

Project Report
On
“LODGE A COMPLAIN”
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In the fulfilment for the award of
Diploma in Computer Engineering



Computer Engineering – HPP
Polytechnic
The Maharaja Sayajirao University of Baroda, Vadodara
Year 2018 - 2019



Computer Engineering

Polytechnic – HPP

The Maharaja Sayajirao University of Baroda , Vadodara

Year 2018 - 2019

CERTIFICATE

This is to certify that the Project titled “**LODGE A COMPLAIN**” has been carried out by **Patel Nilay** (), **Purohit Hari** () and **Shivnekar Vedant** (), under the guidance of **Ms. Nisha Rana** and **Ms. Bhavini Samajpati** in the Partial fulfilment of the **Diploma in Computer Engineering (Final Semester)**, **Polytechnic – HPP**, **The Maharaja Sayajirao University of Baroda, Vadodara** during the academic year **2018 – 2019**.

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ACKNOWLEDGEMENT

Before we get into these things, we would like to thank all those people who have been with us as a part of project from this inception. Accomplishing this project has one of the significant challenges of this semester we have faced. Without the support, patience and guidance of people involved, this task would not have completed. It is to them we owe our greatest gratitude.

Firstly, we would like to thank **The Maharaja Sayajirao University of Baroda, Polytechnic**, to provide us all the amenities, a great environment and a great infrastructure to accomplish this project.

It gives us immense pleasure in presenting “LODGE A COMPLAIN”. It has indeed a great privilege for us to have **Dr.V.H.Kher,Dr.Dharmishtha Vishwakarma. Asstt. Director. Department of Computer Engineering. The Maharaja Sayajirao University of Baroda, Polytechnic**, for providing necessary facilities encouraging us during the course of work.

It has been a great privilege for us to have **Ms. Nisha Rana** and **Ms. Bhavini Samajpati** as our mentor for this project. Their awe-inspiring personality, superb guidance and constant encouragement are the motive force behind this project. We take this opportunity to express our utmost gratitude to them. We are also indebted to them for their timely and valuable advices.

ABSTRACT

This mobile application is based on registering complains regarding antisocial or unauthorized activity going on as well as other cases which needs to be complained. As we know many illegal activities, acts which society doesn't permit and things that harm our culture are going on. In such cases people can help the government to solve such issues if they know where it is going on. By this application, people can simply register the complains in form of image or, e-mails and by simply sending complains through a complain form. The complains will be solved by authorized organization and further actions will be taken by the organization. With the help of this app, crime will also get reduced to an extent and also awareness will be spread among the people regarding consequences of illegal acts.

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CHAPTER 1:

INTRODUCTION

CHAPTER 1: INTRODUCTION

1.1 PROBLEM STATEMENT

This mobile application is based on complains regarding any antisocial or unauthorized activity going on as well as other cases which needs to be complained. The complaint is in form of image or by simply sending emails regarding their complains to the authorized organization.

1.2 MOTIVATION

As we know in the existing system the complaints are not processed faster and some of them are also being ignored, which leads to people's disappointment with government. So, with the help of this app peoples complains can be processed much faster and accurate solutions can be provided to them quickly also crime will be reduced to a greater extent.

1.3 OBJECTIVE

The main objective of this mobile application is to solve people's complains faster with providing utmost safety to their identity. Local complains can also be registered through this app. Emergencies are also serviced by this app.

1.4 SCOPE OF PROJECT

This mobile application is mostly for normal people's and this application will help the government solve local issues faster and efficiently. The city wards can use the app and departments will solve the complains. A good communication will also set between peoples and government and awareness will be spread among people for various crimes and their consequences.

CHAPTER 2:

SYSTEM

REQUIREMENTS

CHAPTER 2: SYSTEM REQUIREMENTS

2.1 HARDWARE REQUIREMENTS

Developer side

- Processor: i3
- RAM: 4GB
- Harddisk: 20GB

User Side

- Android device supporting version 4.0.3(Ice-cream Sandwich)
- RAM: 512mb
- Storage: 512mb

2.2 SOFTWARE REQUIREMENTS

- Front end:-
 1. Android virtual device: An Android Virtual Device (AVD) is an emulator configuration that allows developers to test application by simulating real device capabilities. We can configure AVD by specifying hardware and software options. AVD manager enables an easy way of creating and managing AVD with its graphical interface.
 2. SDK: Software development kit is typically a set of software development tools that allows creation of applications for a certain software package, software framework, hardware platform, computer system, video game console, operating system or similar development platform.
 3. Android studio: Android studio is official Integrated Development Environment (IDE) for Android app development.

- Back end:-

SQLite is an open source SQL database that stores data to a text file on a device. Android comes in with built in SQLite database implementation. SQLite supports all the relational database features. It can perform various tasks such as creating, modifying or deleting databases, tables, fields or rows; executing SQL statements or managing users and permissions.

CHAPTER 3:

SYSTEM ANALYSIS

CHAPTER 3: SYSTEM ANALYSIS

3.1 Study of current system

The current system lacks in providing faster solutions of the complains registered by the people and also in certain situations alone person is not capable to handle any antisocial activity going on. As so many cases are being registered day by day the local municipal corporation sometimes fails or takes so much time for solving people's problems. Antisocial activities are also increasing day by day and police sometimes fails to control that. All such cases can harm local peoples and may also harm the society's sentiments and morals. Some corrupt officers also doesn't register people's complain and fools public. Due to increasing of such cases peoples trust over government may also lose.

3.2 Proposed system

This system is made for solving local issues and controlling the antisocial activities. By using this application one can help police for controlling and taking actions over any antisocial activity which can't be handle by alone person. One can send complains by taking picture or by simply filling the complain form. In cases where emergency services are required, emergency services can also be used by the user. After sending the complain the authorized organization will solve the complain and after solving it the report of the complain will also generate. User can also check the complain status and previously registered complains. The news bar in this app is also useful for spreading the awareness amongst the society.

3.3 Feasibility study

3.3.1 Operational Feasibility

This system is operationally feasible as it is very easy for end users to operate it. It only needs basic information about Android platform. The computerized system leads to reduction in time consuming processes. User's satisfaction can be greatly achieved and hence better service can be provided.

3.3.2 Economical Feasibility

The android platform is used to develop this application. As it is free source software therefore the money is saved. This will also save costs of manual processing. Manual processing of data is decreased, hence fewer modules are required. Also, there is a minimum requirement of the hardware. For using this application, users will also be not charged. As the front end used is Android platform, it can also be available on the playstore. Hence, system is economically feasible.

3.3.3 Technical Feasibility

As this application is technically feasible, most appropriate platform used to develop this application is Android. It has a graphical user interface that assists users, wards and the users that doesn't belong from the IT background. It provides better flexibility to its user with simple GUI system. It is also easy to manipulate and debug. This application also provide attractive front end and easy to understand one. The front end Android platform supports database like SQLite which is easy to use and maintain.

CHAPTER 4:

SYSTEM DESIGN

CHAPTER 4: SYSTEM DESIGN

4.1 DATA DICTIONARY

Table name: Admin

Description: This table contains admin detail.

[Table 4.1: Admin]

Sr. No.	Column Name	Data Type	Size	Constraint	Description
1	Aid	Integer	02	Primary Key	It contains id of the admin.
2	Aemail	Varchar	15	Not Null	It contains email of the admin.
3	Apwd	Varchar	08	Not Null	It contains password of the admin.

Table name: User

Description: This table contains user detail.

[Table 4.2: User]

Sr. No.	Column Name	Data Type	Size	Constraint	Description
1	Uid	Integer	02	Primary Key	It contains id of user.
2	Umob	Integer	10	-	It contains user's mob number.

Table name: Zone

Description: This table contains zone details.

[Table 4.3: Zone]

Sr. No	Column Name	Data Type	Size	Constraint	Description
1	Zid	Integer	02	Primary Key	It contains id of zone.
2	Zname	Varchar	20	-	It contains name of zone.

Table name: Ward

Description: This table contains ward detail.

[Table 4.4: Ward]

Sr. No.	Column Name	Data Type	Size	Constraint	Description
1	Wid	Integer	02	Primary Key	It contains id of the ward.
2	Wno	Integer	02	Not Null	It contains number of ward.
3	Wemail	Varchar	20	Not Null	It contains email of ward.
4	Wpwd	Varchar	08	Not Null	It contains password of ward.
5	Zid	Integer	02	Foreign Key	It contains id of zone.

Table name: Area**Description:** This table contains area detail.**[Table 4.5: Area]**

Sr. No.	Column Name	Data Type	Size	Constraint	Description
1	Arid	Integer	02	Primary Key	It contains id of area.
2	Arname	Varchar	15	Not Null	It contains name of area.
3	Zid	Integer	02	Foreign Key	It contains id of zone.
4	Wid	Integer	02	Foreign Key	It contains id of ward.

Table name: Department**Description:** This table contains department detail.**[Table 4.6: Department]**

Sr. No.	Column Name	Data Type	Size	Constraint	Description
1	Did	Integer	02	Primary Key	It contains id of department.
2	Dname	Varchar	20	Not Null	It contains name of department.
3	Wid	Integer	02	Foreign Key	It contains id of ward.

Table name: Services**Description:** This table contains services detail.**[Table 4.7: Services]**

Sr. No.	Column Name	Data Type	Size	Constraint	Description
1	Sid	Integer	02	Primary Key	It contains id of service.
2	Sname	Varchar	10	Not Null	It contains name of service.
3	Wid	Varchar	10	Foreign Key	It contains id of ward.
4	Did	Integer	02	Foreign Key	It contains id of department.

Table name: Feedback**Description:** This table contains feedback detail.**[Table 4.8: Feedback]**

Sr. No.	Column Name	Data Type	Size	Constraint	Description
1	Fid	Integer	02	Primary Key	It contains id of feedback.
2	Uid	Integer	02	Foreign Key	It contains id of user.
3	Femail	Varchar	25	Not Null	It contains email of user.
4	Fdesc	Varchar	50	-	It contains description of feedback.

Table name: Complain**Description:** This table contain complain detail.**[Table 4.9: Complain]**

Sr. No.	Column Name	Data Type	Size	Constraint	Description
1	Cid	Integer	02	Primary Key	It contains id of complain.
2	Caddress	Varchar	50	Not Null	It contains address of user.
3	Uid	Integer	02	Foreign Key	It contains id of user.
4	Arid	Integer	02	Foreign Key	It contains id of area.
5	Cname	Varchar	20	Not Null	It contains name of user.
6	Wid	Integer	02	Foreign Key	It contains id of ward.
7	Did	Integer	02	Foreign Key	It contains id of department.
8	Sid	Integer	02	Foreign Key	It contains id of service.
9	Cimg	Blob		-	It contains image of complain.
10	Cemail	Varchar	30	Not Null	It contains email of user.
11	Cstatus	Varchar		Not Null	It contains status of complain.
12	Cdesc	Varchar	50	-	It contains description of complain.
13	Caction	Varchar	100	-	It contains action over complain.

4.2 Data Flow Diagram

4.2.1 Context level

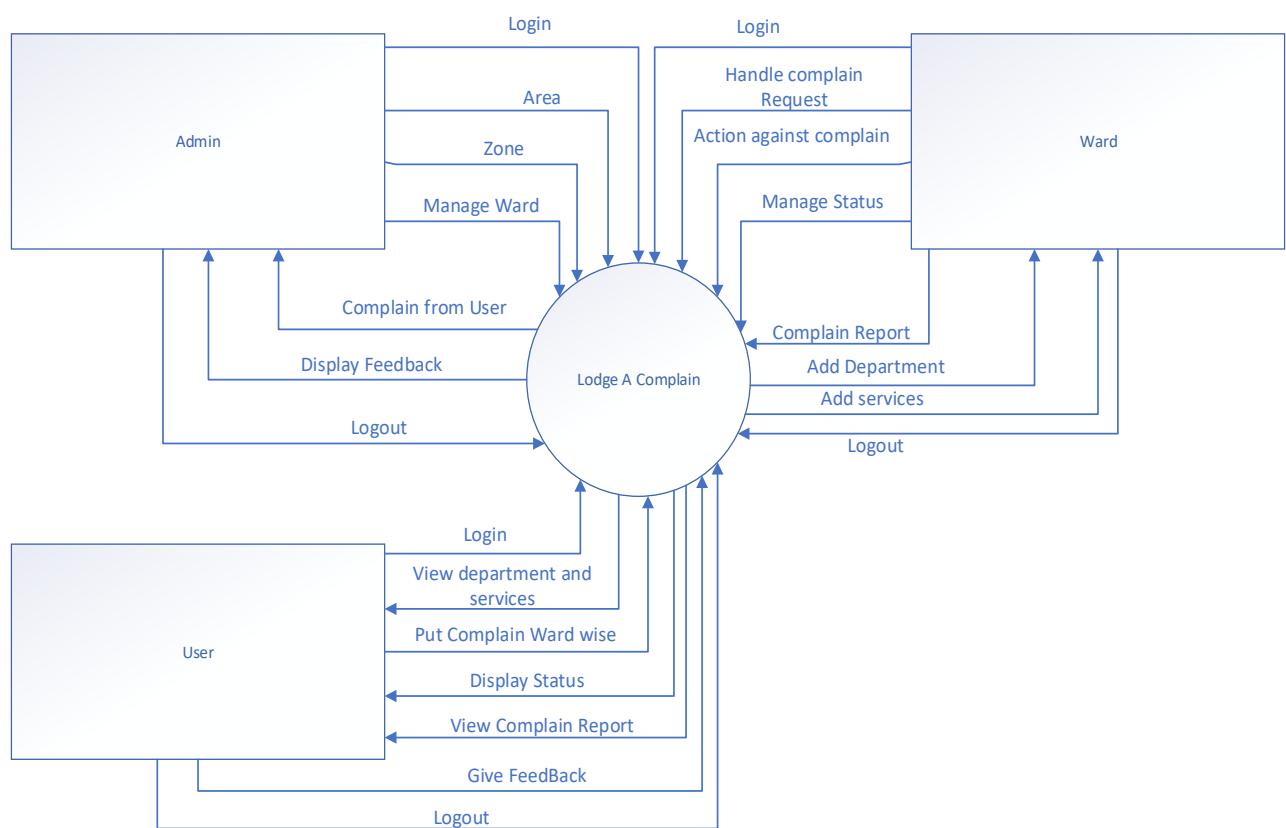


Figure 4.1 Context Level DFD

4.2.2 Level 0(Admin)

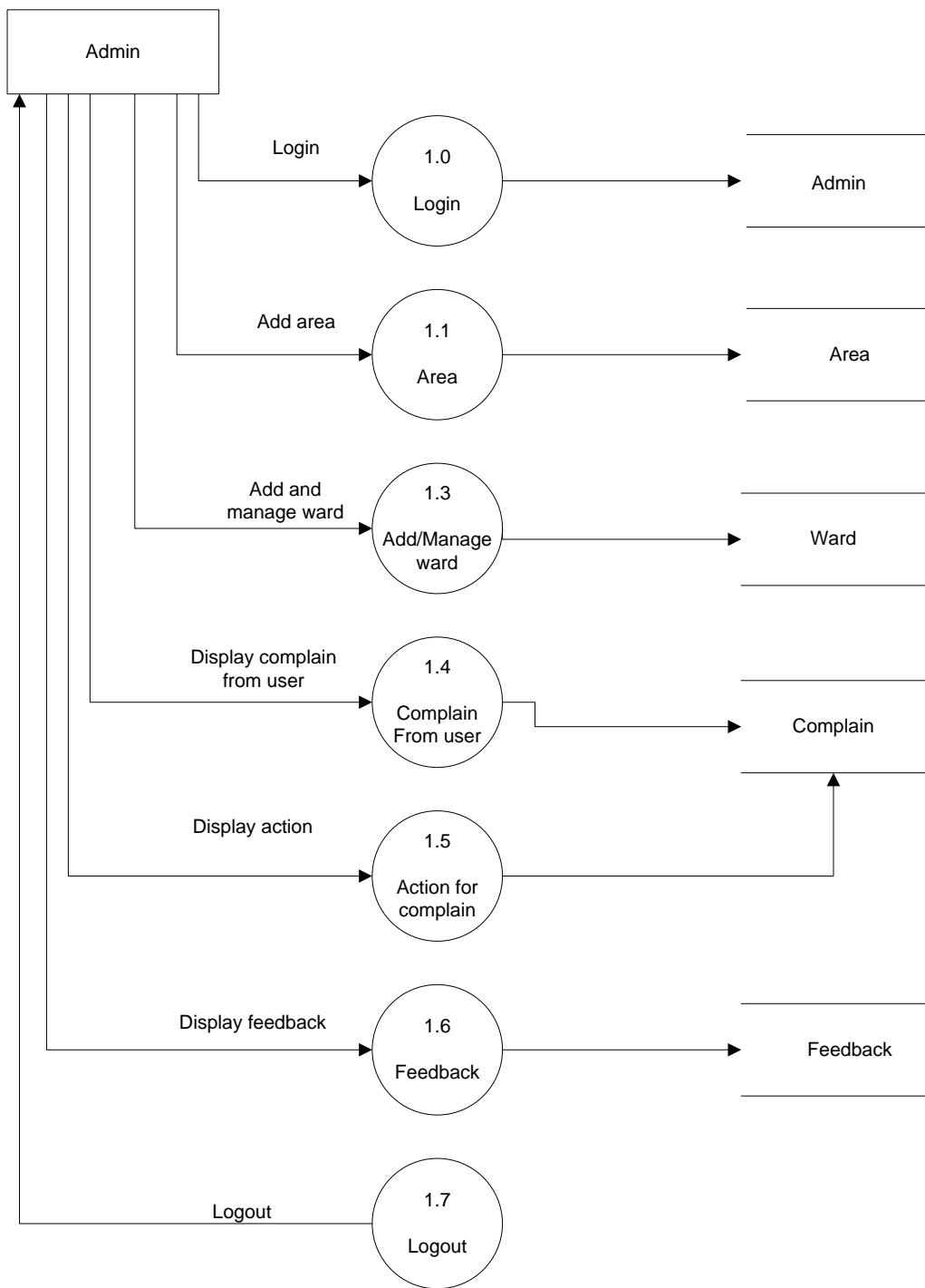


Figure 4.2 Zero Level DFD

4.2.3 Level 0 (Ward)

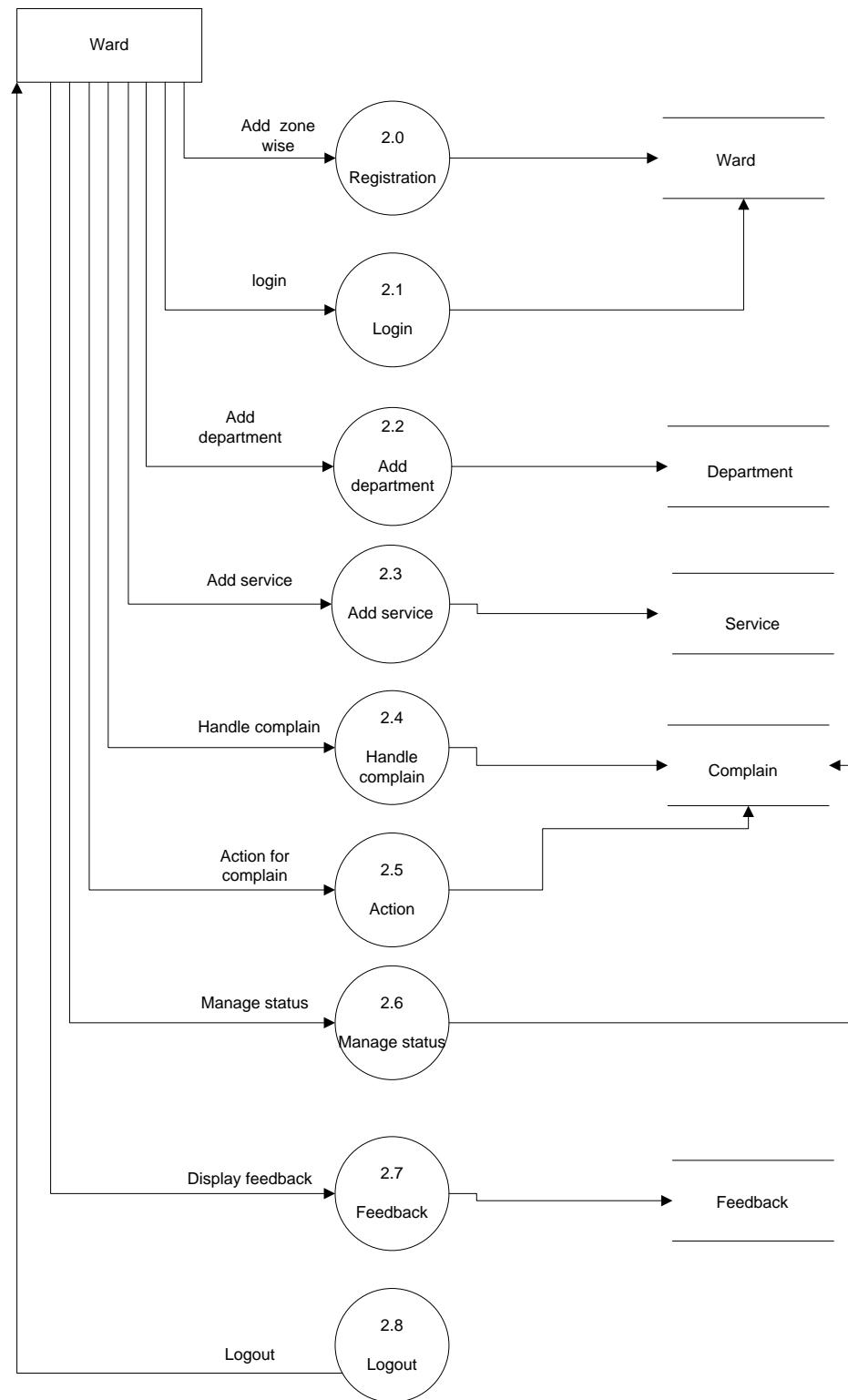


Figure 4.3 Zero Level DFD

4.2.4 Level 0 (User)

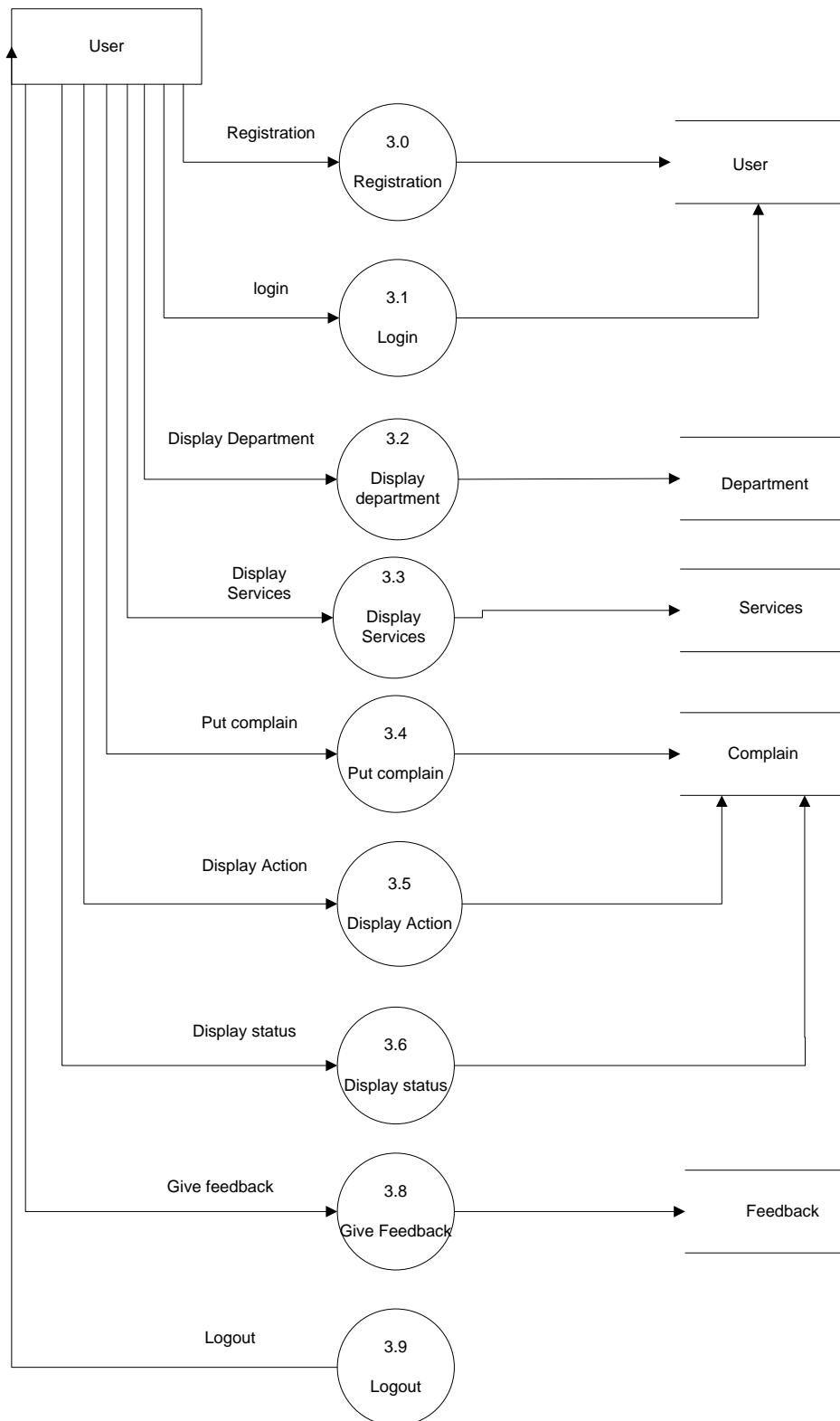
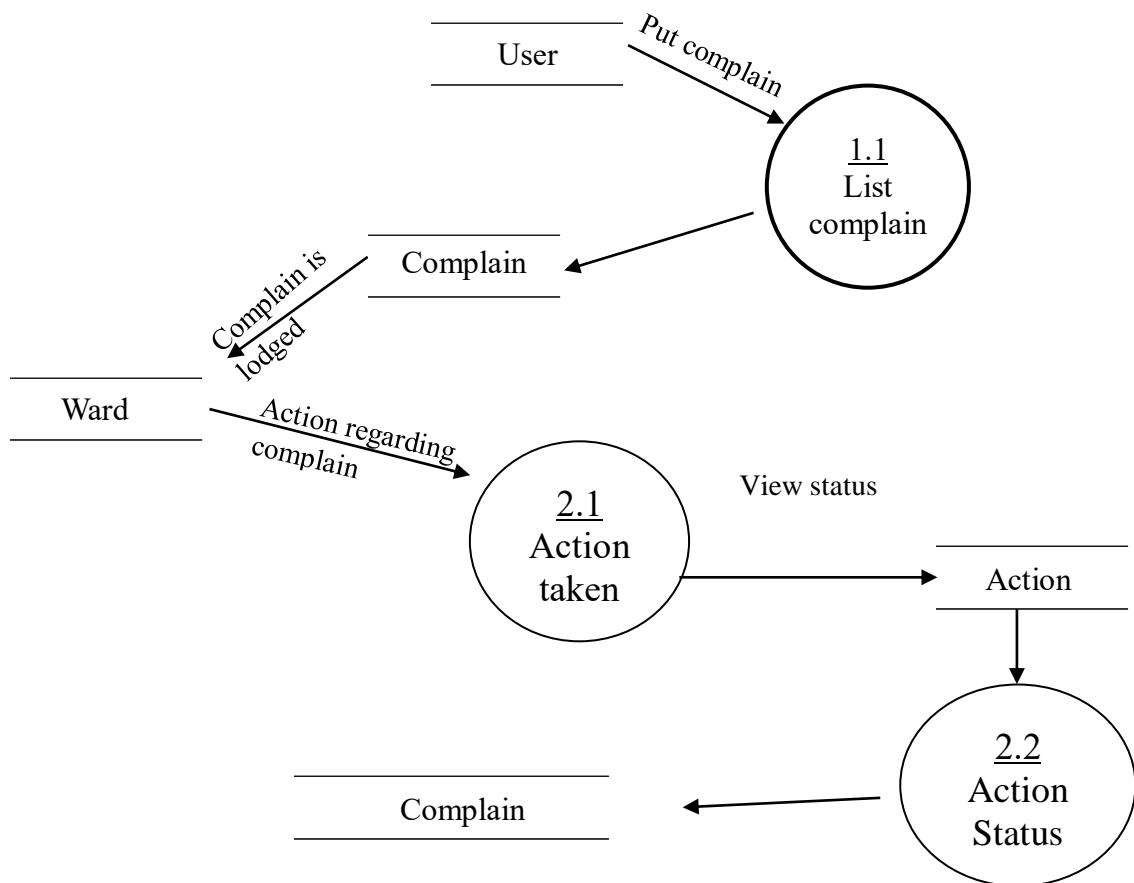


Figure 4.4 Zero Level DFD

4.2.5 Level 1(Complain)



4.3 Entity Relationship Diagram

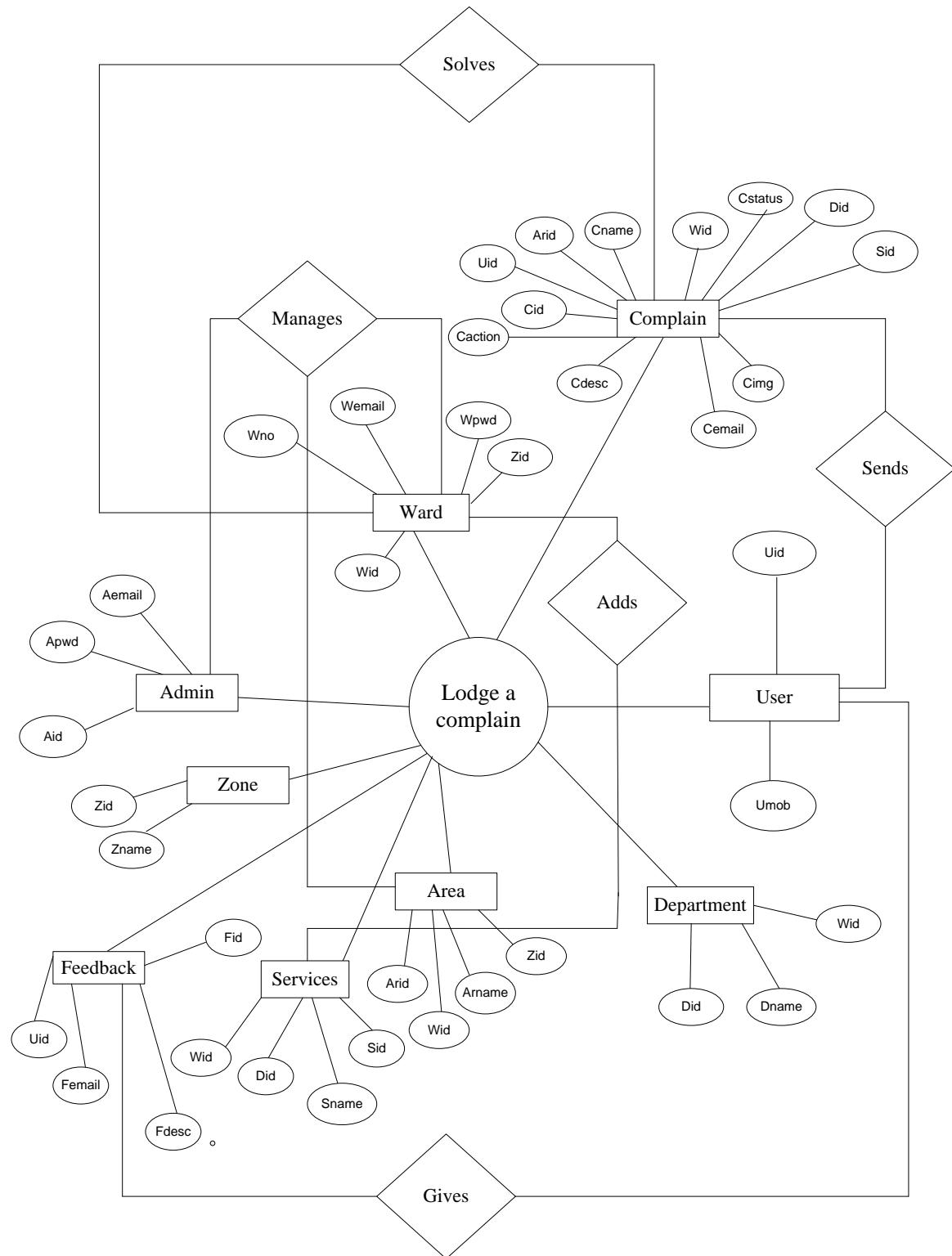


Figure 4.6 Entity Relationship Diagram

4.3 Level 4(Use Case Diagram)

4.3.1 Admin

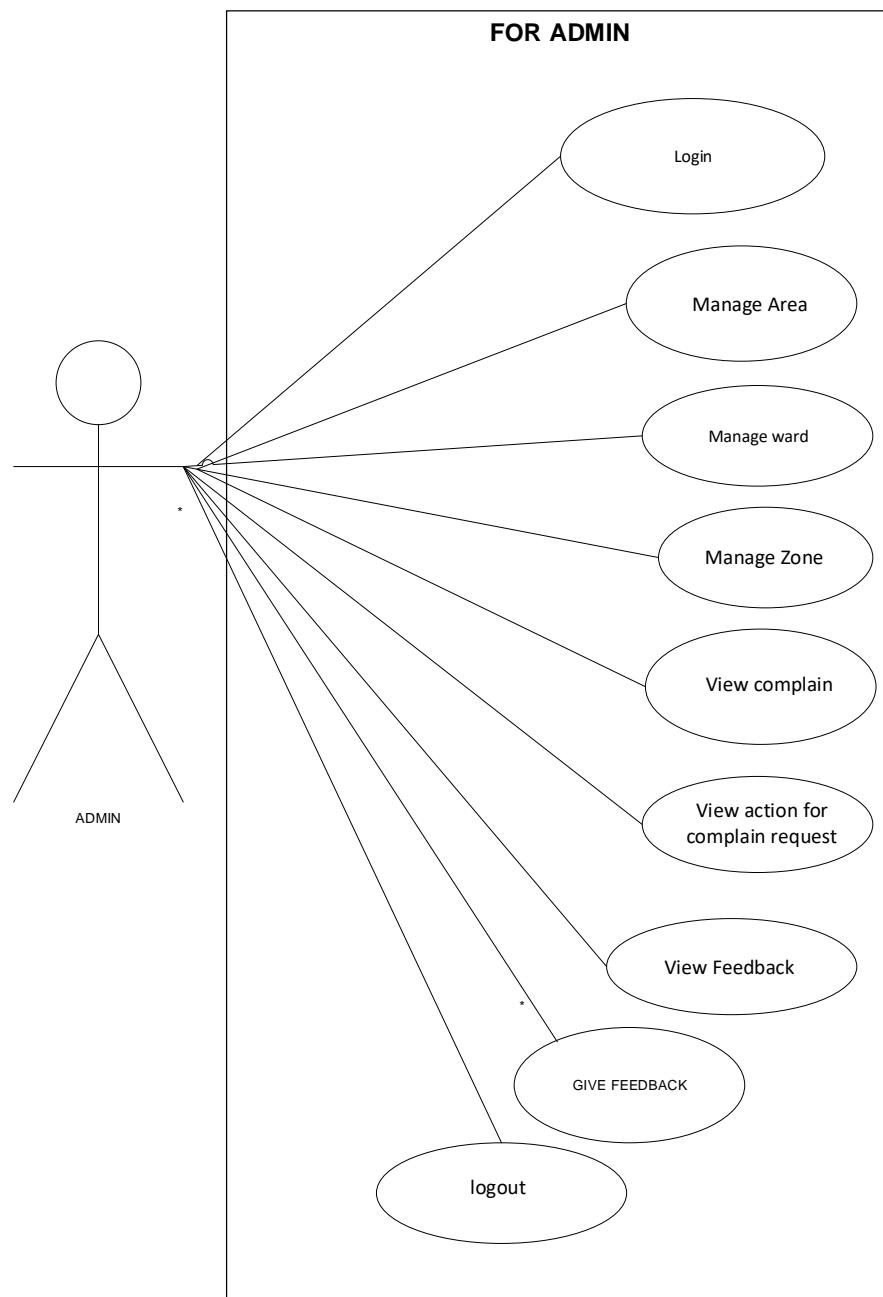


Figure 4.7 Use Case Diagram

4.3.2 Ward

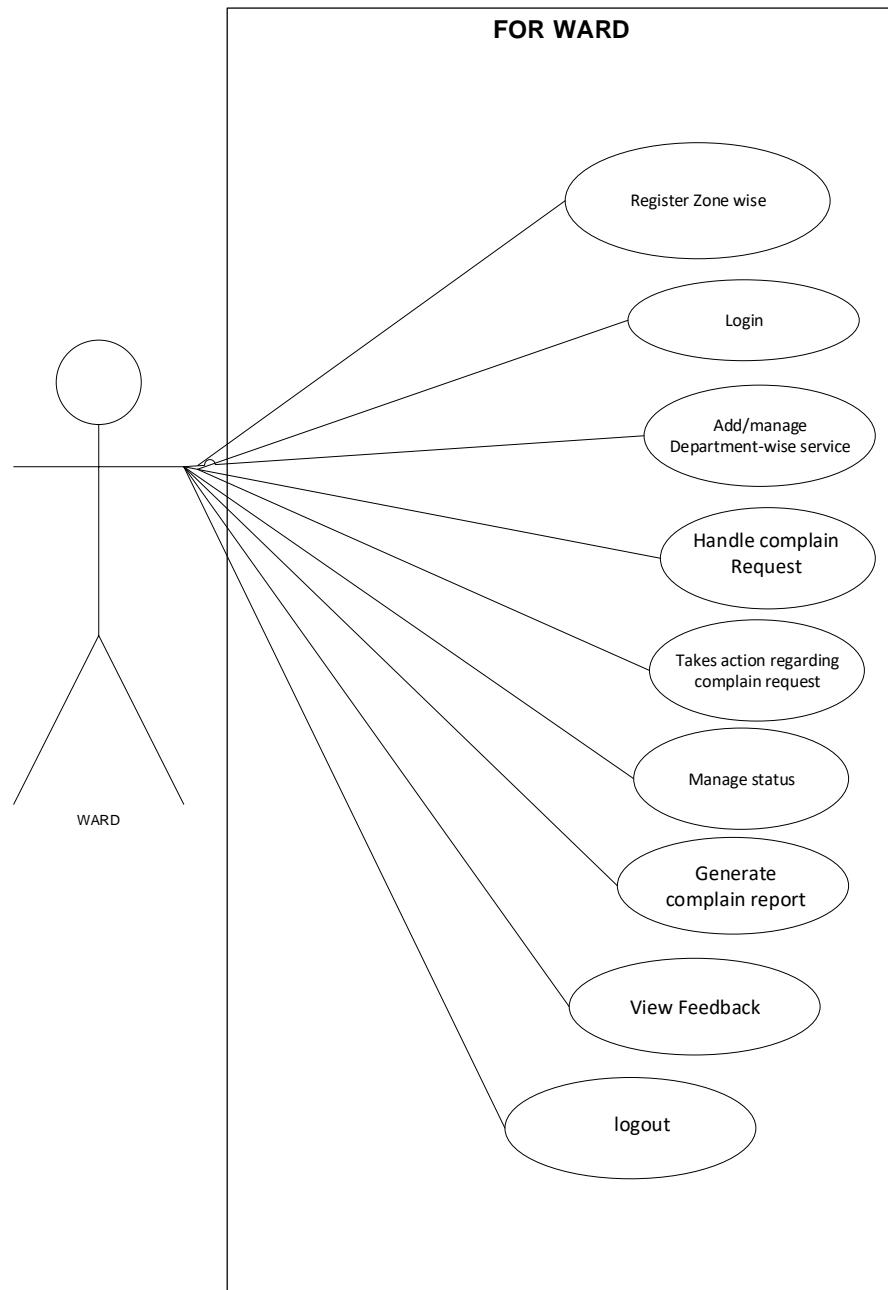


Figure 4.8 Use Case Diagram

4.3.3 User

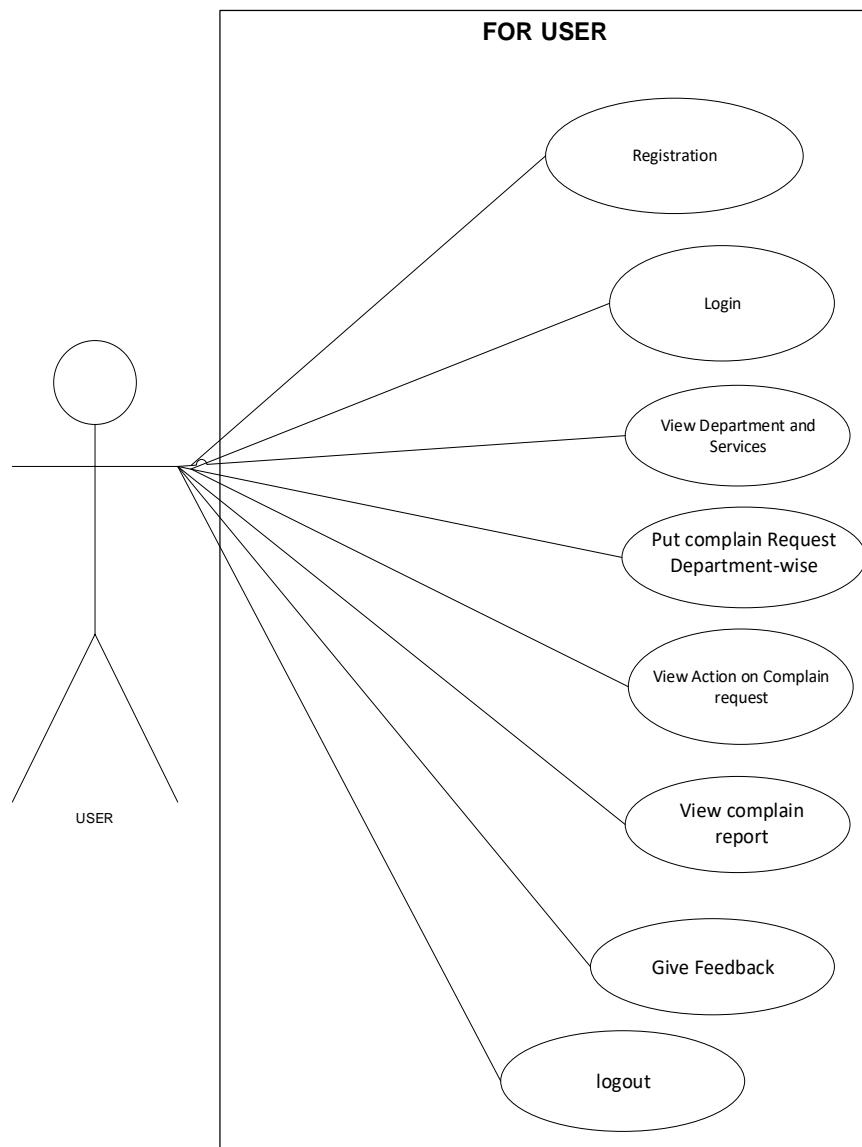


Figure 4.9 Use Case Diagram

CHAPTER 5:

PROJECT

IMPLEMENTATION

CHAPTER 5: PROJECT IMPLEMENTATION

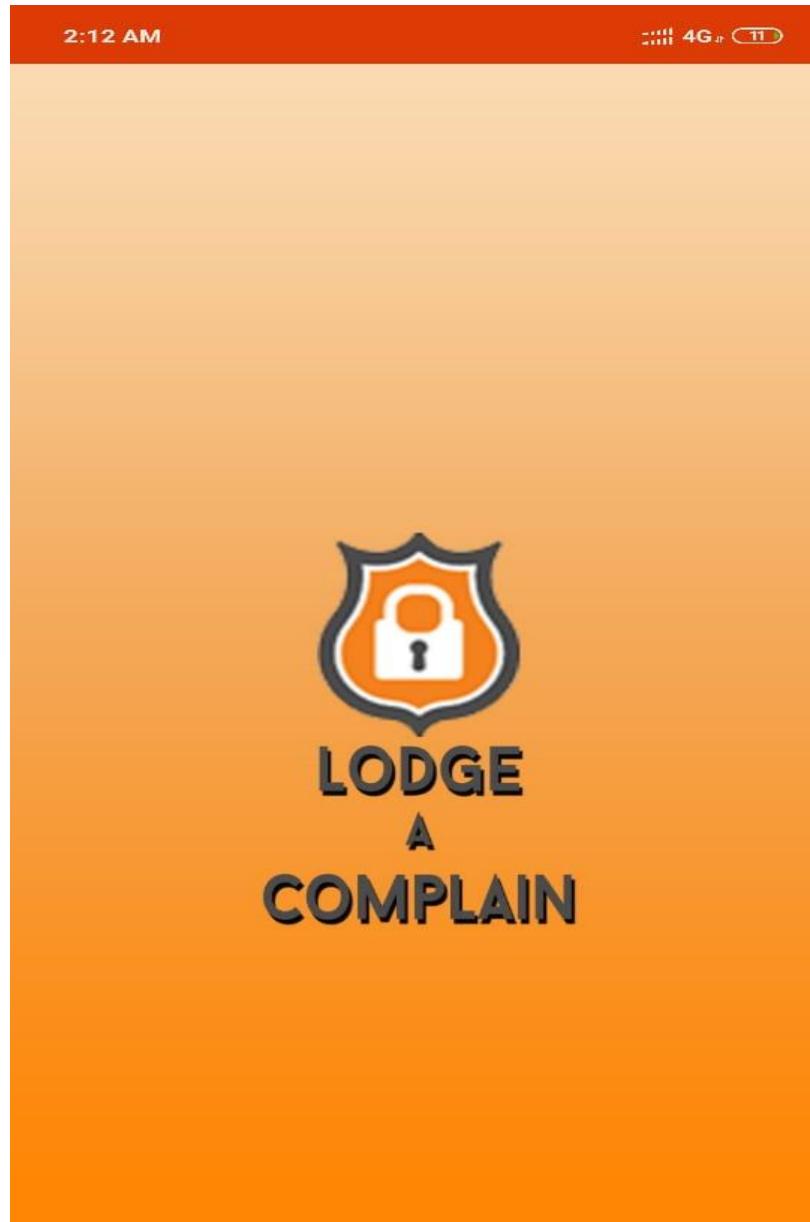


Figure 5.1 Splash Screen

Description: This is splash screen of application.

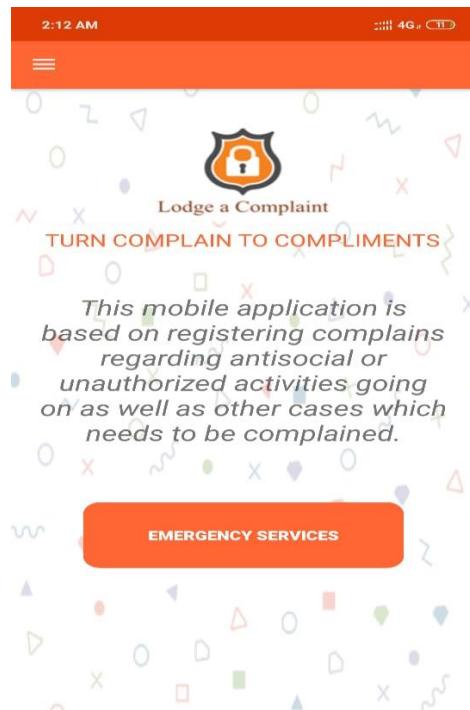


Figure 5.2 Home page

Description: This is the home page of application



Figure 5.3 Main drawer page

Description: This table contains the main navigation drawer

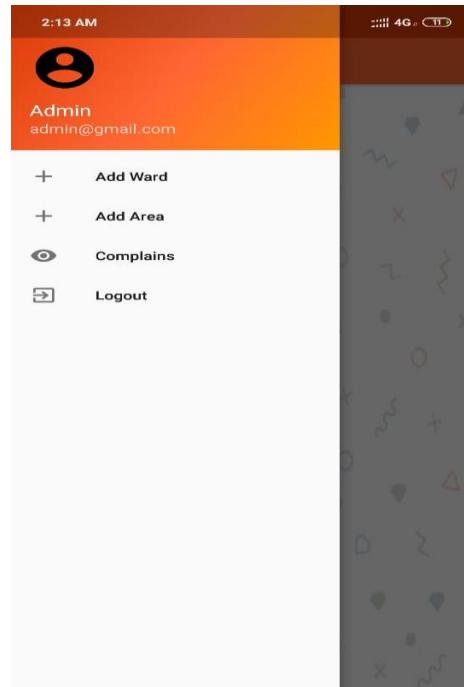


Figure 5.4 Admin drawer

Description: This page contains admin's navigation drawer

A screenshot of the "Add ward" page. The top bar shows the time as 2:13 AM and signal strength as 4G. The page has a decorative background of colored geometric shapes. It features three input fields: "Ward No.", "Ward Email", and "Ward Password", each enclosed in a rectangular box. Below these fields are two orange buttons: "SUBMIT" on the left and "DISPLAY WARD" on the right.

Figure 5.5 Add ward page

Description: This page contains add ward activity

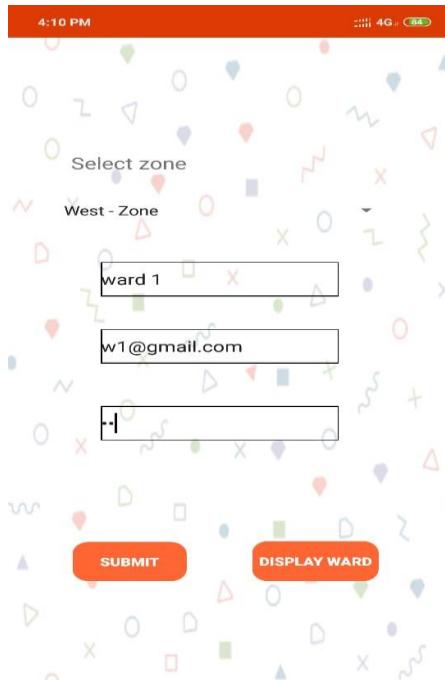


Figure 5.6 Add ward page

Description: Admin is adding ward1 in west zone

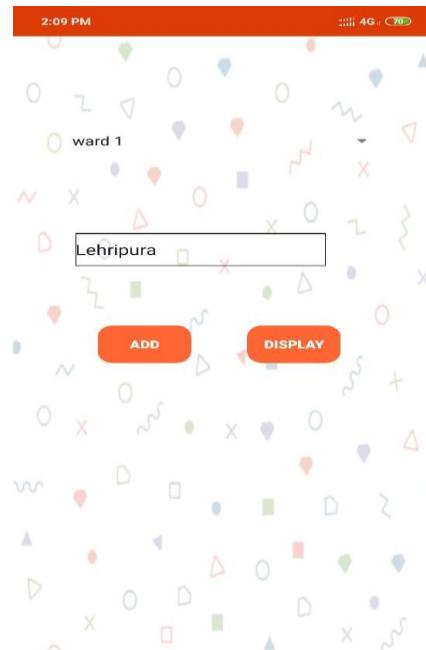


Figure 5.7 Add area page

Description: Admin is adding area in ward 1



Figure 5.8 Add area page

Description: Area displayed

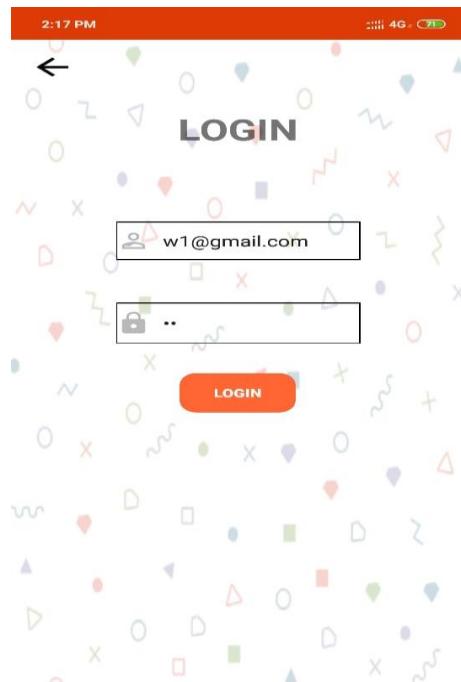


Figure 5.9 Ward login

Description: Ward is logging in

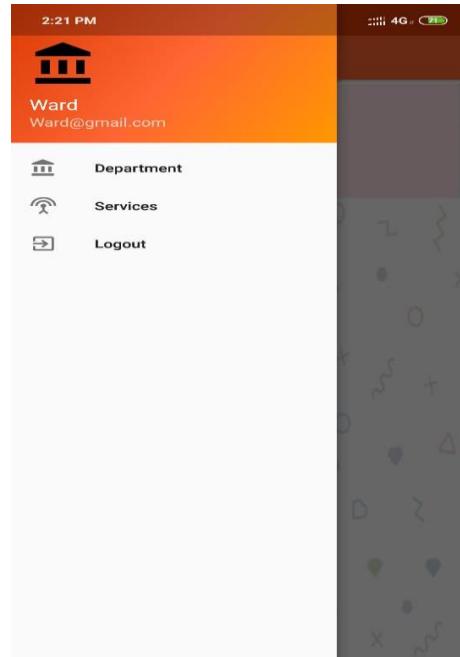


Figure 5.10 Ward navigation drawer

Description: This page contains the activities of the ward

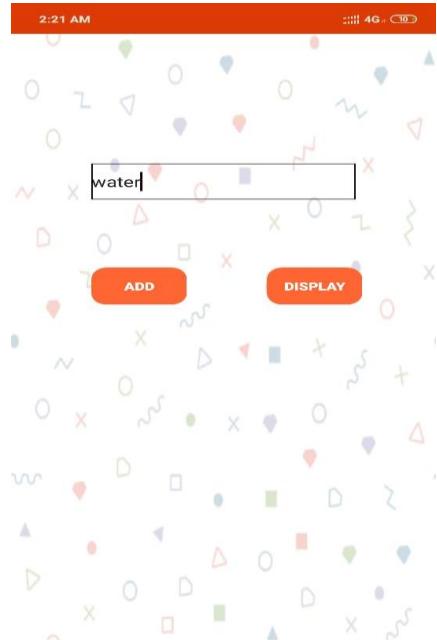


Figure 5.11 Department page

Description: Ward is entering department

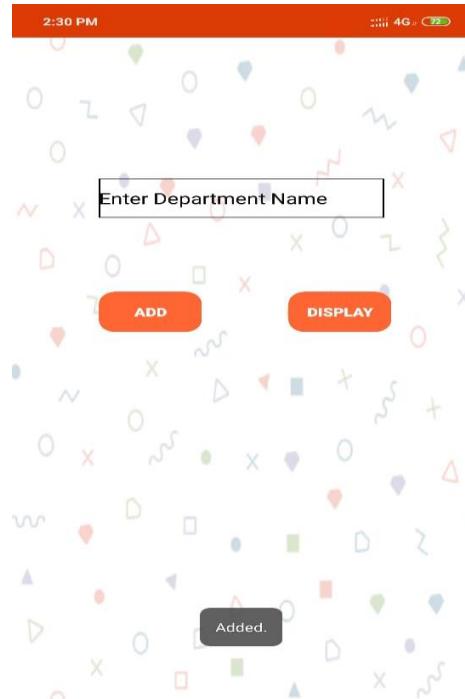


Figure 5.12 Department page

Description: Department added



Figure 5.13 Department page

Description: Department displayed



Figure 5.14 Service page

Description: Ward is entering service department wise

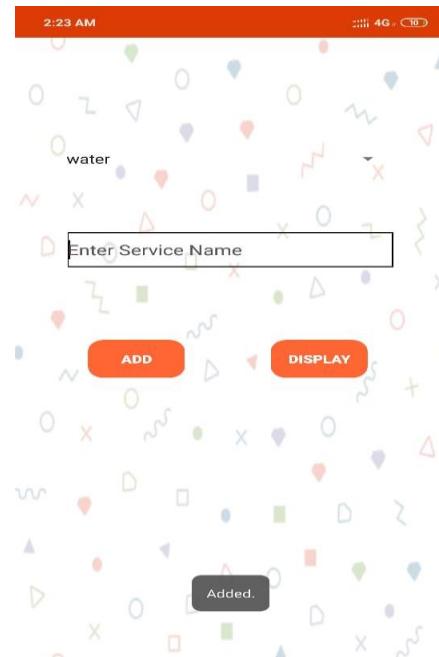


Figure 5.15 Service page**Description:** Service added**Figure 5.16 Service page****Description:** Service displayed

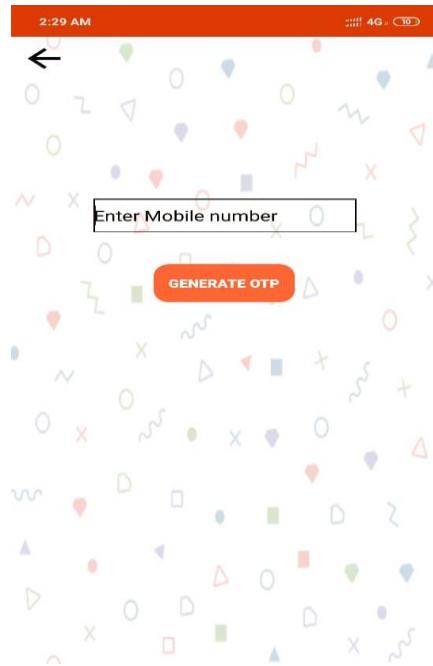


Figure 5.17 Sign in page

Description: This is user's signup/login page

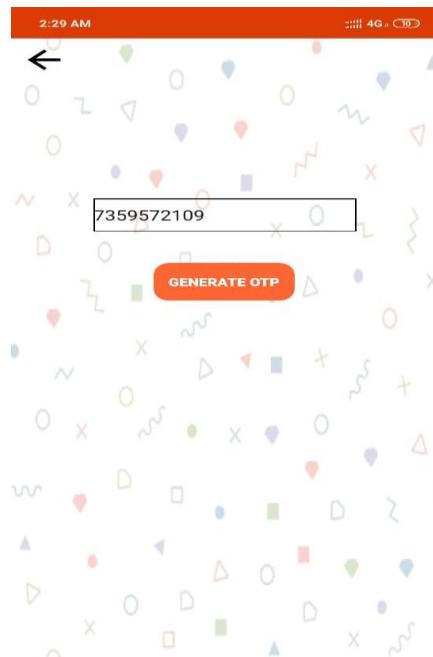


Figure 5.18 Sign in page

Description: User is signing in

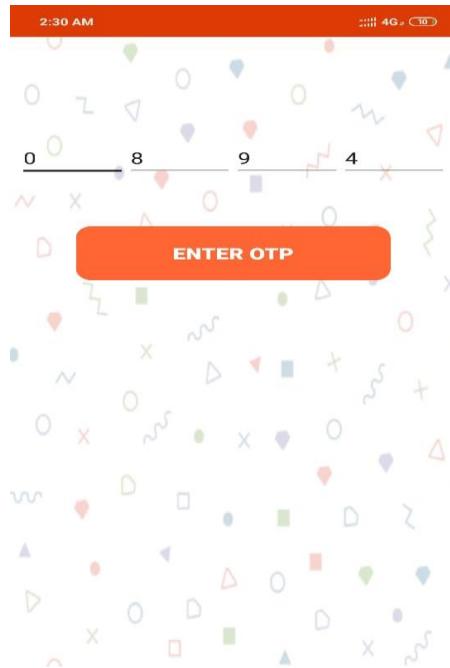


Figure 5.19 Verifying OTP

Description: User is entering OTP

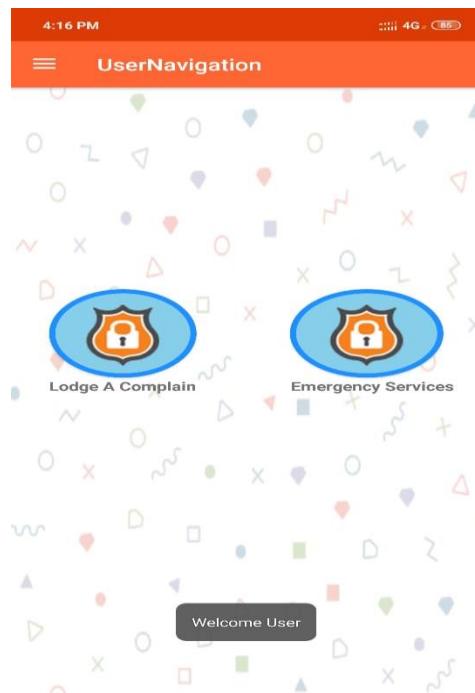


Figure 5.20 User home page

Description: This is the home page of user

Personal Information

Name
Enter Name
E-mail
Enter Email
Address
Enter Address

Problem Details

Ward
ward 1
Area
Lehripura

Complain category

Departments
water
Services
water cleanliness

Describe Complaint

Describe The Complain

Image
CAMERA GALLERY

SUBMIT Reset

Figure 5.21 Complain form

Description: This is the complain form

Personal Information

Name
Hari purohit
E-mail
hari@gmail.com
Address
abcd

Problem Details

Ward
ward 1
Area
Lehripura

Complain category

Departments
water
Services
water cleanliness

Describe Complaint

xyzxyz

Image
CAMERA GALLERY

SUBMIT Reset

Figure 5.22 Complain form

Description: User is sending complain

Address
Enter Address

Problem Details

Ward
ward 1

Area
Lehripura

Complain category

Departments
water

Services
water cleanliness

Describe Complaint
describe The Complain

Image

CAMERA GALLERY

Your complain is successfully registered...

Reset

Figure 5.23 Complain form**Description:** Complain is submitted**Figure 5.24** Emergency services page

Description: This page contains emergency services



Figure 5.25 User complain page

Description: This page contains user's complains

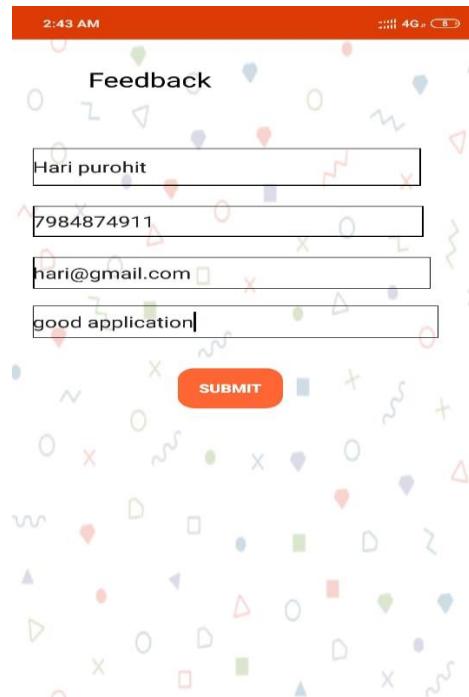


Figure 5.26 Feedback page

Description: This is the feedback page



Figure 5.27 Ward home page

Description: Complain is displayed at ward's home page

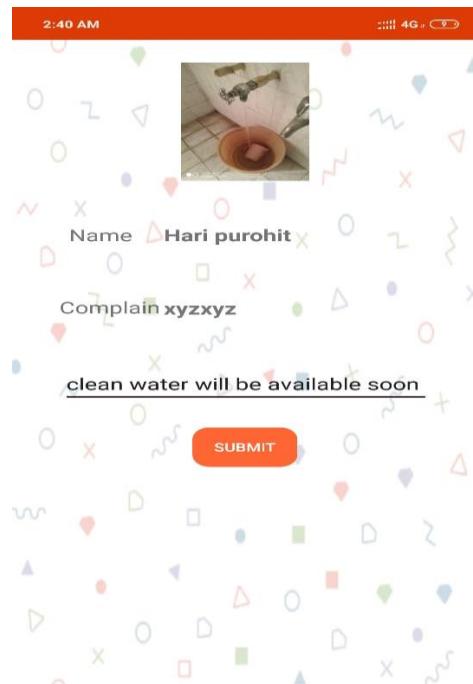


Figure 5.28 Ward home page

Description: Ward taking action over complain



Figure 5.29 Admin's complain display page

Description: This page contains user complains at admin side

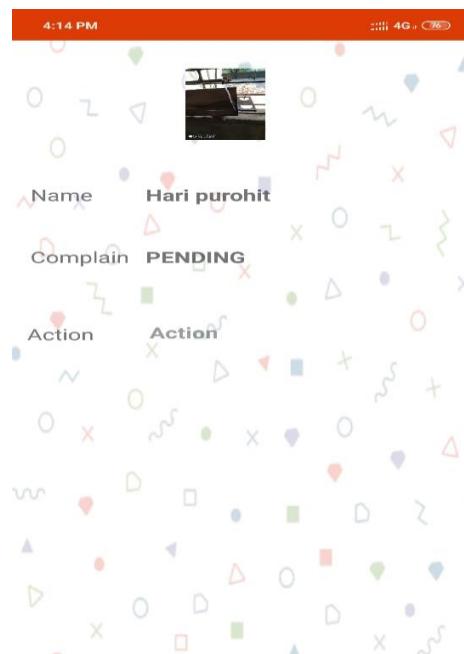


Figure 5.30 User's complain page

Description: This page displays complain status before taking action

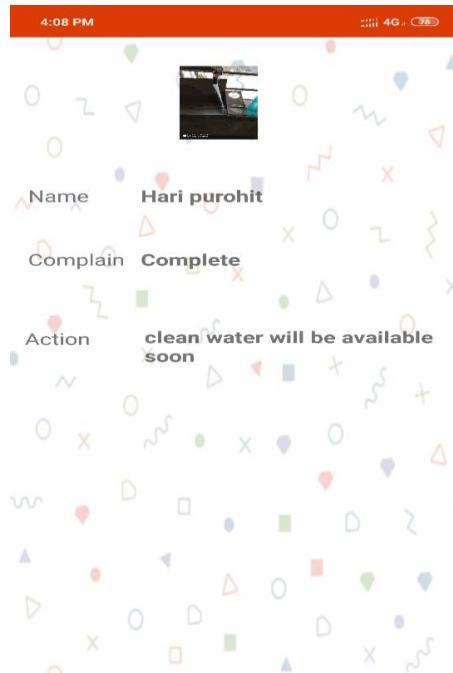


Figure 5.31 User's complain page

Description: This page displays complain status after taking action



Figure 5.32 Admin side feedback display

Description: This page displays users feedback at admin side

CHAPTER 6:

TESTING

CHAPTER 6: TESTING

6.1 Test Planning

The test planning is the process that starts with the project planning. This process defines the functions that are to be tested on the basis of black box testing. This method is named so because the software program, in the eyes of the tester, is like a black box; inside which one cannot see. The main objective of the test will be to identify all the backdoors to the entry of redundant or invalid data in the database.

6.2 Test Strategy

The strategy of testing “Lodge a complain” is quite simply based on the black box technique in which the tester will not know the structure implementation of the web application and will provide us the test results randomly as per their input.

The main parameters of the Testing will be as follows:

1. Login Validations
2. Register Validation
3. Mobile number Validations
4. Complain Validation

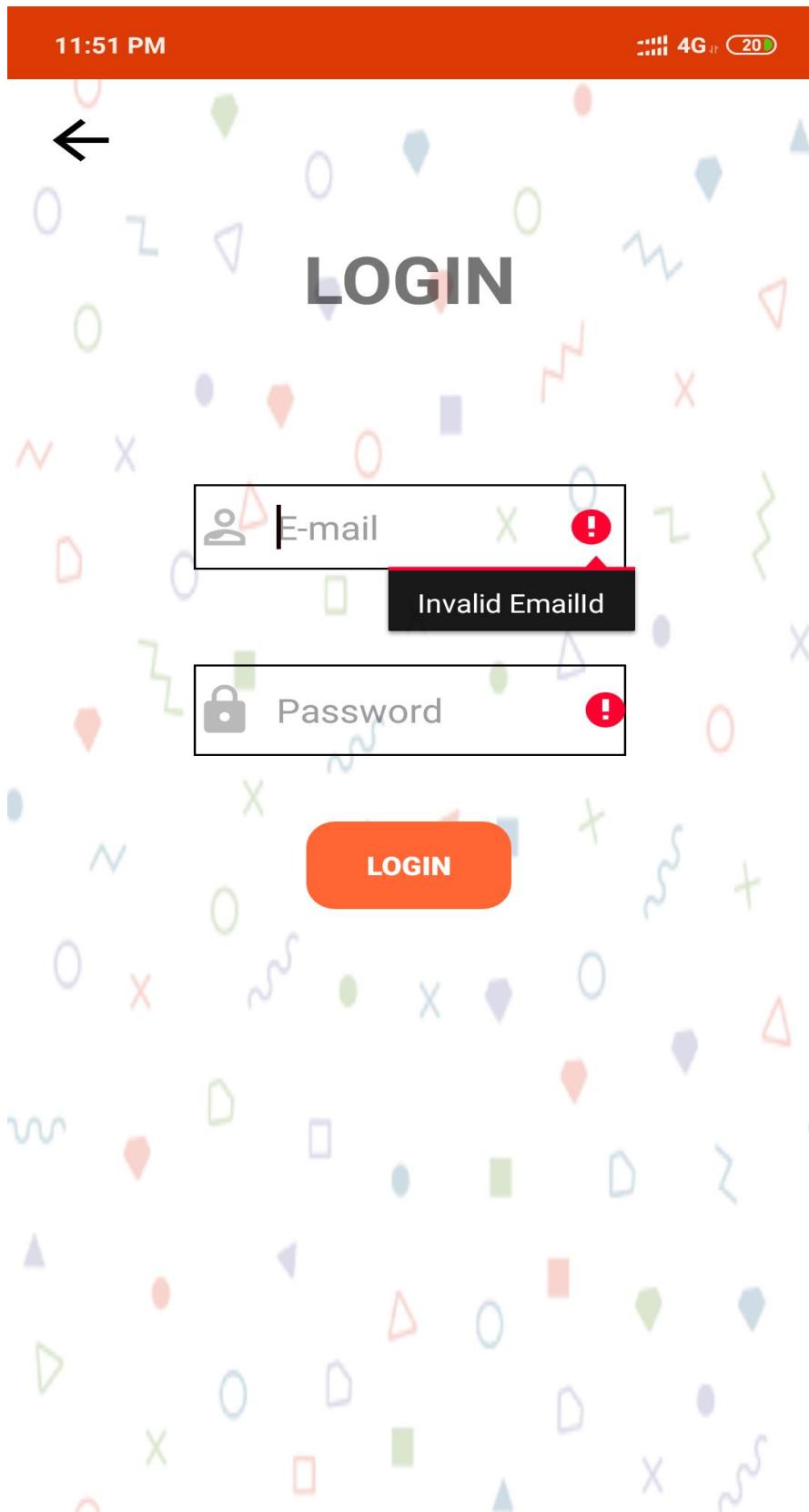


Figure 6.1 Login Page

Description: This page shows the invalid email validation.

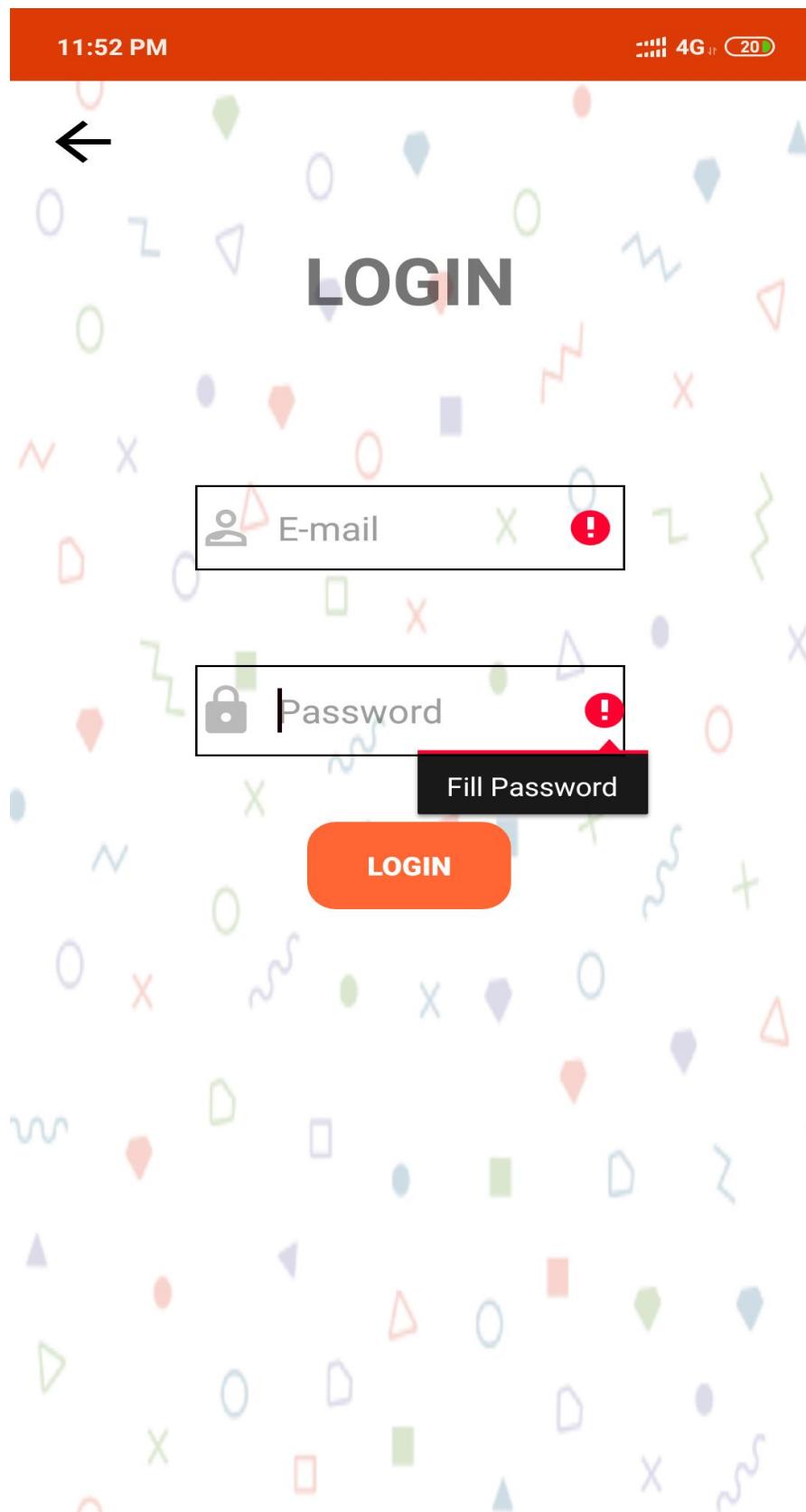


Figure 6.2 Login Page

Description: This page shows the validation to fill password.

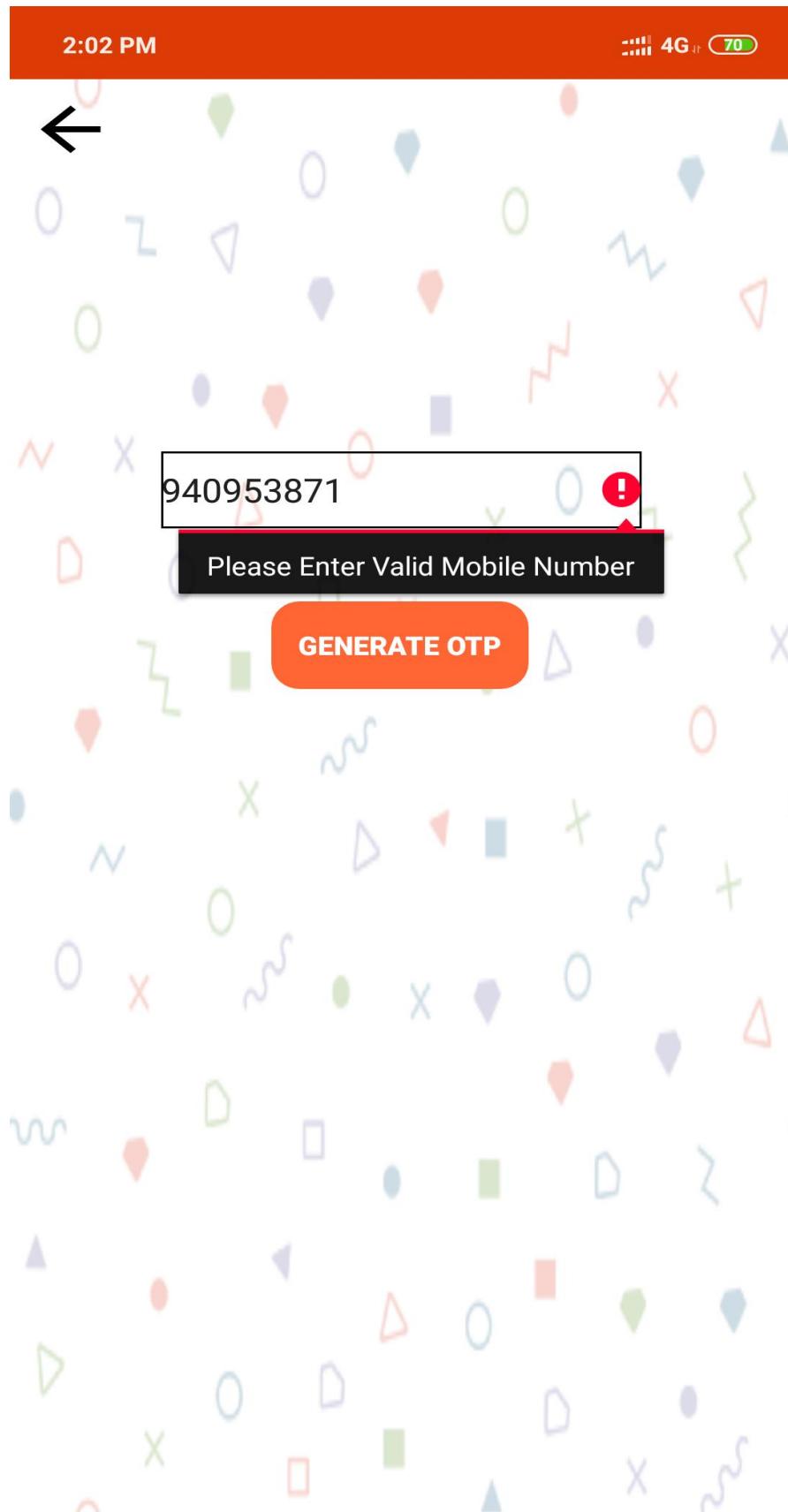


Figure 6.3 User Register Page

Description: This page shows the validation to enter a valid mobile number.

The image shows a smartphone screen displaying a mobile application for filing a complaint. The top status bar indicates the time as 1:37 PM, signal strength, 4G connectivity, and a battery level of 74%. The main interface is titled "Personal Information". It contains four input fields: "Name" (placeholder "Enter Name" with a red exclamation mark), "E-mail" (placeholder "Enter Email" with a red exclamation mark), "Address" (placeholder "Enter Address" with a red exclamation mark), and a "Fill Text" button. Below this section is a "Problem Details" section with dropdown menus for "Ward" (selected "ward 1") and "Area" (selected "Laheripura"). The next section is "Complain category" with dropdown menus for "Departments" (selected "Water") and "Services" (selected "water cleanliness"). A "Describe Complaint" section follows, featuring a text input field "Describe The Complain" with a red exclamation mark, and a "Image" button below it.

Figure 6.4 Complain Page

Description: This page shows the validation to fill text.

1:37 PM 4G 74

Personal Information

Name

Enter Name !

E-mail

Enter Email !

Address

Enter Address !

invalid EmailId

Problem Details

Ward

ward 1

Area

Laheripura

Complain category

Departments

Water

Services

water cleanliness

Describe Complaint

Describe The Complain !

Image

Figure 6.5 Complain Page

Description: This page shows the invalid email validation.

The screenshot shows a mobile application interface for filing a complaint. At the top, there is a red header bar with the time '1:37 PM' and signal strength indicators. Below the header, the title 'Personal Information' is displayed. There are three input fields: 'Name' (placeholder 'Enter Name'), 'E-mail' (placeholder 'Enter Email'), and 'Address' (placeholder 'Enter Address'). Each of these fields has a red circular validation icon with a white exclamation mark. Below this section, the title 'Problem Details' is shown, followed by a 'Fill Text' button. Under 'Problem Details', there are dropdown menus for 'Ward' (selected 'ward 1') and 'Area' (selected 'Laheripura'). The next section is titled 'Complain category' and contains dropdown menus for 'Departments' (selected 'Water') and 'Services' (selected 'water cleanliness'). A section titled 'Describe Complaint' follows, containing an input field 'Describe The Complain' with a red validation icon. At the bottom of this section is a blue button labeled 'Image'. The entire form is set against a light gray background.

Personal Information

Name

Enter Name

E-mail

Enter Email

Address

Enter Address

Problem Details

Fill Text

Ward

ward 1

Area

Laheripura

Complain category

Departments

Water

Services

water cleanliness

Describe Complaint

Describe The Complain

Image

Figure 6.6 Complain Page

Description: This page shows the validation to fill text.

The screenshot shows a mobile application interface for filing a complaint. At the top, there is a red header bar with the time '1:37 PM' and signal strength indicators. Below the header, the screen has a light gray background.

Address: A text input field labeled 'Enter Address' contains the placeholder text 'Enter Address'. A red exclamation mark icon is positioned in the top right corner of this field.

Problem Details:

- Ward:** A dropdown menu is open, showing 'ward 1' as the selected option.
- Area:** A dropdown menu is open, showing 'Laheripura' as the selected option.

Complain category:

- Departments:** A dropdown menu is open, showing 'Water' as the selected option.
- Services:** A dropdown menu is open, showing 'water cleanliness' as the selected option.

Describe Complaint: A text input field labeled 'Describe The Complain' contains the placeholder text 'Describe The Complain'. A red exclamation mark icon is positioned in the top right corner of this field.

Buttons:

- Image:** A button with a camera icon and the text 'CAMERA' below it.
- Fill Text:** A black button with the text 'Fill Text' in white.
- GALLERY:** A button with a gallery icon and the text 'GALLERY' below it.

SUBMIT: A large orange button with the text 'SUBMIT' in white.

Reset: A button with the text 'Reset' in gray.

Figure 6.7 Complain Page

Description: This page shows the validation to fill text.

CHAPTER 7:

CONCLUSION AND

FUTURE WORK

CHAPTER 7: CONCLUSION AND FUTURE WORK

Conclusion:

As explained in proposed system, the main function of the application is to solve local issues and peoples complain faster with providing appropriate solutions. Application helps in controlling antisocial activities and daily complains are solved efficiently. Emergency options are also there which helps user in an emergency. News displayed on the app are very helpful for awareness of people.

Future Work:

In future, this application will be extended in following ways:

- By receiving video complains.
- Can also be extended at state or country level.

BIBLIOGRAPHY

1. Stackoverflow

We have used the stackoverflow.com site in programming for the validation of email address and material design. Also in learning the concept of the recycler view and how to insert an image in android and retrieve it.

<https://stackoverflow.com/questions/12947620/email-address-validation-in-android-on-edittext>

<https://stackoverflow.com/questions/27869167/how-to-use-material-design-in-android-app>

<https://stackoverflow.com/questions/40584424/simple-android-recyclerview-example>

<https://stackoverflow.com/questions/28113484/how-do-i-insert-an-image-in-an-activity-with-android-studio>

<https://stackoverflow.com/questions/7331310/how-to-store-image-as-blob-in-sqlite-how-to-retrieve-it>

2. Java 2: The Complete Reference

Book by Herbert Schildt

We have used the Java 2: The Complete Reference book to learn the concepts about the basic java language and the syntax of for loop, if statement, if else statement and also to learn about the concept of threads.