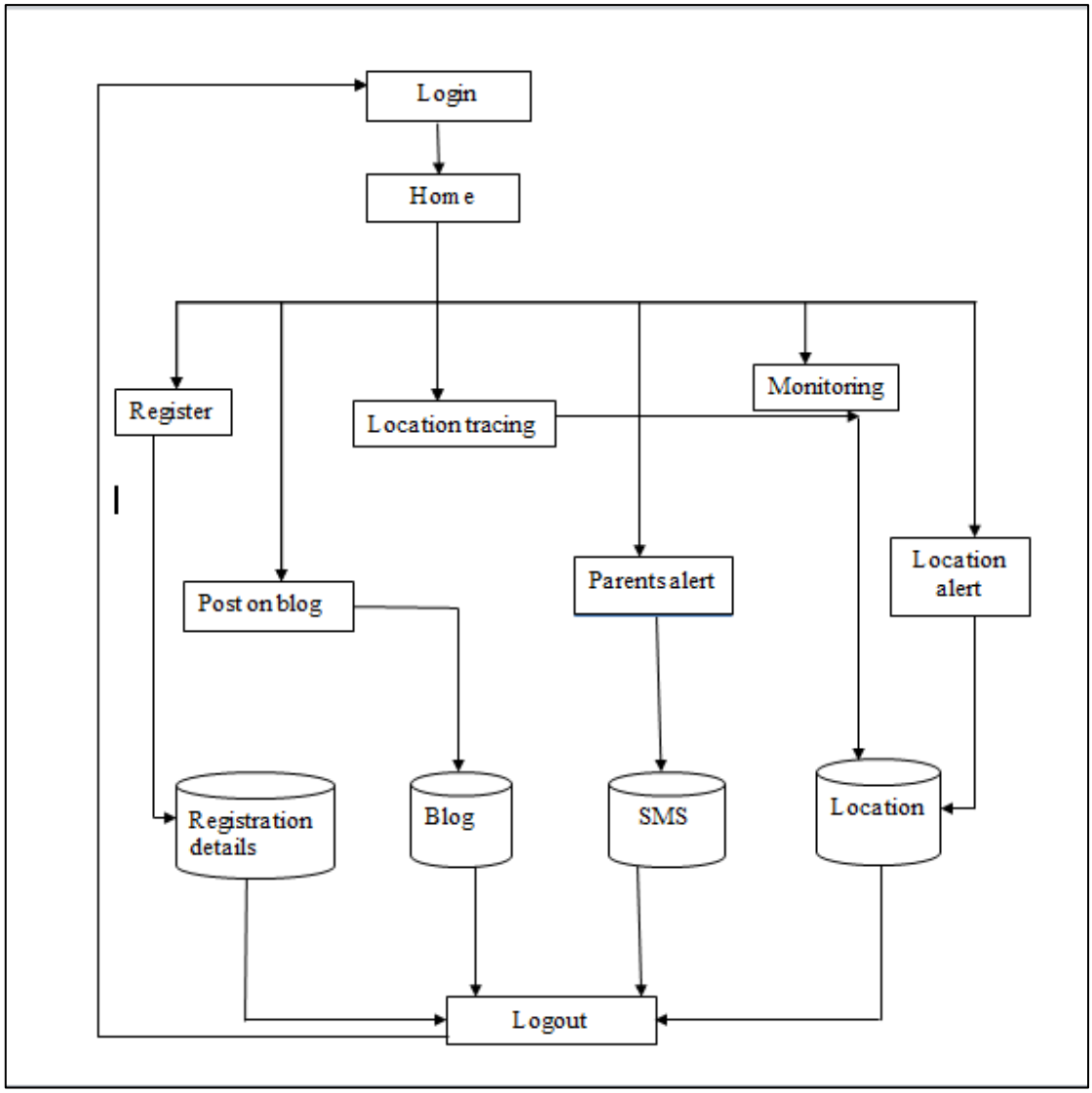


Fig: 4.1.System Architecture

The accessing of the application is restricted by registered user .Administrator provide separate user name and password for each users .The user can enter into the home page of the app only after enter a valid username and password. If a user a user registered in one time it is valid for till they cancel the registration.

A registered user will get all type of help and assistance from this app .The user is monitored by the monitoring station at all time when the app is on. The location database stores all location tracing details including the latitude - longitude of the place and time when the person enter in that region, when they leave from there etc. In the case of an emergency the user can easily make alert by click a simple alert button. The alert contains an emergency message as well as the location details of the user where they are in current situation also.

4.2. INPUT DESIGN

To ensure that the input is understood by the user Input design is one of the most expensive phases of the operation of computerized system and is often the major problem of a system. A larger number of problem with a system can usually be traced back to fault input design and method. Needless to say, therefore that the input data is the life block of a system and has to be analyzed and designed with the most consideration.

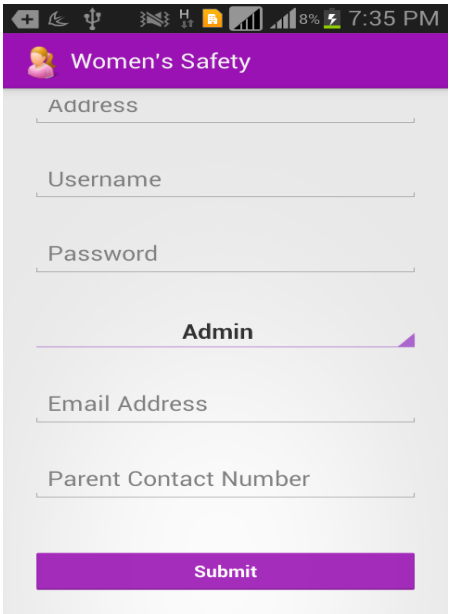


Fig: 4.2 Input screen

The input forms of this project are designed using php and java. The input forms get the all details of the new user. The input design is capable to collect the important details like name of the user, address, phone number, email id etc. **(Fig: 4.2.1)**. From the administrator side input forms collect the details about the block listed place and alert details (refer appendix screenshots (screen: C.1), (screen: C.2), (screen: C.3)).

System analyst decide the following input design details like, what data item to input, what medium to use, how the data should be arranged or coded data items and transactions needing validations to detect errors and at last the dialogue to guide users in providing input.

Input data of a system may not be necessarily a raw data captured in the system from scratch. These can also be the output of another system or sub-systems. The design of input covers all phase of input from the certain of initial data to actual entering the data to the system for processing. The design of input involves identifying the data needed, specifying the characteristics of each data item, capturing and preparing data for computer processing and ensuring correctness of data.

4.3. OUTPUT DESIGN

Output design generally refers to the results and information that are generated by the system. For many end users, output is the main reason for developing the system and the basis on which they evaluate the usefulness of application. Output forms are also designed in a specific manner as per the user requirements.

The output of this project displays,

- The alert about the blocked area when user enters into the blocked area.
- In the admin database the monitoring station add the details of the blocked area.
- Parents can also view the location details of the user as well as the latitude and longitude address of the location when user enters in the block listed area.

Fig: 4.3. User Output Screen Design

The output screen of this project designed using Google map and database tables. The output screen in the user side is alert message about the block listed place (**Fig 4.3.1)** and location details of their current position. But in the admin side it is an alert message as well as the location details added in the admin data base.(**Fig: 4.3.1).**For more output screen details (refer appendix screenshots (screen: C.6), (screen: C.7), (screen: C.8)).

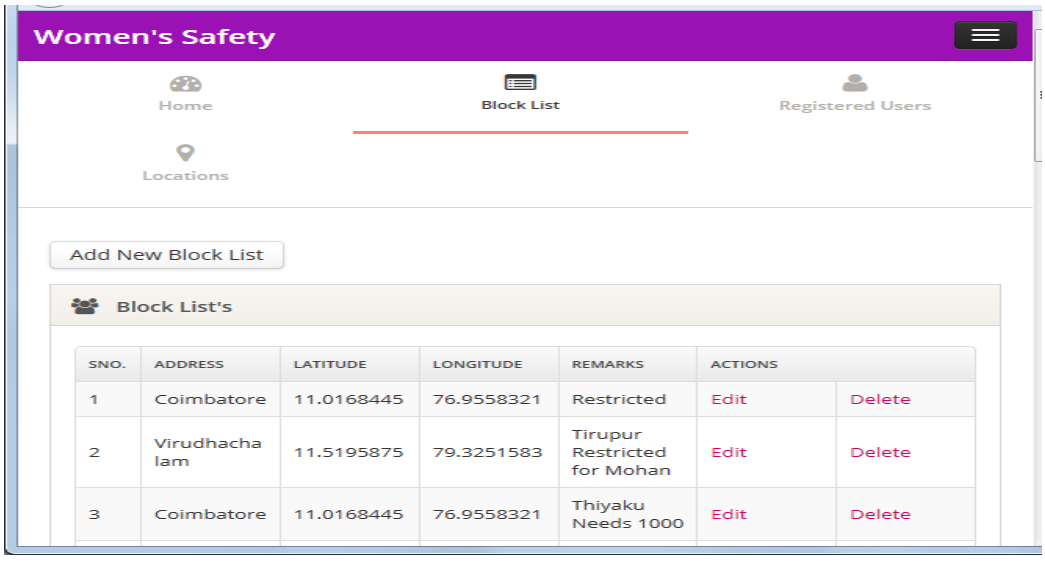


Fig: 4.4.admin output screen

4.4 DATABASE DESIGN

MySQL, is an open source relational database management system. It is based on the structure query language (SQL), which is used for adding, removing, and modifying information in the database. Standard SQL commands, such as ADD, DROP, INSERT, and UPDATE can be used with MySQL.

MySQL can be used for a variety of applications, but is most commonly found on Web servers. A website that uses MySQL may include Web pages that access information from a database. These pages are often referred to as "dynamic," meaning the content of each page is generated from a database as the page loads.

4.4.1 Table design

Data base table design of this project contains six main tables**.** This table are designed by using the MySQL queries. These are relational database tables with strong and systematic table design to handle various levels of data. The first table is designed for registration of the user it contains the important user details.in this table user id is set as primary key and set auto increment property for id. User id is unique for each users.so using this user id find out the details of a person easily from a large database.It avoids the concurrency of data primary key prevent the repeat of the data. The second table contain the location details. It contains the details of the location. International Mobile Equipment Identity Imei set as a foreign key, it is help to make connection with other tables. The location stores the latitude and longitude of the place, time, date etc. The third table contains the personal details of the user. The fourth table store the details of the blog. The fifth table contains the details of the block listed place.

4.4 Database: Table Design

There are six main tables are used for store datas in the database.

- Registration table
- Location table
- Personal Details table
- Complaints table
- Blog details table
- Block listed area table

Table Design

Table Name: Registration
Primary key: id

Table 4.4.1.1 Registration

Sl.no	Field Name	Data Type	Size	Constraints	Description
1	Id	Varchar	10	Primary key, Auto increment	User ID
2	Name	Varchar	20	Not Null	User Name
3	Address	Varchar	150	Not Null	User Address
4	Privilege	Varchar	10	Not Null	Privilege (Admin/Monitoring)
5	Designation	Varchar	20	Not Null	Designation
6	Ctno	Bigint	12	Not Null	Contact Number
7	Eid	Varchar	20	Not Null	Email ID
8	Username	Varchar	20	Not Null	Username
9	Password	Varchar	20	Not Null	Password

Table Name: Location
Foreign key: imei

Table 4.4.1.2 Location

Sl.no	Field Name	Data Type	Size	Constraints	Description
1	Imei	Varchar	20	Foreign key	International Mobile Equipment Identity
2	Lat	Varchar	20	Not Null	Latitude
3	Lon	Varchar	20	Not Null	Longitude
4	Date	Date	-	Not Null	Date
5`	Time	Time	-	Not Null	Time

Table Name: Personal Details
Primary key: imei

Table 4.4.1.3 Personal Details

Sl.no	Field Name	Data Type	Size	Constraints	Description
1	Imei	Bigint	20	Primary key	International Mobile Equipment Identity
2	Name	Varchar	20	Not Null	User Name
3	Address	Varchar	50	Not Null	User Address
4	Dob	Date		Not Null	Date Of Birth
5	contact_no	Bigint	12	Not Null	Contact Number
6	parent_contactno	Bigint	12	Not Null	Parent Contact Number
7	Email	Varchar	25	Not Null	Email ID
8	Designation	Varchar	20	Not Null	Designation
9	Image	Varchar	50	Not Null	Add Image
10	id_type	Varchar	10	Not Null	Identification Type
11	id_no	Varchar	10	Not Null	Identification Number
12	Hght	Int	5	Not Null	Height
13	Wght	Int	3	Not Null	Weight
14	Age	Int	3	Not Null	Age

15	Bg	Varchar	10	Not Null	Blood Group
16	Location	Varchar	20	Not Null	Current Location
17	Msg	Varchar	100	Not Null	Message

Table Name: complaints
Foreign key: imei

Table4.4.1.4 Complaints

Sl.no	Field Name	Data Type	Size	Constraints	Description
1	cid	Int	10	Auto Increment	ID
2	Imei	Bigint	20	Foreign key	International Mobile Equipment Identity
3	Mobno	Bigint	12	Not Null	Mobile Number
4	Descript	Varchar	200	Not Null	Complaint

Table Name: Blog
Primary key: bid
Foreign key: imei

Table 4.4.1.5 Blog

Sl.no	Field Name	Data Type	Size	Constraints	Description
1	Bid	Int	10	Primary key	Blog ID
2	Imei	Bigint	20	Foreign key	International Mobile Equipment Identity
3	Title	Varchar	100	Not Null	Title of Issue
4	Description	Varchar	200	Not Null	Description about Issue
5	date	Date		Not Null	Date
6	Time	Time		Not Null	Time
7	Author	Varchar	25	Not Null	Author Name
8	Image	Varchar	50	Not Null	Image related to Issue

Table Name: Black listed
Foreign key: imei

Table 4.4.1.6 Black listed

Sl.no	Field Name	Data Type	Size	Constraints	Description
1	Id	Int	10	Auto Increment	ID
2	Imei	Bigint	20	Foreign key	International Mobile Equipment Identity
3	Latitude	Varchar	20	Not Null	Latitude
4	Longitude	Varchar	20	Not Null	Longitude
5	Place	Varchar	20	Not Null	Place
6	Remarks	Varchar	200	Not Null	Remarks about place

5. SYSTEM DEVELOPMENT

System Development is a series of operations performed to manipulate data to produce output from a computer system. The principle activities performed during the development phase can be divided into a major related sequence. They are

- Internal
- External

The major internal system development activities done for the system are computer program development and performance testing.
The major external system development activities done are planning and implementation

5.1 MODULE

The project has eight modules

- Admin
- Registration
- Monitoring
- Location tracing
- Post on blog
- Parents alert
- Location alert
- User

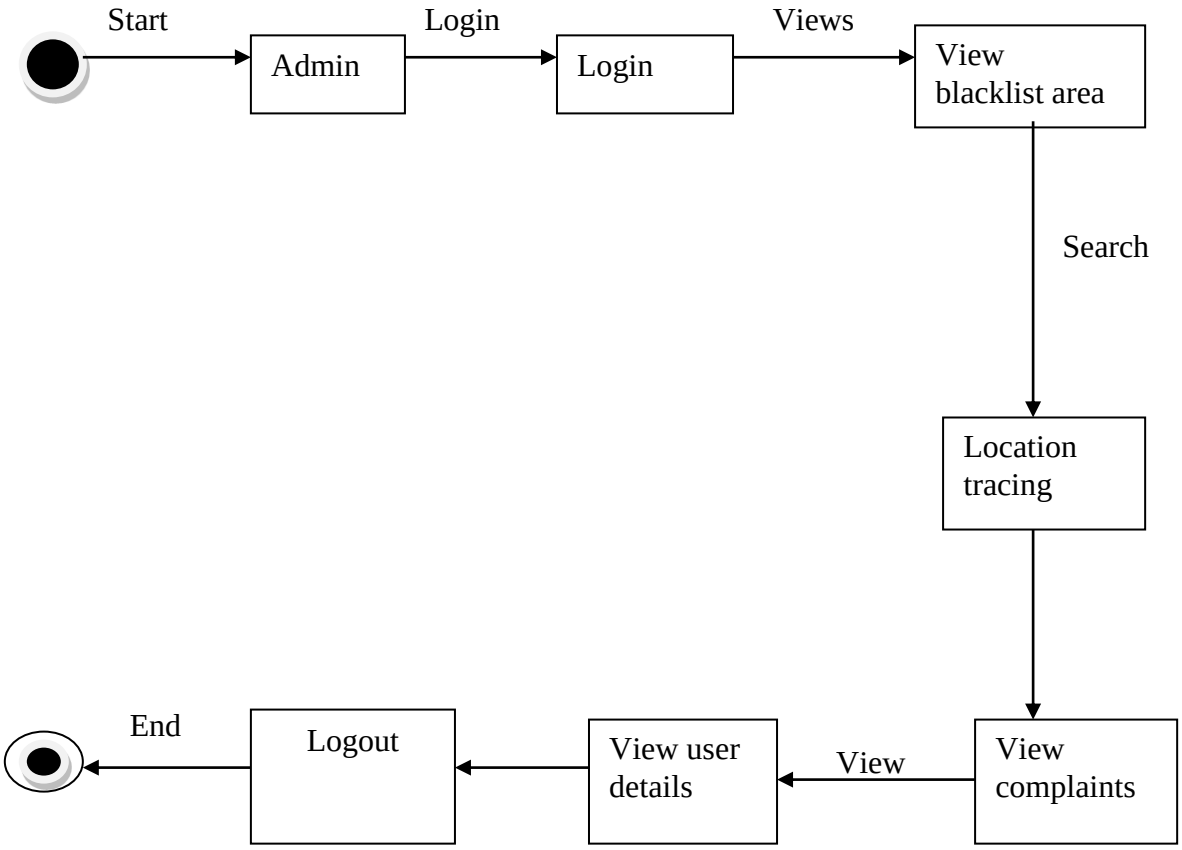


Figure 5.1.1.Activity Diagram

5.2 MODULE DESCRIPTION

- **Admin**

The admin module controls the whole system and monitoring station. Monitoring station's employee can register only through admin then only it is possible to login. Admin provide the black listed areas to the user by entering details in the input page. So the details can be viewed by the user in the application. Admin store the whole database of users

- **Registration**

New user can enter the details and use this application. If the person want to use this application just enter the personal details such as name, address, mobile number, parents contact number etc.

- **Monitoring**

The monitoring module monitors the user of the application according

to their emergency and provides help. The monitoring station can track the location of the application user. In this module monitoring deals with the users of the application and storing user details. The complaints send by the users are viewed by monitoring station.

- **Location tracing**

The location tracing module deals with finding the location of the user through GPS in the Google map. The monitoring station can identify the location of the user and provide help to user. The authority can find out the current location of persons and take necessary action. Using her mobile number the authority trace out her current location. This module is provided to authority can view her location using GPS.

- **Posting on blog**

It views the articles and problems of women's. If women's have any Problem is occur just post the complaint. This module is provided to solve the women's problem and opinion about the product.

- **Parents alert**

If women's have faces any problem switch on the application then message is send to parents mobile. This module is perform message is send on her parents mobile.

- **Location alert**

The authority can find out the location of person using they mobile number. If women's faces any problem just open the application then alert message pass to authority. They identify current location.

- **User**

The user module deals with registering the whole details in the website and download the android application from the website. The user can post any incidents in the blog. User can use the android application and send complaints, location and view dangerous area

Figure 5.2 Use Case Diagram shows the how different modules are connected and what types of operations carried out in the each modules .Admin modules controls all other operations activities in this system. From the diagram it indicates how different activities connected to various modules.

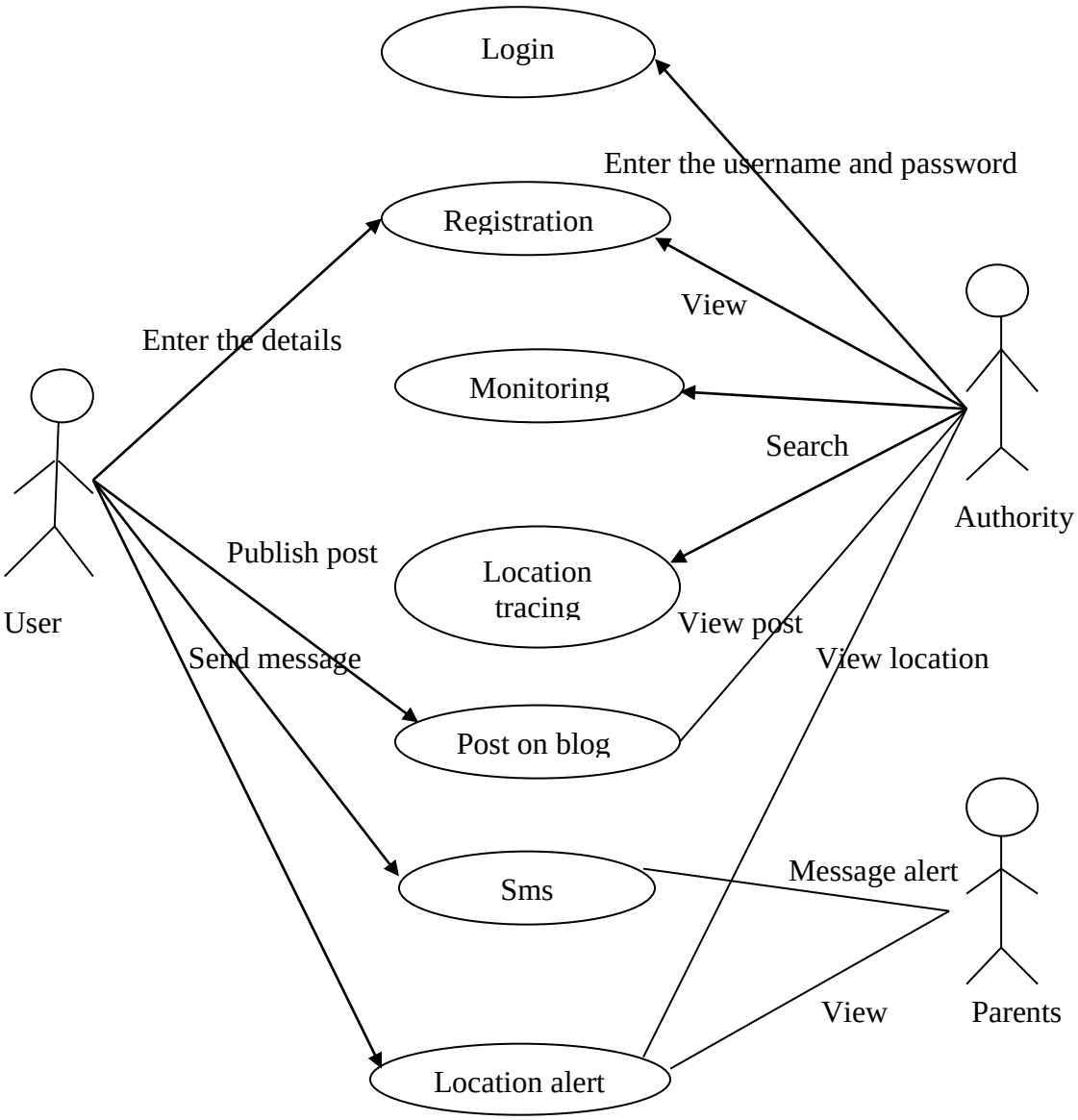


Fig: 5.1.2 Use Case Diagram

6. SYSTEM TESTING AND IMPLEMENTATION

6.1. SOFTWARE IMPLEMENTATION

Implementation is the most crucial stage in achieving a successful system and giving the user's confidence that the new system is effective and workable. Implementation of this project refers to the installation of the package in its real environment to the full satisfaction of the users and operations of the system.

Testing is done individually at the time of development using the data and verification is done the way specified in the program specification. In short, implementation constitutes all activities that are required to put an already tested and completed package into operation. The success of any information system lies in its successful implementation.

System Implementation is the stage in the project where the theoretical design is turned into a working system. The most critical stage is achieving a successful system and in giving confidence on the new system for the user that it will work efficiently and effectively. The existing system was long time process.

The proposed system was developed using android platform. The existing system caused long time transmission process but the system developed now has a very good user-friendly tool, which has a menu-based interface, graphical interface for the end user. After coding and testing, the project is to be installed on the necessary system. The executable file is to be created and loaded in the system. Again the code is tested in the installed system. Installing the developed code in system in the form of executable file is implementation.

The project execution was checked with live environment and the user requirements are satisfied. Proper implementation is essential to provide a reliable system to meet the organization requirements.

6.2 SOFTWARE TESTING

System Testing

Testing is vital to the success of the system. System testing makes a logical assumption that if all the parts of the system are correct, the goal will be successfully achieved. Inadequate Testing or non-testing may give wrong result. The familiar testing concept is as follows.

Testing is the process of checking whether the developed system is working according to the original objective and requirements. The system works according to the required specification. When the system is found working, test it with actual data check performance.

Objectives of Testing

The testing objectives are summarized as follows:

- Testing is a process of executing a program with the intent of finding an error.
- A successful test is one that uncovers an as-yet-undiscovered error.
- Tests should be planned long before testing begins.

Test Plan

Testing is one of the main parts of software development. An elaborate testing of data is prepared and the system is using test data. While doing testing, errors are noted and correction is made. Test case design focuses on a set of technique which meets all testing objectives, which are mentioned below.

- Testing is process of executing a program with the intent of finding an error.
- A good test case is one that has high probability of finding an as -yet undiscovered error.

Testing demonstrates that software function work according to the specification. In addition data collected from testing provides a good indication of software reliability and quality. Once the source code has been generated, software must be tested to uncover as many errors as possible before delivery to the user. In order to find the highest possible number of errors, tests must be conducted systematically and test cases must be designed

using disciplined techniques. Different types of testing methods are: Unit testing, Integration testing, Validation Testing.

6.3. UNIT TESTING

Unit testing focuses verification efforts on the smallest unit of software design of the module. Therefore unit testing is also known as “Module Testing”. Unit testing is first level of testing. During coding phase different modules are tested to determine the internal logic of the modules. In my project I have test registration module. This module will perform user can enter the personal details. Then data's are update to server. It perform different modules are tested.

6.4. INTEGRATION TESTING

Integration Integrating testing is a systematic technique for constructing test to uncover errors associated with in the interface. In Integration testing, the unit testing modules are combined together and tested again. Integration testing addresses the issue associated with the dual problems of verification and program construction. After the software has been integrated a set of high order tests are conducted.

The main objective of this testing is to take unit tested modules and build program structure that has been dictated by design. During integration, Top-Down integration was followed, were modules are integrated by moving downward through the control hierarchy, beginning with the main program module.

Integration testing will perform combining two modules. This project I have test two form login page and main form.

The authorized people only can access the login page. They enter the user name and password and click the submit button then go to the main form.

Validation Testing

At the end of the integration testing, software is completely assembled as a packages, interfacing error have been uncovered and correction testing begin. Software validation is achieved through series of black box tests that demonstrate conformity with the requirements. A test plan outlines the classes of tests to be conducted and a test

procedure defines specific test cases that will be used to demonstrate conformity with requirements. After validation test case has been conducted, one of two possible conditions exists:

- The function or performance characteristics conform for specification and are accepted
- A deviation from specification is uncovered and a deficiency list is created.

In this project validation test will perform if user can the details in registration form. If user can enter the invalid data it shows error message.

Functional Testing

Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation, and user manuals.

2 Test Cases and Test Report

Unit testing

TEST CASE NO	TEST CASE	TEST CASE DESCRIPTION	EXPECTED RESULT	OBSERVED RESULT	RESULT PASS/FAIL
1.	Enter the user name and password	Check whether the valid user name and password.	The user name and password has to be accepted.	The user name and pass word has entered correctly.	Pass

Integration Testing

TEST CASE NO	TEST CASE	TEST CASE DESCRIPTION	EXPECTED RESULT	OBSERVED RESULT	RESULT PASS/FAIL
1.	Enter the latlong of the Black listed area	To Check the location id report will be displayed within range.	To show the details of the black listed place.	The area details has been retrieved correctly using GPS and displayed the details	Pass

Validation Testing

TEST CASE NO	TEST CASE	TEST CASE DESCRIPTION	EXPECTED RESULT	OBSERVED RESULT	RESULT PASS/ FAIL
1.	Enter the admin name and password.	Check whether the valid admin name and password.	The admin name and password has to be accepted.	The admin name and pass word has entered correctly	Pass
2.	Enter the wrong username and password	Check whether if the user name can able to access the administrator rights	The user should not be able to access the administrator privilege	users are unable to access admin rights.	Pass

6.5 SOFTWARE MAINTENANCE

Maintenance plays a vital role. After systems have been verified, tested and implemented, they must continue to be maintained to ensure that they continued to perform correctly and that they can adapt to new requirement if needed. Ongoing monitoring or testing of system may needed to be systematized to ensure that maintenance need are identified and met when necessary. Where systems are for extended users as another means to determine the need for maintenance and modification.

System maintenance is the last phase in the software Engineering process that eliminates errors in the working system during its work span and to tune the system to any variations in its working environment. The system requires maintenance as there may be changes and requirements in the organizational needs, government policies, hardware and software environment etc.

In system maintenance, an enormous mass of potential problems and cost lies under the surface. Software maintenance is of course, far more than fixing mistakes. Analysis's and programmers append for more time in maintaining the program then they do writing them. Few tools and techniques are available for maintenance.

Maintenance is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, sub-assemblies and finished product. It is the process of exercising software with the intent of ensuring that the software system meets its requirements and user expectations and does not fail in an unacceptable manner.

7. CONCLUSION

The project entitled **"**Advanced Women's Safety Monitoring System on Android Mobile Platform**"** which is currently developed and implemented using Android, Java, PHP and MySQL. The project has been successfully designed and implemented. The package was designed in such a way that future modifications can be done easily. The following conclusions can be deduced from the development of the project. Automation of the entire system improves the efficiency. This project provides a friendly graphical user interface which proves to be better when compared to the existing system. It gives appropriate access to the authorized users depending on their permissions. It effectively overcomes the delay in communications. Updating of information becomes so easier. System security, data security and reliability are the striking features. The System has adequate scope for modification in future if it is necessary. Hence, Android once again proved to be a versatile operating system which allowed us to manipulate various inbuilt features of an Android mobile which made us to develop an intelligent application.

8. Future Enhancements

There is scope for future development of the project "Advanced Women's Safety Monitoring System on Android Mobile Platform**"**. The world of computer fields is not static; it is always subject to be dynamic. The technology which is famous today becomes outdated the very next day. To keep abstract of technical improvements, the system may be further refined. So, it is not concluded. Yet it will improve with further enhancements.

Enhancements can be done in an efficient manner. The software has been developed in such a way that it can accept modifications and further changes like adding automatically updated images in sever. The software is very user friendly and in future any changes can be done easily and update the same with further modification establishment and can be integrated with minimal modification. Thus the project is flexible and can be enhanced at any time with more advanced features. The coding has been done cautiously so that any developer can follow the program easily with knowledge of the convention followed hence it is easy to be maintained.

The software restructuring is carried out. Software restructuring modifies source code in an effort to make it amenable to future changes. In general, restructuring does not modify the overall program architecture. It also modify to convert a electrical shock. It tends to focus on the design details of individual modules and on local data structure defined within modules. The android device is change to wearable product like a watch.

9. BIBLIOGRAPHY

BOOKS

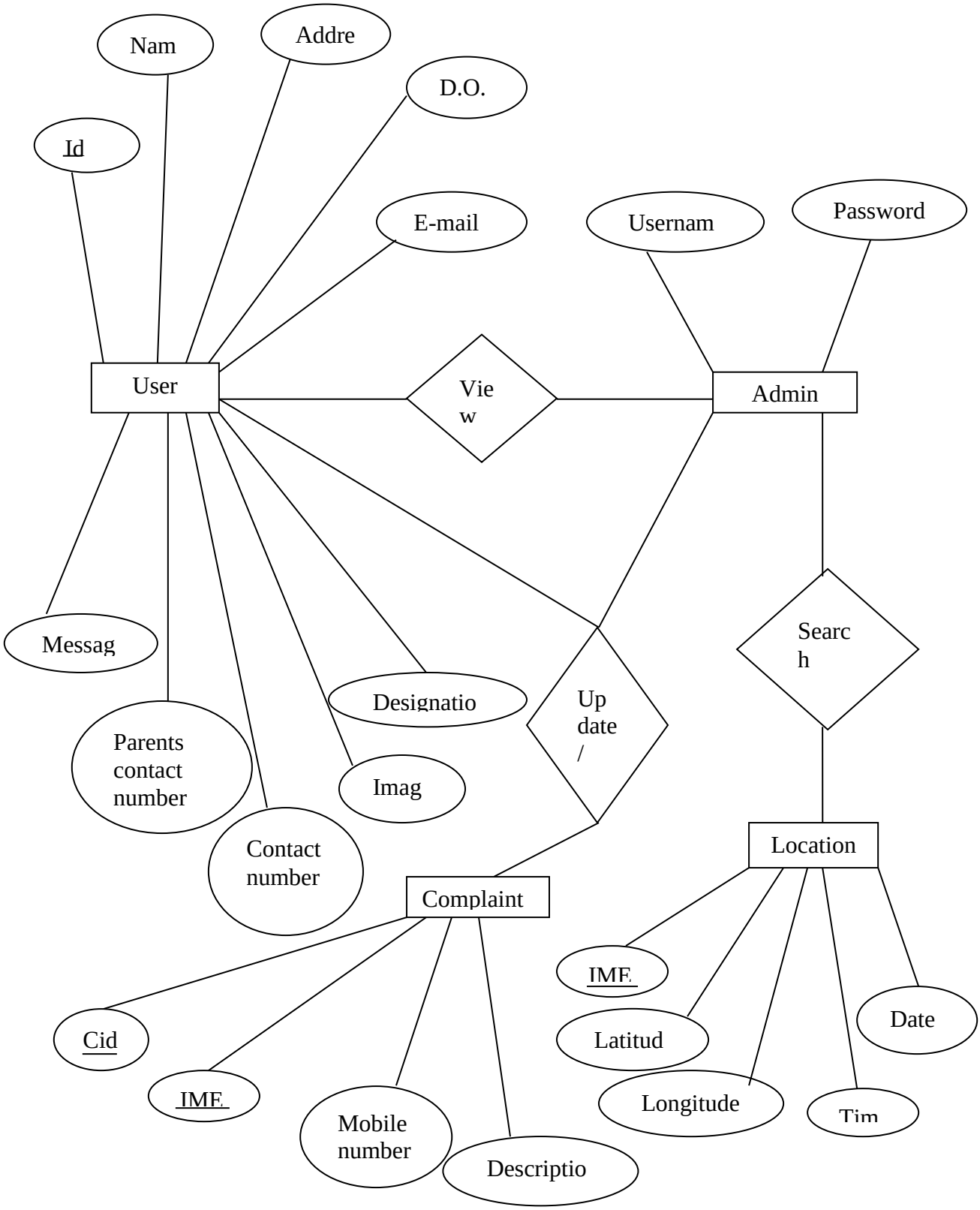
1. WHO (2013). Responding to violence and sexual violenceagainstwomen .http://www.who.int/violence_injury_prevention/violence/activities/intimate/en/
2. Remya George, Anjaly Cherian.V, Annet Antony,"An Intelligent Security System for Violence against Women in Public Places "International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-3, Issue-4, April 2014
3. Elias M. Awad, **"System Analysis & Design(2007)"**, BPB Publications.
4. Ivan Bayross "**MySQL 5 for Professionals(2009)**", Fifth Edition, SPD Publications.
5. James Fuller, **"Professional PHP Web Services(2010)"**, Fifth Edition, McGraw Hill.
6. R.Meier,Wiley**"Professional Android 2 (2010)"**Apress Edition.
7. Roger S. Pressman," **Software Engineering**", The McGraw-Hill.
8. Simon Stobart, Mike Vassileiou,"**PHP and MySQL Manual"**,Sixth Edition.
9. Front Line and The Observatory for the Protection of Human Rights Defenders (2010) 'Nigeria:Defending Human Rights: Not Everywhere Not EveryRight.'http://www.omct.org/pdf/Observatory/2010/Nigeria_mission_report.pdf

WEBSITES

1. http://www.android.com - Android Official Webpage
2. http://code.google.com/android/ - Official Android Google Code Webpage
3. http://www.androidwiki.com – Android Wiki
4. http://www.androidhive.com

APPENDIX

A.ENTITY RELATIONSHIP DIAGRAM



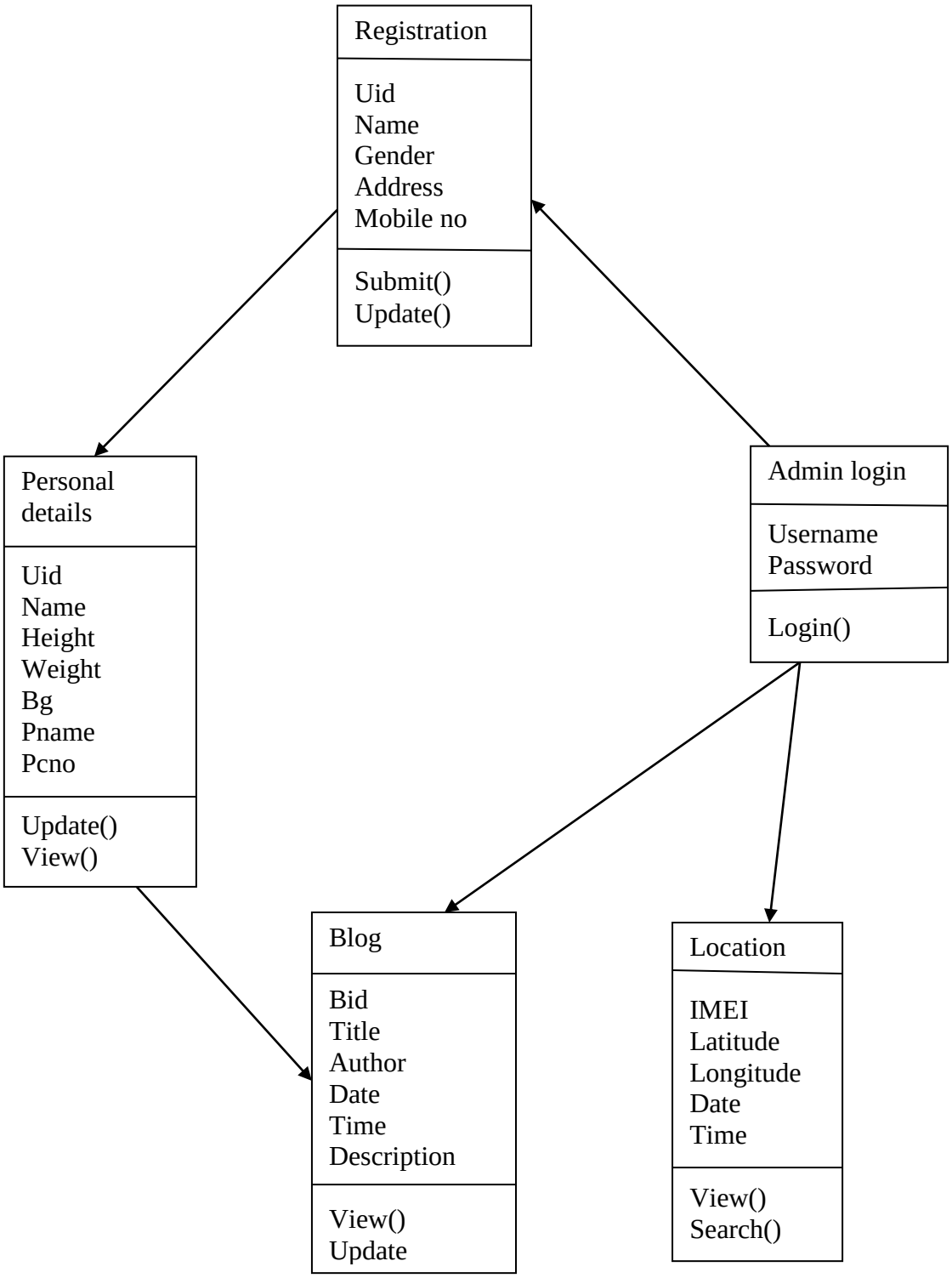


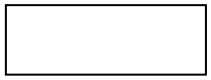
Fig: A.2 Class Diagram

B.DATA FLOW DIAGRAM

A Data Flow Diagram (DFD) is a diagram that describes the flow of data and the processes that change or transform data throughout a system. It's a structured analysis and design tool that can be used for flowcharting in place of, or in association with, information oriented and process oriented system flowcharts. When analysts prepare the Data Flow Diagram, they specify the user needs at a level of detail that virtually determines the information flow into and out of the system and the required data resources. This network is constructed by using a set of symbols that do not imply a physical implementation. The Data Flow Diagram reviews the current physical system, prepares input and output specification, specifies the implementation plan etc.

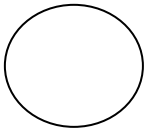
Four basic symbols are used to construct data flow diagrams. They are symbols that represent data source, data flows, and data transformations and data storage. The points at which data are transformed are represented by enclosed figures, usually circles, which are called nodes.

Data Flow Diagram Symbols:-

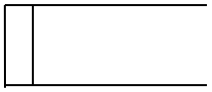


_ Source or Destination of data

_ Data Flow



_ Process



_ Storage

A.2.2 DATAFLOW DIAGRAM

Level 0

Log in

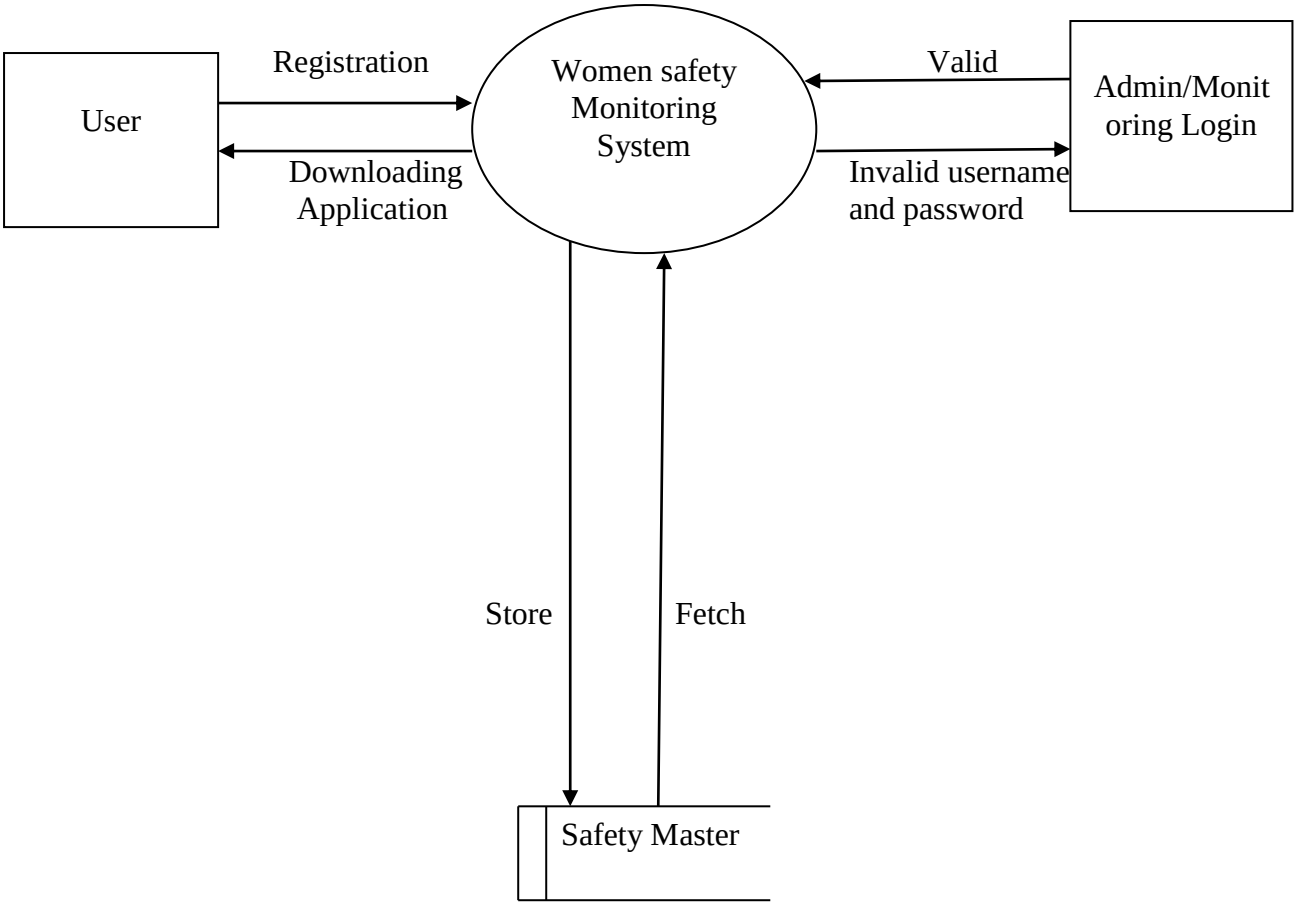


Fig: B.1 Data Flow Diagram Level0

Level 1

Admin

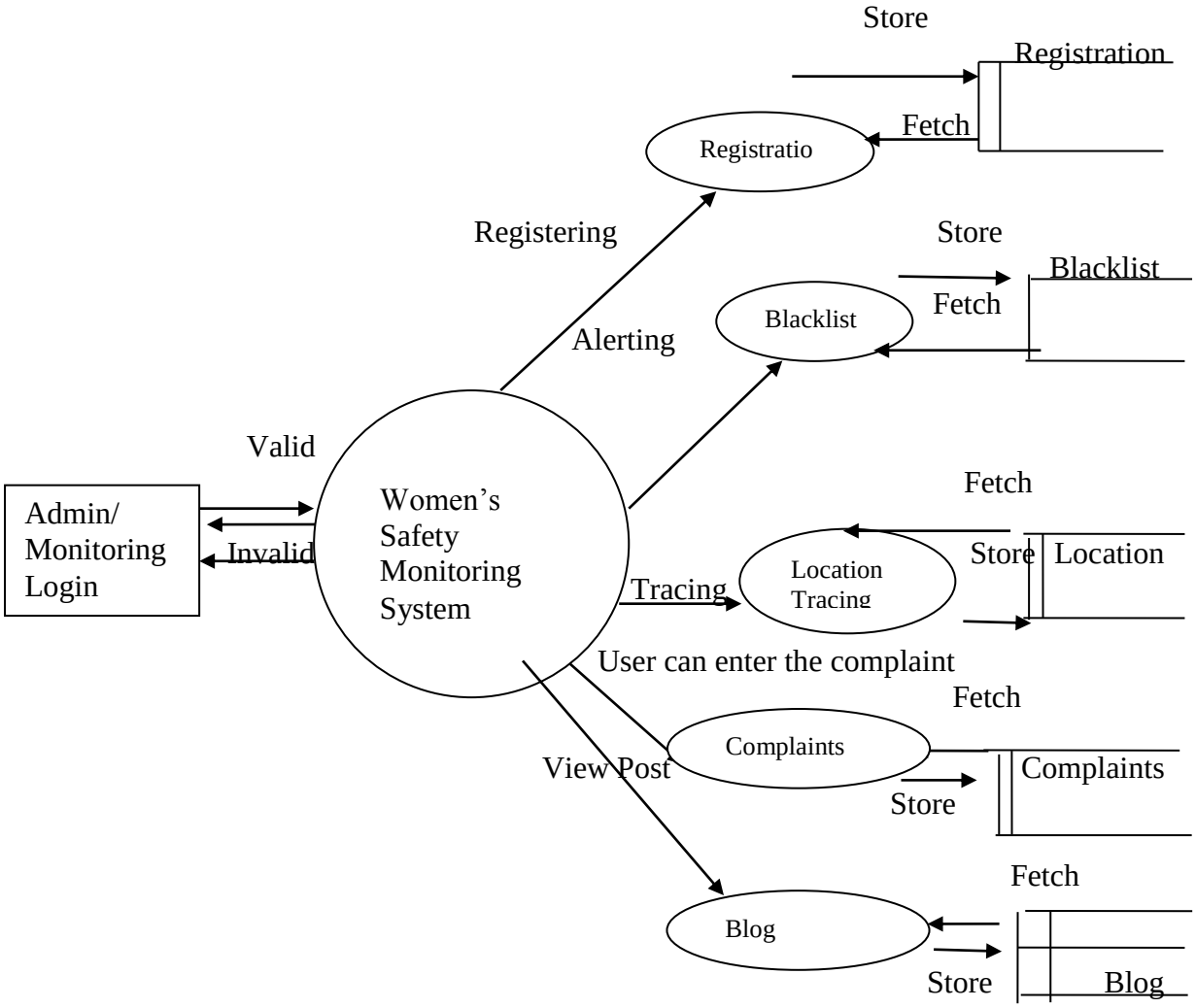


Fig: B.2. Data Flow Diagram Level 1

Level 2

Registration

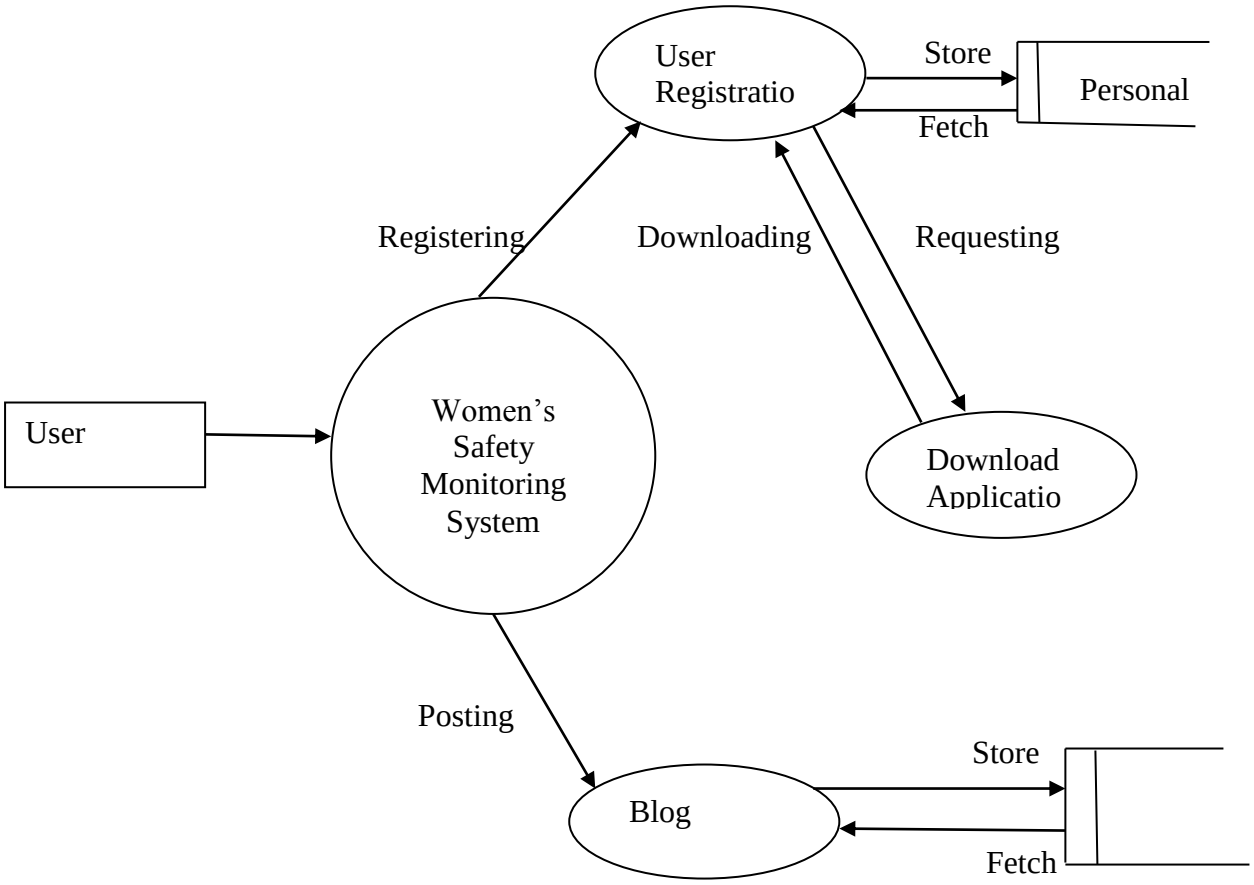


Fig: B.3 Data Flow Diagram Level 2

Level 3

User

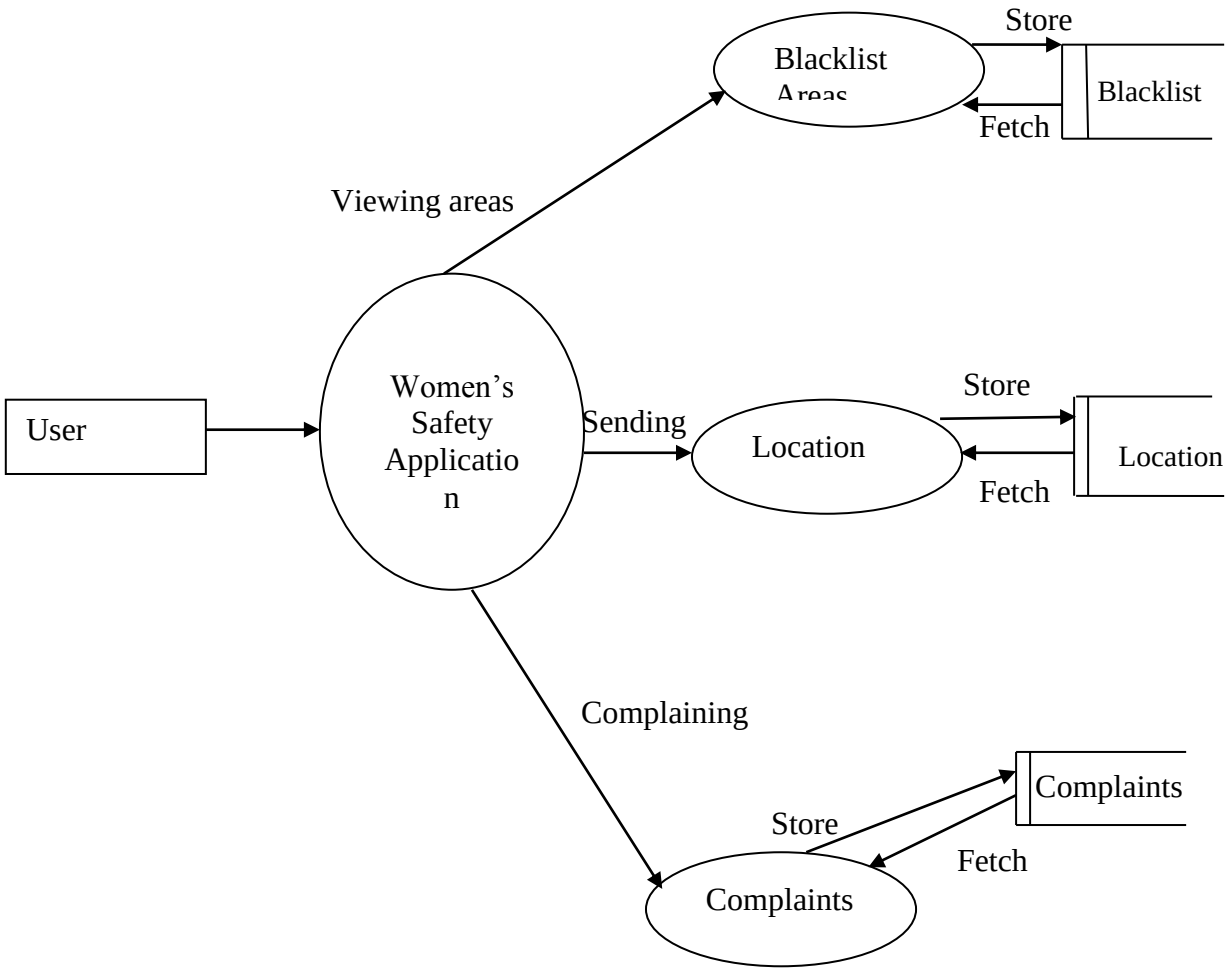
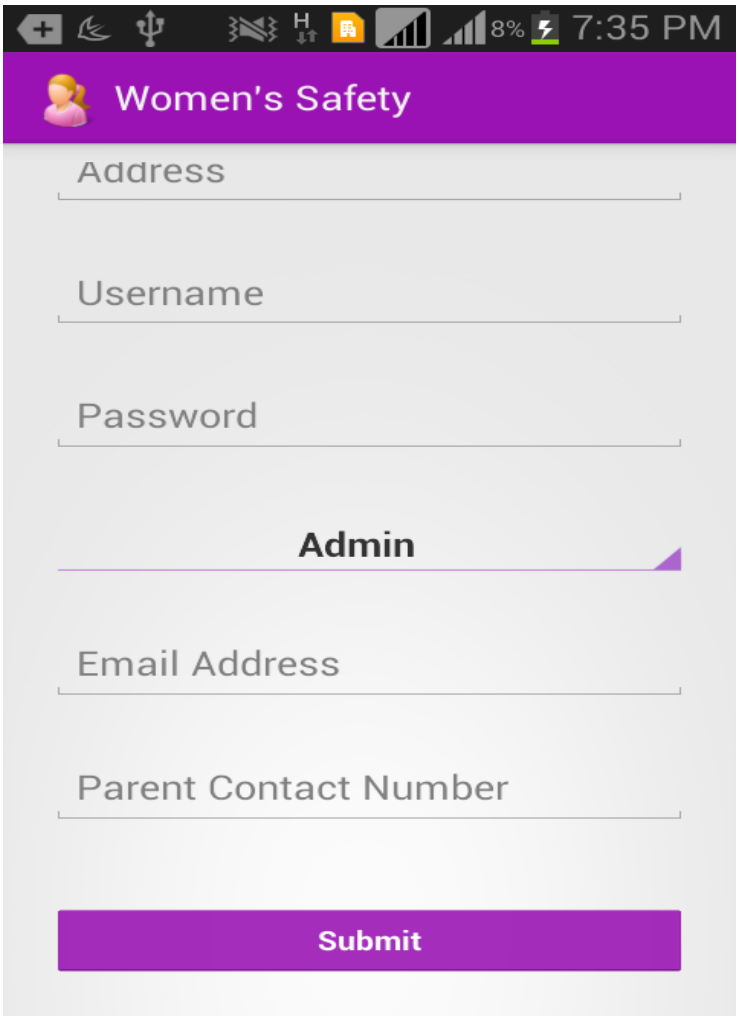
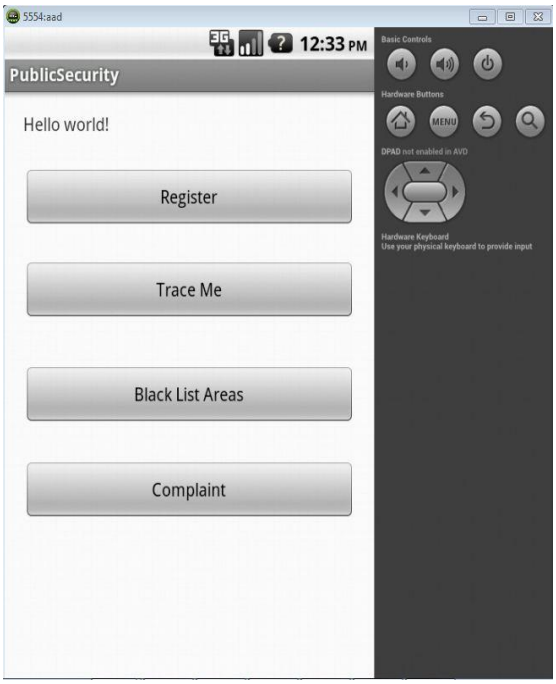


Fig: B.4 Data Flow Diagram Level 3

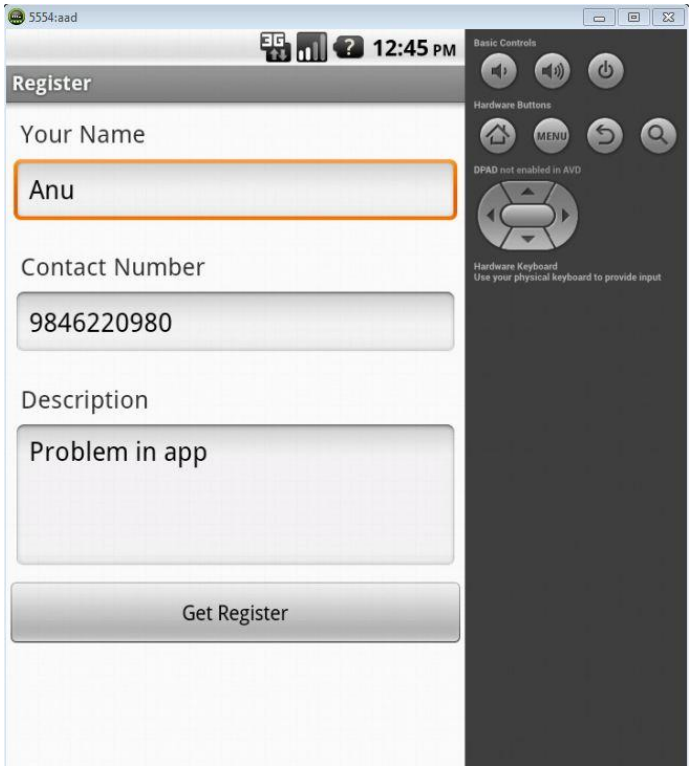
C. SCREEN DESIGN



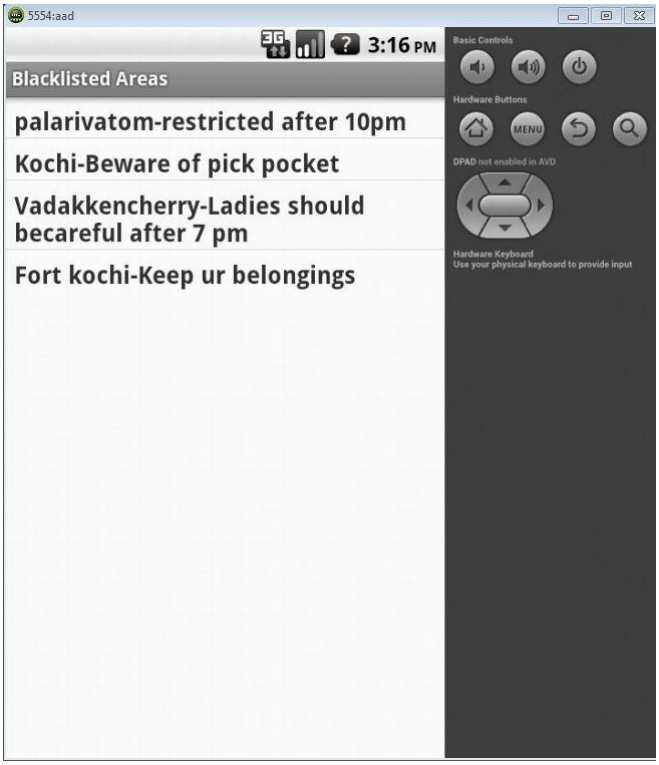
Screen: C.1.User Registration



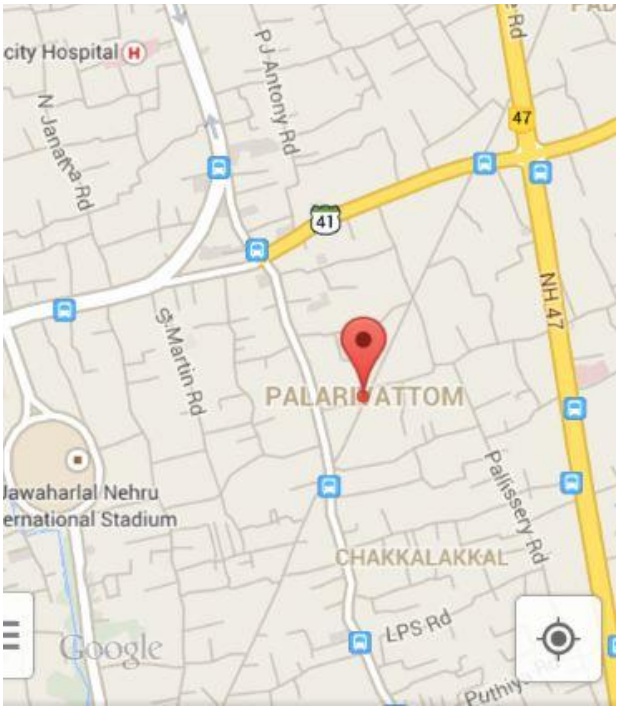
Screen: C.2.User Home Page



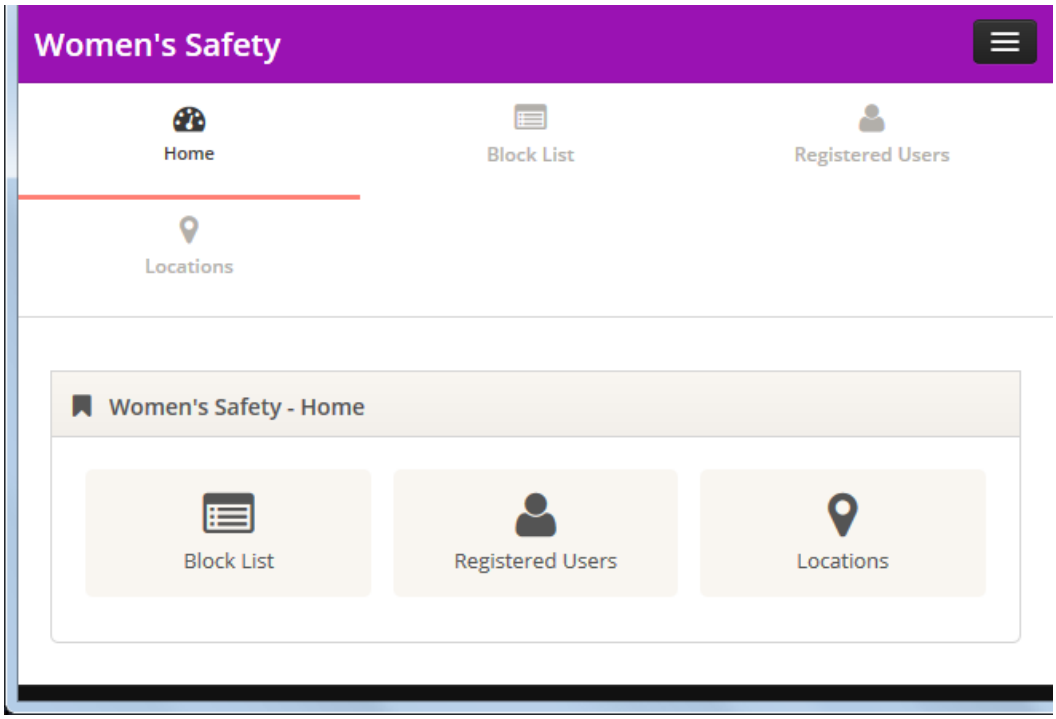
Screen:C.3: Complaint



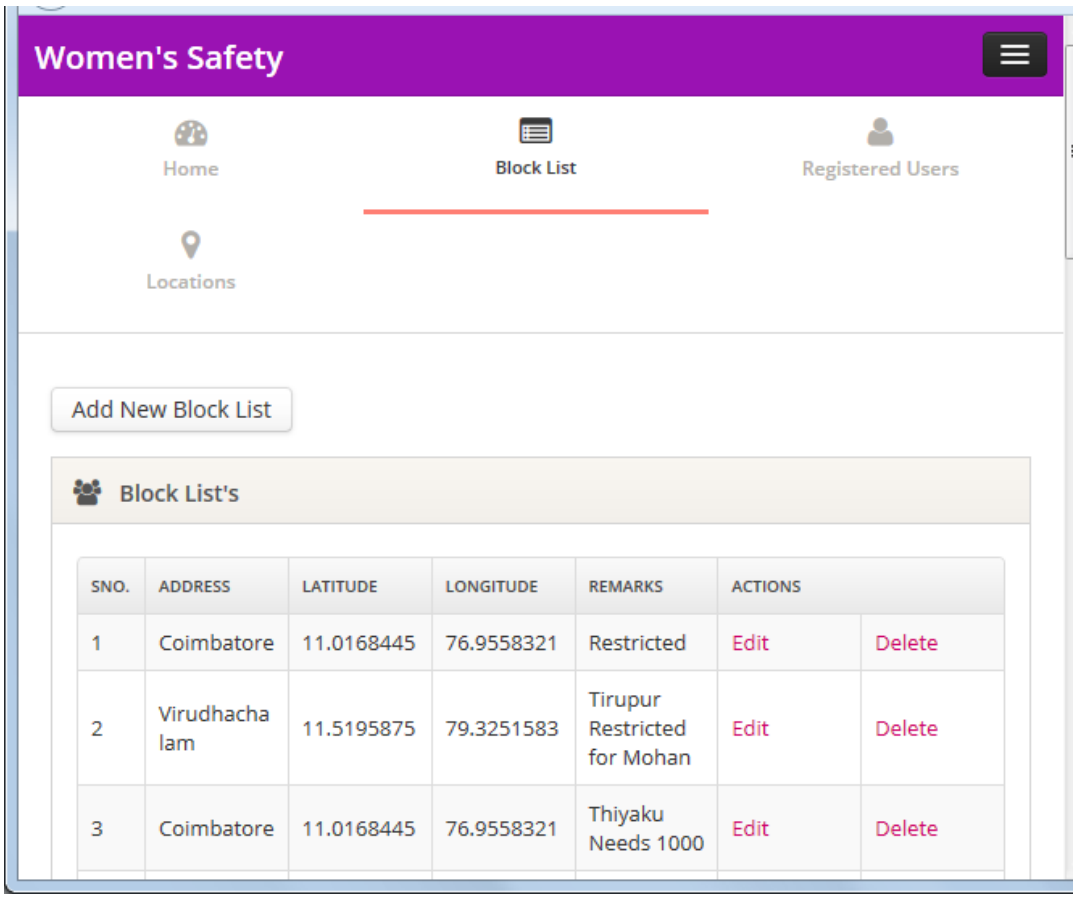
Screen C..4 : Blacklisted Areas



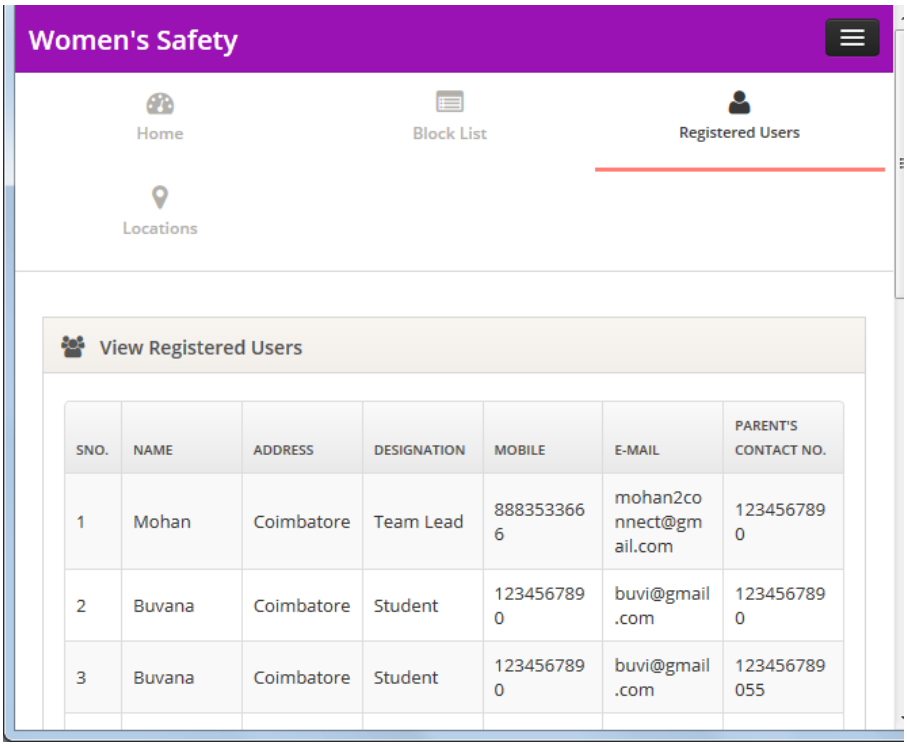
Screen: C.5: Location Tracing



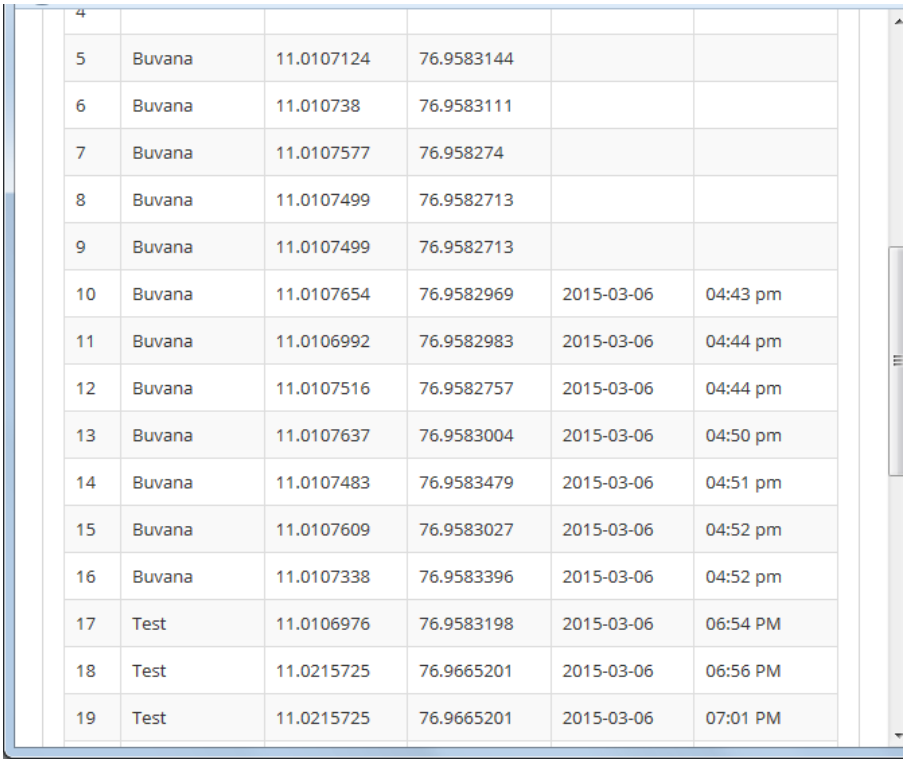
Screen C.6. : Admin Home Page



Screen C.7.Block Listed Area Details



Screen C.3.8:User Details



5	Buvana	11.0107124	76.9583144		
6	Buvana	11.010738	76.9583111		
7	Buvana	11.0107577	76.958274		
8	Buvana	11.0107499	76.9582713		
9	Buvana	11.0107499	76.9582713		
10	Buvana	11.0107654	76.9582969	2015-03-06	04:43 pm
11	Buvana	11.0106992	76.9582983	2015-03-06	04:44 pm
12	Buvana	11.0107516	76.9582757	2015-03-06	04:44 pm
13	Buvana	11.0107637	76.9583004	2015-03-06	04:50 pm
14	Buvana	11.0107483	76.9583479	2015-03-06	04:51 pm
15	Buvana	11.0107609	76.9583027	2015-03-06	04:52 pm
16	Buvana	11.0107338	76.9583396	2015-03-06	04:52 pm
17	Test	11.0106976	76.9583198	2015-03-06	06:54 PM
18	Test	11.0215725	76.9665201	2015-03-06	06:56 PM
19	Test	11.0215725	76.9665201	2015-03-06	07:01 PM

Screen C.9: Location Details Of The User