WOLKITE UNIVERSITY

COLLEGE OF COMPUTING AND INFORMATICS

DEPARTMENT OF INFORMATION TECHNOLOGY

PROJECT TITLE: MOBILE AND WEB BASED CRIME MANAGEMENT SYSTEM FOR WOLKITE CITY

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Wolkite University, Wolkite, Ethiopia, February 24, 2023

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SUBMITED TO DEPARTMENT OF INFORMATION TECHNOLOGY

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DECLARATION

This is to declare that this project work which is done under the supervision of Mr. Nigus Oumer and having the title **MOBILE AND WEB BASED CRIME MANAGEMENT SYSTEM FOR WOLKITE CITY** is the sole contribution of:

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APPROVAL FORM

This is to confirm that the project report entitled mobile and web based crime management system for wolkite city submitted to Wolkite University, College of Computing and Informatics department of Information Technology in partial fulfillment of the requirement for the award of the degree of Bachelor of Science in Information Technology is an original work carried out by ASHU, MISALE and KENESA is approved for submission.

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Examiner 3 Name	Signature	Date
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ACKNOLEGEMENT

First of all, we would like to thank Almighty GOD for the strength, he has given us throughout our life and this project; nothing could happen without the help of GOD. Secondly, we would like to express our gratitude to our advisors, Mr. Nigus Oumer abundantly helpful and offered invaluable assistance, support and guidance. Special thanks also to all our graduate friends, especially group members; for sharing the literature and invaluable assistance. Not forgetting to our best friends who always been there. We would also like to convey thanks to the School of computing and informatics for providing the computer laboratory facilities.

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LIST OF ABBREVIATIONS

BR …….. Business Rule

CMS…… Crime Management System

HTML……. Hyper Text Makeup Language

MWBCMS…… Mobile and Web based Crime management system

MYSQL…… MY Sequel Language

FIR……..First Information Register

PHP…… Hyper Text preprocessor

US…… Use Case

UML……... Unified Modeling Language

EXECUTIVE SUMMARY: MOBILE AND WEB BASED CRIME MANAGEMENT SYSTEM

The mobile and web-based crime management system is a comprehensive platform that leverages technology to facilitate crime reporting, investigation, and management. The system is designed to enable citizens to report crimes using their mobile devices or desktop computers, with features such as location tracking, multimedia uploads, and secure communication channels. Law enforcement agencies can use the system to receive and manage reports, assign cases to investigators, and track the progress of investigations. The system's analytics capabilities can provide insights into crime trends and patterns, helping agencies to allocate resources effectively. Overall, the mobile and web-based crime management system represents a significant step forward in the fight against crime, leveraging technology to improve communication, collaboration, and efficiency in law enforcement.

CHAPTER ONE

1. INTRODUCTION

A mobile and web-based crime management system is a technology-driven platform that helps law enforcement agencies and other organizations to manage and respond to criminal incidents effectively. The system utilizes mobile and web technologies to streamline the process of reporting, tracking, and managing crime incidents. This system allows citizens to report crimes directly to the police via their mobile devices or web browsers, providing real-time incident reporting and reducing response times. It also enables law enforcement agencies to effectively manage and allocate resources to respond to reported incidents. The mobile and web-based crime management system provides a comprehensive platform for recording, tracking, and analyzing crime incidents, with features such as real-time incident mapping, crime analytics, and trend analysis. This helps law enforcement agencies to identify patterns of criminal behavior, prioritize resources, and make informed decisions on how to allocate resources effectively.

Overall, the mobile and web-based crime management system provides an innovative solution for managing crime incidents, enhancing community safety, and promoting collaboration between law enforcement agencies and citizens.

1.1 Background of the Organizations

Wolkite City Police Station is found in Southern Nations, Nationalities and Peoples Region (SNNPR) in Gurage zone. Wolkite city police station is the administrative center of the Gurage zone police department is working on CMS manually which may expose their customer to vulnerable and may lost their file. In this project out of numerous areas of applications of computers we are going to apply for solving a challenge of a nation and put the most preferable solution to solve this challenge.

Crime is an act or the commission of an act that is commanded by a public law and makes the offender liable to punishment by that law.

Police is by law charged with the responsibility of preventing and detecting crime, preserving, peace, order and enforcing all laws and regulations. A system of providing the Wolkite Police with information regarding crime and the various activities they had carried out in the past, will go a long way in helping to checkmate crime and their activities; and this will also help in identifying new cases of crimes and criminals within a given area. MWBCMS will assist the police with useful information that will help in apprehending, prosecuting, and sanctioning criminals. It has been acknowledged that the nearest we can get to the criminal happenings or events is the record kept by the Police, of crimes reported to them. The use of computers, smart mobile and other communication devices that will help in keeping track of criminals and the various activities they engaged in, is currently very minimal.

The police keep records victim on paper and this does not help their efficiency as it does not provide accurate, reliable and comprehensive data round the clock. In recent times, with the economic hardship of the country is going through it is common for the police to complain about lack of stationeries in cases which they may wish to record. The CMS beats the method of paperwork adopted here in Wolkite City Police Station. On this platform, all records are computerized, thus eliminating loss of data through rough handling by the Police Department, and this makes investigation of future crimes relatively easier. Police officers now have the ability to immediately generate crime report directly relevant tithe situation at hand rather than searching through numerous, dusty files. Automation is the utilization of technology to replace human with a machine that can perform more quickly and more continuously.

The MWBCMS will enable the police to have accurate and sufficient statistics on information of a case; the year a crime was committed, who investigated it and other related crime information. The same information provides a powerful decision making tool for policemen, investigators, database administrators, judges and fellow law enforcement agencies and this only emphasizes more on the need for an efficient, accurate, comprehensive and reliable CMS.

1.2.1 Vision organization

It is to see the nature of an institution that can create a society where the rule of law reigns and is free from traffic accidents in our city, where peace and security are guaranteed and free from crime.

1.2.2 Mission organization

Protecting society by respecting and enforcing the country's and state constitutions and other laws; By participating, crime is committed and presented to the relevant judicial body, and when found, it is to build the capacity of the leadership and members to execute it by investigating it with quality and speed, and by creating coordination with other justice and security forces to ensure the peace and security of the society.

1.3 Statement of the problem

Some problems arise existing system include:

- Lack of Wealth
- shortage of personnel
- Limited Technology
- Slow Response Time
- Human Error
- **Lack of Wealth:** Some of the problems that arise due to the lack of wealth in the existing system is include: a shortage of staff, Inadequate Training , outdated equipment ,which can make it difficult for the police to respond to emergencies in a timely manner. This can lead to delays in investigations, and criminals may be able to evade the police or continue their criminal activities.
- **Limited Technology**: lack the necessary technology to effectively manage crime. This can result in slow communication between agencies, insufficient data analysis, and a lack of real-time crime monitoring.
- **Human Error**: Manually managing crime can be prone to human error. Mistakes in data entry, incorrect classification of crimes, and other errors can result in inaccurate crime statistics and misdirected investigations.
- **Slow Response Time**: Manually managing crime can result in a slow response time from law enforcement agencies. This can allow criminals to escape or continue their criminal activities, leading to a higher crime rate.

Overall, the problem with manually managing crime system is that it can result in a less effective and less efficient system for combating crime. We used Mobile and Web Based Crime Management System it is important for law enforcement agencies to modernize their crime management systems to better serve their communities.

1.4 Objective the project

1.4.1General Objective

The main objective of our project to develop Mobile and Web based Crime Management System For Wolkite City

1.4.2 Specific Objectives

To achieve the general objective of the project, the proposed system consists of the following specific objectives:

- Crime Reporting and tracking
- To solve the problem of the current system of manual
- citizens to report crime incidents easily and quickly
- Collect data and analyze the system requirements and identity problems of the existing system.
- Design the artifacts of the proposed system for the overall view of the structure implement the system
- Finally testing the system to overcome the system function.

1.5 Feasibility Study

1.5.1 Economic feasibility

In our project economic feasibility would involve analyzing the costs of developing and implementing the system, as well as the benefits that the system would provide. This analysis would help to determine whether the benefits of the system outweigh the costs, and whether the project is a good investment.

To determine the economic feasibility in our project the following factors should be considered:

- Development costs: This includes the cost of designing, coding, testing, and deploying the system, as well as the cost of any hardware and software needed to support the system.
- Operating costs: This includes the cost of maintaining and updating the system, as well as the cost of providing technical support to users.

- Benefits: This includes the benefits that the system would provide, such as improved efficiency, accuracy, and collaboration, as well as reduced costs associated with manual data entry and processing.
- Return on investment (ROI): This is a measure of the financial return that the project is expected to generate, expressed as a percentage of the initial investment.

By conducting a thorough economic feasibility analysis, it will be possible to determine whether the Mobile and Web-based Crime Management System is a good investment, and whether the costs of developing and implementing the system are outweighed by the benefits that it will provide. This analysis will help to ensure that the project is financially sound, and that it is likely to be successful in meeting its objectives

1.5.2 Operational Feasibilities

In the context of the Mobile and Web-based Crime Management System, operational feasibility would involve analyzing the feasibility of developing and implementing the system, as well as the feasibility of operating it on an ongoing basis.

To determine the operational feasibility of the Mobile and Web-based Crime Management System, the following factors should be considered:

- Technical feasibility: This involves analyzing the technical aspects of the project, including the availability of hardware and software, and the ability of the organization to develop and implement the system.
- Organizational feasibility: This involves analyzing the organizational structure and culture of the organization, as well as its ability to support the system and implement necessary changes.
- User acceptance: This involves analyzing the willingness and ability of users to accept and use the system.
- Schedule feasibility: This involves analyzing the ability of the organization to develop and implement the system within the desired timeline.

By conducting a thorough operational feasibility analysis, it will be possible to determine if the Mobile and Web-based Crime Management System is feasible to implement and operate, and if the organization is ready to support the system. This analysis will help to ensure that the project is practical and realistic, and that it is likely to be successful in meeting its objectives.

1.5.3 Technical feasibility

In our project technical feasibility would involve analyzing the availability of hardware and software, and the ability of the organization to develop and implement the system.

To determine the technical feasibility of the Mobile and Web-based Crime Management System, the following factors should be considered:

- Technical infrastructure: This involves analyzing the technical infrastructure of the organization, including the availability of hardware and software, and the ability to integrate the system with existing systems and processes.
- Technical skills: This involves analyzing the technical skills of the organization, including the availability of personnel with the necessary technical expertise to develop and implement the system.
- Data compatibility: This involves analyzing the compatibility of the data used by the system with existing systems and processes.
- Technical standards: This involves analyzing the compliance of the system with technical standards, such as security and privacy standards.

By conducting a thorough technical feasibility analysis, it will be possible to determine if the Mobile and Web-based Crime Management System is feasible to implement and operate from a technical perspective. This analysis will help to ensure that the project is technically feasible, and that the organization has the necessary technical infrastructure and skills to support the system.

1.5.4 Political feasibility

The political feasibility of the Mobile and Web-based Crime Management System, the following factors should be considered:

- Political environment: This involves analyzing the political environment and regulatory framework, including any laws and regulations that may impact the development and implementation of the system.
- Stakeholder support: This involves analyzing the willingness of stakeholders and political leaders to support the system, including any potential opposition to the system.

- Budget constraints: This involves analyzing the availability of budget and resources to develop and implement the system, and ensuring that the budget constraints align with the political priorities of the organization.
- Public perception: This involves analyzing the public perception of the system, including any potential concerns about privacy and security, and ensuring that the system is designed and implemented in a manner that addresses these concerns.

By conducting a thorough political feasibility analysis, it will be possible to determine if the Mobile and Web-based Crime Management System is feasible to implement and operate given the political environment and constraints. This analysis will help to ensure that the project is politically feasible, and that stakeholders and political leaders are willing to support the system.

1.5.5 Legal feasibility

Legal feasibility of the Mobile and Web-based Crime Management System, the following factors should be considered:

- Laws and regulations
- Intellectual property rights
- Contractual obligations
- Liability and indemnification
- Data privacy

The proposed system is free from disobeying of copyright, disclosure of violation and other private resource. Therefore it is legally feasible.

1.6 Scope and Limitation of the project

1.6.1 Scope of project

The scope will explain the boundaries of this project. The main scope of this project is focus on to develop Mobile and web based crime management system which is easily accessible to the people and police officers using the web based. These systems provide proper security and reduce the manual work of file based system. In General the scope of this project is:-

- Online Crime Reporting
- Information of Most wanted person

- Address and Contact Details of Police Station of Wolkite city
- Manage news
- Comments and Feedback to Police Stations
- Add witness Person
- Information of Most missing person

  This system works those listed of crime:-

  - ✓ Traffic accident
  - ✓ Terrorism assault
  - ✓ Hard group dissention
  - ✓ Human assassination
  - ✓ Fire accident

1.6.2 Limitation of the study

Even through this project focuses on the crime reporting and management system it doesn't include the following because of time to do all this

- Not used Guragigna language
- Not used GPS

1.7 Significance and Beneficiary of the Project

1.7.1 Significance of The System

This system has the following significance

- Makes information easily accessible
- Reduce resource wastage
- Fast decision making by generating report easily
- Creates satisfaction to the user
- Easy to know the record user
- Save time to accomplish one task
- Implementation of this project will lead the organization to a better performance that can highly reduce the workload of employee and user.

The proposed system has a lot of benefits some of the tangible and intangible benefits are listed below :

1.7.2 Tangible benefits

- Decreases the cost of the organization.
- Efficiency
- Accuracy
- Simplicity and speed
- Error reduction
- Increased flexibility
- Compact storage
- Increased management planning and control

1.7.3 Intangible benefits

- Increased employee commitment
- Right information at the right time
- Customer satisfaction
- Accurate decision making.

1.7.4 Beneficiaries of the project

To the system developing team members

- An opportunity to exercise how real life problem are solved. Going back and forth through each and every system development phase and acquire skill in developing web-based system
- Enriching theoretical knowledge.

To the police department

- Solves problems that are associated with the manual system
- It can use the document as a reference material for related projects in the future.
- Time saving application
- Organized and reliable criminal record
- Gating current information about status

To training coordinator and employees

- Increasing job satisfaction by eliminating tedious tasks
- Fast and error free activities
- Send or receive packet of data

- Evidence based data is saved permanently
- Fault and redundant data is extremely removed

1.8 Methodology of the Project

1.8.1 Data Collection Methods

We are used different methods to collect data. Among the methods we use the following:

- Observation
- Document analysis
- Interview

- Observation: we observed from manual system that it face the user on problem such as loss of data, time consuming and their statics of data may be kept on unsafe place and even may be stolen. The other problem we observed is they send the crime or criminal data from one station to another station manually which may expose them to vulnerable that means this data may be lost. We also observed the currently working system and the way how to provide information for the society
- Document analysis: manually collected files for collecting information. Internet and some research papers were used as sources to collect information related to this project. The advantage of this document is to refer previously developed system to fill the gap not done. The system developed may not overcome all suggested problem for the nation, so the new developer must close this area**.**
- Interview: We used interview to gather information about the organization and to elicit requirements. We asked some question such as what type of problem they face, how they do, and we got some information about statics of their manual system. We also get some data how they save their data of crime as well criminal info.

1.8.2 System Analysis and Design

The team plan to use the Object Oriented Software Development Methodology (OOSD) for the development of the system among the different methodologies. Because it is better way to construct, manage and assemble objects that are implemented in our system. We used OOSD because of the following important features:

- Increase reusability
- Increased extensibility
- Improved quality

- Financial benefits
- Reduced maintenance cost
- Managed complexity

Object oriented design methodology has two phases:-

Object Oriented Analysis (OOA): During this phase the team will look at the problem domain and with the aim of producing a conceptual model of the information that exists in the area which will be analyzed. And this model the functions of the system (use case modeling), identifying the business objects, organize the objects and also the relationship between them and finally model the behavior of the objects.

Object Oriented Design (OOD): During this phase the model interactions and behaviors that support the use case scenario, and finally update object model to reflect the implementation environment. And also transforms the conceptual model produced in object-oriented analysis to take account of the constraints imposed to our system format, so that we will use this phase to refine the use case model to reflect the implementation environment. State chart diagram, component diagram and deployment diagram to model our system.

1.8.3. System Testing Methodology

We will use two different methods of testing technique used:

- Black box testing
- White box testing

- **Black box testing** after finished the project the organization used testing does not have access to the internal workings of the system being this type of tested. This means that the tester is only concerned with the inputs and outputs of the system, and not how the system processes those inputs or produces the outputs. Black box testing is typically used to test the functionality and usability of a system from an end-user's perspective.
- **White box testing,** this type of testing our team used testing access to the internal workings of the system being tested. This means that that can directly observe and test the code, algorithms, and data structures of the system. White box testing is typically

used to test the correctness, performance, and security of a system from our team perspective.

1.9 Development Tools and Technologies

1.9.1 Frontend Technology

- HTML,CSS
- Java script: -associated with PHP

1.9.2 Backend Technology

- PHP (We use PHP language for the system development; to create user interface and our system (software) will be compatible on all hardware).
- Xampp server: - for designing the database.
- MySQL database server.

1.9.3 Documentation and Modeling Tools

- Microsoft Office 2010: for preparing the documentation
- Draw.io: - For designing UML diagrams associated with the project.

1.9.4 Deployment Environment

- Desktop computer and Smart Mobile.
- Operating system (windows).

CHAPTER TWO

2. DESCRIPTION OF THE EXISTING SYSTEM

2.1 Introduction of Existing System

In the existing crime management system, most of the operations are done manually like sending complaints, taking actions against crimes, viewing status etc. So with the existing system if anybody wants to complaint against crimes he must do it through the police. If we are doing the system manually, so many minor errors will occur. Error detection in the previous entries made and data cross verification is another important function. These are done manually, and it would take time.

2.2 User of existing system

Users are entities that interact with the system .In concerns on only in crime management system of wolkite city administration police office.

The crime management system we focus only on person or actors involved on those activities. Here are the user are involved in the existing system.

Users	Is part of proposed system
Detective	Yes
Police	Yes
Head officer	Yes
User	Yes

Detective

- Detectives can take some cases from administrator or normal public.
- Detective can start the some discussion forms and post some information to others.

- Detective view complaint registration forms.
- View crime registration forms record crime, generate reports.
- Record decision files and prepare summons forms.

User

- The user register to the detective police office
- The user view summons forms
- The user view their file

Police

- Crime detect
- Check the crime
- prevent crime before done

Head office

- Tracking a crime
- Providing work
- Allows to manage news
- Allow users to view missing and wanted person.

2.3. Major Functions of the Existing System

The activities or tasks that performed in wolkite city police administration regarding to crime management system are the following:-

- ✓ Recording new criminal case
- ✓ Generate different report

Generate different summons forms

- ✓ Register compliant ,and criminals
- ✓ Record decisions files
- ✓ View decisions files

2.4. Forms and reports existing system used

There are a lot of forms and reports used by police office for different purpose. These forms and reports are put in the police office in paper based. The following forms and reports that are used in the police station existing system.

የደቡብ/ብ/ብ/ህዝቦችክልላዊ መንግስት ፖሊስ ኮሚሽን

የወንጀል ስታቲስትክስ ሠንጠረዥ

የደቡብ ክልል ፖሊስ ኮሚሽን የ20 ዓ.ም የወንጀል ስታትስቲክስ ከ / /20 ዓ.ም እስከ / /20 ዓ.ም ድረስ የ ወራት

የ ሩብ ዓመት የወንጀል ስታትስቲክስ ሪፖርት እድሱ

ግልባጭ

ንዑስ ቁጥር 1		ንዑስ ቁጥር 2								
ተ.ቁ	የወንጀል አርዕስት	ለፖሊስ የተመዘገቡ ወንጀል እና ተከሳሽ ብዛት								
		በጀት ዓመቱ ተፈፅሞ			ከበጀት አመቱ ውጭ ተፈፅሞ			በሱላላ ድምር		
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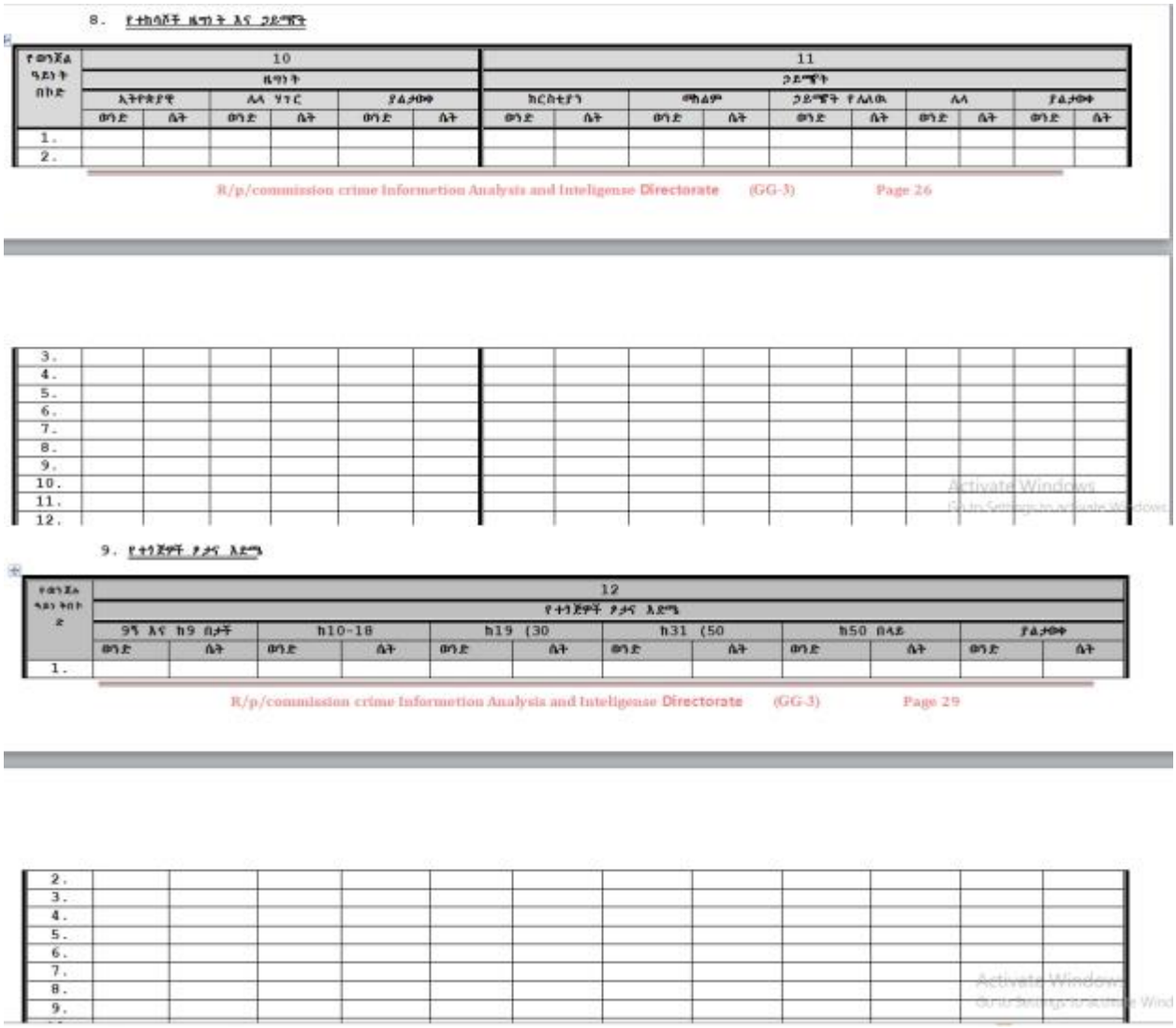

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2.5 Problem of the existing system

This manual working Style was resource consuming and traditional which is usually prone to error, not Satisfactory, and exhaustive. Generally the existing system has the following main Problem.

Information Problem

Input

- Data failure.
- Since it is manually collecting system, there is a repetitive record.

Output

- In appropriate of data and information may produced.

- wrong information leads to poor decision making.
- insufficient information flow between users.

Data storage

- shortage of database system
- Data are not easily accessible
- Difficult to modify
- Data repetition that leads to inconsistency

Performance Problem

The efficiency of the existing system not suitable, because organizing and managing of data and information takes much more time

un necessary flow of information, data can be inputted, processed and produced because of this it consume much amount of time and labor.

Data Handling

The existing system is very difficult to handle data. Each police works in different ways the individual police work in a different manner and the use their own method of Collecting and determining data.

Accessing Timing

The availability information did not reach at the expected time this problem is highly descriptive during report generation as well as a new police record process. This leads for the problem of doing false decision and data redundancy because there is no way of enforcing the uniqueness of a particular report not incorporates during data entry; this is also the case when record process is done Managed, and lacking flexibility. Because of the large number of serious crimes, minor complaints may be ignored.

Security and control

The current system can be accessed by unauthorized person and losing of material, since it doesn't have any authentication system.

2.6 Business Rule Identification

Business rule is effectively an operating principle or policy of which the software must satisfy. It often pertain to access control issues, business calculations, or operating polices

and principles of the organization. Therefore, our new system has the following business rules.

BR1. Detectives conduct narcotics investigations, perform surveillance and establish and maintain contacts with informants; investigate gang related crimes Detectives gather information and evidence and solved crime

BR2. The police must maintain the confidentiality of sensitive information related to ongoing investigations, including the identity of informants and witnesses.

BR3. The police coordinate with other law enforcement agencies, such as federal agencies and neighboring police departments, to ensure that investigations are conducted effectively and efficient if each Police, head officer and detective leaves the organization by any means.

BR4. The head officer must ensure that all police personnel follow the chain of command, with clear lines of communication and reporting

BR5. The police must receive regular training and education to stay up-to-date on new crime-fighting techniques, technologies, and laws.

BR6. The police must document all reported crimes in a comprehensive and accurate manner

BR7. Detective respond to and investigate scenes of crimes such as homicide, theft, robbery, auto theft, illegal sex related activities.

CHAPTER THREE

3. PROPOSED SYSTEM

The proposed mobile and web-based crime management system is designed to address the limitations and problems of the existing crime management systems. The main objective of the proposed system is to provide a more efficient, effective, and user-friendly platform for managing crime-related information. The proposed system will be accessible from both mobile and web platforms, allowing users to easily report crimes and access crime-related information. Some of the key features of the proposed system include:

- User-friendly interface: The proposed system will have a user-friendly interface that is easy to navigate and understand.
- Real-time updates: The proposed system will provide real-time updates on crime-related information, allowing users to stay informed and up-to-date.
- Data analysis and reporting: The proposed system will support data analysis and reporting, allowing users to quickly access and analyze crime-related information.
- Case management: The proposed system will provide a comprehensive case management system that allows users to manage cases from start to finish.
- Data security and privacy: The proposed system will prioritize data security and privacy, ensuring that all crime-related information is protected and only accessible by authorized users.

Overall, the proposed mobile and web-based crime management system will provide a more efficient, effective, and user-friendly platform for managing crime-related information, improving the ability of law enforcement agencies and other organizations to respond to and prevent crime.

3.1 Functional Requirements

Functional requirement is statements of services the system should provide, how the system should react to particular inputs and how the system should behave in particular situation.The system functional requirement is grouped in to Applicant, Police, Head officer,Detective and System admin.

Login

- The head officer to login by user name and password.
- The administrator to login by user name and password.
- The police to login by user name and password.
- The user to login by user name and password.
- The WBCMS shall enable to send forgot password through email.
- The WBCMS shall enable to send forgot account name through email.

applicant :

- The system allows login and logout of the system.
- The system allows to add crime report to the system.
- The system allow users to view case status.
- The system allow users to view news.
- The system allow users to report missing person.
- The system allow users to view profile.

police :

- The system allows login and logout of the system.
- The system allows to view crime report of the system.
- The system allows to view suspect.
- The system allows to add suspect to the system.
- The system allows to view missing and wanted person.

head officer :

- The system allows login and logout of the system.
- The system allow users to view missing and wanted person.
- The system allows to manage news.
- The system allow users to post missing and wanted person.

Detective :

- The system allows login and logout of the system.
- The system allow users to view missing and wanted person.
- The system allows to manage news.

- The system allows for detective to add case status.

Administrator:

- The system allows login and logout of the system.
- The system allows to system admin to manage account as per required.
- The admin shall allow create an account to new users.
- The admin shall allow disable the existing account.
- The admin shall allow update profile of the existing account.
- The admin shall allow delete the existing account.
- The admin shall allow register new crime information.
- The admin shall allow update the crime records.
- The admin shall allow delete crime information.
- The admin shall allow view reports.
- The admin shall allow insert about police Station Details.
- The admin shall allow update about police Station Details.
- The admin shall allow delete about police Station Details.
- The admin shall allow view about police Station Details.
- The admin shall allow view result of cases.
- The admin shall allow view all complaint.
- The admin should organize the search results in paged manner.
- It should also provide user the flexibility to navigate to the required page.

3.2 Nonfunctional requirement

Non-Functional requirements are often associated with the state of the system and not with the functionality that the system has to offer. Non-functional requirements are that requirement, which has no essential for the system, but it can support and give more quality for the system. The non-functional requirement of the system deals with how well the system provides service to the user. It is a software requirement that describes not what the software will do, but how the software will do it.

Some of the non- functional requirements are:

- User Interface and Human factors
- Hardware requirement
- Security Issues

- Performance Consideration
- Error Handling and Validation
- Backup and Recovery
- Physical Environment
- Resource Issue
- Documentation

3.2.1 User Interface and Human factors

The user interface and human factors in the Mobile and Web-based Crime Management System are important components that contribute to the overall success of the system. The user interface should be intuitive, user-friendly, and easy to use, allowing users to easily access the system's functionalities. Human factors considerations should be taken into account, such as ergonomics, accessibility, and user-centered design principles, to ensure that users are able to use the system effectively and efficiently. This can improve user satisfaction and increase the likelihood of widespread adoption and usage of the system.

3.2.2 Hardware requirement

Having functional and nonfunctional requirements, our proposed system also has hardware requirement. Some of hardware requirements are:

- 233MHZ processor
- 128 MB SD-RAM
- 2-4 GB Hard-disk
- Monitor (640x480 Display)
- 32 GB smart phone storage

3.2.3 Security Issues

Security is an important concern in any system, especially one dealing with sensitive information such as crime reporting and management. To address security issues in the Mobile and Web-based Crime Management System, the following measures should be taken:

- User Authentication: The system should have a secure login mechanism to ensure that only authorized users can access it. This can be achieved

through the use of usernames and passwords or multi-factor authentication methods.

- Data encryption: refers to the process of converting plain text into encrypted data, or ciphertext, to prevent unauthorized access and secure the stored or transmitted data. In the context of the crime management system, data encryption can be used to protect sensitive information such as personal data, criminal records, and case details from unauthorized access and tampering. This can be achieved using various encryption algorithms and technologies, such as MD5. Ensuring the security of data is crucial for maintaining the privacy and confidentiality of citizens and law enforcement agencies.
- Access Control: The system should have a robust access control mechanism that restricts access to sensitive information based on user roles and permissions.
- Logging and Auditing: The system should keep a log of all activities performed within it, such as user logins, data changes, and system access. This log can be used for auditing purposes to detect and prevent unauthorized access.
- Security Testing: The system should undergo regular security testing to identify and remediate any vulnerabilities. This can be achieved through penetration testing, vulnerability scanning, and code reviews.
- Disaster Recovery and Business Continuity: The system should have a disaster recovery plan in place to ensure that critical information and services are restored in the event of a system failure.

3.2.4 Performance Consideration

Performance considerations in a mobile and web-based crime management system can include various aspects such as response time, data processing speed, network latency, scalability, and availability. Factors such as the number of users, volume of data, and system complexity can impact the performance of the system. To ensure that the system operates efficiently, it is important to identify the performance requirements and constraints, and implement appropriate performance optimization techniques such as caching, load balancing,

and data compression. Regular monitoring and testing can also help identify performance bottlenecks and allow for timely resolution of any issues that may arise.

3.2.5 Error Handling and Validation

Error handling and validation are crucial components of software design and development. The goal of error handling and validation is to prevent the software system from producing incorrect results, crashing or having other undesirable consequences. This is achieved by checking user inputs and ensuring that they meet specific requirements and constraints.

In the case of a Mobile and Web-Based Crime Management System, error handling and validation can be used to prevent data entry errors, ensure the validity of user inputs, and protect the system from malicious attacks. For example, input validation can be used to check that the data entered into the system is in the correct format, and error handling can be used to handle exceptions and unexpected events, such as a system crash.

Effective error handling and validation can improve the reliability and security of the Mobile and Web-Based Crime Management System, and provide a better user experience for citizens and law enforcement officers who use the system.

3.2.6 Quality Issues

Quality issues refer to the deficiencies in the system that negatively impact the ability of the system to meet the requirements and expectations of the users. In the context of a mobile and web-based crime management system, quality issues could include poor user experience, incorrect data processing, slow system response time, low reliability, poor security, and lack of scalability. To address these quality issues, it is important to conduct thorough testing and quality assurance processes, implement error handling and validation mechanisms, and regularly update and maintain the system to ensure its continued performance.

3.2.7 Backup and Recovery

A backup and recovery system for a mobile and web-based crime management system is essential to ensure that all critical data is preserved and can be restored in case of a failure or disaster.

Here are the key steps for implementing a backup and recovery strategy for such a system:

- **Data backup**: Regular backups of all critical data should be taken and stored in a secure location. This includes information about crimes, investigations, and related documents.
- **Data storage**: The backup data should be stored in a secure and reliable location, such as a cloud-based storage service or a secondary on-premises storage device.
- **Data recovery:** A disaster recovery plan should be in place to ensure that the data can be restored quickly and efficiently in case of a failure. This may include procedures for restoring data from backup, using a secondary storage device, or using cloud-based recovery services.
- **Data validation:** Regular validation of the backup data should be performed to ensure that it can be restored correctly. This may include running tests to restore the data to a test environment, and verifying that all data is complete and accurate.
- **Data security:** The backup data should be secured against unauthorized access, theft, or loss. This may include using encryption, secure storage facilities, and access controls to ensure that only authorized personnel can access the data.

By implementing a robust backup and recovery strategy, you can ensure that your mobile and web-based crime management system is protected against data loss, and that you can quickly recover from any failures or disasters

3.2.8 Physical Environment

Physical Environment for mobile and web based crime management system

The physical environment for a mobile and web-based crime management system refers to the physical infrastructure and conditions necessary for the system to operate effectively and securely. Here are some of the key considerations for the physical environment of such a system:

- **Data Centers**: The system may be hosted in one or more data centers that are designed to provide a secure, reliable, and scalable environment for hosting the application and data. These data centers should be equipped with robust power and cooling systems, backup generators, and other infrastructure necessary to ensure availability and continuity.
- **Network Connectivity**: The system should be connected to a high-speed, reliable network to ensure that users can access the application and data from anywhere, at

any time. This may include a dedicated, secure network connection or a cloud-based infrastructure.

- **Physical Security:** The physical environment should be secured against unauthorized access, theft, and damage. This may include access controls, surveillance cameras, and other security measures.
- **Environmental Conditions**: The physical environment should be designed to provide the appropriate temperature, humidity, and other environmental conditions necessary to ensure the stability and reliability of the hardware and software components.
- **Disaster Recovery**: The physical environment should be designed to provide disaster recovery capabilities, such as redundant power and cooling systems, backup generators, and off-site storage facilities.

By considering these physical environment factors, you can ensure that your mobile and web-based crime management system is secure, reliable, and scalable, and that it can be recovered quickly in the event of a failure or disaster.

3.4.9 Resource Issue

Here are some common resource issues that might occur in a mobile and web-based crime management system:

- **Scalability**: As the number of users and amount of data increases, the system must be able to scale to handle the increased demand.
- **Performance**: The system must respond quickly and efficiently to user requests, even during periods of high traffic.
- **Network Connectivity**: The system must be able to work with limited or unreliable network connections, especially for mobile users.
- **Data Storage:** The system must be able to store and retrieve large amounts of data securely and efficiently.
- **Security:** The system must be able to protect sensitive crime information from unauthorized access and protect against data breaches.
- **Availability:** The system must be available 24/7 to support law enforcement operations.
- **Integration:** The system must be able to integrate with other systems, such as crime databases and GPS tracking systems.

- **User Experience**: The system must provide a user-friendly experience for both officers in the field and civilians reporting crimes.
- **Technical Support:** The system must have adequate technical support in place to quickly resolve issues and provide updates.

Addressing these resource issues will ensure the success and reliability of a mobile and web-based crime management system.

3.4.10 Documentation

Documentation refers to written or digital information that provides instructions, information, and guidance on the use, maintenance, and design of a system. It is an important aspect of software development and helps users understand how a system works, what features are available, and how to use them effectively. In the context of a Mobile and Web-based Crime Management System, documentation can include user manuals, technical specifications, system design documents, and other relevant information that users and developers may need to understand and use the system. Documentation can also serve as a reference for future updates or modifications to the system.

CHAPTER FOUR

4. SYSTEM ANALYSIS

4.2.1 Use Case Model

Actors: An actor is a person, organization, or external system that plays a role in one or more interactions with your system.

In our system the following actors are involved: -

- ❖ System admin
- ❖ Head officer
- ❖ Detective
- ❖ Police
- ❖ Applicant

Use cases: is a symbol that describes a sequence of actions that provide something of measurable value to an actor and is drawn as a horizontal ellipse. In this project, we identified the following use cases:-

- Login
- View news
- Add crime report
- Manage news
- View crime report
- View case status
- Create accounts
- Deactivate accounts
- Update accounts
- Post missing and wanted person
- Add suspect
- Add case status

- Add case
- View suspect
- View case status

4.2.2 Use Case Diagram

A use case is a methodology used in system analysis in identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal.

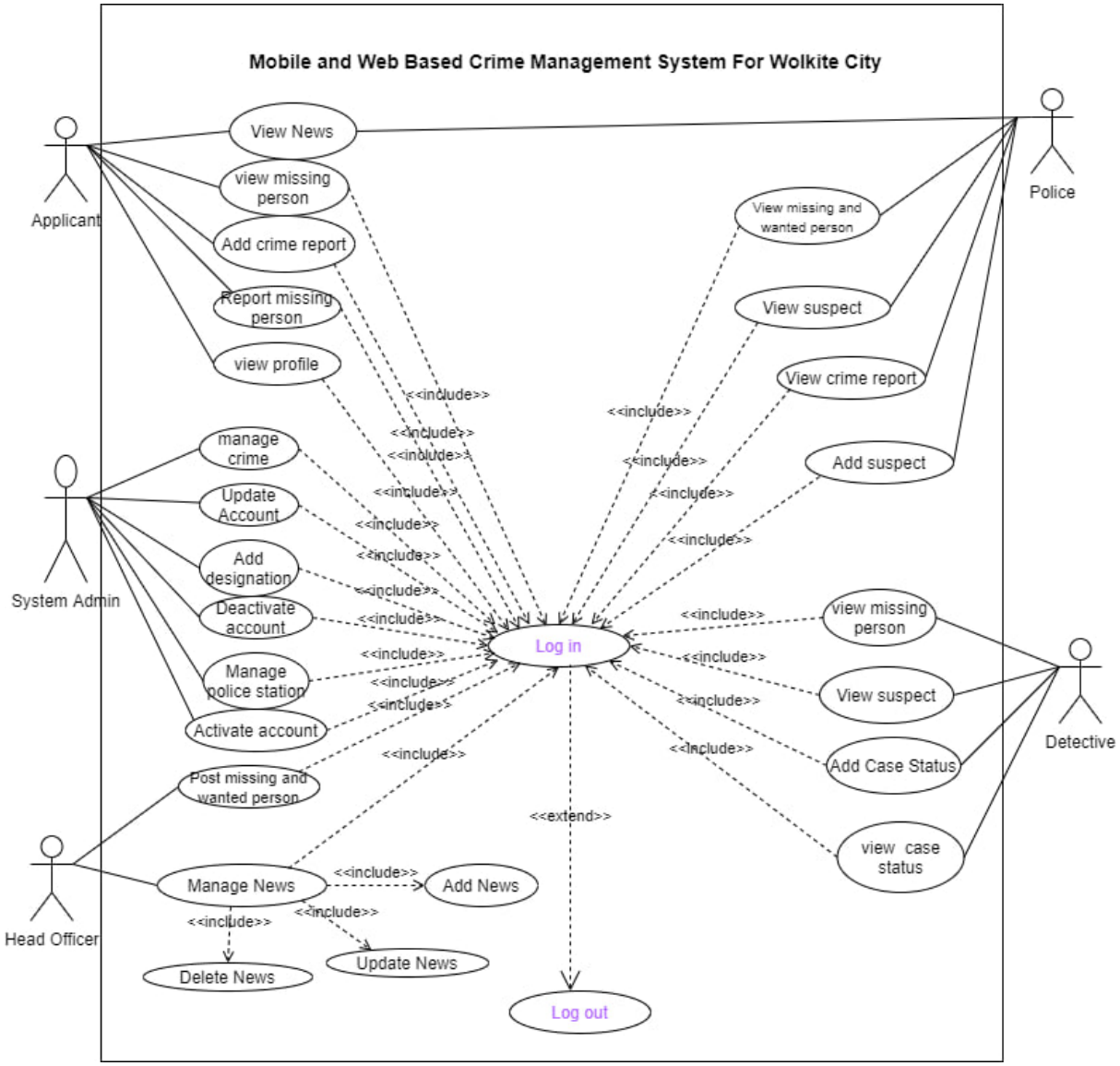

Figure 1 use case diagram

4.2.3 Use Case Description

A use case is an interaction between users and a system. It captures the goal of the users and the responsibility of system to its users. It is the functionality of the system or the service provided by the system.

Table 1: Use case description for create account

Use Case ID	UC1
Use Case Name	Create User Account
Actor	System admin
Description	This use case allows to system admin to create account with valid user name and password for Police, Head officer and Detective.
Preconditions	The system administrator login to his/her home page.
Post conditions	The system administrator registers the users account successfully

Normal Course Of the Action	
User Action	System Response
Step1: The System admin log to his/her page. Step2: The System admin click on User Account link. Step4: The System admin fills the form Stepe5:system admin clicks submit button	Step3: The system displays create account form. Step6: The system verifies all input fields are filled correctly (alternative A) (alternative B). Step7: The system display's successfully created message. Step8: End of Use case.

Alternative Course of the action	
User Action	System Response
StepA.2: The system admin returns to step4. StepB.2: system admin clicks cancel button and returns step4.	StepA.1: The system displays please fill all required fields message. StepB.1: the system display the account is already exist

Table 2: use case Description for deactivate account

Use Case ID	UC2
Use Case Name	Deactivate User account
Actor	System admin
Description	This use case allows a system admin to delete or remove accounts which have no user currently.
Preconditions	All system admin must login to the system.
Post conditions	The account successfully deactivated

Normal Course Of the Action	
User Action	System Response
Step1: The System admin log to his/her page. Step2: The System admin click deactivate account link. Step4: The System admin search required user account. Step5: The system admin click deactivate button Step7: system admin clicks ok button	Step3: The system will display user interface to deactivate the user account. Step6: The system verifies and displays are you sure message (alternative A). Step8: The system display deactivated successfully message. Step9: Use case ends.

Table 3: Use case Description for update account

Use Case ID	UC3
Use Case Name	Update User Account
Actor	System admin, Head officer, Detective, User and Police
Description	The use case allows updating users account.
Preconditions	System admin must login to the system.

Post conditions	Users account should update successfully.
Normal Course Of the Action	
User Action	System Response
Step1: The system admin should login to his/her page. Step2: Admin click Update account link. Step4: Admin fill both old and new information. Step5: Admin click Update button.	Step3: The System display Update account form. Step7: The system validates the information (Alternative A) (Alternative B). Step8: The system display successfully update message. Step9: end use case.
Alternative Course of the action	
User Action	System Response
StepA.3: Admin returns to step 4. StepA.3: Admin returns to step 4.	StepA.1: System display data entry is mismatched error. StepA.2: system redirected to step 7 again. StepB.1: System display please fill al field message.

Table 4: Use Case description for Login

Use Case ID	UC4
Use Case Name	Login
Actor	System Admin, Head Officer, Detective, Police and User
Description	This use case allows all actors go login in to the system using password and user name
Preconditions	Actors should have valid user name and password.
Post conditions	Login to the system

Normal Course Of the Action	
User Action	System Response
Step1: actors request the system to login Step3: actors enter user name and password. Step4: actors clicks login button. Step7: actors login to the system.	Step2: The system displays the Login form Step5: The system validates the actors input (Alternative A) (Alternative B). Step6: the system displays required user interface. Step8: end of use case.
Alternative Course of the action	
User Action	System Response
StepA.2: The actors repeat starting from step3. StepB.1: Actor return to step1.	StepA.1: The system displays user name/password or both are invalid. StepB.1: the system display authentication is false message.

Table 5: Use Case description for Post missing and most wanted person

Use Case ID	UC5
Use Case Name	Post missing and most wanted person
Actor	Head Officer and Detective
Description	This Use case used to add missing and wanted person to home page of the system.
Preconditions	Actors should login to the system.
Post conditions	Users should access newly posted information
Normal Course Of the Action	
User Action	System Response
Step1: Head officer and Detective click missed and	Step2: The system displays the required form.

wanted person link. Step3: Head officer and Detective fill the necessary information about missed or wanted person. Step4: Actor click submit button.	Step5: The system verifies the information (Alternative A). Step6: The system display successful message. Step7: End of use case.
Alternative Course of the action	
User Action	System Response
StepA.2: The Head officer fills again back to step3.	StepA.1: The system display error message, "please fill all text fields".

Table 6: Use Case description for View Crime Report

Use Case ID	UC6
Use Case Name	View Crime Report
Actor	Police, Head officer and Detective
Description	This use case is allows to view crime reports
Preconditions	Police department's should login to the system
Post conditions	Police departments view newly reported crimes.
Normal Course Of the Action	
User Action	System Response
Stepe1: click to view crime report link Stepe3: Police departments see all recorded crime report	Stepe2:the system display the page Stepe4:use case end

Table 7: Use Case description for add News

Use Case ID	UC8
Use Case Name	add News
Actor	Head Officer.
Description	This use case used for Head officer to post latest and new information.
Preconditions	The officer and Detective should login with his or her account
Post conditions	News should display on the public page.

Normal Course Of the Action	
User Action	System Response
Step1: The Actor click Manage link. Step2: Actor select Add link. Step4: Actor selects the news file. Step5:Actor click upload button.	Step2: the system displays add/delete/Update options. Step3: The system order to choose upload file. Step6: The system verifies the upload news file (Alternative A). Step7: the system displays successful message. Step8: End of use case.

Alternative Course of the action	
User Action	System Response
StepA.3: Head officer returned again to step3.	StepA.1: System display error message," empty file is uploaded" and redirected to step3.

Table 8: Use Case description for Delete Old news

Use Case ID	UC9

Use Case Name	Delete Old news
Actor	Head Officer and Detective
Description	This use case allows for deleting old and unnecessarily posts.
Preconditions	The officer and Detective should login with his or her account.
Post conditions	Old posted information is not seen on the page

Normal Course Of the Action	
User Action	System Response
Step1: The Actor click Manage link. Step3: Actor click remove link. Step5: Actor selects list of posts. Step6: Actor click delete button. Step8: Actor clicks ok (Alternative A).	Step2: the system displays add/delete/Update options. Step4: The system display list of posts. Step7: The system displays are you sure message. Step9: The system display successfully deleted message. Step10: End of use case.

Alternative Course of the action	
User Action	System Response
StepA.1: Officer closes the warning message and returns again step6.	

Table9: Use Case description for Update news

Use Case ID	UC10
Use Case Name	Update request
Actor	Head Officer and Detective
Description	This use case allows for deleting old and unnecessarily posts.

Preconditions	The officer and Detective should login with his or her account.
Post conditions	Post news can be modified success fully.
Normal Course Of the Action	
User Action	System Response
Step1: actor click manage link. Step3: The actor click Update link. Step5: Actor fills the form. Step6: Actor click delete button.	Step2: the system displays add/delete/Update options. Step4: The system display Update form. Step7: The system verifies the inserted information (Alternative A) (Alternative B). Step8: The system display successfully deleted message. Stepe9: End of use case.
Alternative Course of the action	
User Action	System Response
StepeA.2: Actor returns again to step5. StepB.2: Actor returns to step5	StepA.1: The system display mismatched information is inserted message. StepB.1: The system displays please fill all field messages.

Table 10: Use Case description for Add case Detail

Use Case ID	UC11
Use Case Name	Add Case
Actor	Detective
Description	This use case allows add Case record data to the system
Preconditions	Detective login to his/her page and Valid crime report should exist.
Post conditions	Case should be added successfully.
Normal Course Of the Action	
User Action	System Response

Step1: Detective click add case button. Step3: Detective fills all required information. Step4: Detective click submit button.	Step2: the system displays add case form. Step5: the system verifies the information. Step6: the system displays successful message. Step7: End of use case.
Alternative Course of the action	
User Action	System Response
StepA.2：Detective returns to step3.	StepA.1： the system displays error message, "please fill all provided information".

Table 11: Use Case description for View News

Use Case ID	UC12
Use Case Name	View News
Actor	User, system admin, head officer, police, and detective
Description	This use case is used to view news from the station in any time.
Preconditions	-
Post conditions	News can be viewed by actor.
Normal Course Of the Action	
User Action	System Response
Step1: actors should browse the system. **Stepe2**:actors clicks to **view news** link	**Step3:**the system displays the list of news **Step4**: end of use case

Table12: Use Case description for Add Crime Report

Use Case ID	UC14

Use Case Name	Add Crime Report
Actor	User, Police, Head officer, and Detective.
Description	This use case allows adding crime report to the system.
Preconditions	Crime should be seen by reporter.
Post conditions	Crime report should found on the page.

Normal Course Of the Action	
User Action	System Response
Stepe1: Actor's should be browsing the system. Stepe2: Actor's click add crime report link. Stepe4: Actor's fill required information with regards to the report. Step5: Actor's click Add button.	Stepe3: The system displays the form. Stepe6: The system verifies the information (Alternative A). Stepe7:End of use case

Alternative Course of the action	
User Action	System Response

Table13: Use Case description for Logout

Use Case ID	UC16
Use Case Name	Logout
Actor	System Admin, head officer, Police, User, and detective
Description	This use case allows for users to exit from the system at a time.
Preconditions	The user should login and in use of the system.
Post conditions	Users exit from the system.
Normal Course Of the Action	

User Action	System Response
Step1: The Actors clicks the logout button.	Step2: The system will display successfully logout from the system message. Step3: End use case.

Table 14: Use Case description for add suspect

Use Case ID	UC18	
Use Case Name	Add suspect	
Actor	Head officer, detective and police	
Description	This use case allows for identify and add suspect persons to the system as per required.	
Preconditions	Actor should login his/her page.	
Post conditions	The suspected person should successfully add to the system.	
Normal Course Of the Action		
User Action		System Response
Step1: Actor click search case link. Step3: Actor searches with his/her case ID and if suspect is not found. Step4:Actor click add suspect link. Step6: They must fill the provided field. Step7: click the submit button.		Step2: The system display list of case. Step5: The system will display add form. Step8: The system verifies the information (Alternative A). Step9: The system display successful message. Step10: End of use case.
Alternative Course of the action		
User Action	System Response	
StepA.3: Return again to step6.	StepA.1: The system display error message, “please fill all	

	fields correctly". StepA.2: system redirected to step6.

Table 15: Use Case description for Add Witness

Use Case ID	UC19	
Use Case Name	Add Witness	
Actor	User and detective	
Description	This use case allows users and detective to add eye witness for the crime when it happened	
Preconditions	Actors should login to his/her page.	
Post conditions	The user should add the witness successfully	
Normal Course Of the Action		
User Action		System Response
Step1: users hit add witness link Step3: users fill information about the witness to be added Step4: users hit submit button		Step2: the system displays the form to add the witness Step5: the system validates the input information (Alternative A). Step6: the system display successfully added message Step7: End use case.
Alternative Course of the action		
User Action	System Response	
StepA.2:user returns to step5	StepA.1:the system display error not all required fields are filled and display unfilled form	

Table16: Use Case description for Add case Status

Use Case ID	UC25
Use Case Name	Add case status
Actor	Detective
Description	This use case allows to add Case status to the system
Preconditions	Detective should be login to his/her page.
Post conditions	The Case Status created by the Detective successfully added to the system

Normal Course Of the Action	
User Action	System Response
Step1: Detective click Add status link. Step3: Detective fills information of the case status. Step4: Detective click Add button. Step6: Detective insert user's account and click send button.	Step2: The system displays add status form. Step5: The system order to insert user account. Step7: The system verifies the information (Alternative A) (Alternative B). Step8: The system display successfully added message. Step9: End use case.

4.2.4 Use case Scenario

Police provides safety to citizens. It always remains steady for arresting any criminal who is a threat for the safety of society. After registering the FIR(First Information Register) from any citizen, police starts its work and on that basis it arrests the criminals if proofs are found against them. Once the criminals are arrested, police starts investigation from them. After getting all the proofs against the criminal, it is the duty of the police to present all the proofs honestly to the court so that the right man can get right punishment. The true and right information provided by the people to police helps a lot in arresting the criminals who try to spoil the peaceful environment of society. Along with low salary scale, facilities of modern

technology such as computerized system of keeping records are not provided to police department which causes low efficiency. As it is the age of computers and all the organizations today use computers to maintain their records, so this facility should also be given to police department in order to increase their efficiency and to save their time. In our Project we are going to implement a WBCMS (Web Based Crime Management System). This is a database system in which police will keep the record of Criminals who have been arrested, to be arrested or escaped. This will help the Police department to manage their records easily. In police system when an incident occurs, a Petitioner reports an FIR (First Information Report). Police starts investigation according to law on this FIR. An investigation Officer supervises the investigation process. The main concerning people in the whole process are Petitioner (The person who files an FIR), Victim, Accused/Criminal, investigation officer.

Solving crimes comes down to reconstructing the scenario of the crime. Who did what, how, when and why, are the central elements of investigations. This will subsequently lead to (but also will be influenced by) a crime scenario; a chronological description of how (the manner), by who and why the crime has been committed.

4.3 Object Model

It is a representation of a system that allows for investigation of the properties of the system and, prediction of future outcomes, such as activity diagram, sequence diagram.

4.3.1 Class Diagram

- ✓ **class diagram** in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by

  Showing the system's classes,

  - their attributes,
  - operations (or methods),
  - And the relationships among the classes.

- ✓ A class diagram is an illustration of the relationships and source code dependencies among classes in the Unified Modeling Language (UML).
- ✓ Class defines the methods and variables in an object, which is a specific entity in a program or the unit of code representing that entity.
- ✓ Class diagrams are useful in all forms of object-oriented programming (OOP).

- ✓ It provides an overview of the target system by describing the objects and classes. inside the system and the relationships between them.
- ✓ It provides a wide variety of usages; from modeling the domain-specific data structure to detailed design of the target system.
- ✓ Class diagram for crime management system is briefly drown below.

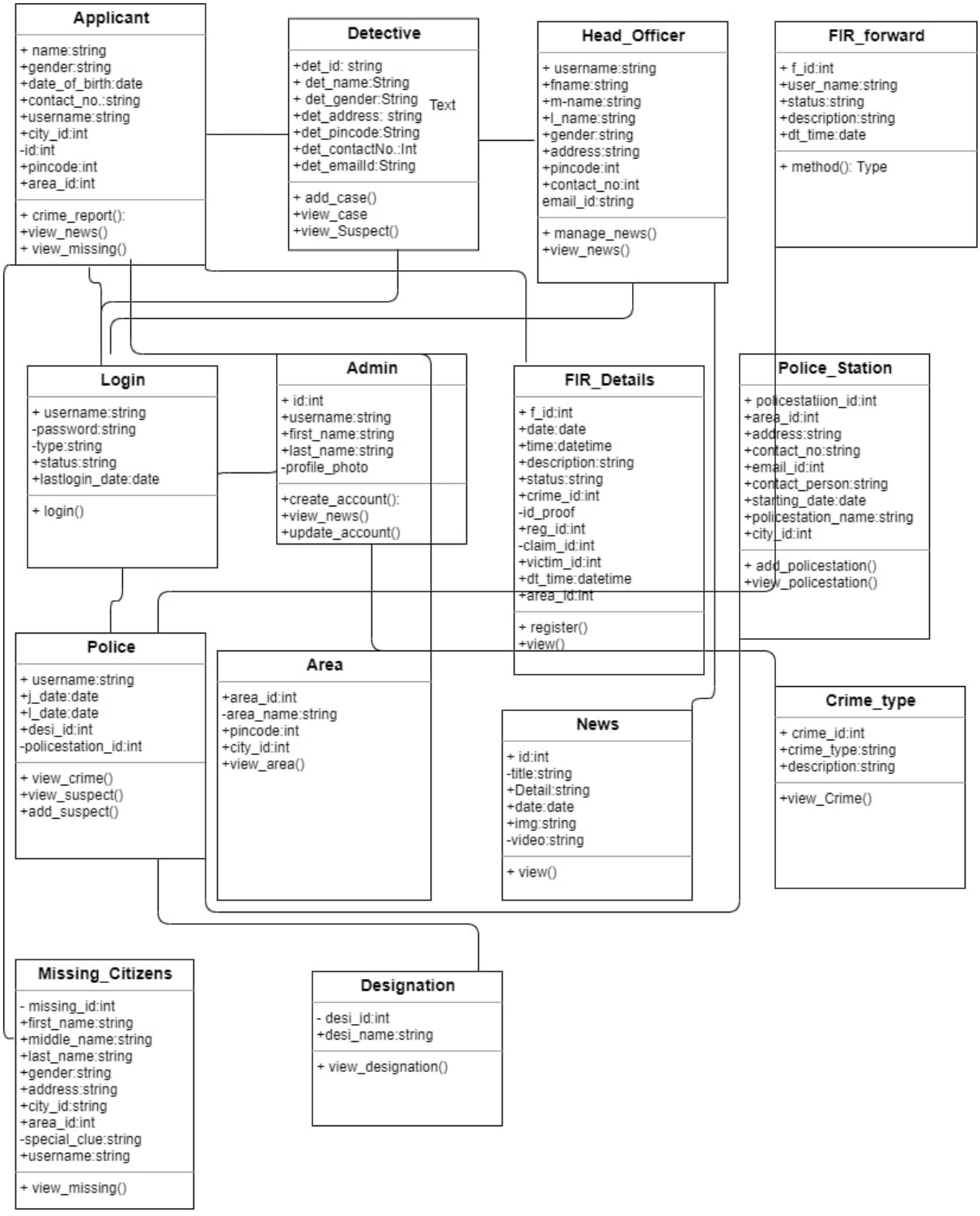

Figure: 2 Class diagram

4.4 Data Dictionary

Table17: Applicant

Applicant	Data Type	Constraints	Description
User_name	Varchar(30)	Not null	It store applicant user name
User_id	Varchar(20)	Primary key	It store user id
User_email	Varchar(20)	Not null	It store user email
User_phone	int	Not null	It store user phone
Gender	Varchar(10)	Not null	It store gender
User_address	Varchar(50)	Not null	It store user address

Table 18: Admin

Admin	Data Type	Constraints	Description
Admin_Id	Varchar(30)	Primary key	It is store admin id
Admin_name	Varchat(50)	Not null	It is store admin name
Admin_gender	Varchar(15)	Not null	It is store gender
Admin_email	Varchar(25)	Not null	It is store email

Table19: Detective

Detective	Data Type	Constraints	Description
det_name	Varchar(30)	Not null	it store name
det_id	Varchar(20)	Primary key	It store det_id
det _email	Varchar(20)	Not null	It store email
det_phone	int	Not null	It store det phone
Gender	Varchar(10)	Not null	It store gender

Table20: Police

Police	Data Type	Constraints	Description
police_name	Varchar(30)	Not null	It store police name
police_id	Varchar(20)	Primary key	It store police id
police_email	Varchar(20)	Not null	It store police email
police_phone	int	Not null	It store police phone
Gender	Varchar(10)	Not null	It store gender

Table21: Head officer

Head officer	Data Type	Constraints	Description
Hd_name	Varchar(30)	Not null	It store hd name
Hd_id	Varchar(20)	Primary key	It store hd_id
Hd_email	Varchar(20)	Not null	It store Hd email
Hd_phone	int	Not null	It store hd phone
Gender	Varchar(10)	Not null	It store gender

4.5 Sequence Diagram

Sequence diagram is an interaction diagram that shows how objects operate with one another and in what order. It is a construct of a message sequence charts. Sequence diagram shows object.

Object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out

the functionality of the scenario. Controller is a software program that manages or directs the flow of data between two interfaces. In a general sense, a controller can be thought of as something between two interfaces and manages communications between them.

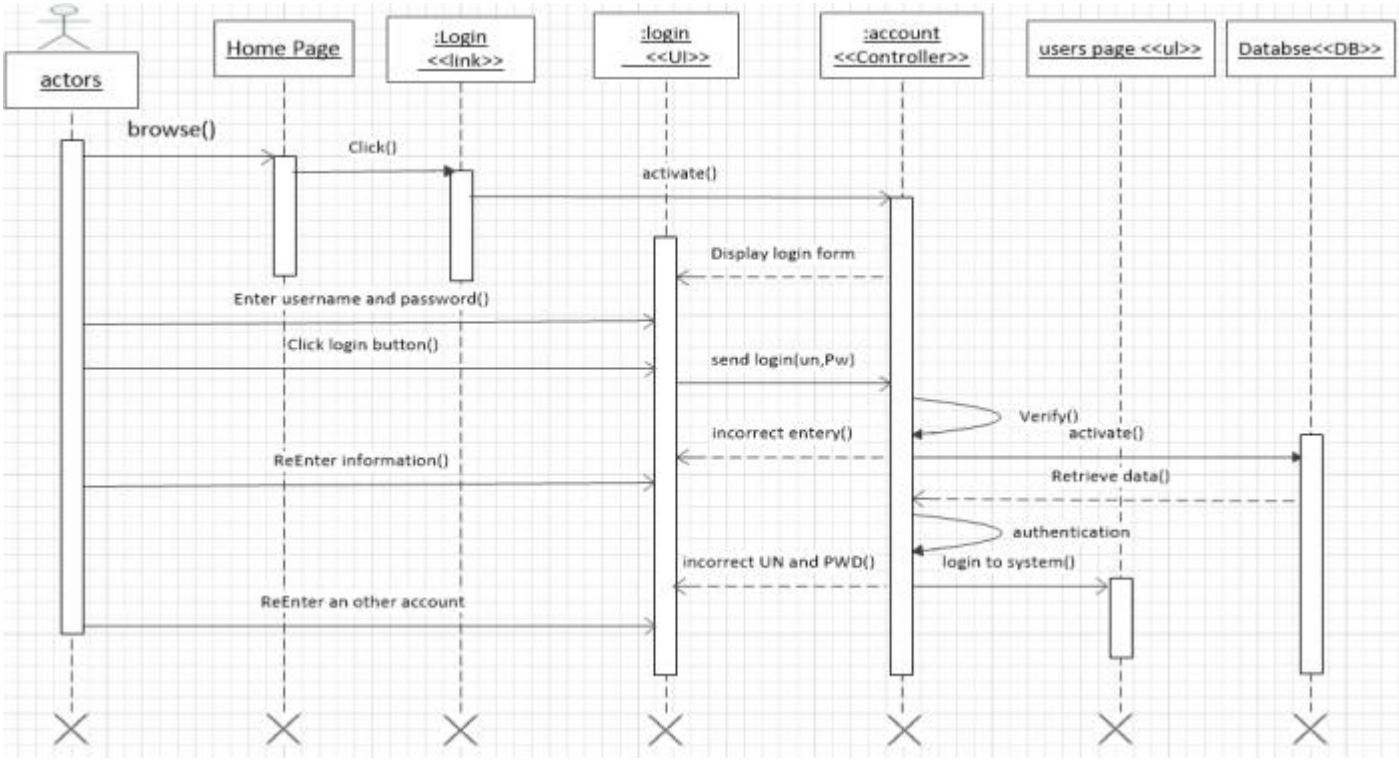

Figure3: sequence diagram for login page

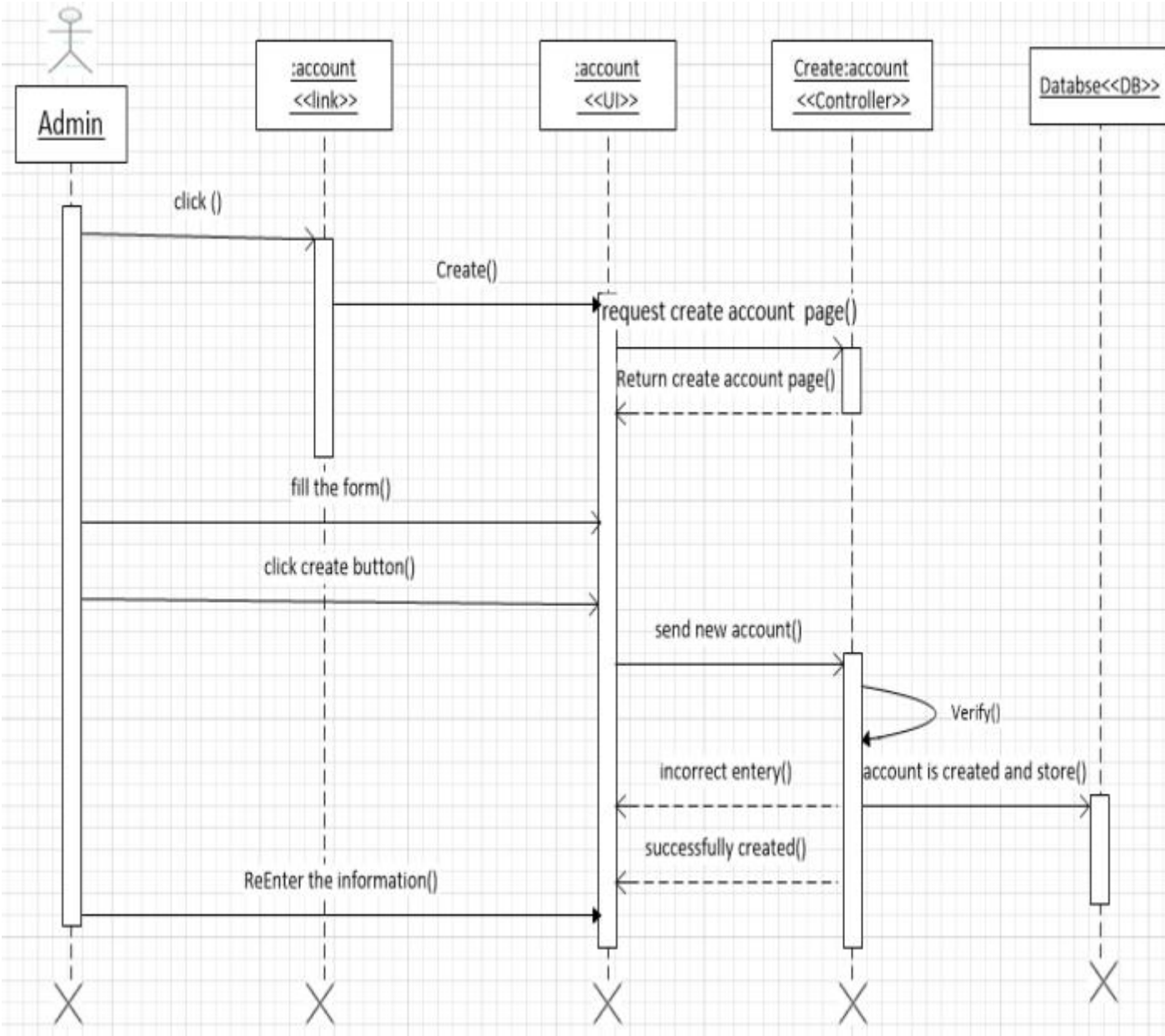

Figure 4: sequence diagram for create account page

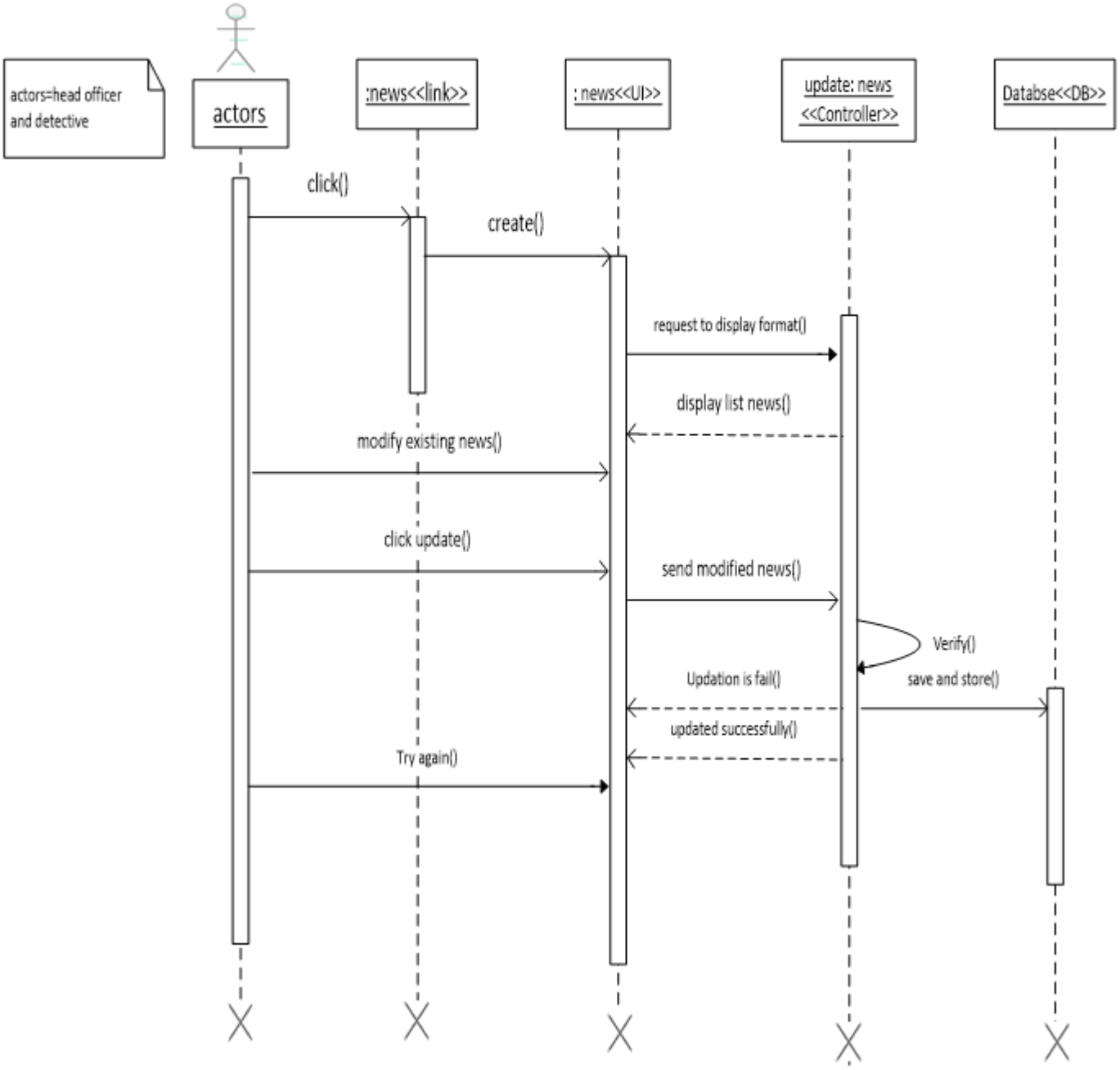

Figure 5: sequence diagram for update news page

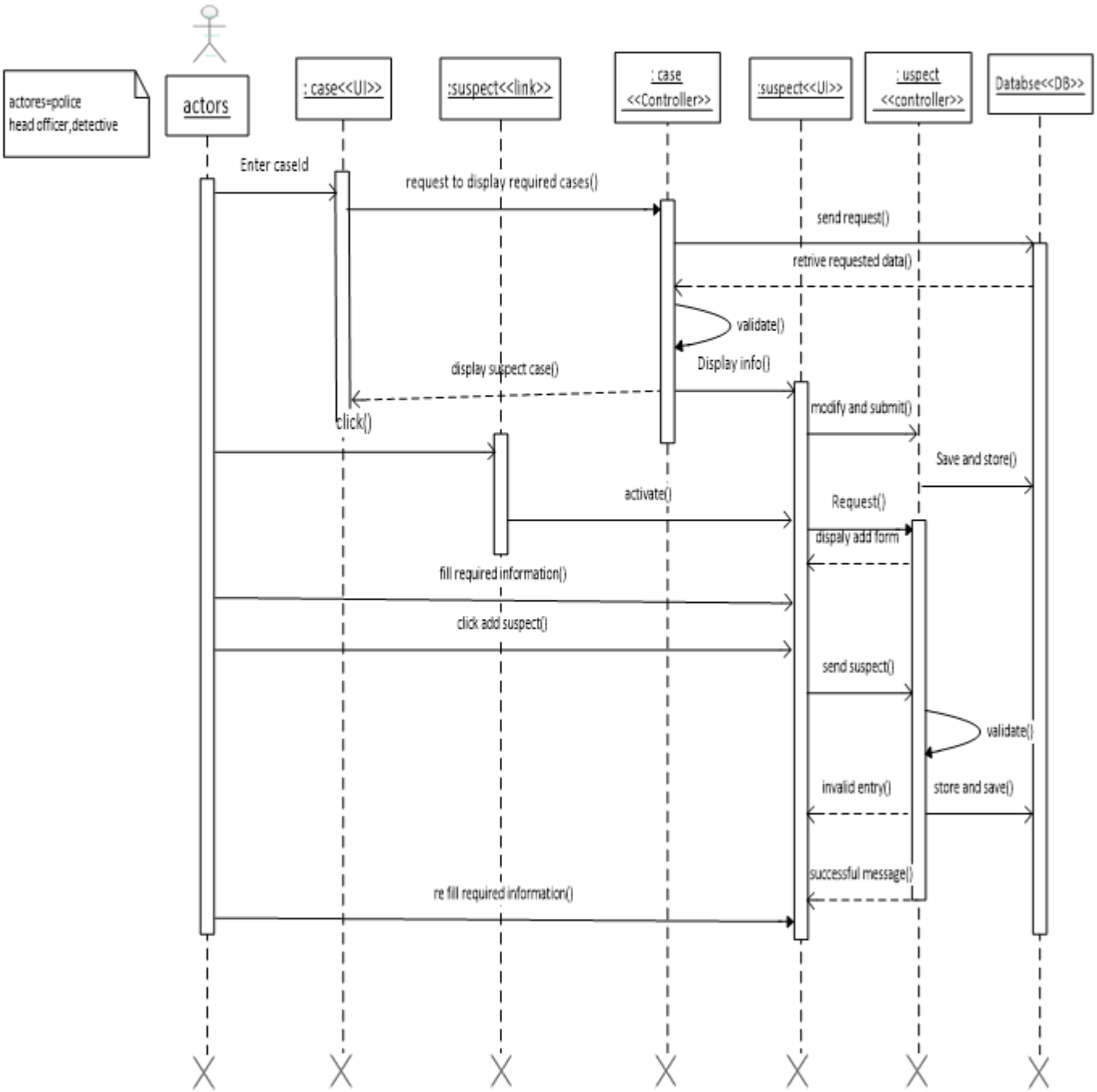

Figure6: sequence diagram for add suspect page.

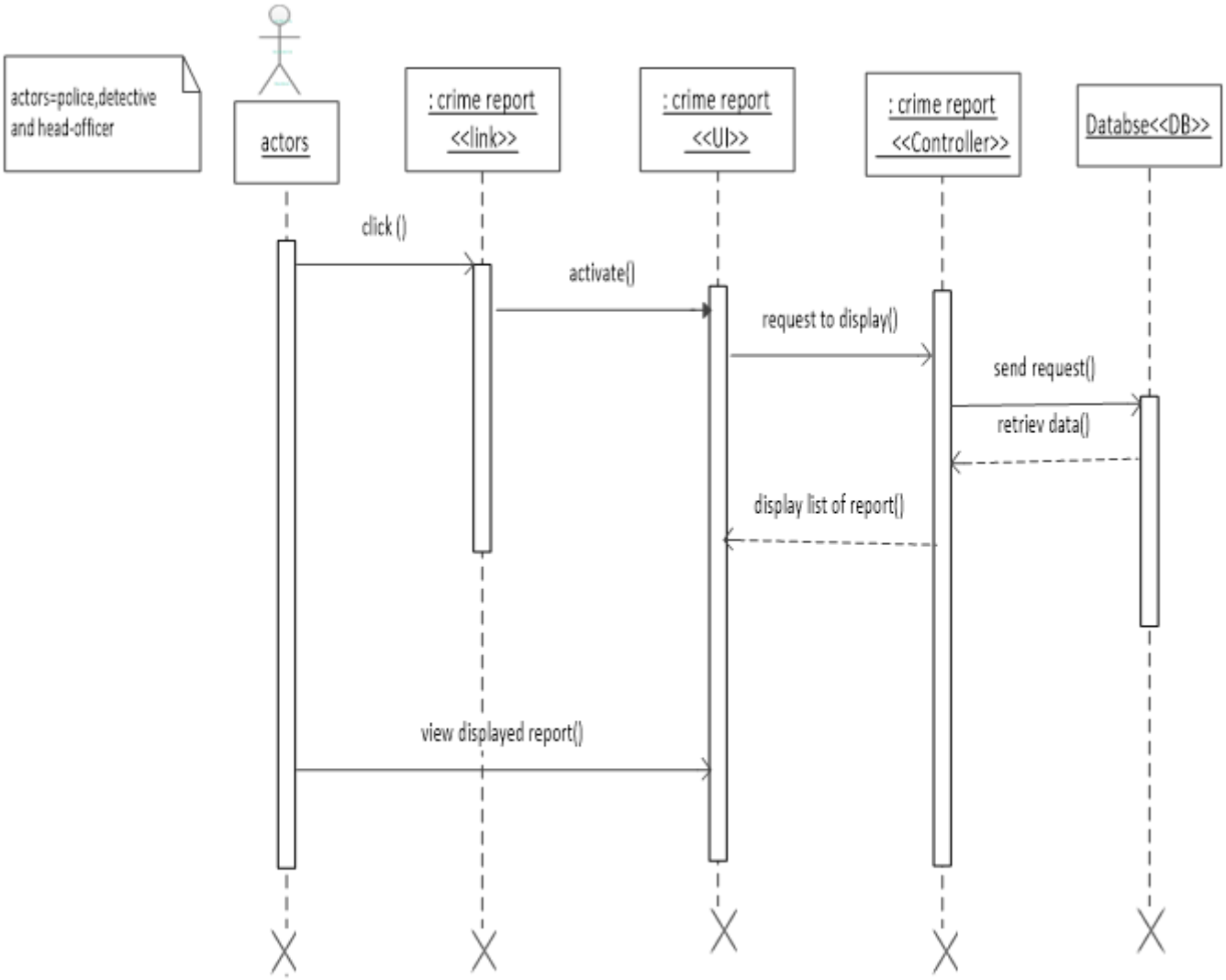

Figure7: sequence diagram for Add crime report page.

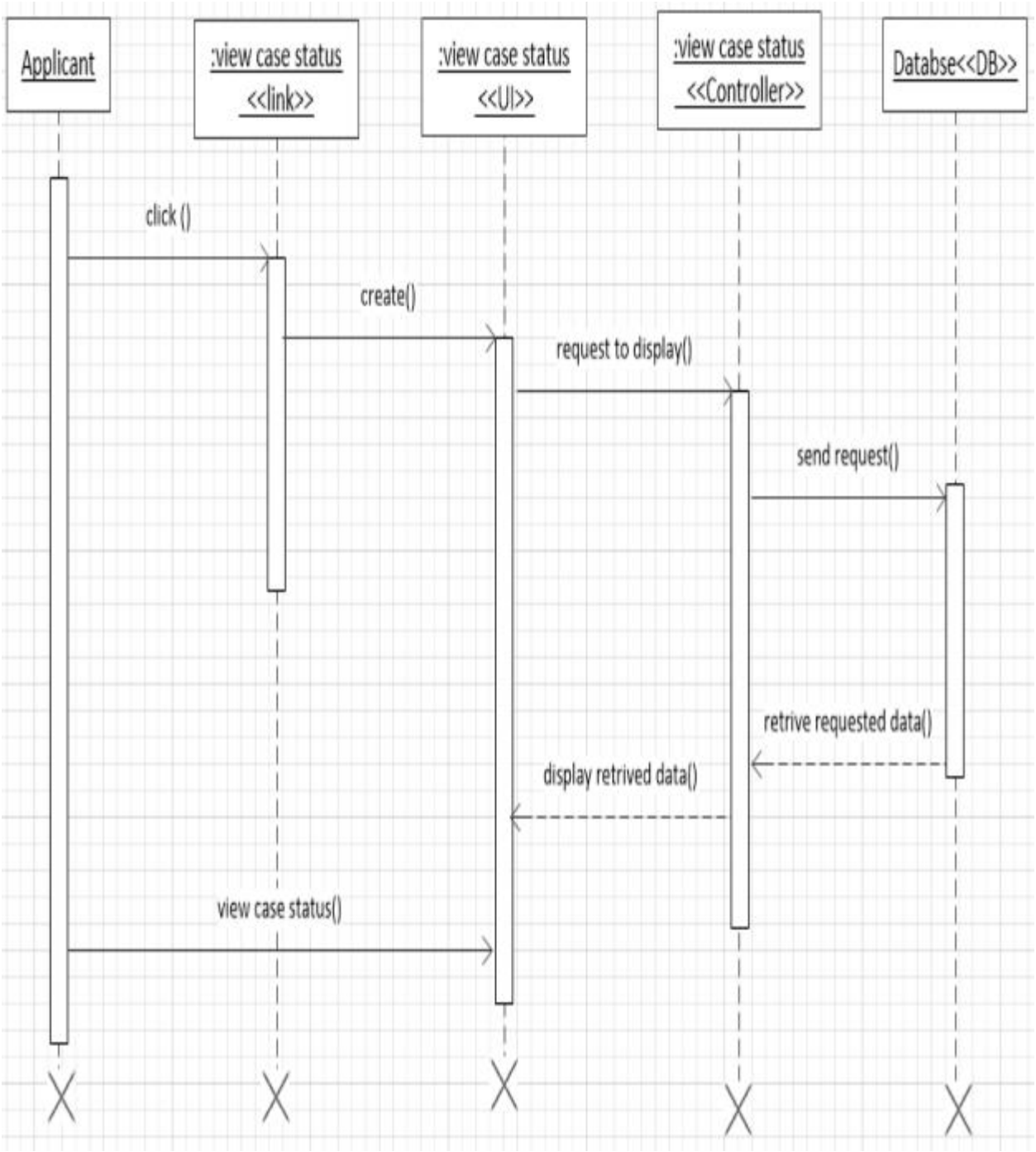

Figure8: sequence diagram for view case status page.

4.6 Activity Diagram

An activity diagram is used to model a large activity's sequential work flow by focusing on action sequences and respective action initiating conditions. An activity diagram is represented by shapes that are connected by arrows. Arrows run from activity start to completion and represent the sequential order of performed activities. Black circles represent an initial workflow state. A circled black circle indicates an end state. Rounded rectangles represent performed actions, which are described by text inside each rectangle.

A diamond shape is used to represent a decision, which is a key activity diagram concept. Upon activity completion, a transition (or set of sequential activities) must be selected from a set of alternative transitions for all use cases Synchronization bars indicating the start or completion of concurrent activities are used to represent parallel sub flows.

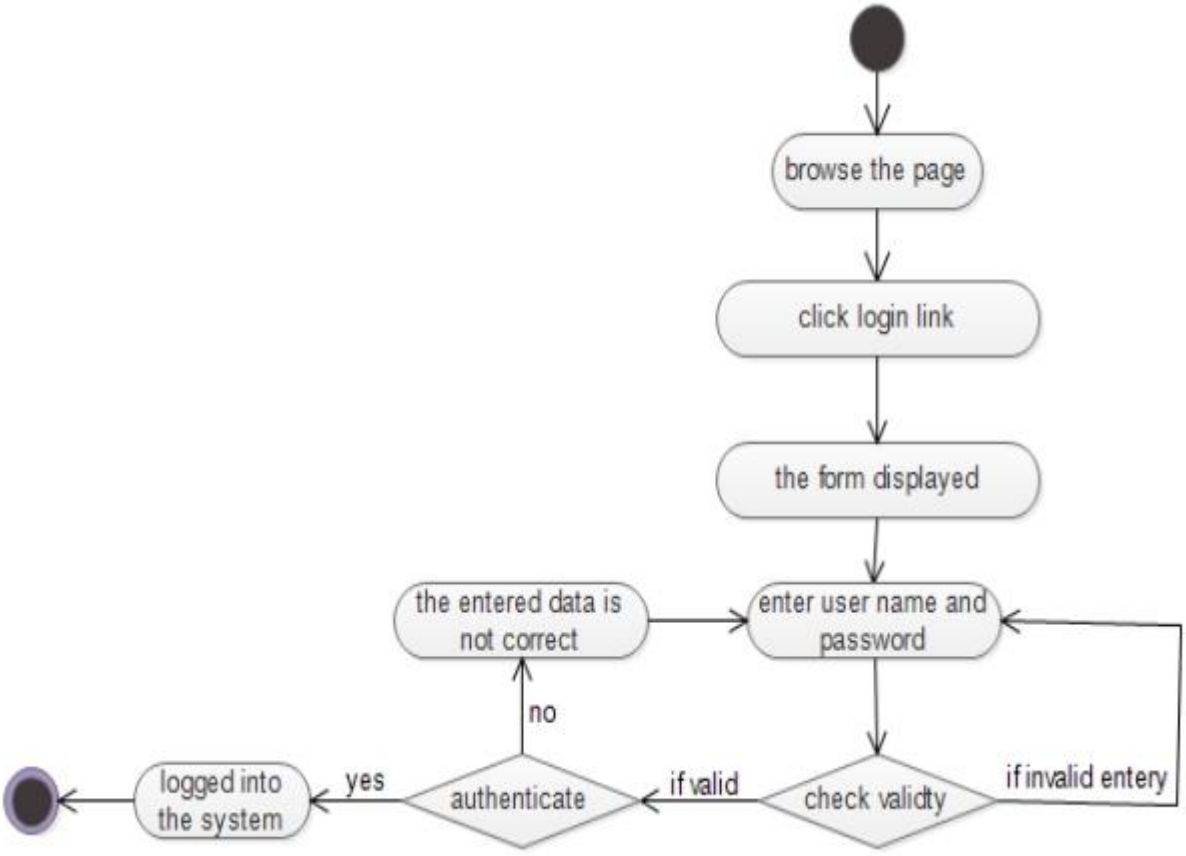

Figure9: Activity Diagram for Login.

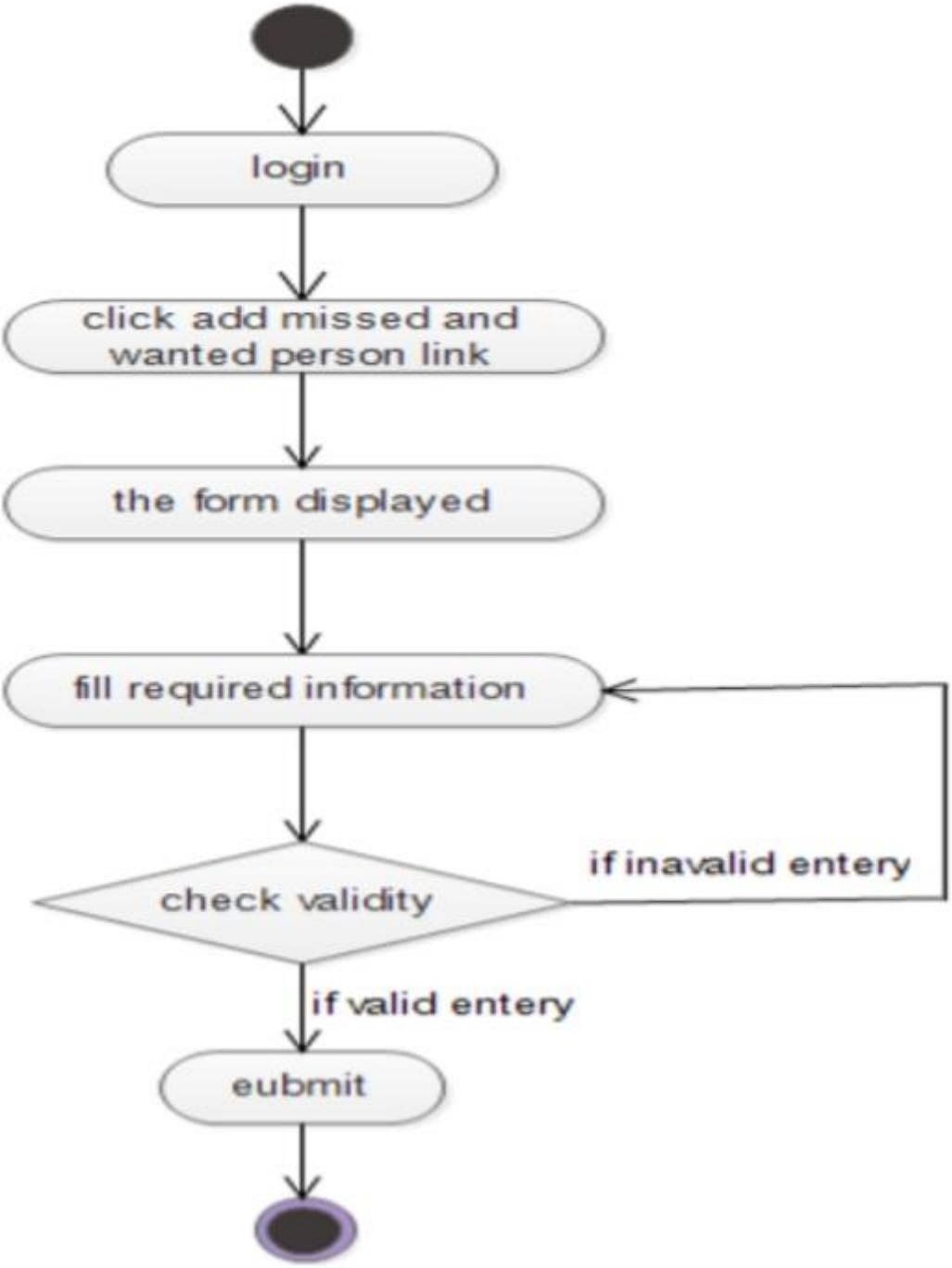

Figure10: Activity diagram for Post most wanted and missing person.

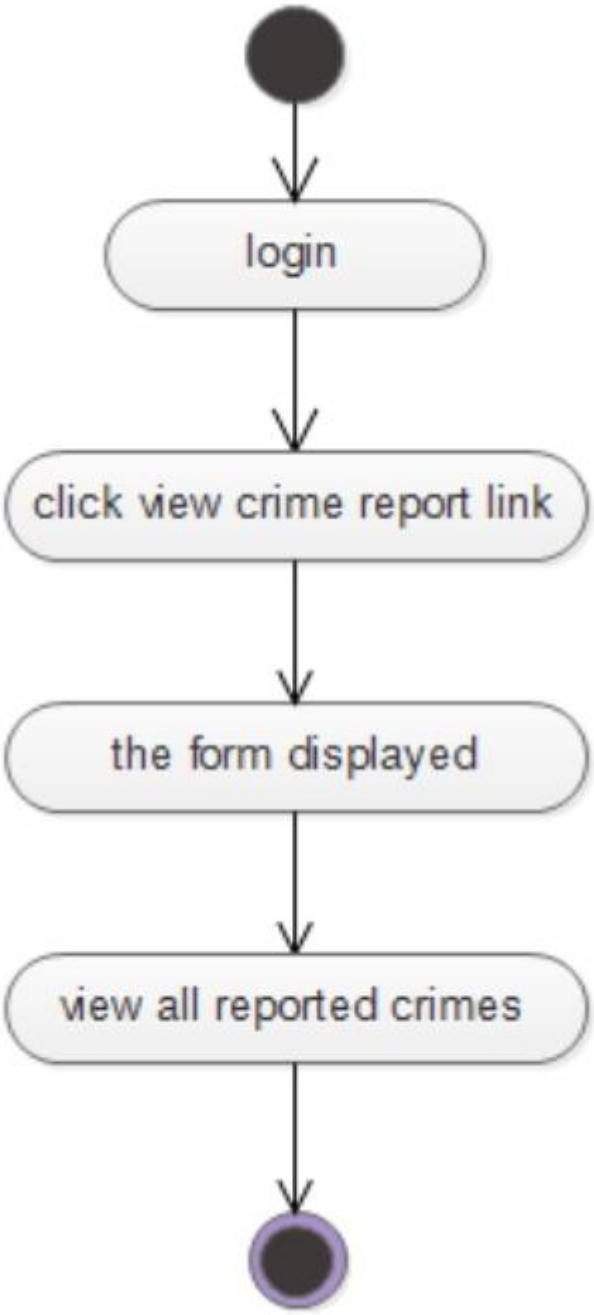

Figure11: Activity Diagram for View Crime report

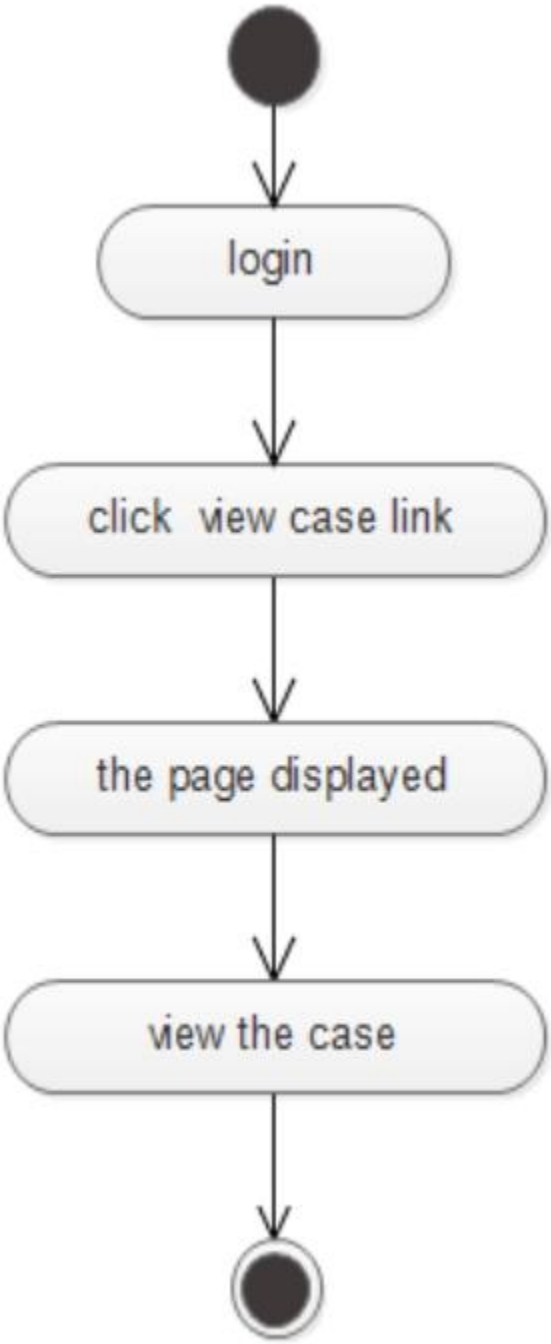

Figure12: Activity Diagram for View case

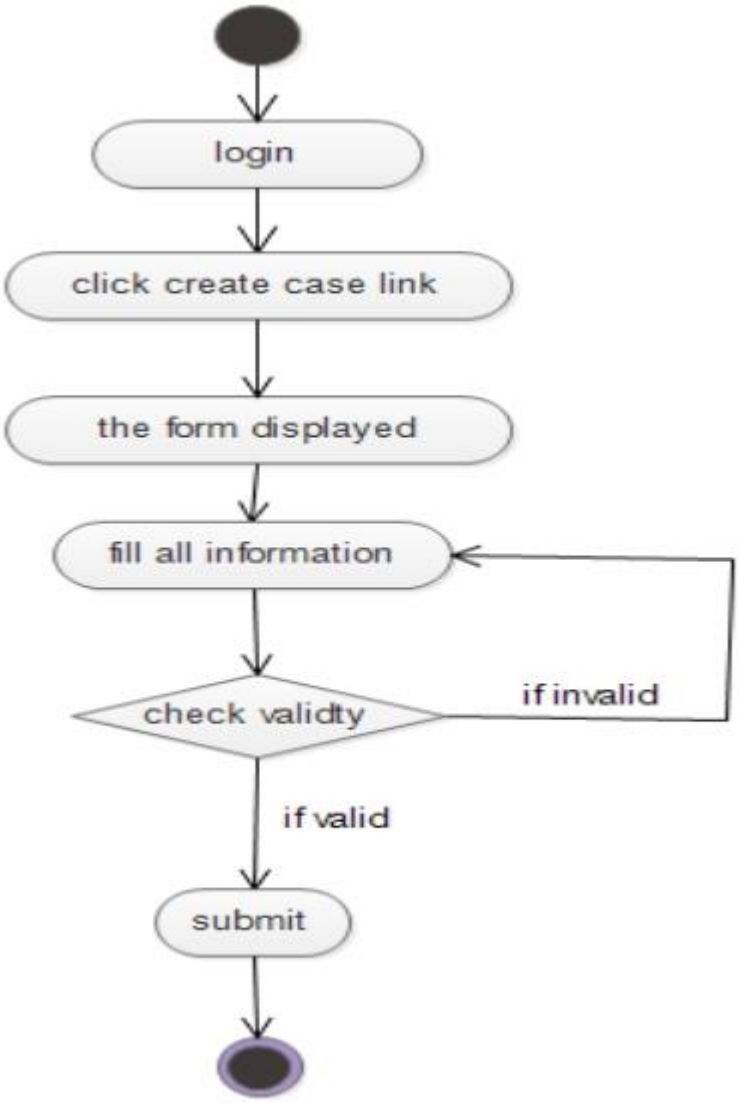

Figure13: Activity Diagram for Create case

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CHAPTER FIVE

SYSTEM DESIGN

5.1. Introduction

The System Design is the process of defining the architecture, components, modules, interfaces, and data for a system to satisfy specified requirements. It covers the description of how the system will be implemented, including hardware and software specifications, data management, security, and user interface design. In the case of Mobile and Web-based Crime Management System, the design should focus on creating an intuitive and efficient user interface, secure data storage and retrieval, and efficient system performance. Additionally, the design should include considerations for error handling, validation, and quality issues to ensure that the system meets the requirements and expectations of its user.

5.2. Design Goals

The design goals represent the desired qualities of the system and provide a consistent set of criteria that must be considered when making design decisions. Based on the nonfunctional requirements and the information elicited from the users, the following design goals are identified.

Performance Criteria

- ✓ The system is compatible with wamp server platform. Because, the system is programmed with php and mysql.
- ✓ Maintenance Criteria.

Modifiability

The system is easily modifiable when the wolkite Police station changes the new IIS server.

Portability

The system is portable from window platform to other plat forms easily b/c it uses the IIS server.

Readability

The source code of the system is restricted to be understood by the programmer of the system or a person who has a great knowledge on Microsoft web developing languages. Such us:

- Wamp server
- CSS
- HTML

End User Criteria

Since the system is developed by using Microsoft products, it is easy to make and that have help panel for the end user.

✓ Reliability requirement

- A **reliability requirement** is a dependability requirement that specifies a required amount of reliability, which is a quality factor that is defined as follows:

    - Reliability
    - The degree to which something operates without failure under given conditions during a given time period.

➢ Security Criteria

Security For users of the system

- ✓ The system provides privileges to authorized users can create user name and password to log in to the system.
- ✓ And also system has another security keeping mechanism, which is called Session and cookies which can help users to log in to the system and cannot back to the securable pages such as user name and password.

Security for Administrators of the system

- ✓ The Administrator of the system which is directly connected the database is more secured part of the system protection.
- ✓ Only a person who a privilege to the system can logon by providing username and password and the system will check if a specified role is given to that system.

Security for Department/Police station of the system

Any member of the police station has accounts that have been created by administrator.

5.3. System Architecture

The proposed system is expected to replace the existing manual system by an automated system.

Figure14: System Architecture

5.4. Subsystem Decomposition

Sub system decomposition of the online crime management system into smaller subsystems with a strong coherence. The different subsystems have a loose coupling. By reviewing the user's functional requirements we have decomposed the system into subsystems some them.

5.4.1 Component diagram

It is a type of design diagram that shows overall system architecture and the logical components within it for how the system is implemented. It shows the dependencies among a set of components. This modeling aspect involves the physical things that reside on a node such as executables, files, libraries, tables and documents. The goal of the component modeling is to distribute the classes of the system into large scale, cohesive component.

Figure below show the component diagram of crime management system

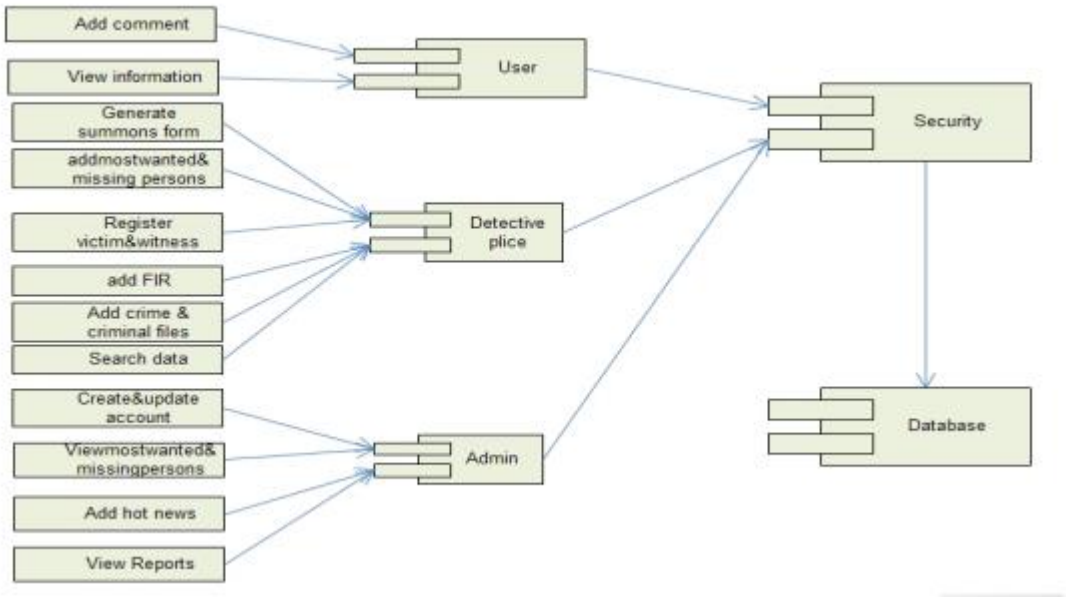

Figure15: Component diagram.

5.4.2 Deployment diagram

A deployment diagram is a graph of nodes connected by communication associations.

- ✓ Nodes are shown as 3-D boxes.
- ✓ Nodes may contain component instances.
- ✓ Components may contain objects (indicating that the object is part of the component)

Deployment diagrams are useful for showing a system design after some decisions are made. These decisions include Subsystem decomposition, Concurrency, Hardware/Software Mapping. It shows how the system (software) is deployed in the hard ware components.

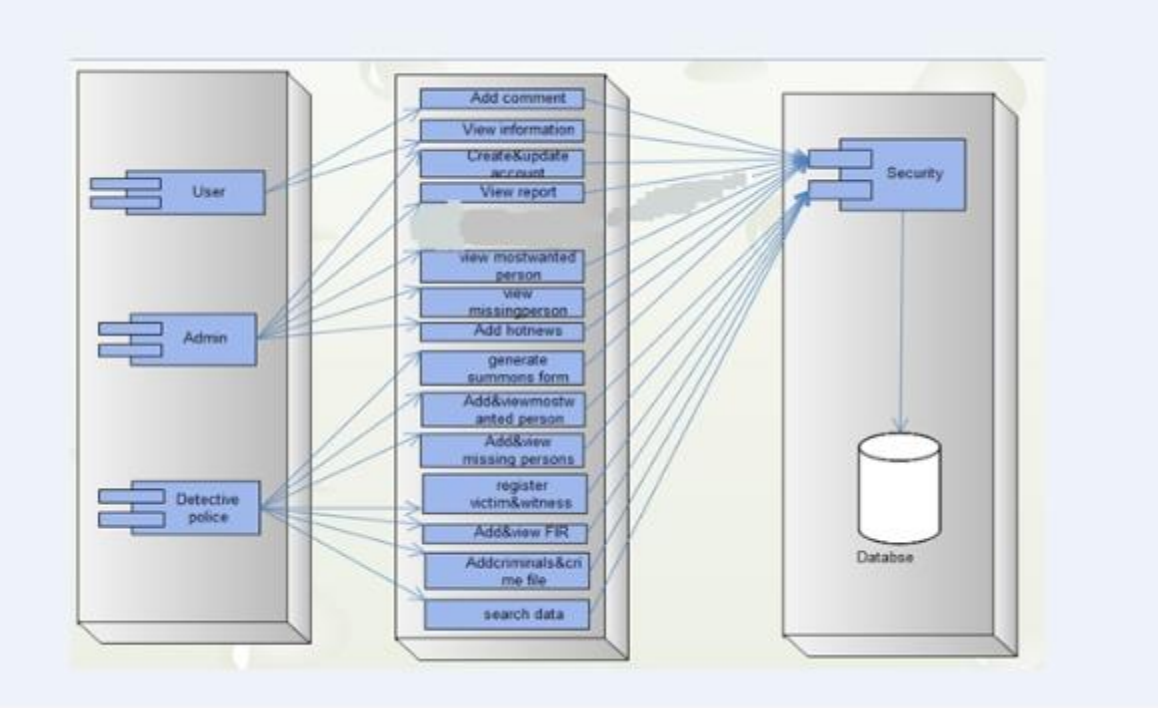

Figure16: Deployment diagram.

5.4.3. Detailed Class Diagram

A Detailed Class Diagram is a type of UML diagram that provides a detailed view of the classes, their attributes, methods, and relationships in a software system.

In a mobile and web-based crime management system, a Detailed Class Diagram may include classes such as Applicant, Police, detective, FIR, Accused, File, Witness,criminal,crime,Head Officer, Investigator, and Admin. Each of these classes would have its own set of attributes and methods, such as User's name, email, and password, or Crime's location, date, and description.

The relationships between classes would also be defined, such as a User can report multiple Crimes, an Officer can handle multiple Cases, or an Investigator can work on multiple Reports. These relationships would be shown using arrows and annotations on the diagram.

Overall, a Detailed Class Diagram in a mobile and web-based crime management system would provide a visual representation of the software's internal structure, helping developers to better understand the system's design and facilitate communication among team members

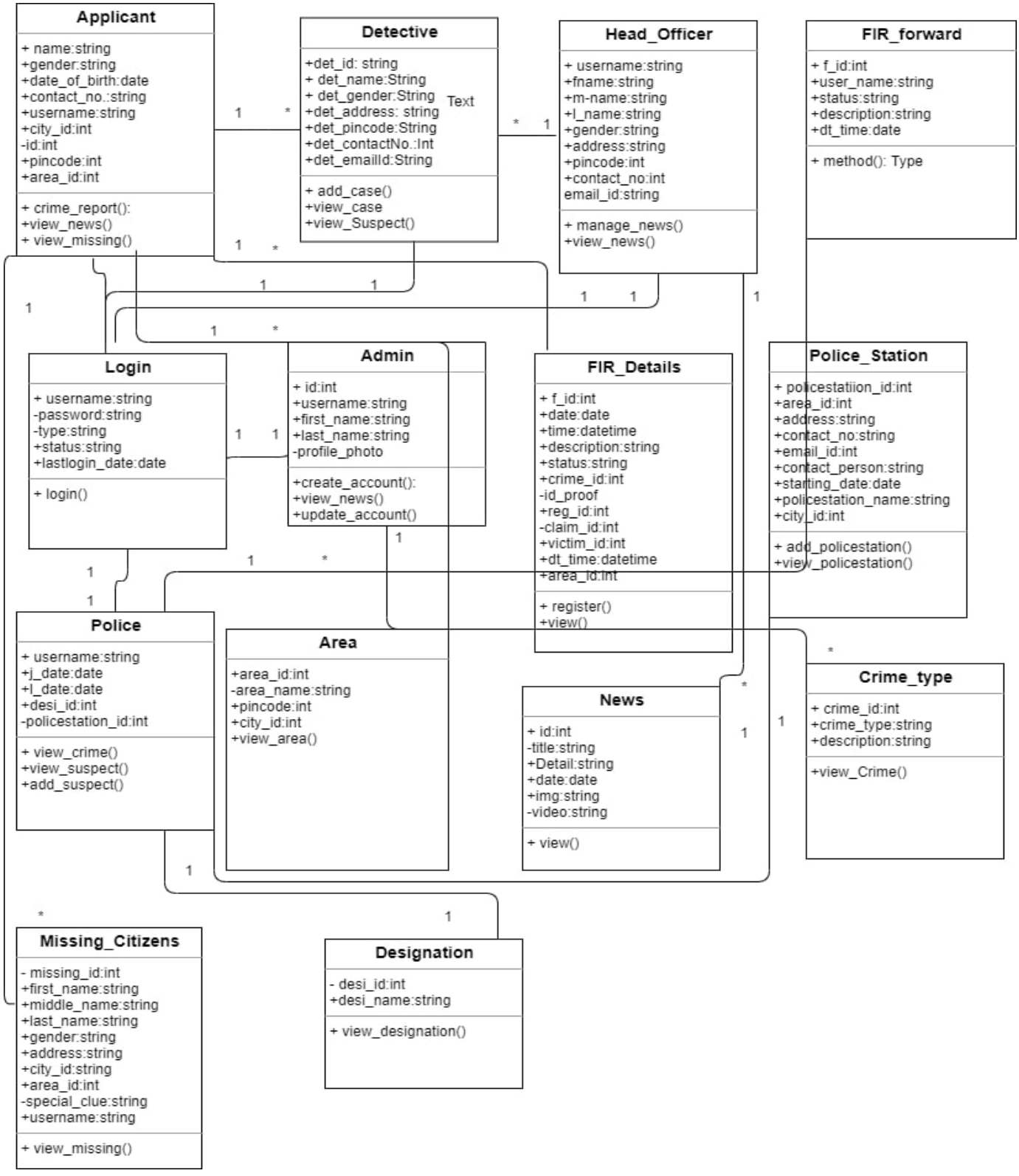

Figure17: Detailed Class Diagram

5.5 Persistent Data Management

Persistent data management refers to the storage and retrieval of data over time, even after the application that created the data is no longer running. In the context of a mobile and web-based crime management system, persistent data management refers to the storage of crime reports, case information, and other relevant data in a database that can be easily accessed and updated by authorized users. This is important because it allows for the tracking of crimes over time, as well as the sharing of information between different agencies and departments involved in investigating and solving crimes. A well-designed persistent data management system should ensure that data is secure, reliable, and easily accessible to authorized users.

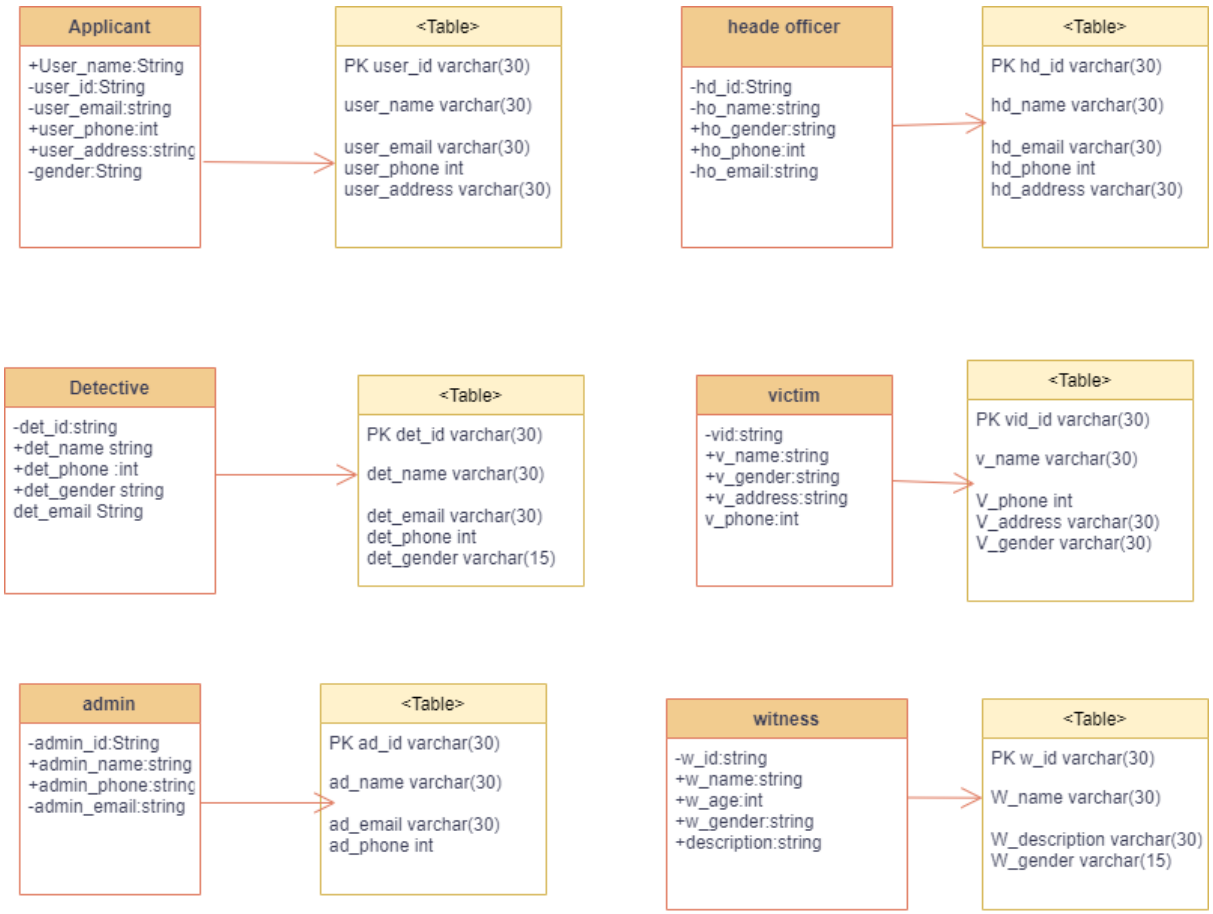

Figure18: Persistent Data Management

5.6 Access Control and Security

Access control and security are critical considerations in any information system, including a mobile and web-based crime management system. Access control refers to the measures put in place to ensure that only authorized users can access the system and the data it holds.

Security, on the other hand, refers to the measures put in place to protect the system and data from unauthorized access, theft, or damage.

To ensure the security of the mobile and web-based crime management system, the following measures can be implemented:

Activities	Applicant	Head officer	Detective	Police	Admin
Login	✓	✓	✓	✓	✓
View news	✓	✓	✓	✓	✓
Crime report	✓				
Manage news		✓			
View crime report				✓	
View case status			✓		
Create Account					✓
Deactivate Account					✓
Update Account	✓				✓
Post missing and Wanted person	✓				
Add suspect	✓			✓	
Add case status			✓		
View suspect				✓	

Table22: Access Control and Security

5.7 Packages

Packages for a mobile and web-based crime management system typically include the following components:

- User Management: This module is responsible for managing the user accounts and authentication of citizens, law enforcement officers, and administrators.
- Crime Reporting: This module allows citizens to report crimes, provide details, and upload evidence such as photos or videos.
- Crime Management: This module is used by law enforcement officers to manage crime reports, assign cases to investigators, and track the progress of investigations.
- Evidence Management: This module enables law enforcement officers to manage evidence related to crimes, such as photos, videos, and witness statements.
- Communication and Collaboration: This module provides a platform for communication and collaboration among law enforcement officers and between law enforcement officers and citizens.
- Analytics and Reporting: This module provides analytical and reporting capabilities to help law enforcement officers understand crime patterns and make informed decisions.
- Alerts and Notifications: This module provides real-time alerts and notifications to law enforcement officers and citizens regarding criminal activity and investigations.
- Data Backup and Recovery: This module ensures that the data stored in the system is secure and can be recovered in the event of data loss or corruption.
- User Feedback and Support: This module provides a platform for users to provide feedback and support to the development team.

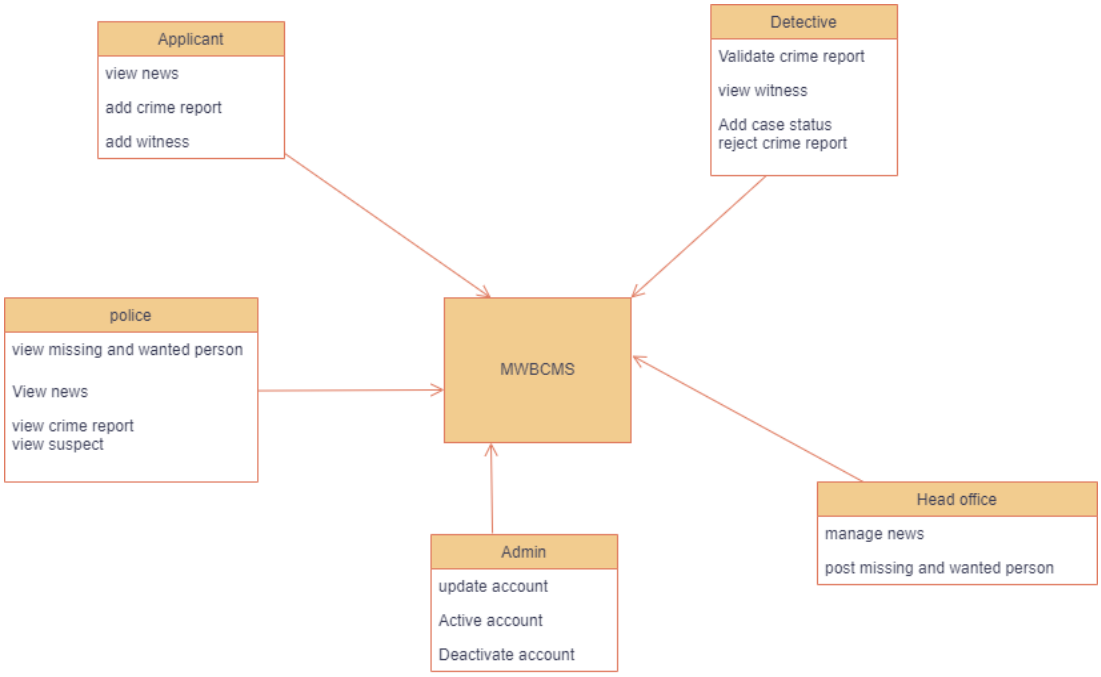

Figure19: Packages

5.8 Algorithm Design

An algorithm is a procedure or formula for solving a problem, based on conducting a sequence of specified actions. It is a step by step process carried out to solve the given problem. The purpose of using pseudo code is that it is easier for humans to understand than conventional programming language code and that it is a compact and environment independent description of the key principles of an algorithm.

Algorithm 1: Login

BEGIN

Login (Username, password)

INPUT: Username and Password

IF (User exist)

READ Password FROM database

IF (Password == Entered Password)

Login successful

Redirect to an authenticated page

ELSE

PRINT “incorrect password “

END IF

ELSE

PRINT “incorrect Username or password “

END IF

END

Algorithm 2: Create Applicant Account

BEGIN

Create Applicant Account (App_ ID, first Name, last Name, App_name, Password)

INPUT: App_ ID, First Name, Last Name, App_name and Password

IF (Applicant Account exist)

PRINT “The Applicant Account is already exist in the database.”

ELSE

PRINT “Applicant Account created successfully!”

END IF

END

Algorithm 3.Create police Account

BEGIN

police((Pol-ID, FName, LName, Gender, Address, Phno_number, Email, password)

INPUT: police_ID, First Name, Last Name, Gender, Address, phone number, Email, Password

IF (police not exist)

PRINT “The police does not exist in the database.”

ELSE

PRINT “Police Account created successfully!”

END IF

PRINT “the fill in input is incorrect/ error!”

END

5.9 User Interface Design

User Interface Design

The User Interface Design (UID) is a critical aspect of the Mobile and Web-based Crime Management System. The goal of UID is to make the user experience as seamless, intuitive, and visually appealing as possible. To achieve this, designers take into account factors such as usability, accessibility, and aesthetics.

In the UID process, designers create wireframes, mockups, and prototypes that help stakeholders to understand how the system will look and function. They may use tools such as Sketch, Adobe XD, and others to create visual representations of the system.

Designers must also ensure that the user interface meets the needs of diverse user groups, including the elderly, disabled, and those with different language and cultural backgrounds.

Once the UID is complete, it should be tested to ensure that it meets the user requirements, is easy to use, and has an attractive and consistent look and feel. This testing can involve usability testing, where real users test the system and provide feedback, as well as expert evaluations, where experts in the field of UID review the system and provide recommendations for improvement.

Figure20: User Interface Design

CHAPTER SIX

IMPLEMENTATION AND TESTING

6. IMPLEMENTATION OF THE DATABASE

```
CREATE TABLE admin (
  username varchar(45) NOT NULL,
  first_name varchar(45) NOT NULL,
  last_name varchar(45) NOT NULL,
  profile_photo varchar(255) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
-- Dumping data for table admin
INSERT INTO admin (username, first_name, last_name, profile_photo)
CREATE TABLE applicant (
  first_name varchar(30) NOT NULL,
  last_name varchar(30) NOT NULL,
  middle_name varchar(30) NOT NULL,
  gender varchar(6) NOT NULL,
  address int(100) NOT NULL,
  contact_no int(25) NOT NULL,
  emailid varchar(30) NOT NULL,
  profile_photo varchar(50) NOT NULL,
  username varchar(30) NOT NULL,
  city_id varchar(30) NOT NULL,
  pincode int(15) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

-- Dumping data for table applicant

INSERT INTO applicant (first_name, last_name, middle_name, gender, address, contact_no, emailid, profile_photo, username, city_id, pincode)

-- Table structure for table detective

CREATE TABLE detective (

username varchar(100) NOT NULL,

firstname varchar(20) NOT NULL,

middlename varchar(50) NOT NULL,

lastname varchar(50) NOT NULL,

gender varchar(10) NOT NULL,

address varchar(100) NOT NULL,

pincode int(10) NOT NULL,

contactno int(15) NOT NULL,

emailid varchar(50) NOT NULL

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

-- Dumping data for table detective

INSERT INTO detective (username, firstname, middlename, lastname, gender, address, pincode, contactno, emailid)

CREATE TABLE head_officer (

username varchar(50) NOT NULL,

firstname varchar(30) NOT NULL,

middlename varchar(30) NOT NULL,

lastname varchar(50) NOT NULL,

gender varchar(6) NOT NULL,

address varchar(50) NOT NULL,

pincode int(50) NOT NULL,

```
  contactno int(19) NOT NULL,
  emailid varchar(30) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

-- Dumping data for table head_officer
INSERT INTO head_officer (username, firstname, middlename, lastname, gender, address, pincode, contactno, emailid)
CREATE TABLE login (
  username varchar(45) NOT NULL,
  password varchar(45) NOT NULL,
  type varchar(15) DEFAULT NULL,
  status varchar(10) DEFAULT NULL,
  last_logindatetime date DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

CREATE TABLE policestation (
  poilcestation_id int(10) UNSIGNED NOT NULL,
  area_id int(10) UNSIGNED NOT NULL,
  address varchar(255) NOT NULL,
  contact_no int(10) UNSIGNED NOT NULL,
  Email_id varchar(255) NOT NULL,
  contact_person varchar(45) NOT NULL,
  starting_date date NOT NULL,
  policestation_name varchar(45) NOT NULL,
  city_id int(10) UNSIGNED NOT NULL
INSERT INTO policestation(poilcestation_id, area_id, address, contact_no, Email_id, contact_person, starting_date, policestation_name, city_id)
```

6.1. **Implementation of Class Diagram**

Methods implemented in our system:

Administrator

-manageAccount();

-createAccount();

-manageCrime();

Applicant

+viewMissingPerson();

-viewProfile ();

+Crimereport();

Police

+viewMissingPerson();

+viewWantedPerson();

-viewSuspect();

-viewCrimeReport();

Detective

+viewSuspect();

+viewMissingPerson();

-viewCaseStatus();

Head officer

-manageNews();

+viewMising();

Variables and class implemented in our system:

Applicant class

+ CharField **first_name**

+CharField **last_name**

+ CharField **middle_name**

+ CharField f_name

+ CharField m_name

+ CharField l_name

+ CharField gender

+CharField address

+ CharField username

+ CharField profile_photo

PhoneNumberField phone_no

EmailField email_id

ForeignKey city_id

IntegerField pincode

Class policestation

AutoField poilcestation_id

#CharField address

#CharField contact_no

#CharField Email_id

#CharField policestation_name

-DateField starting_date

#ForeignKey area_id

#ForeignKey city_id

6.2. CONFIGURATION OF APPLICATION SERVER

We have been used XAMPP as application server because it is a simple, lightweight Apache distribution that is extremely easy for us to create a local web server for testing and deployment purposes. Since the basic job of all web servers is to accept requests from clients (visitor of web browser) and then send the response to that request (the components of the page that a visitor wants to see). And a web server is an essential part of any website, since our developed system is web-based system, we had used Apache web Server which is open-source software.

- In the configuration process its installation is straightforward and simple then set upped and run the configuration to start, stop, and configure the services by opening the dashboard.
- It is integrated with most popular operating systems. We use XAMPP for windows.
- It is automatically installed on our computer as we install it.
- It is free web server and supports many operating systems.
- It is used to easily run and test websites and web applications locally.

6.3. CONFIGURATION OF APPLICATION SECURITY

Since our system involves storing of some personal data, we put some security mechanisms like unauthorized person cannot login into the system because the system requires a user name and password. Web application security is the process of securing confidential data stored online from unauthorized access and modification. We have implemented all input validations properly in order to secure our system. Since the system developed to the users who may senior to computer or may professional to computer so all inputs must be implemented easily and sample to use. When the user enters invalid inputs or empty, the system notifies to the user to inter valid inputs. In order to secure our system, we have been performed the following activities: -

- ✓ All inputs were validated properly
- ✓ User accounts was assigned with necessary access privileges
- ✓ Sessions was implemented

6.4. Testing

Introduction

Developing software is a complex process. No matter how hard we try to eliminate all faults simply by going through the development phases which is requirements elicitation, requirement analysis, system design, and implementation, however through good practice we can make sure that the most series fault does not occur in the first place.

In addition we need a separate testing phase, with the goal of elimination all remaining faults before release the system.

Testing is the final phase of implementation. Testing is a process to show the correctness of the program. Testing is checking of the system workability in an attempt to discover errors and avoiding such errors from the system. In this the team members tested the entire system as a whole with all forms and code. In this we tested all the functionalities in the System. All errors in the forms, functions, modules have been tested.

6.5. Sample Test

To simplify the testing process, the project team followed the different types of tests that break the testing process up into the distinct levels. These types testing are functional testing (unit testing, integration testing, acceptance testing and system testing) and non-functional testing (Security testing).

- **Unit testing**: Unit testing is a validation method in which a programmer tests if individual units of source code are fit for use. The system units are tested one by one by inserting invalid data.
- **Integration testing**: In this testing part, all the modules combined together and tested for fitness with each other and with the systems functionality. If error occurs in combining them, the module with problem will be identified and re combined.
- **Acceptance testing**: Acceptance testing is the process of testing system prior to its delivery. A system is mainly developed for an end user normally a customer of the

organization. A system is said to be accepted if and only if the user of the system is satisfied. In this perspective acceptance testing is widely used to prove that system performs as per the requirements. In acceptance testing the customers provides the input data to validate the system operation. It is also known as functional testing, black-box testing, release acceptance, application testing, confidence testing, final testing and validation testing.

➢**System testing**: It is the final step of testing. In this the team members tests the entire system as a whole with all forms, code, modules. This form of testing is popularly known as Black Box testing or System tests. In this the team members tests all the functionalities in the System. All errors in the forms, functions, modules are tested.

➢**Security testing**: Security testing was done by trying to access the system that is not authorized. For example without the valid user name and password tester will try to access the system.

6.6 System Testing

Test Cases and Test Result

TEST ID	Test case title	Test Condition	System Behaviour	Expected Result
T01	AdminTest User_id (positive test)	Correct username and password entered	Logged into Admin page	Admin page login
T02	AdminTest User_id (Negative test)	Incorrect username or password entered	The floating bar appears Localhosts says 'wrong username or password'	Unable to login into admin page
T03	ApplicantTest User_id (Positive test)	Correct username and password	Logged into User page	User page login
T04	ApplicantTest User_id (Negative test)	Incorrect username or password entered	The floating bar appears Localhosts says 'wrong username or password'	Unable to login into User page
T05	PoliceTest User_id	Correct username and password	Logged into Police page	Police page login

	(Positive test)	entered		
T06	PoliceTest User_id (Negative test)	Incorrect username or password entered	The floating bar appears Localhosts says 'wrong username or password'	Unable to login into admin page

Table 23: System Testing

CHAPTER SEVEN

CONCLUSION AND RECOMMENDATION

7.1 Conclusion

Nowadays everything is getting computerised. Manual work usually consumes a lot of time and is error-prone. To make complaining easy and manage crime reports, this application is beneficial. Thus, Crime Management System overcomes most of the existing system's limitations and is a very user-friendly application. So, the outcome of all the hard work done for the web based crime management system is here. This software reduces the amount of manual data entry and gives greater efficiency. This Crime Management System is a solution to all the problems related to the crime reports, criminals' details, their crime, their area, and others, etc. At the end, we can say that this software is performing all the tasks accurately and is doing the work for which it is made.

7.2 Recommendation

To use the system properly the all candidate must take computer and smart device training. The extranet network connection must also available in all places. In addition to these the electricity must available in all place and the users must be familiar to the system.

7.3 Future Scope

- GPS can be added
- Biometric can be added
- Face Recognition can be added
- In future the system will provide mail facility to members, members can send mail to other stations.
- In the future the system will provide an online live chat application.

7.4 REFERENCE

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7.5 Appendix

Appendix I: Interview Questions

- ✓ How many sub police stations include wolkite city police station office?
- ✓ What is crime and what are crimes in detail?
- ✓ How does seem the work flow of wolkite city police station office?
- ✓ How many work division in the wolkite city police station office?
- ✓ How someone report crime?
- ✓ What seems like the working principle of at present in wolkite city police station office?
- ✓ What is the responsibility of police in the police station?
- ✓ What is the responsibility of detective in the police station?

✓ What is the responsibility of head officer in the police station?

Appendix II: Existing System Report

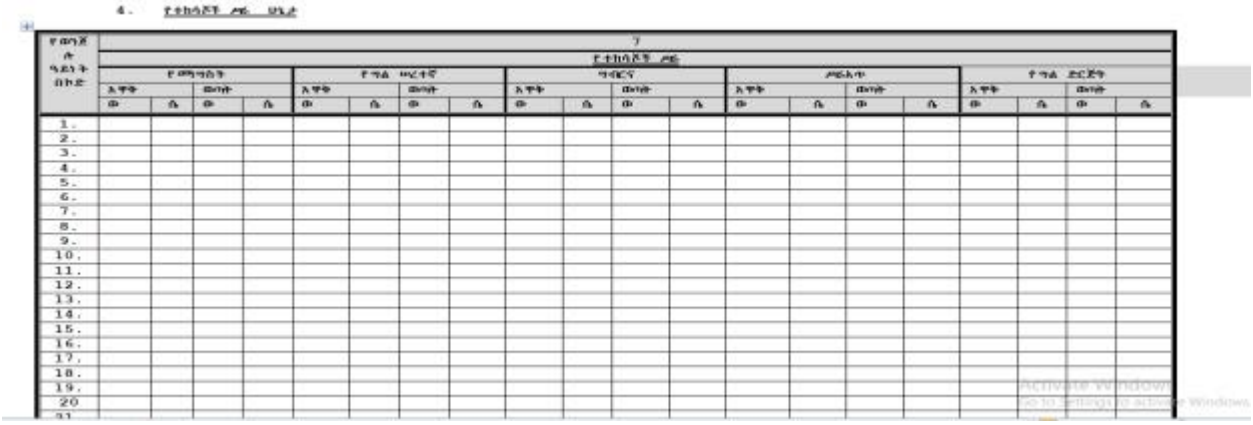

Table 24: Appendix II

Appendix III: Sample Source Code

Source code for Home.php

```
config.php | header.php | home_news.php | home.php | registration.php | crimealert.php

<?php
session_start ();
include("config.php");
include "header.php"
?>
<div id="site_content">
    <div class="sidebar_container">
    <div class="sidebar">
          <div class="sidebar_item">
          <h2>  <marquee alt="up">Latest News</marquee></h2>
     <p>  <a href="#" title="NEWS" style="color:#708090" text-decoration="none";> </a></p>
       <p><a href="#" title="NEWS" style=color:#708090></a></p>
  <p> <a href="#" title="NEWS" style=color:#708090></a></p>
   <p><a href="#" title="NEWS" style=color:#708090></a></p>
  <p> <a href="#" title="NEWS" style=color:#708090></a></p>
          </div><!--close sidebar_item-->
        </div><!--close sidebar-->
    <div class="sidebar">
          <div class="sidebar_item">
            <h2></h2>
            <p><a href="#econtact.php" title="Emergency" style=color:#708090 text-decoration:none;> <br></a>
      <p><a href="#" title="How to" style=color:#708090 text-decoration:none;> <br>
       <p><a href="#" title="Police Recruitment" style=color:#708090 text-decoration:none;></p>
      </div><!--close sidebar_item-->
       </div><!--close sidebar-->
      </div><!--close sidebar_container-->

    <div class="slideshow">
      <ul class="slideshow">
        <li class="show"><img width="700" height="350" src="images/images.jpg" alt="&quot;The Police commissioner&quot;" /></
        li>
      <li><img width="700" height="350" src="images/images (1).jpg" alt="&quot;Enter your caption here&quot;" /></li>
      <li><img width="700" height="350" src="images/images (2).jpg" alt="&quot;Enter your caption here&quot;" /></li>
          <li><img width="700" height="350" src="images/images(3).jpeg" alt="&quot;Enter your caption here&quot;" /></li>
      <li><img width="700" height="350" src="images/images (4).jpg" alt="&quot;Enter your caption here&quot;" /></li>
          <li><img width="700" height="350" src="images/images (3).jpg" alt="&quot;Enter your caption here&quot;" /></li>
        </ul>
```

```
<div class="detail">
    <table width="96%" cellpadding="0" cellspacing="0" >
    <tr>
    <td width="650" height="89" >
    <h2>Welcome, <?php echo ($_SESSION['username']);
    ?>... <?php echo ($_SESSION['type'])?></h2>
     <p><?php //echo base64_decode($_GET[msg]);?>
     </tr>
    </table>
        </div>
  </div><!--close site_content-->
 <?php include("footer.php");?>
</div><!--close container-->
  </body>
</html>
```

config.php | header.php | home_news.php | login.php | registration.php | crimealert.php

```
<?php ?>
<!DOCTYPE HTML>
<html>
  <head>
    <title>Login</title>
   <link rel="stylesheet" type="text/css" href="frsc.css"/>
  <link rel="stylesheet" href="css/login.css">
  </head>
  <body topmargin="0" leftmargin="0" rightmargin="0" bottommargin="0">
      <div id="container">
            <div class="header">
                <img style="margin:0px 0px 0px 0px;float:left;" width="140" height="120"src="css/logo1.jpg" alt=""/>
                <img style="margin:0px 0px 0px 0px;float:right;" src="css/logo1.jpg" width="120" height="117" alt=""/>
                <h3 class="headtext">  <b>WOLKITE CITY POLICE STATION</b> </h3>
                <h5 style="color:#A52A2A;text-align:right;margin:0 0px 0px 0px; font-size:22px; font-face:Cataneo BT"><i>
                ...Crime Management System</i></h5>
            <hr /></div>
        <ul id="saturday">
            <li><a href="index.php" ><span>Home</span></a></li>
       <li><a href="login.php" class="current"><span>Login</span></a></li>
  <li><a href="aboutus.php"><span>About</span></a></li>
  <li><a href="econtact.php"><span>Emergency Contacts</span></a></li>
                </ul>
      <div id="page">
    <div class="login-card">
    <h1>Login</h1><br>
  <form action="checkLogin.php" method="post">
    <input type="text" name="username" placeholder="Username">
    <input type="password" name="password" placeholder="Password">
    <input type="submit" name="login" class="login login-submit" value="Login">
  </form>

  <div class="login-help">
    Not a user yet?  <a href="registration.php">Register</a>
  </div>
```

```
</div>
</div>
  <?php include("footer.php");?>
</div>
    <script src='http://cdnjs.cloudflare.com/ajax/libs/jquery/2.1.3/jquery.min.js'></script>
<script src='http://ajax.googleapis.com/ajax/libs/jqueryui/1.11.2/jquery-ui.min.js'></script>
  </body>
</html>
```

config.php | header.php | home_news.php | action.php | registration.php | crimealert.php

```php
<?php
$link = mysqli_connect("localhost", "root", "", "cms2");

if (mysqli_connect_error()) {
    echo "database is not connected";
}else if ($_POST) {

    ////////////////////////////////////create account
    if ($_POST["action"] == "create_account") {
session_start();
        $quiry = "INSERT INTO `user`( `fname`, `lname`, `username`, `password`, `role`, `sex`, `phone`, `status`)
         VALUES('" . $_POST["fn"] . "', '" . $_POST["ln"] . "', '" . $_POST["username"] . "', '"
         .md5('123'). "', '".$_POST["role"]. "', '".$_POST["sex"]. "', '".$_POST["ph"]. "', 'on');";
        if (mysqli_query($link, $quiry)) {
            echo "true";
        } else {
            echo "false"+$quiry;
        }
    }

    ////////////////////////////////////signup account

    if ($_POST["action"] == "create_account_user") {

        $quiry = "INSERT INTO `user`( `fname`, `lname`, `username`, `password`, `kebele`, `phone`, `sex`, `age`, `status`)
         VALUES('" . $_POST["fn"] . "', '" . $_POST["ln"] . "', '" . $_POST["username"] . "', '"
         .md5('123'). "', '".$_POST["k"]. "', '".$_POST["ph"]."', '".$_POST["sex"]. "', '".$_POST["age"]. "', 'on');";

         if (mysqli_query($link, $quiry)) {
            echo "true";
        } else {
            echo "false".$quiry;
        }
    }
    ////////////////////////////////////add news

    if ($_POST["action"] == "add_news") {
        session_start();
```



```php
        }
    }


////////////////////////login
    if ($_POST["action"] == "login") {
        session_start();
        $q = "select * from user where status='on'";
        $c=0;
        if ($r = mysqli_query($link, $q)) {
            while ($row = mysqli_fetch_row($r)) {
                // print_r($row);
                if ($_POST["email"] == $row[3] && md5($_POST['psw']) ==$row[4]) {
                    $c = 1;

                    $_SESSION["name"] = $row[1]."  ( ".$row[5]." )";
                    $_SESSION["un"] = $row[3];
                    $_SESSION["role"] = $row[5];
                    $_SESSION["id"] = $row[0];

                        echo "true";
                        return;
                }
            }

            if ($c == 0) {
                echo "false";
                return;
            }
        } else {
            echo "Database error";
            return;
        }
```

```
    }

    // logout

    if ($_POST["action"] == "logout") {
        session_start();
        session_unset();
        echo "true";
    }


    // ////////////////////////////////resate password
    if ($_POST["action"] == "rsate_pws") {

        $quiry = "update applicant set password='".md5(123)."' where Emailid=" . $_POST["Emailid"] . " LIMIT 1";
        if (mysqli_query($link, $quiry)) {
            echo "true";
        } else {
            echo "false";
        }
    }


    // ////////////////////////////////delete crime
        if ($_POST["action"] == "delete-crime") {

        $quiry = "delete from crime  where id=" . $_POST["id"] . " LIMIT 1";
        if (mysqli_query($link, $quiry)) {
            echo "true";
        } else {
            echo "false";
        }
    }

    // ////////////////////////////////delete crime
        if ($_POST["action"] == "delete-case") {
```



```
            echo "false";
        }
    }

    // ////////////////////////////////delete crime
        if ($_POST["action"] == "delete-case") {

        $quiry = "delete from `case` where id=" . $_POST["id"] . " LIMIT 1";
        if (mysqli_query($link, $quiry)) {
            echo "true";
        } else {
            echo "false". $quiry;
        }
    }



    // ////////////////////////////////delete news
    if ($_POST["action"] == "delete-news") {

        $quiry = "delete from news  where id=" . $_POST["id"] . " LIMIT 1";
        if (mysqli_query($link, $quiry)) {
            echo "true";
        } else {
            echo "false";
        }
    }



    // ////////////////////////////////delete news
    if ($_POST["action"] == "delete_missing") {

        $quiry = "delete from missing  where id=" . $_POST["id"] . " LIMIT 1";
        if (mysqli_query($link, $quiry)) {
            echo "true";
```

```
37              <input type="radio" name="gender" value="Male"/>Male
38              <input type="radio" name="gender" value="Female"/>Female
39            </td>
40          </tr>
41          <tr>
42            <td border="2"><b style="color:#000058;">Address:</b></td>
43            <td><textarea name="address" cols="32" rows="5"  id="address"></textarea></td>
44          </tr>
45          <tr>
46            <td border="2"><b style="color:#000058;">District:</b></td>
47            <td>
48              <select name="city" size="1"  id="city" >
49                <option>-----select-----</option>
50                <?php
51                  $cityQuery = "SELECT * FROM city";
52                  $rsCity = mysqli_query($conn,$cityQuery);
53                  while($rowCity = mysqli_fetch_array($rsCity))
54                  {
55                ?>
56                  <option value="<?php echo $rowCity['city_id']?>"><?php echo $rowCity['city_name']?></option>
57                <?php
58                  }
59                ?>
60              </select>
61            </td>
62          </tr>
63          <tr>
64            <td border="2"><b style="color:#000058;">Pin code:</b></td>
65            <td><input type="text" name="pincode"></td>
66          </tr>
67          <tr>
68            <td border="2"><b style="color:#000058;">Contact No:</b></td>
69            <td><input type="text" name="contactno"></td>
70          </tr>
71          <tr>
72            <td border="2"><b style="color:#000058;">E-mail ID:</b></td>
```