SUPERIOR UNIVERSITY LAHORE

Faculty of Computer Science & IT

Final Year Project

PROJECT REPORT

Police Management System

Project ID:

Project Team

Student Name	Student ID	Program	Contact Number	Email Address
Sawaira Nawaz	Mitw-s18-011	MITW	0305287093	mitw-s18-011@superior.edu.pk
Adeel Ahmad	Mitw-f18-019	MITW	03040448017	mitw-f18-019@superior.edu.pk

Project Supervisor

Prof Mr.Ahmad Kahloon

(Lecturer)

Project Report

Police Management System

Change Record

Author(s)	Version	Date	Notes	Supervisor's Signature
Sawaira Nawaz, Adeel Ahmad	1.0	05-MAy-2021		

APPROVAL

PROJECT SUPERVISOR

Comments: _____

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Name:_____

Date:_____ Signature:_____

PROJECT MANAGER

Comments: _____

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Date:_____ Signature:_____

HEAD OF THE DEPARTMENT

Comments: _____

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Date:_____ Signature:_____

Dedication

We truly respect the gracility of ALLAH that we were able to rank the project within the given time; it's all because of his realistic blessing. It would never have been possible without involvement and attempt of so many people. We truly appreciate and acknowledge the part they play in the closing of our project. First of all, we thank ALLAH Almighty who keeps us perseverant on the path of hard work. Secondly, we acknowledge our sense of feeling to our project supervisor **Mr. Ahmad Kahloon** with his penetrative guidance in every stage of project. No doubt he proved himself as an affianced project supervisor and he is a steadfast source of inspiration.

Next to him, with deep reverence our parents who all always corroborated us morally and showed their benevolent love and care though out the entire period. We feel highly oblige to thank all the teacher of computer science who shared their knowledge with us and for their benevolent attitude. Last but not the least we thank all of our friends and family members for their support.

Executive Summary

This document is all about the police management system. It includes knowledge about every step that user will face while using system. Through this the user can reach to the police in very short time and police can have help about fast solution of issues. This application shortens the time and distance by observing the real facts through public help. Not only this, it can lessen the government expenses by making easy prosecution of the crimes.

All the features are to make the system efficient and reliable. Admin can check all the complaints and user can only upload a complaint and can see his previous uploaded complaints.

After sign up user will login in the system and will reach the home page and here he could register a new complaint. Admin could search the complaint from admin side. Admin can edit, delete and update any user, complaint and can see the information of police stations.

Incharge is another user from admin side who is the incharge of his police station from a fixed location. He could add delete his police officers and could see the complaints and could update it.

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Chapter 1

Introduction

Chapter 1: Introduction

This document is all about the police management system. It includes knowledge about every step that user will face while using system. Through this the user can reach to the police in very short time and police can have fast access to the criminals. This application shortens the time and distance by observing the real facts through public help. Not only this, it can lessen the government expenses by making easy prosecution of the crimes.

All the features are to make the system efficient and reliable. Admin can check all the complaints and user can only upload it and cans see his previous registered complaints and there can check their process.

1.1. Background

Every police system needs an online complaint system. That system should be fast, secure and reliable. It should notify the admin about every report informed by the user. Not only this, the main problem is to secure data from unusual access. Even the modern system of Pakistan is not reliable yet. User get importance when he/she is physically exists, but online complaint submission will notify the Admin about all complaints in all regions.

All functions are well planned.

1.2. Motivations and Challenges

To start an application is difficulty that makes you afraid of being failed. Not at all it is not necessary that you will be proved as a fool developer. Joining the project community we cannot take part for a trial and no chance to push project in risk. It was the first step that I faced. First we had to prepare ourselves for project creation, and then it was not easy to dress up our planning to the reality. So, many issues came while creating the system. We stuck at a lot of steps where we didn't found the way to resolve it but it was our research and team work that we never failed anywhere.

1.3. Goals and Objectives

About what we are creating the system is a highlighted query. Police management system is upper most need of the society, how? The days are going, crimes are lengthening. This needs a movable system that could reach and control it on time. Our goals are to make police system more strong even for small coverage areas, because it has no areas limitation and also for mobile police for quick reach at the crime spot. Our main goal is to provide this facility even in small police stations.

1.4. Literature Review/Existing Solutions

Police management system is created for the time saving of police administration and for the ease of a common man. This is to say that all of the record will be saved at secure database to keep for a long time. This application is to easily find out the records and save the time. There exists police management systems in every police station but they all need modification and also small police stations are deprived of such a facility.

1.5. Gap Analysis

After deep research we analyzed an immense gap within modern Pakistan police system and other world's system. It lacks on time reliability and needs a lot of modifications. Even small police stations and mobile police have no access to this type of system. Our police is not strong just because the lack of such facilities. Being an IT student I rushed to create such an application that could give a system to our small level police to make their position strong.

1.6. Proposed Solution

The system overrides the time consuming paper work and shorten the expenses of it. Data is saved in the database and is only accessed by the administration. Administration can view the complaints and can update its prosecution process. The end user is able to register a complaint after filling all required information.

This system provides valuable facilities to the police and end users like:

1. It saves the time to go police station.
2. Very easy to use
3. Assure the data validity
4. Provides efficient functions to lead the complaints.
5. Provides a secure database
6. Overcomes the manual search.
7. It is interchangeable.

1.7. Project Plan

A web based application is created keeping in eye the modern needs of police criminal system. We planned to give a strong system to police especially to the small level police stations.it will be more cost effective than today's expensive system. In first month we researched about our project topic, took ideas and completed the software setup with complete training. Next month we completed our project in a smooth way and then in the 3rd month all testing and modifications took place and though we completed our project.

1.7.1. Work Breakdown Structure

- **Complaint information:** It manages the complaint information.
- **Login information:** System keeps the user's login information.
- **User record:** It keeps all the past record of the user in database,

- **Complaint record:** It keeps the application record, their time of uploading and applicant detail in database.
- **Apply report:** It provides an interface to the user to apply for a complaint.
- **Application reading:** Police administration will read the complaints.
- **Respond:** Administration will respond the applicant updating process level of complaint.
- **Police Stations**: Administration can also view all the connected police stations.
- **Police Officers:** Police station admins can view their police officers in their police station, they can delete and add any police officer from their side.

1.7.2. Roles & Responsibility Matrix

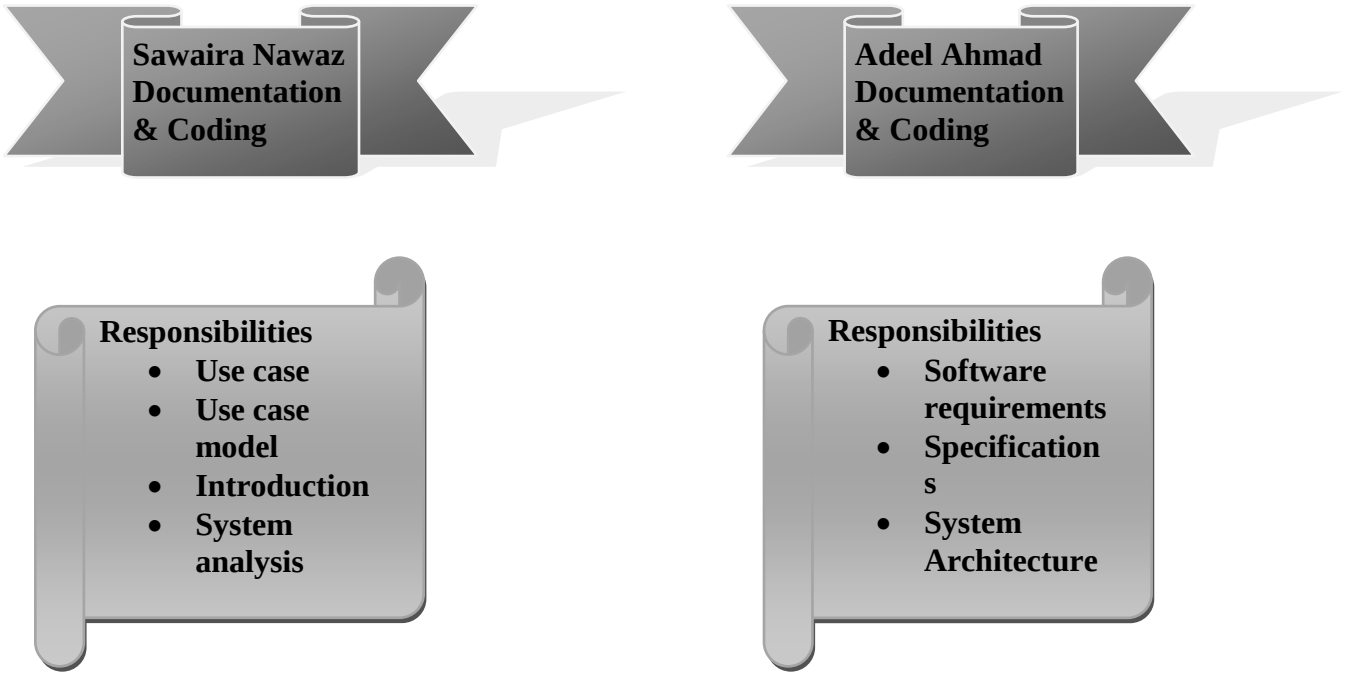


Figure 1.1 : roles and responsibilities

User Role

- User can register complaints.
- User can create a login account.
- User can view his complaint history.
- User can logout.

1.7.3 Gant Chart:

Project Schedule	December 2020	January 2021	February 2021	March 2021	April 2021	May 2021	**Hours**	**Summary**
Tasks								**Percent**
Requirement	24 hrs.	21 hrs.					45	22.20%
Design		12 hrs.	20 hrs.				32	14.90%
Coding		10 hrs.	8 hrs.	13 hrs.	16 hrs.		47	13.20%
Implementation			18 hrs.	31hrs	42 hrs.	18 hrs.	90	6.60%
User manual write			16 hrs.	12 hrs.	9 hrs.	3 hrs.	38	21.10%
Report Writing		14 hrs.	6 hrs.		26 hrs.	16 hrs.	72	1.90%
Demonstrate						8 hrs.	8	20.20%
Total hours	24	57	68	56	93	45	332	100%

Figure 1.2 : Gant Chart

1.8. Report Outline

- All the reports are accessible by the administration, police station of relevant location and the applicant; system will keep them private from other users.
- User can login through direct signup.
- User can view all of his previous applications.
- User can delete its application whenever he/she wants.
- Application will be saved in web database.
- Administration could update the prosecution process information of the complaint.

Chapter 2

Software Requirement Specifications

Chapter 2: Software Requirement Specifications

2.1. Introduction

2.1.1. Purpose

This document is all about the Police management system. It not only saves the time but also the paper expenses. Police needs the fast and secure system that could handle every new occurring crime scene CS in the society, and could make the police prosecution fast.

2.1.2. Document Conventions

PMS	Police management system
PO	Police Officer
SEO	Searched Engine optimization
UC	Use Case

2.1.3. Intended Audience and Reading Suggestions

The document is intended for the users such as developers, project managers, marketing staff, clients, testers, and Administration. The system contains application registration by the client and reading of application by the police, also police can update about the police prosecution. Document have content page that enables the readers to reach to their desired page.

2.1.4. Product Scope

The system contains application registration by the client and reading of application by the police administration, also they can update about the police prosecution. Administration can technically update and respond to the clients in formal way.

2.1.5. References

www.W3school.com

www.app.creately.com

www.overstack.com

2.2. Overall Description

2.2.1. Product Perspective

This product contains the following perspectives better than the old system.

Old System:

- More paper work, more expenses
- Physical work, difficult to update it
- No direct contact with the administration to respond on time.
- Data is not secure, as it has no permanent security.
- It requires more man power than computer system.

Police management system contains:

- This system is mean to produce a fast and secure system
- It contains an environment for users and admin to work appropriately
- It gives an environment for user to register an online complaint for any crime
- Administration can view the complaints
- Admin can respond the applicant on time by updating the status.
- Admin can update prosecution of the police and any news
- System saves the data through authentication of the user
- Searching the relevant applicant or applicant or anything is available
- This increase the work efficiency of the police through computer system.

2.2.2. Product Functions

System contains the following functionalities

- It maintains the user accounts securely.

- It maintains the data in online database that's why it is secure to being theft and burn
- It reduce the paper work and work fast and on-time on internet
- It keeps the record of the users and applicants
- It has searching ability that reduces the time
- Not only police system, also public will enjoy the facilities
- Basic things are to inform the police on time so could police reach on the spot, this is possible in this system
- Mainly police calls can be the slang call that wastes the time but this system accepts application with evidence
- Can accept more than one applications at a time

2.2.3. User Classes and Characteristics

- It will provide searching facility
- It manages online report registration details
- It gives all the information about applicant
- It shows the Prosecution of reports by asking queries
- It also manages the user's detail
- Editing, adding and updating of profiles by user
- Editing, adding and updating of police officers
- Integrity of all records of registration
- Simple status and resolutions
- Decrease the person load involved in existing manual system
- Individual access to any information
- Reports are well designed
- It will provide multi-level priorities
- Better storage capacity
- Updating is more easy

- work speed is increase
- Retrieval of information is easy and fast
- to maintain the security user accounts are being secured

2.2.4. Operating Environment

Software:

Language : PHP

Database : MYSQL
Browsers : All Browsers

Hardware:

Computer with internet

2.2.5. Design and Implementation Constraints

The design of software is not the responsibility of the software team yet it will be the responsibility of the administration that which designer they hire. User testing and load control will be checked by the team. Even though any issue occurred within 6 months will be solved by the team free of cost, after that it will not be the responsibility of the software team.

After testing and giving the first successful trial of start of the software team will not continue and precede any work. After delivering software any change in it will be charged.

2.2.6. User Documentation

User will login and get an interface of the application, all function are defined there. Click on any option will get him to the desired landing page. User can register complaints against any crime occurred in the surrounding. No charges are to register applications, user can view it prosecution process and at any time he also can take his application back. User can view the status of complaint updated by the administration.

2.2.7. Assumptions and Dependencies

Assumptions:

The important assumptions are that the user should be familiar with the use of computer system, its mouse and keyboard and also internet. User must have a strong internet. User should complete all its requirements and then start using the system.

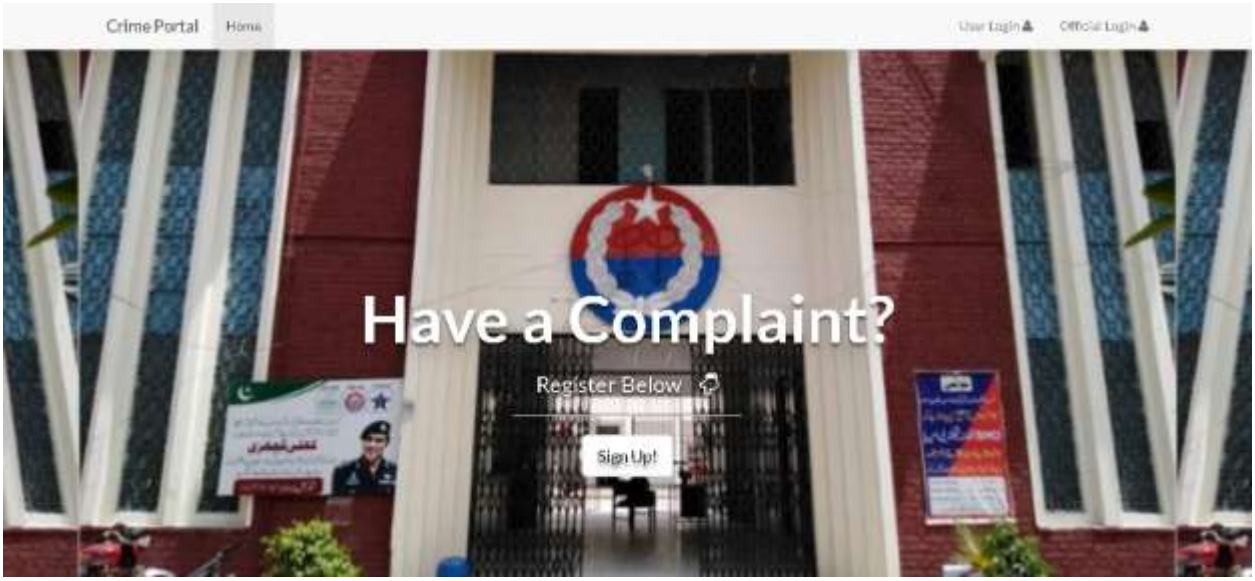
Dependencies:

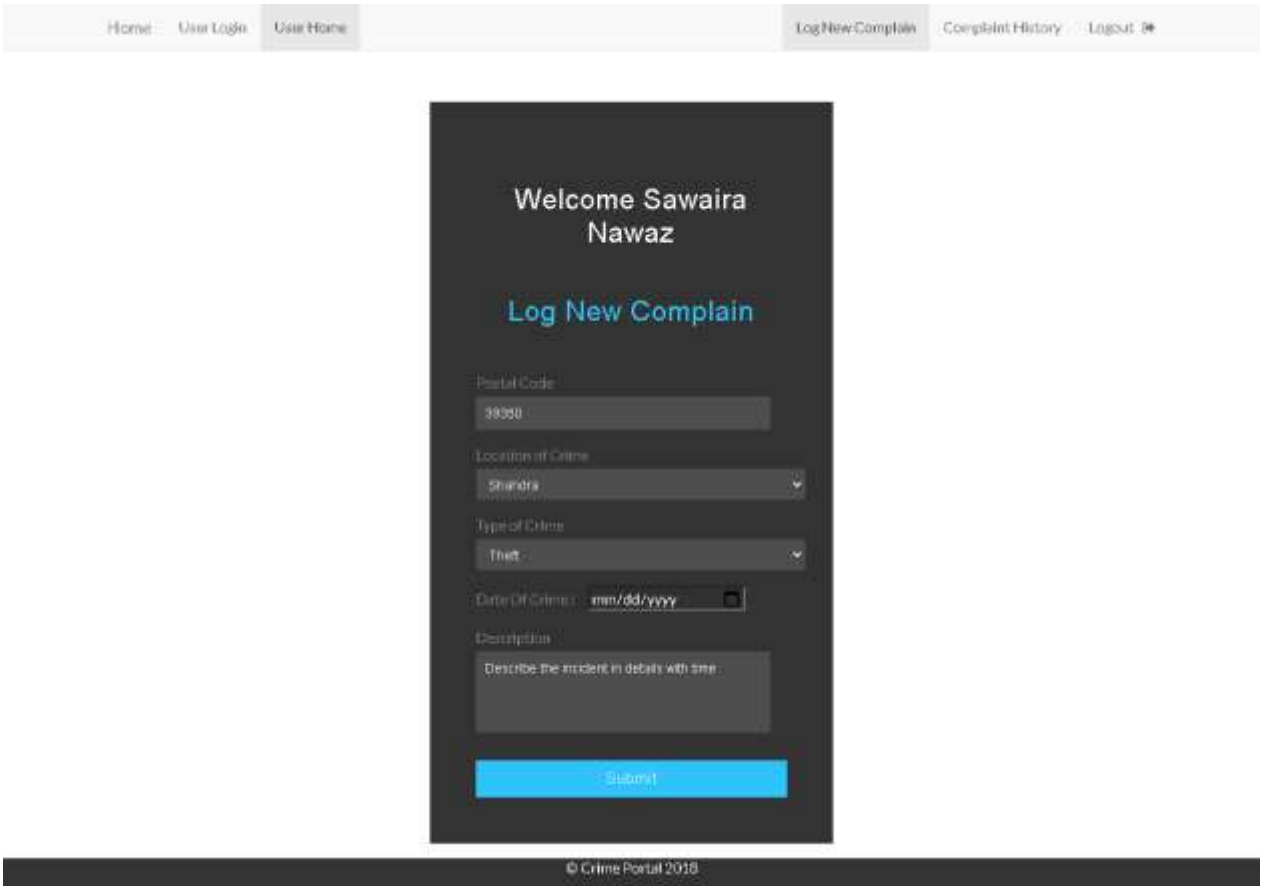
System access depends upon the correct login information. Security personal have access to all user accounts.

2.3. External Interface Requirements

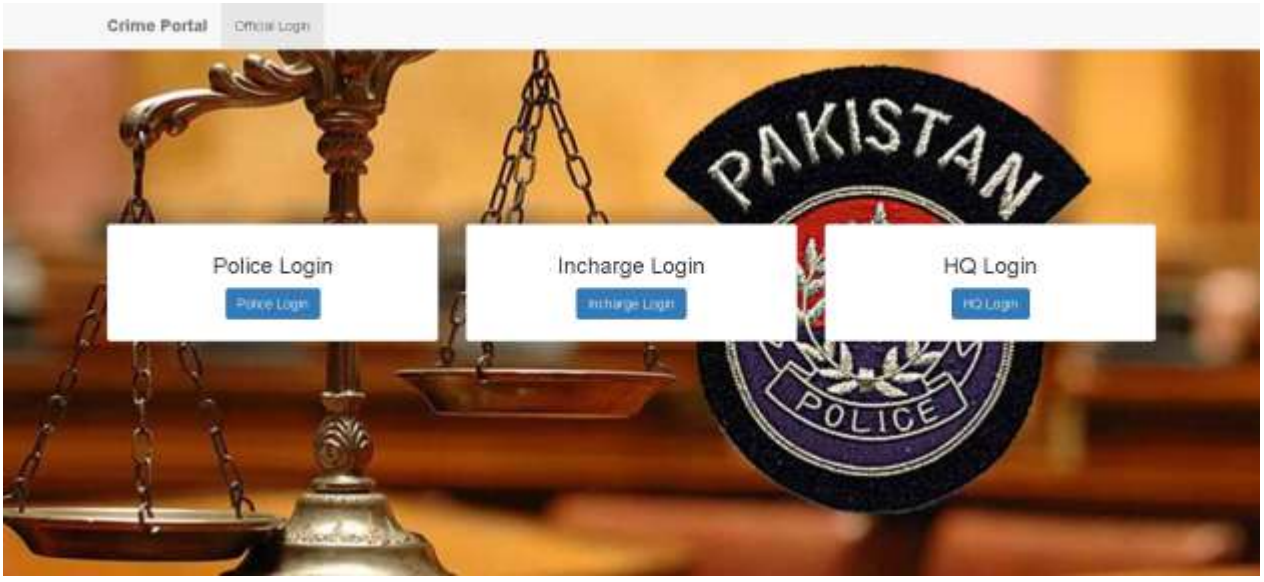
2.3.1. User Interfaces

User interface has a login and sign in buttons page that requires the user's correct information. After logging in, user lands to the website's page that enables the user to register an application by clicking the register link button. There is also a button for the user to view status updated. In the user's profile all applications that are registered by the user are shown. User can view the admin response by checking status of the complaint.





Admin Interface



2.3.2. Hardware Interfaces

In hardware this system contains a computer and internet only as it is a web based application.

2.3.3. Software Interfaces

Software is the least need of this system. This system is created through XAMPP server (version v3.2.4) using PHP language that is the foremost application having a server of its own, likely named as MYSQL. Text editor used in the system is Atom and visual studio code. All frontend is controlled by the text editor and then connected with the database and data is stored there. HP CORE i3 operating system windows 10 are used.

2.3.4. Communications Interfaces

This system requires an operating system that has any browser which could run the application. Server is used to record the data that is used must here. In the system only email and call are the real means of communication between the admin and the user.

2.4. System Features

2.4.1. Login Activity

2.4.1.1. Description and Priority

This feature is of top priority, it mean highest priority. Logging in the system keeps the record of the users and applicants. Login is must for both admin and user.

2.4.1.2. Stimulus/Response Sequences

A login link given access to you to the main page after opening the website there will open a page which consist a login form also a Signup form, signing in required for the user if he is not already registered.

2.4.1.3. Functional Requirements

REQ-SF1-1: An online form provided the user to input his identifications to login to his account.

REQ-SF1-2: If the user is not registered then he will first fill the registration form

REQ-SF1-3: For the registration user needs to enter Full Name, Password, Postal code, email, address, gender and Contact number.

REQ-SF1-4: If the login is successful, the user will enter to home page of the PMS.

REQ-SF1-5: If the login is unsuccessful, user will go back to login page.

2.4.2. Register Application

2.4.2.1. Description and Priority

After get login user gets access to the main page of the website which allows him/her to register an application against any crime. This gets the middle priority, because user may not submit the application or he can use the other features like call or email to the admin as well.

2.4.2.2. Stimulus/Response Sequences

User will click the register application link and will land to the register page. Crime registration is the main part of the system.it will allow the user to enter details about the crime and then submit it.

2.4.2.3. Functional Requirements

REQ-SF2-1: User will type the content and will add the evidence in the evidence option.

REQ-SF2-2: After typing, the application will be submitted.

REQ-SF2-3: If any option i.e. evidences or content is missing the system will give the error while submission. All fields like evidence, location e.t.c. are required.

2.4.3. Complaint History

2.4.3.1. Description and priority

Complaints history is also the important part of the system and is essential for the user to see the status of his previous complains. He can check for his application prosecution status, or assigned police officer (investigator). It has minimum priority.

2.4.3.2. Stimulus/Response Sequences

It is source of getting in touch with the administration. When user clicks the option complaint history, it will allow him to see the updated status of his complaints whether they are in ready, prosecution or rejected state. It will keep in touch the user with police.

2.4.3.3. Functional Requirements

REQ-SF3-1: User will see an updated status of complaint.

REQ-SF3-2: User can take his complain back by giving an aceptable reason.

2.4.4. Application at Admin

2.4.4.1. Description and priority

Admin will receive the complaints and could see all of them. He could also update his status and will assign the relevant police station. It has middle priority.

2.4.4.2. Stimulus/Response Sequences

Admin will receive the complaint and will assign it to a police station according to its location.

2.4.4.3. Functional requirements

REQ-SF4-1: Application will got by the admin

REQ-SF4-2: Admin could assign complaint to a relevant police station.

2.4.5. In charge Login

2.4.5.1. Description and priority

Connected police stations could also login to the site and view their assigned complaints.

2.4.5.2. Stimulus/Response Sequences

Admin of relative police station could see his assigned complaints. And start his further prosecutions

2.4.5.3. Functional Requirements

This feature is efficient for the admin to maintain a flow of attachment with the police departments.

REQ-SF5-1: Police station is assigned by the admin.

REQ-SF5-2: Police could see it from his side.

2.4.6. Police Officers login

2.4.6.1. Description and priority

Police officers of all police stations could login to the system if they are assigned as a user. This is of middle priority.

2.4.6.2. Stimulus/Response Sequences

Any assigned case to any police station will be given to an investigator who will login to the system and will see all his assigned complaints. He could update his status of being accepted, in prosecution or rejected.

2.4.6.3. Functional Requirements

REQ-SF6-1: Police officer will login to the system

REQ-SF6-2: He will receive all of his assigned complaints

2.5. Other Nonfunctional Requirements

2.5.1. Performance Requirements

System is best when it performs as the user wants. When it is needed it should be available. System should be fast as when it is clicked to load it should be loaded abruptly. Loading should be fast and links should not be broken. It depends upon how better is its SEO. SEO will make the application fast and reachable by the user to the relevant site. For all of this its connection with the server should be strong and reliable.

2.5.2. Safety Requirements

Main purpose of the application is to provide a reliable and trustable system that could fulfill the needs publically. This is only possible when we have a secure system that could protect the personal data of the admin and the users. System should be connected to a strong data fetching server. For this, it also needs a backup database that could recover all at any time of harm or damage. It should always be looked upon for updating and make secure from any malware attacks.

2.5.3. Security Requirements

Admin's data is as important as the pillar of the application. When user and admin will have a verifiable logins then they could save their assets. User must have a strong password verified by his mobile number. URLs should not show the id of the user. Data should be updated always.

2.5.4. Software Quality Attributes

Software must be able to accept all users from Sheikhupura. It should be able to work for every 24 hours, whenever user reaches it. System should not accept the password lower than 8 characters and login without mobile number should not be possible. Mobile number should be unique. System is very friendly; it works smoothly but not accepts the wrong and perused data and password.

2.5.5. Business Rules

The design of software is not the responsibility of the software team yet it will be the responsibility of the administration that which designer they hire. User testing and load control will be checked by the team. Even though any issue occurred within 6 months will be solved by the team free of cost, after that it will not be the responsibility of the software team.

After testing and giving the first successful trial of start of the software team will not continue and precede any work. After delivering software any change in it will be charged.

2.6. Other Requirements

It is the simplest report registration project has enables the public to raise hand against crimes. But the most important thing is to build it on a secure server, and should keep updated every time. It should have strong internet and a fast browsing search engine like Google.

Chapter 3

Use Case Analysis

Chapter 3: System Analysis

This document comprises the details about the functionality of this product with the help of diagrams to illustrate its functions in better way. It provides details about different actors, procedures and functions involved in the functionality of this product. To illustrate the functions performed by different actors/stakeholders involved in this system, we can take the help of Use Case Model.

3.1. Use Case Model

USER LOGIN

Use case #	UC-01
Use case name	Login
Trigger	User will login to get access to the application.
Pre-condition	User will enter his information at the login page.
Post-condition	User will reach to the home page of the application.
Priority	5
Basic flow	User will enter his information to the login page and will reach to the main page.
Exception path	If user has no account he will get an error and ask to sign up.
Summary	User will login and reach to the system.
Others	Users cannot access to the system without logging in.

USER SIGNUP

Use case #	UC-02
Use case name	Signup
Priority	5
Trigger	User will sign up to get access to the system.
Pre-condition	User will enter his required information to the sign up page.

Post-condition	If sig up is successful, user will login and will get access to the main page.
Exception path	If signup fail, check the require conditions.
Basic flow	User will login to get access to the system.
Summary	User will enter his data according to the required condition, and after login user will get access to the system.
Others	User cannot get access to the system without sign up.

REGISTER COMPLAINT

Use case #	UC-03
Use case name	Application registration
Priority	Medium
Pre-condition	User will enter details in the complaint registration page.
Post-condition	User will register a complaint.
Exception path	User will only visit the application and go back.
Trigger	User will register an application.
Basic flow	User will register his complain and send it to the police.
Summary	User will register a complaint to the police department.
Other	Main purpose of the system is to register an application.

HEADQUARTER ADMIN LOGIN

Use case #	UC-04
Use case name	Admin login
Priority	high
Trigger	HQ will login to the admin page
Pre-condition	HQ admin will enter id and password.
Post-condition	HQ will land to the main admin page

Exception path	HQ will handle all the users.
Basic flow	HQ will login Admin page.
Summary	HQ will login to the admin page and he will handle all other official users.
Other	There is only one HQ account.

POLICE LOGIN

Use case #	UC-05
Use case name	Police Login
Priority	High
Trigger	Police Officers will login to the system.
Pre-condition	POs will enter their login information.
Post-condition	POs will land to the complaints page.
Exception path	Login will be rejected at wrong login information.
Basic flow	POs will login to the system to the complaint page.
Summary	POs will login to the complaint page and will able to see all the complaints.
Others	All Police officers has heir accounts.

POLICE INCHARGE LOGIN

Use case #	UC-06
Use case name	Police In charge login
Priority	High
Trigger	PI's of the Police stations login to their account.
Pre-condition	PI's will enter their login information.
Post-condition	PI's will be able to land to the complaint page.
Exception path	PI's will only login to see complaints.
Basic path	Police officers will get access to the complaint page after login to

	their accounts.
Summary	Police Officers will login to their account to see the complaints
Others	PI's can only see complaints.

REGISTER COMPLAINTS

Use Case #	UC-07
Use case name	Register complaints
Priority	Medium
Trigger	User will register the complaint.
Pre-condition	User will enter the required details about the complaint.
Post-condition	User will be able to register the complaints.
Exception path	User will no register the complaint.
Basic flow	User will login to the system and will be able to register the complaint.
Summary	User will login to the system and will land the complaint registration page, he will be able to register a complaint.
Others	User can logout after registration of a complaint.

COMPLAINT HISTORY

Use Case #	UC-08
Use case name	Complaint History
Priority	Medium
Trigger	User will view the history of complaint.
Pre-condition	User will click the complaint history link.
Post-condition	User will be able to view all his previous complaint.
Exception path	User will no view the complaint history.
Basic flow	User will login to the account and will be able to view complaint history.
Summary	User will login to the system and will land the complaint history page, he will be able to view complaint history.
Others	User can logout after viewing a complaint history.

LOGOUT

Use Case #	UC-09
Use case name	Logout
Priority	Low
Trigger	Users will logout from the system.
Pre-condition	User will be in the system.
Post-condition	Users will logout.
Exception path	Users will not logout.
Basic flow	User will logout from the system
Summary	If user will be in the system it will be able to logout.
Others	Logout from system will take the user to login page.

Use case diagram

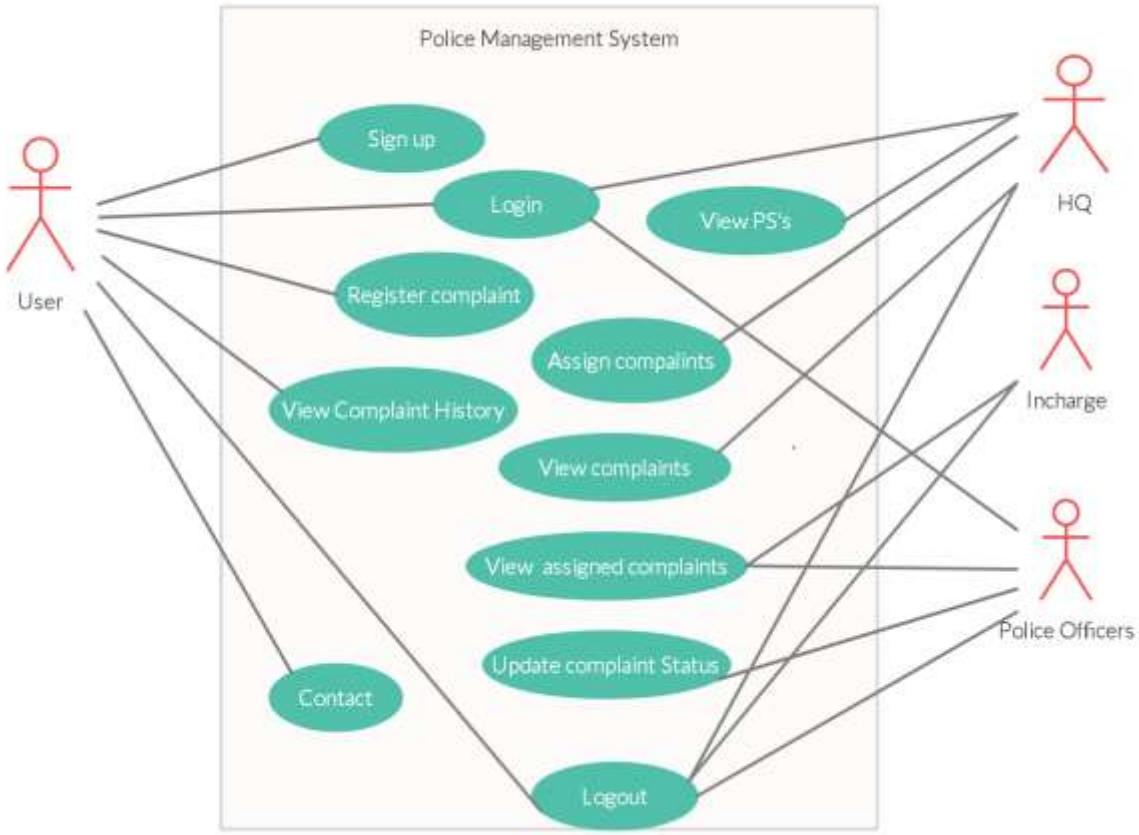


Figure 2.1 : Use case diagram

3.2. Use Case Descriptions

A use-case model is a model which illustrates about how several types of users interact with the system to solve a problem or to gain the desired goals. As such, it illustrates the goals of the users, the interactions between the users and the system, and the required behavior of the system to accomplish these goals. Diagram provided here illustrates a set of use cases, the actors involved and their relationships. An Actor can be a user or any external system. Provided diagram describes a set of actions, that Web based project performs to produce a considerable and valuable result to an actor or users.

- Non-Registered users get registered after providing required information which then stored in the database.
- After Registration user can successfully login to his account providing correct username and password.
- User can register a complaint using the platform provided.
- User can contact to the police through given contact details.
- Administrator provides and manages all the information about the services. The users use these services to accomplish the need.
- Administrator HQ keeps the catalogue update to date to keep the correct record of the data.
- Administrator HQ has rights to view all the police stations and assign the complaints to the relevant located police stations.
- User registers a complaints and view complaint history at any time.
- When user registers an application successfully, he/she gets a pop up message.
- Police station incharges can view the complaints and precede it through any of police investigator officer.
- Police officers can view the complaints and update the status of complaint.
- All users including Admin, police officers can then logout from the system.

Chapter 4

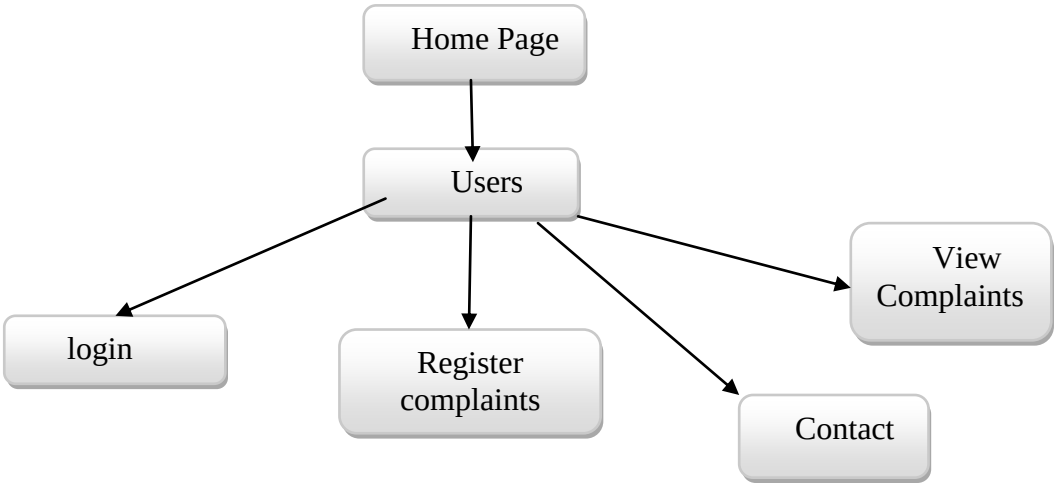
System Design

Chapter 4: System Design

The system Design plays a crucial role for the successful implementation of any project. For better understanding of this project the system design is explained in different perspectives here under.

4.1. Architecture Diagram

This project is built on a simple and basic architecture. The homepage shows links to the main areas of the page such as report registration, contact, and for asking queries. Users can visit those pages to view NEWS updates or register reports. Whereas the users have the option to view, edit and delete their profiles.



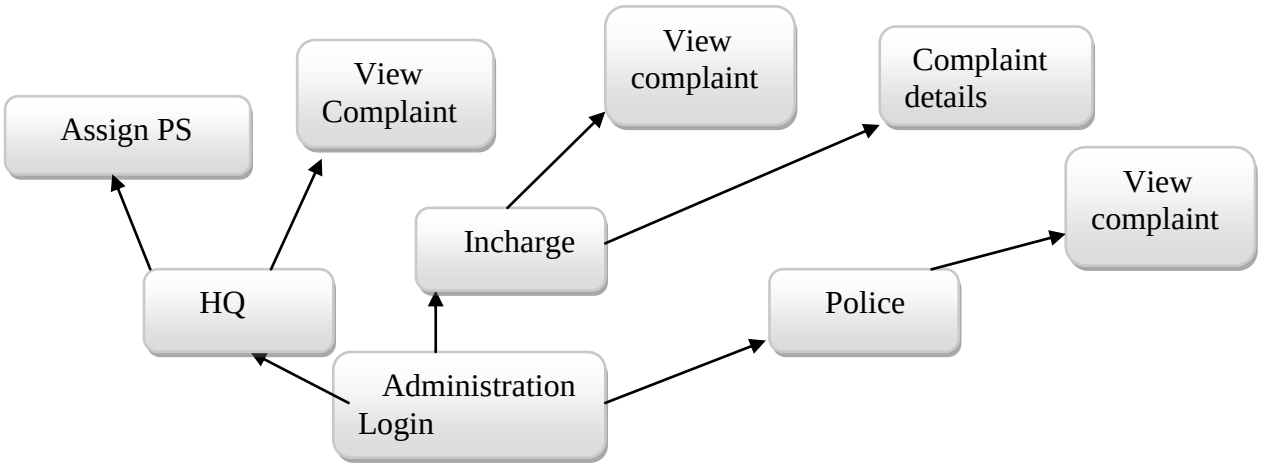


Figure 4.1 : architecture diagram

4.2. Domain Model

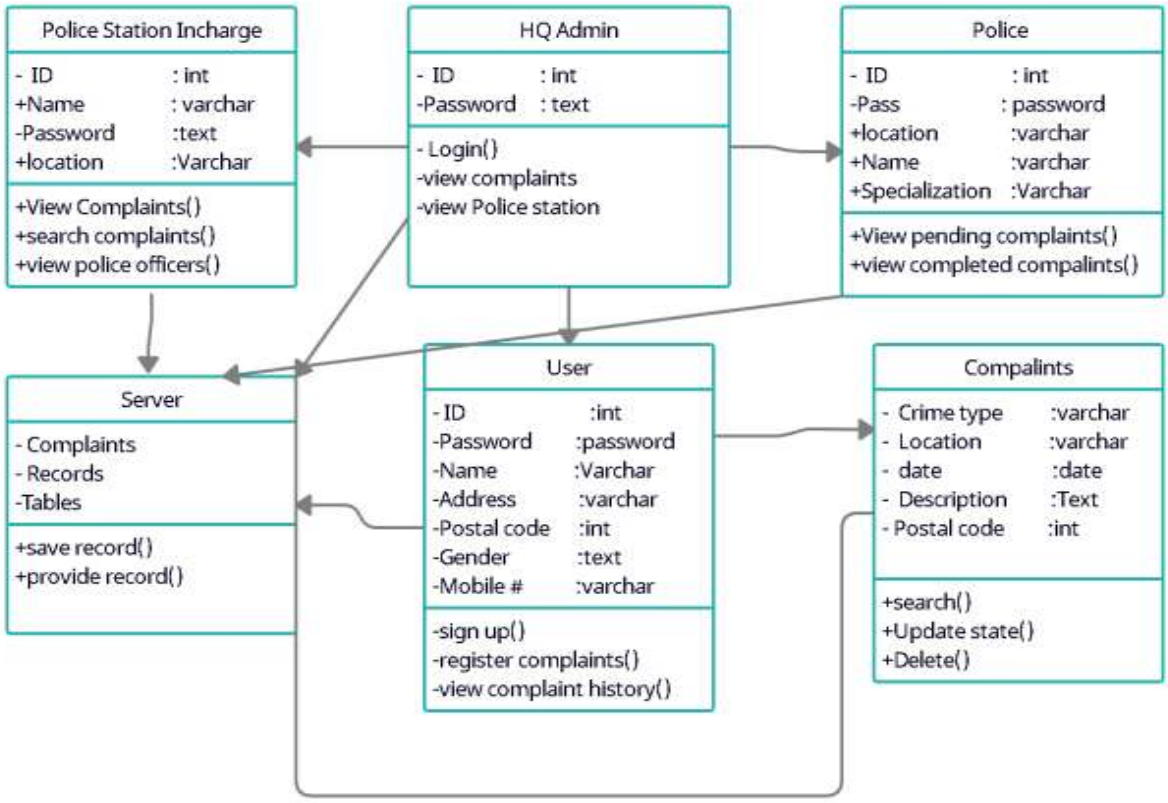


Figure 4.2 : Domain model

4.3. Entity Relationship Diagram with data dictionary

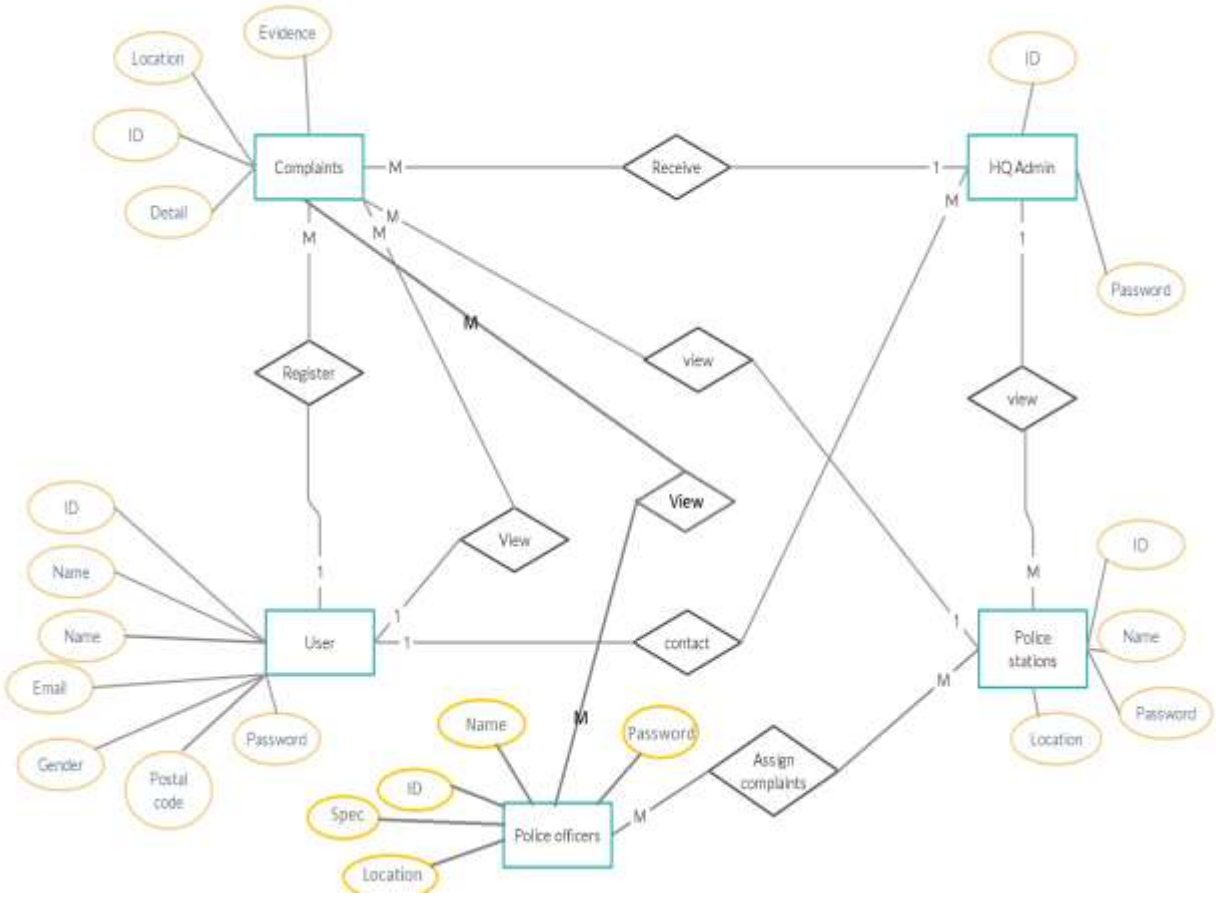


Figure 4.3 : Entity relationship diagram

4.4. Class Diagram

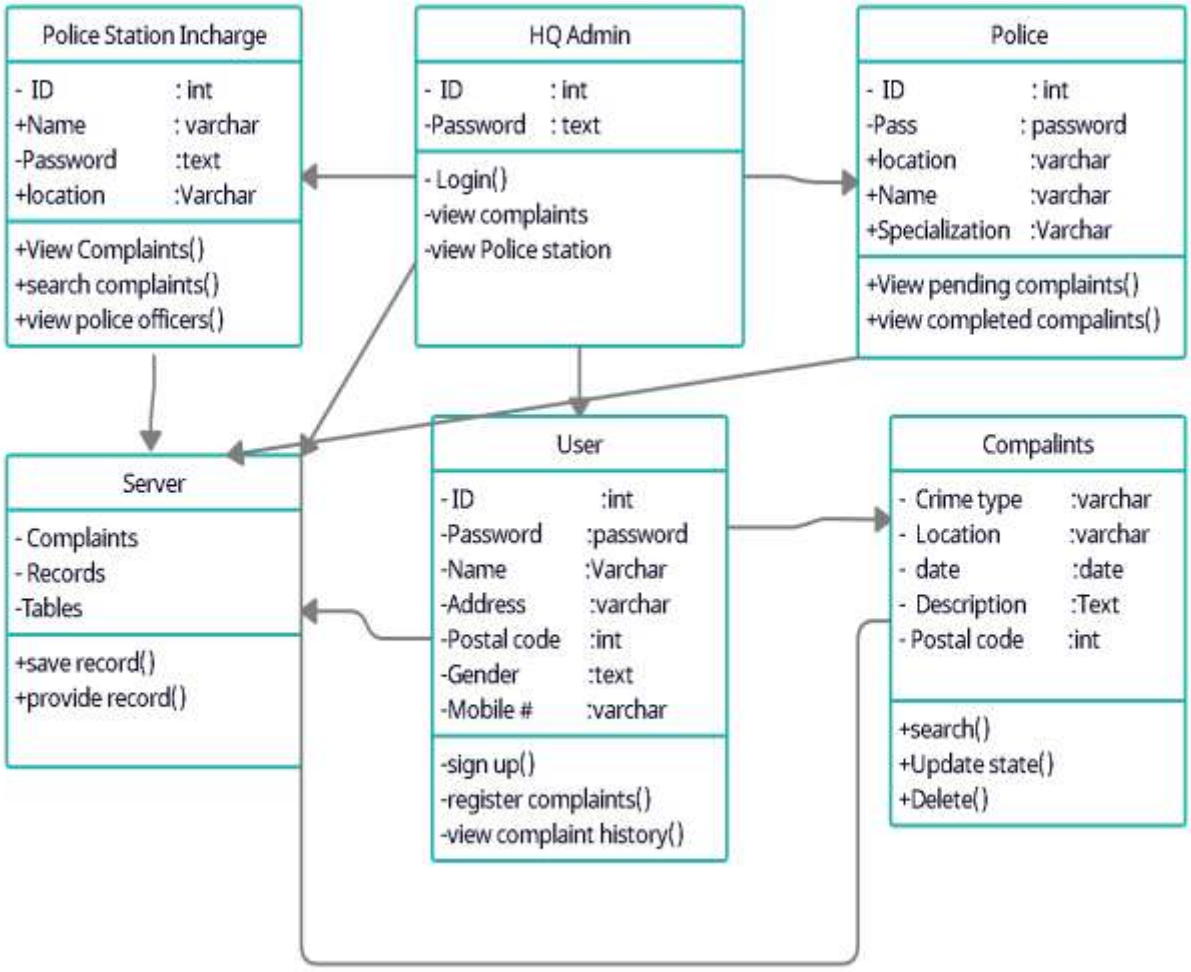
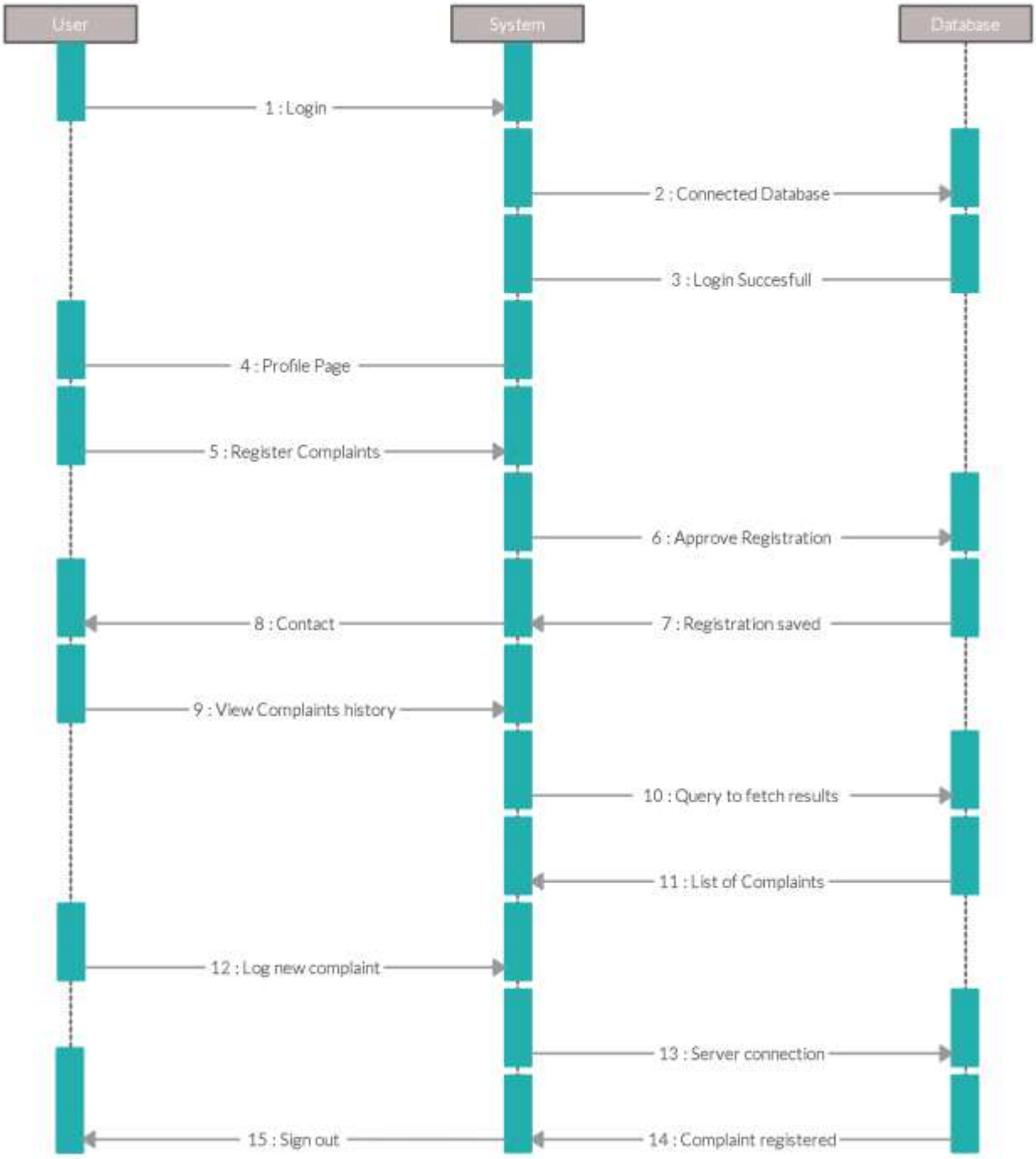


Figure 4.4 : Class diagram

4.5. Sequence / Collaboration Diagram



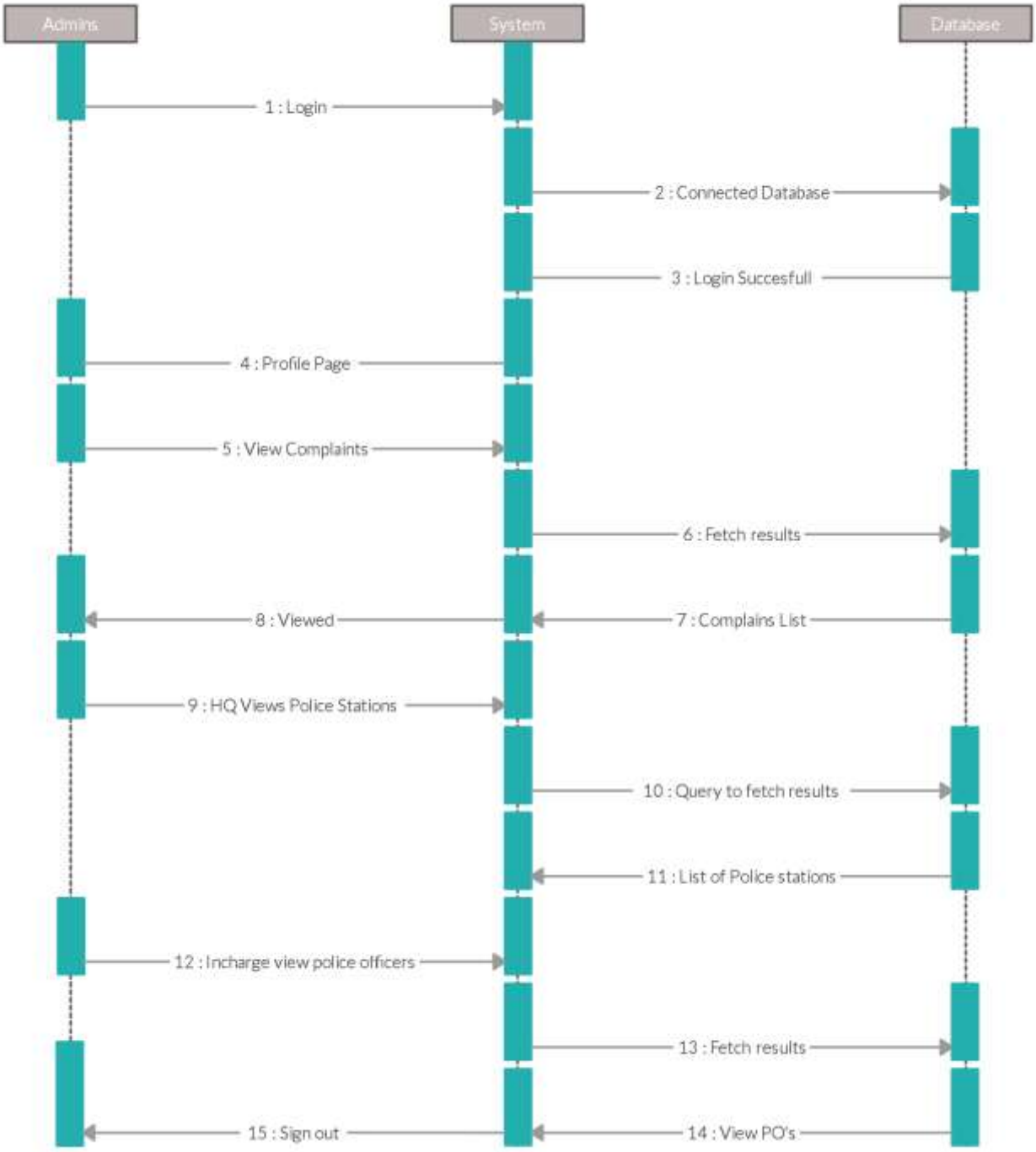


Figure 4.5 : Sequence diagram

4.6. Operation contracts

Operation Contracts describe how the internal state of the concepts in the Domain Model may change. We describe below the most significant operation contract.

Report Registration

When a user registers complaints he will get an ID for future use to check the prosecution of the report. That ID will be unique. Every report will have a different ID.

4.7. Activity Diagram

The user can register complaints, view complaints history, and update profile. This is an activity diagram for the above discussed concept.

Activity Diagram

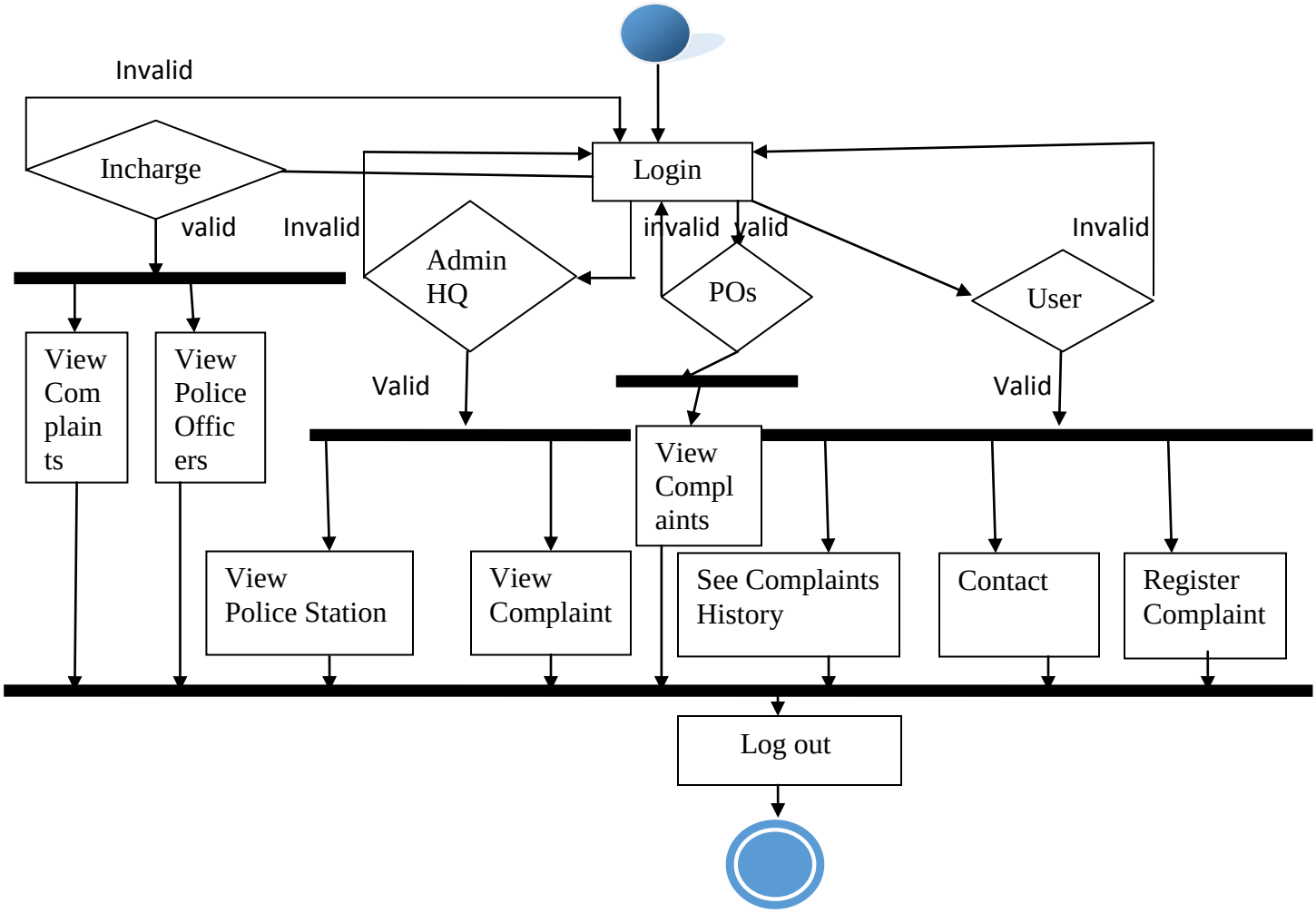


Figure 4.6 : Activity diagram

4.8. State Transition Diagram

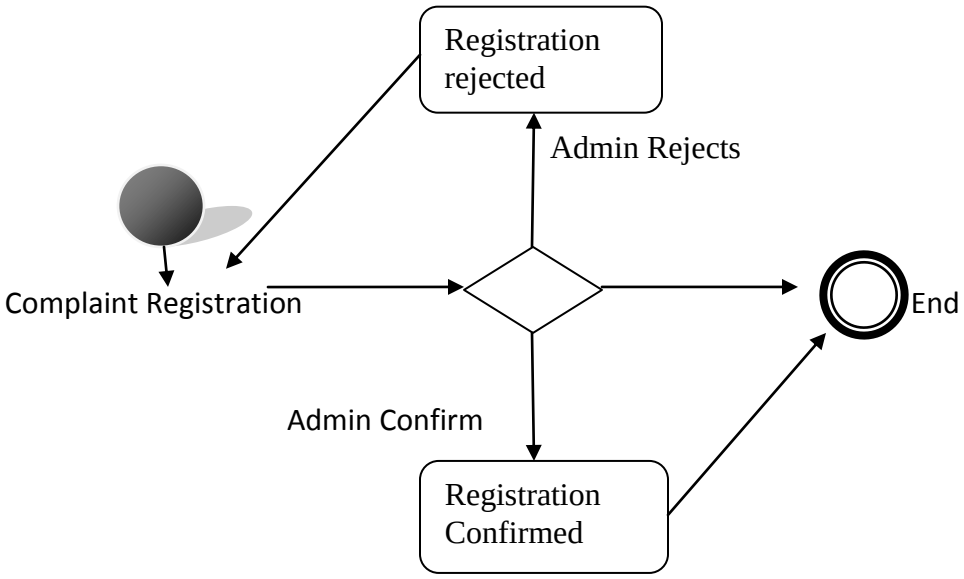


Figure 4.7 : State transition diagram

4.9. Component Diagram

Component diagram is a special kind of diagram in UML. The purpose is also different from all other diagrams discussed so far. It does not describe the functionality of the system but it describes the components used to make those functionalities.

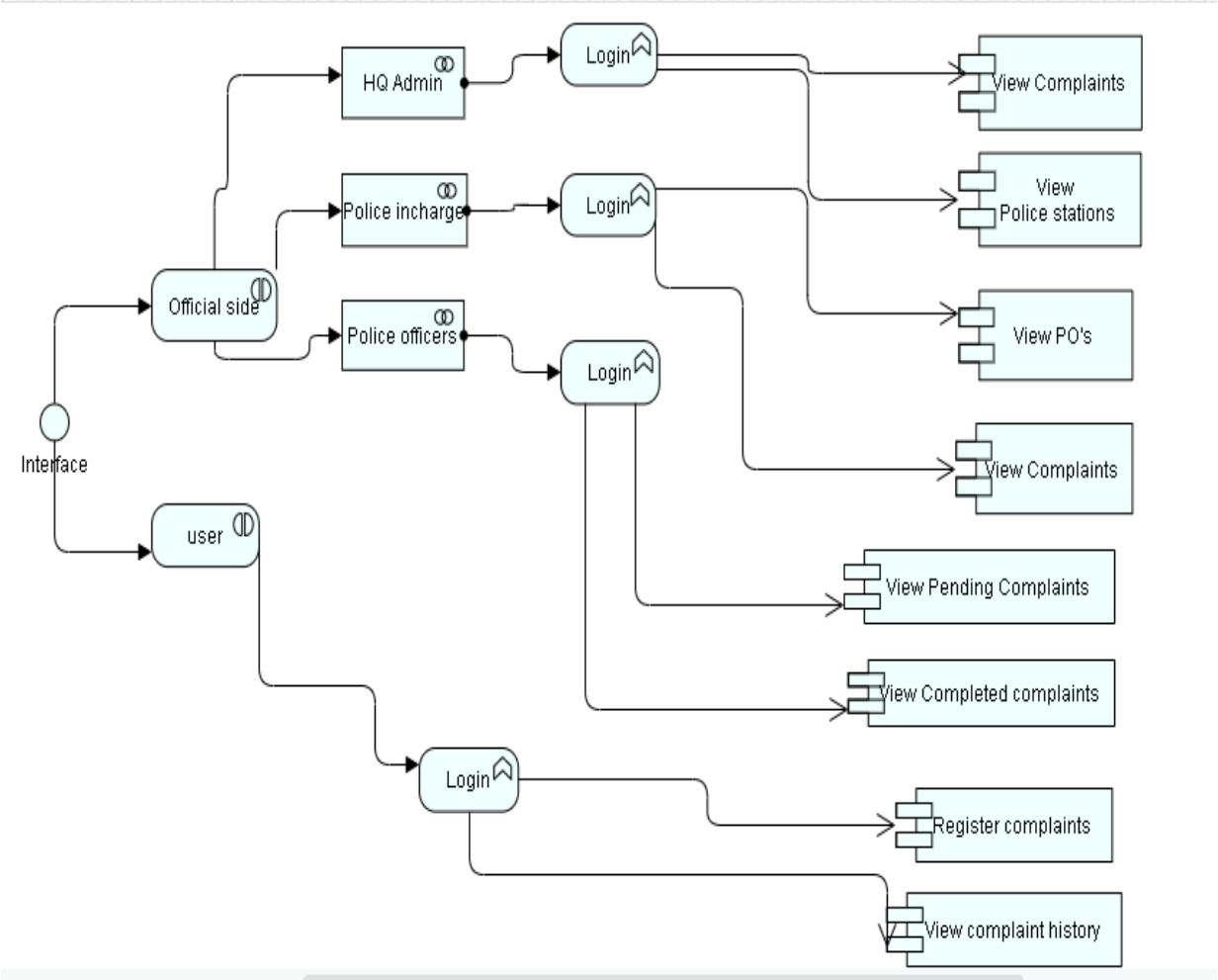


Figure 4.8 : Component diagram

4.10. Deployment Diagram

The term Deployment itself describes the purpose of the diagram. Deployment diagrams are used for describing the hardware components, where software components are deployed. Component diagrams and deployment diagrams are closely related

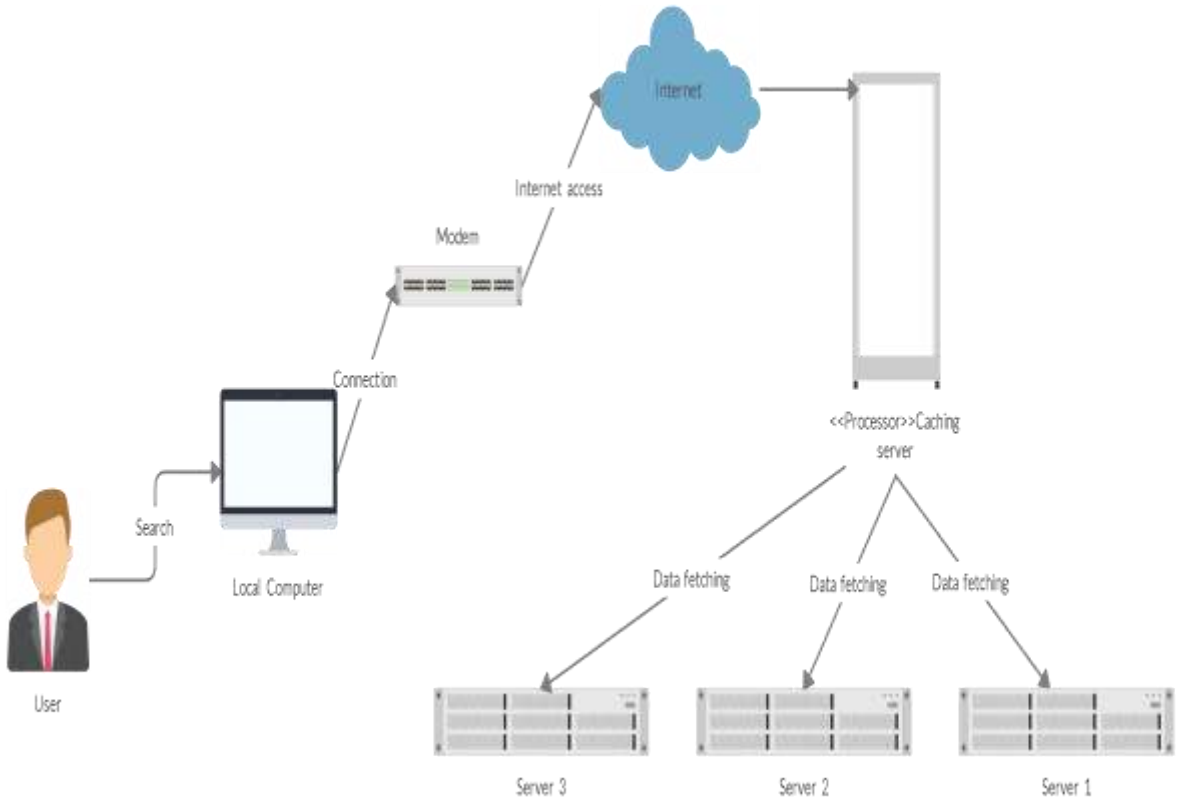


Figure 4.9 : Deployment diagram

Chapter 5

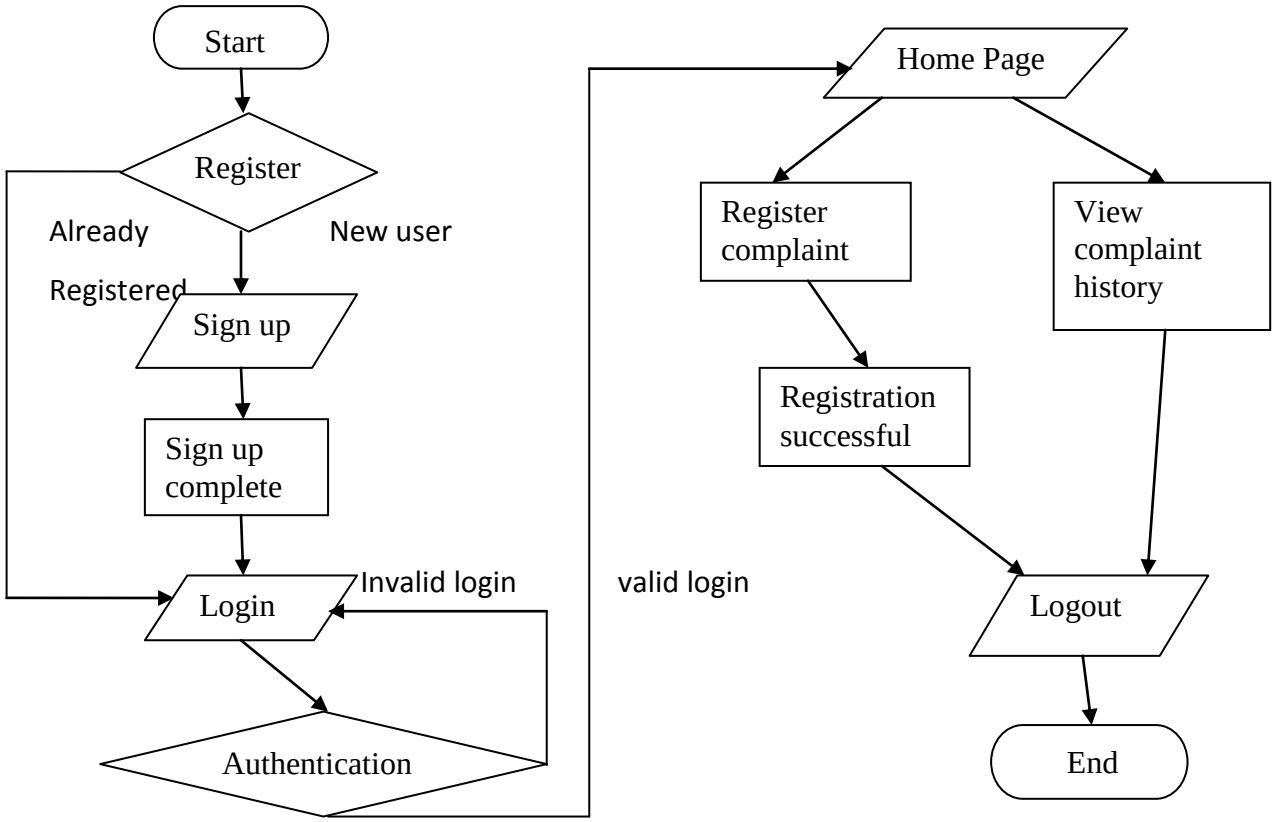
Implementation

Chapter 5: Implementation

It's all about components, libraries, web services and stubs. In this chapter we will see the important flow control and pseudo codes. We also see development environment in this chapter in which we see the flow

5.1. Important Flow Control/Pseudo codes

Following is our flow chart;



5.2. Components, Libraries, Web Services and stubs

Components

Our application is considered of two main components.

Front end

Front-end is made user friendly and good looking by using the bootstrap (version 4.0). From homepage to Landing pages, we gave our project a user friendly look without negotiating over users' comfort. For example with bootstrap we have built a mobile first layout. This means that our application will be friendly in 99% of the browsers as well as various screen dimensions, resolutions and sizes.

Back end

We have used core php for our back end programming. As php is an open source language, there are many developments day to day in this field and we can improve our application with the passage of time.

5.3. Deployment Environment

Police Management System uses cloud computing to connect users to service providers. All pages are linked together in a well-defined form it is very friendly for a user to connect through database and other related information. The user can select through registration option and can register online complaints. All of this is done by the database at our servers where the Admins as well as the customers can interact.

5.4. Tools and Techniques

Tools which are used in development of PMS. These tools are as follow

- Microsoft Word
- Visio 2013
- MySQL
- Visual Studios

Language

- Php
- Html
- Bootstrap plateform

And Techniques which are used in this project

• Software Engineering

• Project Management

5.5. Best Practices / Coding Standards

We have first made out a layout of our application police management system, its nav-bar, nav-icons were designed through bootstrap libraries, we designed a road map of the site and we have constructed it in a way that catches the eye of the user. After completing the front end, we made it working integrating it with PHP. Events functionalities were covered through JavaScript.

5.6. Version Control

This is Version 1. Version 2 may be introduced later on if further enhancements are required.

Appendices

Appendix A: User Manual

Application Usage

1. User Website review

This section includes the basic guidelines for the usage of website.

1.1. Login:

For logging in the system user must register first by adding required information, then he will get an account to the system to use it. Then he will login and would use the application. Use your email and password to login

1.2. Register complaint:

Login is must to register a complaint, further add the required information of the complaint and submit it. Your data would be saved in the database and complaint will be registered.

1.3. View Complaints:

User will be able to see the complaints' history that how many of the complaints he had registered and can view their status of bieng pending or in prosecution.

Appendix B: HQ Admin Manual

A.1. Login:

HQ admin will use his id and password to logging in the system.

A.2. View Complaints:

Head quarter admin can view the complaints and then can assign them to the relevant located police stations.

A.3. View Police Stations:

HQ admin can view all of the connected and registered police station detail by clicking “Police Stations” link.

A.4. Search Complaints:

Admin can search the complaints of a particular location and id.

Appendix C: Police Incharge Manual

1. Login:

Police Incharge is given an id and password assigned from the HQ Admin though which he will be able to login, using that id and password.

2. View Complaints:

Police incharge of any police station can view the complaints of his location only.

3. View Police Officers:

Police incharge can see all of his police officers, there his has rights to delete and add the police officers.

Appendix D: Police Officers Manual

1. **Login:**

   Police officers can login through the assigned user and password given from the Incharge.

2. **View Complaints:**

   Police officers can view the complaints that are of their police station area location.

3. **View Completed Complaints:**

   Police officers can view the completed complaints by going to the link "Completed Complaints".

4. **View Pending complaints:**

   Police officers can also view the pending complaints that are in prosecution or are new ones, by going to the link "Pending Complaints".

Reference and Bibliography

Reference and Bibliography

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2. National institute of computer education by Mr.Anoop Jangid Palanpur, www.niceedu.in, email info-niceedu@gmail.com
3. [1] https://www.w3schools.com
   [2] https://www.getbootsrap.com
   [3] https://www.php.net
   [4] https://www.google.com