

CRIME REPORTING SYSTEM



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CERTIFICATE

This is to certify that Malik Ali (Roll No 29049/170), Abdul Sami (Roll No 29051/172) and Najam ur Rehman (Roll No 29027/107) members of group 01 completed their software project Crime Reporting System at Punjab University Lahore in fulfillment of the requirement for the degree of BS-IT under my guidance and supervision.

By my opinion, it is satisfactory and top to the mark and therefore fulfills the requirements of BS-Information Technology.

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A project like this is never the work of anyone alone. The contribution of many people in different ways has made it possible.

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NAMES

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ABSTRACT

The Crime Reporting System is a web application which is developed for the convenience of the citizens, media personals and for the government related departments. There is need of a system which reflects the opinion of a common man and it makes this product very useful and successful. The users can report crime without any hesitation. The user is also able to upload images and videos of the crime from the crime report section and then check its given information on the crime blog section after the filtration process by admin. The user is also able to connect with government emergency departments by using the helplines of related departments. It requires great amount of disk space and ambiguity is possible in naming massive number of data. All these problems have been examined and a suitable solution provided. Crime Reporting System is to provide the crime coverage and reporting to alert the people about the crime related matters. It provides a platform for the people to easily access the crime related information. The system investigates the determinants of the crime reporting. It ensures the security feature, provides the authentication process for the end users and provides the friendly user interface to make the performance of the website effective and efficient. The CRS web application has a centralized database to keep record of all the management systems in the website. It is cost effective and saves users from the enormous stress and time they spend in the manual system.

Key words:

Crime reporting system, CRS, web application

TABLE OF CONTENT

CHAPTER 1.....	1
INTRODUCTION.....	1
1.1 Problem Statement	9
1.2 Project Title	10
1.3 Existing System	10
1.4 Drawbacks of Existing System	11
1.5 Proposed System	11
1.6 Goals.....	12
1.7 Objectives	13
1.8 Project Scope.....	13
1.9 Functional Requirements.....	14
1.10 Non Functional Requirements.....	16
1.11 Hardware Specifications.....	17
1.12 Software Specifications.....	17
1.13 Gantt Chart	17
1.14 Project Cost Estimation	18
CHAPTER 2.....	20
LITERATURE REVIEW	20
CHAPTER 3.....	35
PROJECT ANALYSIS.....	35
3.1 Analysis of Project	35
3.2 Exploring the Available Technique.....	35
3.3 Database Analysis	35
3.4 Programing Structure Analysis	36
3.5 GUI.....	36
3.6 Test	36
3.7 Software Methodology	37
3.8 Modules	38
3.9 Front-End Technologies	39
3.10 Back End Technologies.....	40
3.11 Software.....	41
CHAPTER 4.....	42
PROJECT DESIGN.....	42
4.1 Use Cases	42

4.2 Use Case Diagram	48
4.3 Sequence Diagram.....	50
4.4 Activity Diagram.....	56
CHAPTER 5.....	57
DATABASE DESIGN	57
5.1 Database Design	57
5.2 Entity Relationship Diagram	57
5.3 Class Diagram	59
5.4 Database Tables.....	60
CHAPTER 6.....	63
TESTING AND VERIFICATION	63
6.1 Black Box Testing	63
6.2 Compatibility Testing.....	64
6.3 Performance Testing.....	64
6.4 Usability Testing	64
6.5 White Box Testing.....	65
6.6 Test Cases.....	66
CHAPTER 7	80
IMPLEMENTATION	80
7.1 User-Interface	80
CHAPTER 8.....	87
CONCLUSION AND FUTURE WORK	87
8.1 Conclusion.....	87
8.2 Limitations.....	88
8.3 Future Work	88
REFERENCES.....	89
APPENDIX.....	95

CHAPTER 1

INTRODUCTION

Crime is a special and separate beat in daily newspapers. They have separate reporters to report crimes. However, crime reporting is part of the objective, interpretative and investigative reporting. Public have tremendous interest in crime stories and newspapers cannot afford to ignore them without damage to its circulation and credibility. Some newspapers had tried to keep crime out of their columns, but that proved counterproductive and they soon included the crime reporting.

Junior reporters generally cover crime, but it is a highly responsible and specialized job. The reporter should have good contacts in the police and other departments of the administration. He must have a working knowledge of the penal codes and law on libel and other relevant matters. The crime reporter has to follow a code of conduct.

A crime is a deliberate act that causes psychological or physical harm, damage or loss of property, and is against the law. There are lots of different types of crime and nearly everyone will experience a crime at some point in their lives. Crime affects people from all backgrounds, locations and ages. The causes of crimes are complex. Poverty, parental neglect, low self-esteem, alcohol and drug abuse can be connected to why people break the law. Some people are at greater risk of becoming offenders because of the circumstances into which they are born.

Crime reporting has always been a central part of news coverage in the media societies, because crime stories are usually very useful. There are several reasons why should people want to read about or listen to stories of crime. The audience always want an explanation of why crimes happen.

Now-a-days computer has started to play a very important role in journalism. The journalism through computer is the application of computing and a way of thinking that how all the activities work together in which the news information gathering, organization, sense making,

communication, presentation and public response to news information are included. These all activities upholding core values of journalism such as accuracy in the news. (Diakopoulos, 2018).

Now a days, the world has become a global village. The use of internet and social media has increased drastically. The news of any incident spreads in mere seconds on social media. But, people can also spread false rumors intentionally or unintentionally on these platforms. Information may spread on these platforms without any authentication. That's why we created a platform where information is provided with proper verification and authentication. The following chart elaborates the use of social media in news reporting in Pakistan:

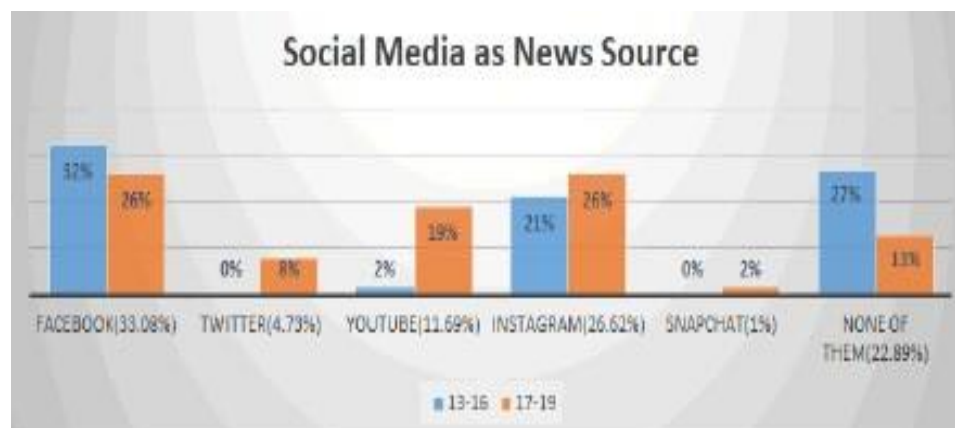


Figure 1.1 Use of Social Media in Pakistan

The main reason of Crime Reporting System is to provide the crime coverage and reporting to alert the people about the crime related matters. It provides a platform for the people to easily access the crime related information. This system investigates the determinants of the crime reporting. This system ensures the security feature, provides the authentication process for the end users and provides the friendly user interface to make the performance of this system effective and efficient.



Figure 1.2 Online Crime Reporting System

Classification of Crime

More important is the classification of the crimes according to the level of the punishment. The crimes are generally graded into the four categories which are given as: felonies, misdemeanors, felony-misdemeanors, and infractions. Often the criminal intent element affects the grading of crime.

a) Felonies

Felonies are the most serious crimes. They are either supported by a heinous intent, like the intent to kill, or accompanied by an extremely serious result, such as loss of life, grievous injury, or destruction of property.

b) Misdemeanors

Misdemeanors are less serious than felonies, either because the intent requirement is of a lower level or because the result is less extreme. Misdemeanors are usually punishable by jail time of one year or less.

c) Felony-Misdemeanors

Felony-misdemeanors are crimes that the government can prosecute and punish as either a felony or a misdemeanor, depending on the particular circumstances accompanying the offense.

d) Infractions

Infractions, which can also be called violations, are the least serious crimes and include minor offenses such as jaywalking and motor vehicle offenses.

Types of crime

a) Personal crimes: Personal crimes are most commonly generalized as a violent crime that causes physical, emotional, or psychological harm to the victim. These crimes are offenses against the person, and can include but are not limited to:

- Assault and Battery
- False Imprisonment
- Kidnapping
- Homicide
- Rape

b) Property crimes: Property crimes or offenses against property, do not necessarily involve the harm of another person. Rather, these crimes involve interference with another person's right to use or enjoy their own property. Some examples of property crimes include but are not limited to:

- Theft
- Arson
- White Collar Crimes
- Receipt of Stolen Goods

c) Inchoate or incomplete crimes: Inchoate refers to the crimes that were initiated but not brought to completion. A person would need to take a substantial step towards completing a crime, as opposed to simply intending to commit a crime. A few examples of inchoate crimes include

- Attempted crimes
- Solicitation
- Conspiracy

List of some crimes that can be reported

a) Kidnapping: Kidnapping is defined as the carrying away of a person by force. It is the unlawful seizure and detention of a person against his will.



Figure 1.3 Kidnapping

b) Homicide: Homicide includes crimes such as first and second-degree murder or involuntary manslaughter.

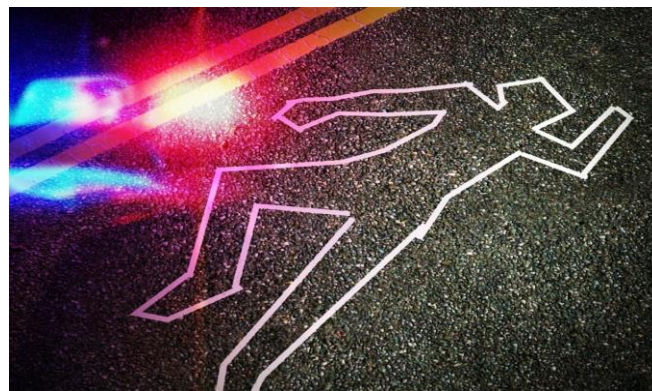


Figure 1.4 Homicide

c) Rape: It means sexual assault. It is unlawful sexual activity and usually sexual intercourse carried out forcibly or under threat of injury against the will.



Figure 1.5 Rape

d) Theft: It refers to a type of crime in which a person takes another person's property and carries it away.



Figure 1.6 Theft

e) Embezzlement: It refers to a type of white-collar crime in which a person entrusted with the finances of another person or business illegally takes that money for their own personal use.



Figure 1.7 Embezzlement

f) Arson: Arson is the wilful and malicious burning of another property of a person or structure.



Figure 1.8 Arson

g) Receipt of Stolen Goods: It is a crime to receive or purchase property that you know or believe to be stolen or otherwise obtained through theft.



Figure 1.9 Receipt of Stolen Goods

h) Robbery: It is the crime of taking or attempting to take anything of value by force, threat of force, or by putting the victim in fear.



Figure 1.10 Robbery

i) Drug Crime: A drug-related crime is a crime to possess, manufacture, or distribute drugs classified as having a potential for abuse.



Figure 1.11 Drug Crime

Rate of Crime in Pakistan

Pakistan Crime Rate and Statistics – Historical Data		
Year	Per 100K Population	Annual % Change in Crime
2020	3.84	2.09%
2019	3.76	-3.05%
2018	3.88	-1.96%
2017	3.96	-5.29%
2016	4.18	-12.08%
2015	4.76	-30.03%
2014	6.80	-6.71%
2013	7.29	-1.44%
2012	7.39	-2.20%
2011	7.56	2.83%
2010	7.35	3.30%
2009	7.12	1.29%
2008	7.03	11.68%
2007	6.29	2.69%
2006	6.13	0.39%
2005	6.10	-0.56%
2004	6.14	0.52%
2003	6.10	-3.55%
2002	6.33	-3.68%
2001	6.57	5.03%
2000	6.26	-7.06%
1999	6.73	-11.41%
1998	7.60	7.03%

1997	7.10	-0.23%
1996	7.12	-6.69%
1990	7.63	-6.69%

Table 1.1 Crime Rate in Pakistan Since 1990

Graph of Comparison between Crime Day and Crime Type

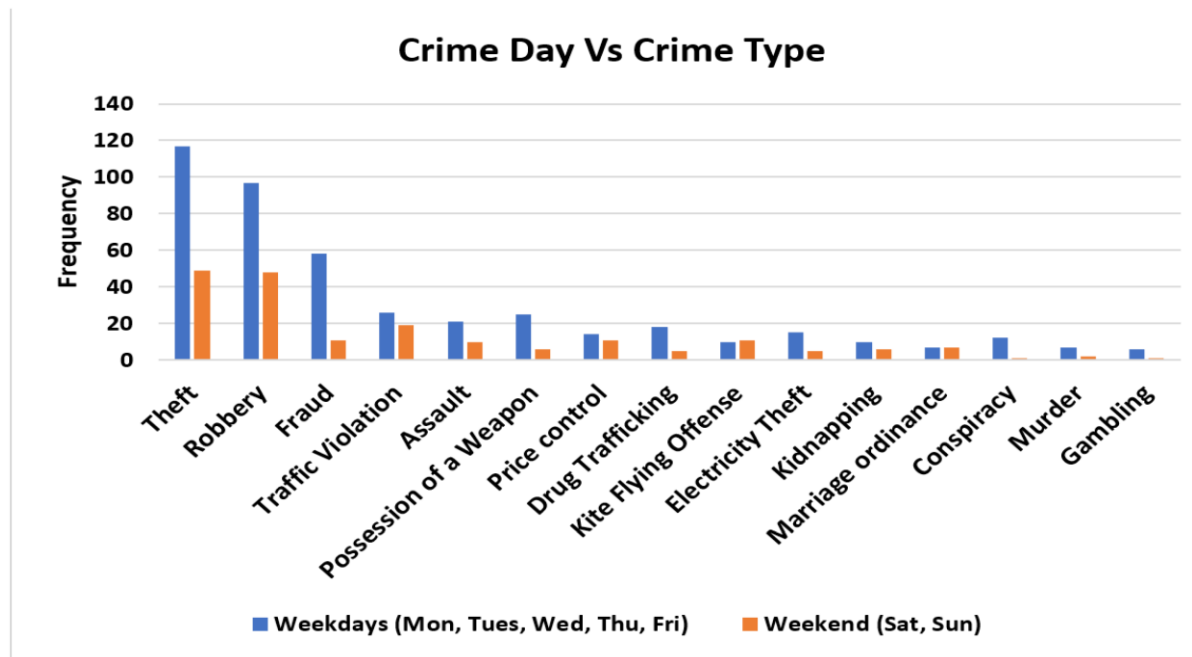


Figure 1.12 Graph for Crime Rate

1.1 Problem Statement

There is always a problem for citizens to report crime due to any hesitation. It is obvious that the speed of crime is increasing day by day altogether societies across the globe. They can't find any appropriate and authentic source of guidance and chooses anything randomly, thus putting their future and systems in risk to be ruined by the unavailability of the proper medium. There is really a need to get proper guidance and the system about the crime reporting as it is a need of the day.

According to the current development in the field of information technology, the already made systems are lacking the use of modern means and is the cause in its progress. So, the Crime Reporting website is a helpful mean for the citizens and the relative departments to work in a significant manner.

The systems that are available are completely dependent on the news sources like blogs, news channels and magazines. To strengthen the crime reporting, an online system is enhanced to fully take the responsibility of reporting crime in a manner that will be useful for the users and admin to maintain all the records with perfection.



Figure 1.13 Stop Crime

1.2 Project Title

“Crime Reporting System”

1.3 Existing System

1.3.1 True Crime Daily (Website)

The website shows news about the crimes occurring all around United States in the form of blogs and videos. The information is collected by Admin from different sources.

1.3.2 True Crime Reader (Website)

True Crime Reader is a site dedicated to the category of true crime-reviews, news, films and television adaptations. News about the crimes is collected from different sources and showed in the form of text and images in the website.

1.3.3 Daily Jang (Newspaper)

The Daily Jang is an Urdu newspaper headquartered in Karachi, Pakistan. It is the oldest newspaper of Pakistan in continuous publication. It gives wide coverage to crime throughout the city. They hire reporters exclusively for crime reporting.

1.4 Drawbacks of Existing System

1.4.1 True Crime Daily

- The system relies on the different sources such as newspaper, magazines and police investigation etc.
- The admin may not be able to reach out every criminal incident occurring in the scope of his system.
- The admin controls all the perspectives of the system, so the view of public about the incident cannot be displayed.

1.4.2 True Crime Reader

- The system relies on the different sources such as newspaper, magazines and police investigation etc.
- The information is only in the form of text and images.
- The admin may not be able to reach out every criminal incident occurring in the scope of his system.

1.4.3 Daily Jang

- It is an expensive medium because you have to buy a newspaper daily to remain updated about crimes in the city.
- It is very time taken because an incident occurring one day can only be published in the next day newspaper.
- The crime news in the newspaper are mostly based on police investigation. There is no input or feedback of the reader.

1.5 Proposed System

In this system, crime is reported by the user who represents the ordinary public. So, public's view about the incident can be observed in the system. The crime is directly reported by the user, so this system does not rely on other resources (like news channels and crime agencies etc.). Along

with text and images, audios and videos can also be uploaded in this website. A user can report crime even if he does not know how to write.



Figure 1.14 Report It

1.6 Goals

The aim of this project is to deploy a web site that helps the peoples in getting information about different matters and activities related to crime and also for the different security departments, with the following objectives.

- To decrease crime and increase security, and also to prevent harm caused by crime.
- The access to the Accounts for the people through their relative accounts.
- To implement a web-based application in such a way that will help people to get a good understanding of the crime happening in their surroundings.
- To design a web-based information and management system that will maintain a record of crimes in the city.
- To provide a reliable and strong medium for the citizens on which they are able to report crime without any fear.

- The platform which provides the complete overview of the forms, reports and notifications relative to the any module of the website.

1.7 Objectives

The objectives of this project are to:

- To help the citizens and security departments in connecting with each other and solving their different problems.
- To explore the limitations encountered in the pre-existing systems and provide their improvised version.
- To serve as a complementary tool for increasing awareness about crimes among masses.
- Prepare professional information and management system website for crime reporting for the community and workplace settings to provide help to secure the public's interest.
- A complete web-based platform for the public who wants to report crime regarding any aspect without any hesitation.
- The different modules in the website can be interacted by the users efficiently and they can effectively update their own profile accounts.

1.8 Project Scope

The main reason of Crime Reporting System is to provide the crime coverage and reporting to alert the people about the crime related matters. It provides a platform for the people to easily access the crime related information. This system investigates the determinants of the crime reporting. This system ensures the security feature, provides the authentication process for the end users and provides the friendly user interface to make the performance of this system effective and efficient.



Figure 1.15 Online Crime Reporting

1.9 Functional Requirements

The requirements that define the functional attributes of system, the functional requirements of a Crime Reporting System are as given:

1.9.1 No Restriction

If a user just wants to visit the website, the user can do this task on the website without any restriction.

1.9.2 Registration Process

If a user wants to report a crime, firstly the user go through the registration process. Look for the "Login" option on the website. When you click the button, you'll be sent to the sign-up page. Either directly or indirectly, manually sign up by filling out the information requested on the sign-up form.

1.9.3 Crime Report Page

After login, the user will be sent to the home page section if the user wants to report the crime click the crime report section.

1.9.4 Form will Appear

After the selection the form will appear, the user selects the type of crime and then fill the form for the information gathering process.

1.9.5 Submit the Form

The user must fill the whole form, if the user will not fill the whole form an error occur.

Following are the requirements of the form:

- User Name
- Type
- Location
- Mobile Number
- Date and Time
- Detail
- Image
- Video
- Audio
- Document

The audio, video and document of the spotted crime is not necessary for the submission. It depends on the user that either he wants to upload or not. But all other things are must.

1.9.6 Submit and Admin Confirmation

When form will submitted, after completing all the process that is required for report a crime, then the confirmation message will pop up that confirm the submission.

Then the Admin will check the report either it is correct or not. If the information is correct, the admin will approve the report and upload the information on the crime blog section.

1.9.7 Crime Blog Section

After the submission process, the user will be able to view the report on the crime blog section after the filtration process by the Admin.

1.9.8 Logout

After the completing all the process, the user will click on logout and simply logout from the website.

1.10 Non Functional Requirements

The requirements that define the quality attributes of system, Non-Functional Requirements play very important role in our project that's why there are some non-functional requirements for Crime Reporting System (CRS).

1.10.1 Availability

Availability describes how likely a system is accessible for the users. The availability of Crime Reporting System (CRS) will be good enough if there is no issue in the hosting or in the server on which the CRS will be running. The Crime Reporting System will be accessible to the users at any time and from anywhere in the world.

1.10.2 Performance

Performance defines how fast a system is. Crime Reporting System approximately fulfills all of its functionalities including its quick response to an action which is performed like data uploading, data updating, data detection and data retrieval etc. That's why performance of the system will be best and most accurate.

1.10.3 Usability

Usability is classical non-functional requirement of the Crime Reporting System that means how hard it is to use the System. The usability of the Crime Reporting System (CRS) is uncomplicated because CRS has a user-friendly interface. It is very simple and no extraordinary skills are required to use.

1.10.4 Compatibility

Compatibility defines how a system or its elements can work in different machines or environments. The HTML, CSS, Bootstrap, JavaScript, JQuery, PHP and MySQL is used in the development of Crime Reporting System (CRS). We have run our project on Windows Operating System, Linux Operating System and Mac Operating System without any issue.

1.11 Hardware Specifications

- Dual core processor CPU or above
- 128 GB hard-drive or above
- 4 GB RAM or above
- Keyboard
- Mouse

1.12 Software Specifications

- Operating System: Windows OS
- Front End: HTML, CSS, Bootstrap, JavaScript, JQuery
- Back End: PHP (Laravel)
- Database: MySQL
- XAMPP (local host) for Windows

1.13 Gantt Chart

The Gantt chart is representation of the project timeline. The Gantt chart lists the activities that must be performed during the software development process. Based on the Work Breakdown Structure (WBS), a Gantt chart shows the project phases on the vertical axis and their corresponding duration of time on the horizontal axis.

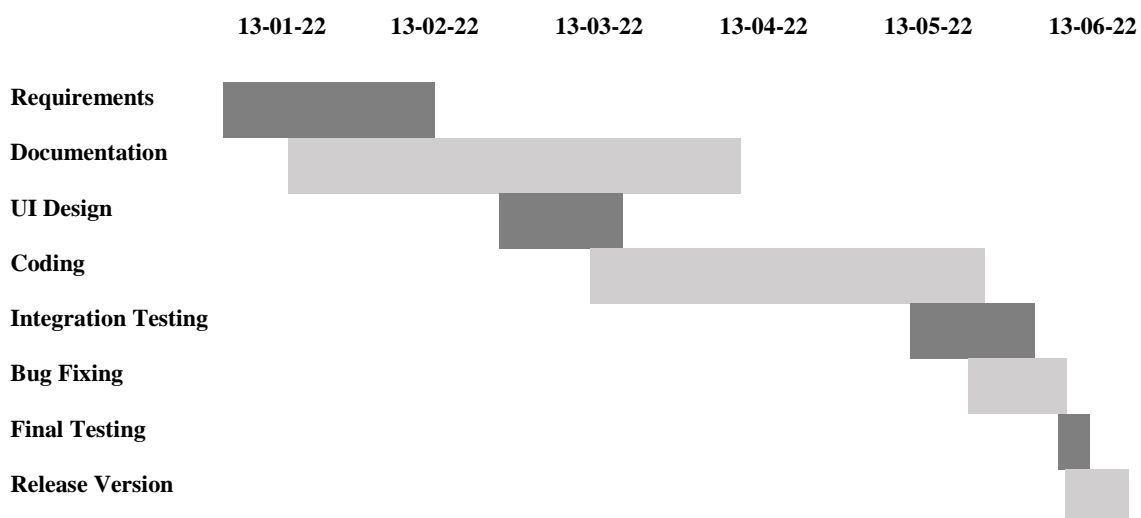


Table 1.2 Gantt Chart of CRS

1.14 Project Cost Estimation

There are many project cost estimation techniques like Constructive Cost Model-I (COCOMO-I), Constructive Cost Model-II (COCOMO-II), Entity Relationship Diagram (ERD) Analysis, Functional Point (FP) Analysis and Lines of Code (LOC) etc. For the cost estimation of Crime Reporting System, We are going to use Lines of Code (LOC) technique because its alternates have many problems as compared to this technique, it is mostly used technique in cost estimation of the project. It is closer to developer's perspective. It is very easy to estimating the efforts. Lines of Code (LOC) clearly consists of all lines of code containing program header files, declaration of any variable, executable and non-executable statements. In LOC technique, the number of lines in the code are counted and based on the number of the lines of the code, the cost of the project is calculated. There is no definite clear picture of how to count number of lines because the length and complexity of the code is different in different languages. It only depends on the length but not on complexity and functionality. Our project "Crime Reporting System (CRS)" is developed by using HTML, CSS, Bootstrap, JavaScript, jQuery, PHP (Laravel) and MySQL. According to LOC, count the lines of code of each file of code of the Crime Reporting System to calculate its estimated cost.

Our Project Title	"Crime Reporting System"
Cost Estimation	Lines of Code (LOC)
HTML	2,893 LOC
CSS	2,620 LOC
Bootstrap	1,570 LOC
JavaScript	437 LOC
JQuery	720 LOC
PHP	4,380 LOC
SQL	563 LOC
Total Lines of Code	13,182 LOC Approximately
Project Estimated Cost	Rs-70,000

Table 1.3 Cost Estimation of CRS

This table represents the approximate lines of code of Crime Reporting System in which HTML, CSS, Bootstrap, JavaScript, JQuery, PHP and SQL lines of code are counted.

CHAPTER 2

LITERATURE REVIEW

A term used to denote the various sources of information about trends and patterns of crime known as crime data. Crime data inform us about the levels of various kinds of offences, where and when they occur, and the social characteristics of both the offenders and victims. Crime data provide the basic material with which many criminologists work, for example in attempting to explain how and why certain crimes occur, why certain kinds of social actors are more or less likely to become involved in criminal behavior, or why overall levels of crime may be rising or falling. (O'brien & Yar, 2008)

The word Criminology proceeded in 1890. The general meaning of the term is the scientific study of crime as a social phenomenon, of criminals and of penal institutional. Criminology is a branch of criminal science which deals with crime root, analysis and prevention of crime. Criminology as a branch of knowledge is concerned with those particular conducts of human behavior which are blocked by society. (Nirmala, 2009)

The concepts of moral responsibility and of social responsibility embrace the people to the internet field. Firstly, we discuss the concepts of internet and its impact on people. Then, the moral and social responsibilities of the internet users. Then we highlight the issues and problems faced by the readers. Responsibility of people who encounter despiteful postings on the internet, some of which might be harmful and damaging for them. (Fortner & Fackler, 2011)

Violence is a debatable and highly affective topic, awakening both fear and appeal. We can be attracted to acts of violence or violent individuals in one context, turn away in another. Our perceptions of the individuals involved their harshness, their weak position, their blamable also inform our judgments of their behavior. On the one hand, unjustified attacks of violence can discharge a wave of public anger and hate. (Maguire et al., 2013)

A general perspective stating that the causes of criminal behavior can be found in the mind of the individual. This theory believes that criminal activity is the result of a defective, unusual, or incompetent personality of a person. Examples of deviant personality traits include animus, impulsiveness, aggression, and awareness quest. (Akers & Sellers, 2013)

Crime is tightly fixated at crime hot spots, suggesting that we can identify and deal with a large fraction of crime problems by focusing on a very small number of places. These crime hot spots proof very strong constancy over time, and thus present a exceptionally promising focus for crime prevention efforts. Crime at places proofs strong variability at micro levels of geography, suggesting that an exclusive focus on higher terrestrial units, like communities or neighborhoods, will lead to a loss of important information about crime and the inefficient focus of crime prevention resources. It is not only crime that varies across very small units of geography, but it is also the social and theoretical characteristics of places. The criminology of place in this context identifies and highlights the importance of micro units of geography as social systems relevant to the crime problem. Crime at place is very probable, and therefore it is possible to not only understand why crime is concentrated at place, but also to develop effective crime prevention strategies to improve the crime problem at place. (Weisburd et al., 2014)

The white-collar crime includes the theoretical, practical, and policy implications that drive from different imaginations. Building upon a theme introduced by the Harvard sociologist Daniel Patrick Moynihan that U.S. society has come to tolerate extreme amounts of common crime, thus “underestimate” serious law-breaking, it has three main charge. First, it extends the reach of Moynihan’s observation by focusing on white-collar and corporate crime. Second, it considers criminological definitions and theorizing that imagines the term “white-collar crime” itself. Third, it provides a case study of how definitional imagination affected policy and enforcement practices in the 2008 financial meltdown. (Van Slyke et al., 2016)

Some social psychologists described aggression as the intention and attempt to harm another individual, physically or socially, or, in some cases, to destroy an object. This definition seems

sufficient for many situations, but it has several limitations. Declining to speak does not fit well, since it is not an active attempt to harm someone, nor is blocking someone's entry. Most psychologists place these two behaviors in a special category of aggressive responses and call them inactive aggressive behaviors, since they are generally interpreted as aggressive in intent, although the behavior is submissive and indirect. (Bartol & Bartol, 2017)

Today, criminal investigation is a broad term encompassing a wide range of specialties that aim to determine how events occurred, and to establish an evidence-based fact pattern to prove the guilt or innocence of an accused person in a criminal event. In some cases, where a person is found committing the criminal act and apprehended at the scene, the criminal investigation is not a complex undertaking. The investigation team can easily go through the crime scene and solve the matter. (Gehl & Plecas, 2017)

The theory of convenience attempts to combine theoretical explanations for the happening of white-collar crime from sociology, psychology, management, organizational behavior, criminology, and other fields to cast light on different aspects of convenience. Convenience can be both an absolute and a relative construct. As an absolute construct, it is attractive to commit financial crime as such. As a relative construct, it is more convenient to commit crime than to carry out substitute actions to solve a problem or gain benefits from an opportunity. White-collar criminals probably vary in their comprehended convenience of their actions. Behavioral enthusiasm can be high when the subjective detection risk is low. Detection risk is a combination of likelihood of detection and consequences after detection. Subjective detection risk varies among individuals. (Gottschalk & Gunnesdal, 2018)

Crime as a concept is very complex and very incorporates a very large range of behaviors. For example from petty shop theft to violent assault, large scale corporate crimes and murder. Crime is also a social construction and behavior defined as a criminal vary across time and place. (Hayes & Prenzler, 2019)

Pakistani Media has grown quickly because of media broad-minded policies during the Government of Musharraf, especially electronic; however Pakistani media due to lack of inclusive and well- organized direction on part of the state has not yet been able to play the desired positive role i.e. strengthening the inner front of the state and bringing a positive change in society. There is the greatest need on part of all state pillars to come up with a comprehensive policy plan for media. To have a subjective analysis of the media role in strengthening society, there is a need to have in-depth knowledge of societal issues and complexities of media. Immensity of subject demanded to resort selectiveness to the essentials and an approach having innovative outlook. Eventually, this paper attempts to address an otherwise highly complex and difficult occurrence. (Awan, 2019)

Through crime-reporting citizens make their security needs very well without any interruption of the police. In crime reporting system the data will kept in soft form such as small medium like mobiles, tablet or laptop. All the users are able to enter the data of the crime that they have seen or observed easily in the system. (Torrente et al., 2017).

As in the increase in the ratio of the crimes, public want to report the crime to the high level authorities. But the fear in the mind of the peoples stops them to report the crime. All the peoples have concerns regarding a family member that the person who commit the crime can harm him or his family. We want to provide a reliable and strong medium for the citizens on which they is free and able to report crime without any fear. (Cole & Stickings, 2017).

In June 2014 the Coral Project launched with a \$3.9M grant from the Knight Foundation. The main reason of this foundation is to provide a platform for the community to achieve the goals that they set. The main goals of this project is to provide a platform for the citizens to read all the related stuff and to empower the publishers to report with the support and encouragement of the public. (Diakopoulos, 2017)

To control the mentality of any society, media plays an important role due to its ability to transfer information and thereby transform societies. Electronic media which prospers on schemes, has

not lost its importance and TV is still a popular means of communication. By virtue of technological revolutions, electronic media has a vast impact on all segments of society (exposure to modern technology and becoming defenseless). In the present-day world, terrorism is a major security threat in Pakistan. (Rauf et al., 2018)

This study was led to discover the impact of crime on socio-economic development of the country. The purpose of the study was to understand the increasing crime rate and to know its effects on socio-economic progress. To examine the crime and its impacts on country development, a field survey was conducted and form was developed to understand the ground situation. For the purpose of the interviews the members of the community were selected by using simple random sample technique. This study is found that crime rate is aggregating due to dissimilar socio-economic obstacles like, poverty, unemployment, uses of drugs, etc. Further this study highlights the causes and recommends possible solutions for the restricting the threat of crime in Karachi. The main focus of this research paper is to find out the routes to overcome crime in Pakistan. (Abbas et al., 2018).

News media around the world have given extensive coverage to the issue of disinformation. This highlights that while the negative effects of social media have dominated the discussion. They use the United States and Sweden as case studies about how digital media have helped to achieve electoral success and shift the political direction in both countries. (Schroeder, 2019).

The fundamental analysis of U.S. journalism textbooks from 1894 to 2016 shows how texts across decades have re-constructed a discussion of damage through news values highlighting and justifying conflict and bad news. Findings are reported in the context of literature suggesting that negative news values substitute a biased sense of social relations, increase fear, and depress civic participation. Literature also indicates that non-journalists often view news through less conflict-oriented, and more value-loaded, frames, suggesting that journalistic values are not natural or inevitable but subject to change. The discourse in journalism textbooks can be a key site for

understanding and influencing journalism culture. Constructive alternatives to the leading dissertation are suggested. (Parks, 2019)

The Statistics show that the level of crimes continue to attract public and political attention but are often presented in conflicting ways. In England and Wales, police-recorded crimes are no longer considered as “national statistics” and instead, the crime survey of England and Wales (CSEW) is used. However, it is not clear why partial population data (e.g., police-recorded crime) are considered less reliable or valid for measuring time-based crime trends in society than inferential statistical estimation models that are based on samples such as CSEW. This is particularly the case for estimating rare events like high-harm violence and specific harmful pattern or method (e.g., knife crime and firearms). In this chapter, the authors cross-reference victim survey and police-recorded data to determine similarities and contradictions in trends. (Ariel & Bland, 2019)

This research work aims at analytically examining the newspapers coverage of crimes incidents in Pakistan. A reflective quantitative content analysis of Pakistani print media was conducted for a period of one year i.e. 1st January 2017 to 31st December 2017. Two renowned national level newspapers; Daily Dawn English-language and Daily Jang Urdu-language, were selected based on newspaper distribution ratings and readership. Explanatory analysis of the study emphasizes those inconsistencies in crime reports exist between Daily Dawn and Daily Jang. Urdu-language newspaper gives more coverage and published articles on many types of crimes as compared to English-language daily. Similarly, English daily newspaper reported urban areas crimes more often compared to Urdu daily, however, articles on defilement against women and child abuse are equally reported in both newspapers. (Shah et al., 2019)

Researchers in the United States and abroad have discussed the intrinsic inequalities within justice systems that cause the underreporting of crime to the police for over the past fifty years. Our review summarizes:

Existing knowledge about victim reporting and outlines new directions in theory and realistic research that place this work within a broader viewpoint on victim help-requesting. We begin with a short review of the historical development of research on victim reporting and its implications for research and social policy. We then review and evaluate major explanations of:

Victims' reporting conduct and outline a new cohesive multilevel framework. This model draws on the wider help-requesting literature to study police notification and other forms of victim help-requesting as interconnected systems that respond to social- background factors and feedback effects. We conclude by outlining the basic realistic propositions of this multilevel theoretical framework and illustrating the most prominent data and research needs. (Xie & Baumer, 2019)

Main objective of the study is to find out the challenges that are faced by the electronic media channels. Administration of channels faces the ban on transmission while Journalists are murdered by the known and unknown forces in Pakistan. The study also provides the research conducted on the murdered journalists during 2002 to 2013 in Pakistani areas. Pakistan could not achieve the benefits of free media since its foundation from 1947 to 2002, for about 55 years because Pakistani people were forced by the powerful authorities to listen and watch to what the powerful groups in Pakistan wanted. There was only one state owned channel PTV (Pakistan Television) who had the responsibility to show the truth but people had become tired with the performance of only one channel because there was no competition and choice for people to dislike the PTV's transmission. (Bashir et al., 2020)

The general public relies on news reports to guide their opinions about crime. Previous research suggests that text elements in crime news reporting are enclosed in consistent packages for audience intake, and that newspaper images exercise a significant influence on audience perception of news articles. The current study categorizes homicide articles into four themes and examines how thematic reporting relates to the likelihood of image insertion. A sample of nearly 4,000 articles published in the Vancouver Sun was coded on a set of 107 variables relating to structural and content characteristics. Results show a significant relationship between image

inclusion and the Compassionate Victim theme, more so than for themes related to fear, sensational events, or media constructions of social issues. (Works & Wong, 2020)

Cybercrimes are the types of crime that include indictable offences and misdemeanors that involve computers or communication tools as targets and commission instruments or are associated with the prevalence of computer technology. Common forms of cybercrimes are cyber stalking, identity theft, cyber laundering, credit card theft, cyber terrorism, drug sale, data leakage, sexually explicit content, phishing, and other forms of cyber hacking. They mostly lead to a privacy violation, security violation, business loss, financial fraud, or damage in public and government properties. Thus, this study intensively reviews cybercrime detection and prevention techniques. It first explores the different types of cybercrimes and discusses their threats against privacy and security in computer systems. Then, it describes the strategies that cybercriminals may utilize in committing these crimes against individuals, organizations, and societies. It also reviews the existing techniques of cybercrime detection and prevention. It objectively discusses the strengths and critically analyzes the weaknesses of each technique. Finally, it provides recommendations for the development of a cybercrime detection model that can detect cybercrimes effectively compared with the existing techniques. (Al-Khater et al., 2020)

The aim of this research is to study the impact of crime based dramatized television programs on citizens' awareness of the criminal justice system of Pakistan. The impact of crime-related television programs on criminal justice issues, including awareness of police, clearance rates, crime, and fear of harassment, is focused. This study illustrated how and to what degree these crime dramas change the awareness of common people of different ages, sexes, experiences and educational backgrounds. (Abbas et al., 2021)

The spread of information has increased many times with the advancement of technology. With this, the spread of fake news has also increased. This has many objectives on part of its initiating source. The anxiety standard is one of it, which aims to create turmoil and a biased image of a situation dominant around the readers. To consider the problem, this study analyzed the WhatsApp

user's response to fake news concerning Covid-19 in Pakistan. This study considered a quantitative survey research method. A Purposive sampling technique has been used to select defendants from the four provinces of Pakistan i.e. Punjab, Balochistan, Sindh and Khyber Pakhtunkhwa. A total of 200 defendants were considered for the study, and only those respondents were included in the study who replied that they check the validity of news that is shared through the WhatsApp groups and statuses. The data has been analyzed through SPSS by obtaining frequencies and percentages. The questionnaire was tested for reliability by applying a Chronbach's Alpha, the value came out to be .621 which is 62 %. Hence, the questionnaire is reliable in terms of measuring the main concept of the study. (Ahmed et al., 2021)

The news and views of Pakistani television channels are widely shared on digital media for information or analysis where the general public discusses blatant and undercover plans by mentioning their realistic and presentational style. This study contributes to the modern studies of media awareness through focus group interviews with 72 arbitrarily selected master's and bachelor's students studying Media and Communication at the School of Media and Communication Studies, University of Management and Technology, Lahore, Pakistan to provide information about the feelings and observations of future journalists and media literates. In summary, the findings of our research uncovered the negative awareness of Pakistani electronic media among the contributors. (Saeed et al., 2021)

The article's grounded-theory method illustrates that social media can be particularly helpful in involving international scenarios. Digital communication tools seem to be most widespread in the influencing phase, whereas more traditional communication tools still reign in customer relationship management. However, there seem to be some important potential boundary conditions, including relationship culture, location vicinity, technology innovation/resources, and strategic importance of the customer that affects the way international SMEs use different communication tools during a sales process. We develop a framework for understanding the B2B

sales process flow with sales communication tools included for international SMEs. (Fraccastoro et al., 2021)

The uncertainty concerning the age of a person had led to discussions on what methods to use in order to determine the age of a person. The issue was also raised in criminal cases where the age of a suspect was unclear and concerned, more precisely, the burden of proof regarding the age of a suspect and the legal grounds for a body examination when estimating an age of suspect. In this article I will with reference to the fundamental principles of proportionality, predictability, equal treatment and consistency the legal grounds for a body examination when there is an uncertainty concerning age and the suspect claims to be under the age of criminal responsibility. (Nordlöf, 2021)

The tradition of gender discernment is not a new thing for Indian society. Its roots are seen from ancient times, which have flourished in the form of female harassment, disregard and unfair treatment. Because of which women, representing 50% of the population of India, are today victims of violence on a large scale in the middle of the country. According to the reports of various government and non-governmental institutions, the crimes against women are increasing day by day instead of decreasing, so to reduce the rate of crimes against women, by the Government of India and the justice system of India and firm instructions and laws are also being made by the state. While there is no decrease in crimes against women. This is the reason why under the research paper "Crime against women in the 21st century", the study of the causes of crime against women in the 21st century and the efforts made by the Government of India for the prevention of crime against women although it was done, an attempt was made to find out the hidden reasons behind the decrease in crime with the woman, however, an analysis has been made based on the data obtained from the study. (Kharwar & Kumar, 2021)

In the information age, attention has become a rare resource. Dreadful events can quickly stimulate the attention of the audience. However, when journalists use new media technology to report dreadful news events, there are many problems of media ethics. This paper takes the report of "a

17-year-old boy committed suicide by jumping off a bridge" as an example to analyze the problems in the reporting methods and content of the mainstream media "People's Daily" and "Chengdu Commercial Daily" while using new media technology. The problems include the lack of humanistic care in the reporting method, the lack of rational judgment in the content of the report, and the problem of intentionally intensifying emotional feelings under the attention economy. In the end, specific solutions have been hesitantly proposed for these problems, so as to provide reference for journalists when reporting such events. (Wen, 2021)

In this world, every place faces a level of crime within its borders, but there is much conflict as to which factors lead to crime. Economic conditions, due to their association with poverty, are frequently described as a possible contributors to crime rates. (Perez, 2022)

To downgrade crime rates, there is a need to understand and analyze up-and-coming patterns of criminal activities. This study examines the occurrence patterns of crimes using the crime dataset of Lahore, a metropolitan city in Pakistan. The main aim is to facilitate crime investigation and future risk analysis using imagining and unconfirmed data mining techniques including clustering and association rule mining. (Ferooz et al., 2022)

In Pakistan, the cybercrimes are increasing at a rapid speed. The current study examines the issue of cybercrimes in Pakistan. It aims to search all the regulation dealing with cybercrimes in Pakistan. The study first described the cybercrimes and all those factors that are responsible for the cybercrimes. It explored all the common methods employed by criminals for cybercrimes. The study then analytically evaluates the law dealing with cybercrimes in Pakistan. It analyses and evaluates the procedure of FIA (Federal Investigation Agency) which is responsible primarily for dealing with cybercrimes in Pakistan. The Population is selected from Pakistan southern area of total users online devices internet and e-commerce. Where electronically cybercrime is mention. Total sample size is 297. To collect data a survey is customized. The data will be evaluated via software Smart Pls. The findings of this study enhance public awareness and contribute to academic. The results are rigid to further study and useful for researchers and publically well-

being mission. The main addition of this research is to analyze the cybercrime activities that are now a days performed by many hackers in all over the world. Mostly in Pakistan. So, this is a great development in research. (Jamshed et al., 2022)

The continuous authentication has a great importance to maintain the security level of a system. The goal of this work is to investigate a trustworthy, continuous, and non-contact user authentication approach based on a heart-related biometric that works in a daily-life environment. To this end, we present a novel, continuous authentication system, namely Cardiac Scan, based on geometric and non-volitional features of the cardiac motion. It is very useful for any system for the effective and efficient performance. (Lin et al., 2017).

The chances offered through digital and communications technologies, in particular social media, have inspired a miscellaneous range of interdisciplinary perspectives exploring how such developments effect the way we live. Rather than positioning technology as existing in a separate space to society more widely, the ‘digital society’ is a concept that recognizes such technologies as an rooted part of the larger social entity and recognizes the integration of digital technologies, media, and networks in our everyday lives, including in crime execution, victimization and justice. In this article, we explore potential for an interdisciplinary concept of digital society to expand and inspire pioneering. (Stratton et al., 2017)

The Crime Reporting System is a web based system to register the complaint online. Today, rate of crime is highly grown and not in the control of the authorities. There is no transparency in the police department and most of the peoples don not believe in them that their problems will be recognized or not. They provided them a platform on which they can easily describe their problems and the crimes that what they are¹ facing. This system was able to register the reports from people by online method and is very helpful to the police department in identifying criminals. In that system, any person can register their report online. Generally, many crimes seen by the public will not reach to the police due to many reasons like fear, lack of time, ignorance. (Anees & Ahmad, 2017).

The number of Internet enabled devices (e.g., a smartphone, a tablet, or a laptop) is highly increasing, so does their role in a person's everyday life. Through the use of a call, an instant message, a post on social media or even real time video communication, users can easily use their smartphone to report an event, ask for assistance or provide information about their status, allowing the distribution of faster and more efficient safety services. To this end, community policing has come to be considered as a new and improved mode of policing by many countries in the past years. (Charitou et al., 2018)

In the human societies, criminal activities have always been a part of their lives. Even today, in a very advanced world many different kinds of crimes are still committed in almost every social environment. But all those people who commit crimes are not representative of the majority of their community. Members of these communities always wish to report crime but they do not do this because of the fear which they are faced by the society. They feel a fear of being identified. So most of the crimes are unreported, and investigations fail to gain key evidence from witnesses. The Crime Reporting System provides an environment which gives reliability for all the users of not being victimized and can report crime without any fear. (Shih et al., 2019).

There is a number of AI methods that are used to evaluate underlying patterns of public interest in large volumes of data, greatly decreasing the cost of investigation in journalism. But so far only a few investigative stories have utilized AI methods, in relatively limited ways. This paper researches what has been achieved in investigative reporting using AI techniques, why it has been difficult to apply more advanced methods, and what sorts of investigative journalism problems might be solved by AI in the near term. Journalism problems are often unique to a particular story, which means that training data is not readily available and the cost of complex models cannot be amortized over multiple projects. Much of the data relevant to a story is not publicly accessible but in the hands of governments and private entities, often requiring collection, debates, or purchase. Journalistic conclusion requires very high accuracy, or extensive manual checking, to avoid the risk of libel. The factors that make some set of facts significant are deeply sociopolitical

and therefore difficult to encode computationally. The biggest near-term potential for AI in investigative journalism lies in data preparation tasks, such as data extraction from diverse documents and probabilistic cross-database record linkage. (Stray, 2019)

Most of the crimes committed are unreported to the authorities. Given this fact, Crime Reporting System through online is always the active participation of the citizens. The main idea of the Crime Reporting System is to spread the crime information to the community. The project specifically looks into the crime detection and prevention. It provides the safe and powerful authority to all the users to report the crime without any fear. (Ganiron Jr et al., 2019).

In recent years, technology has become essential in everyone's life. Now a days everyone knows how to use computers, laptops, smartphones etc. It can be seen where people can report the crime on the spot. This system uses track of every person who is using this application, with the help of that admin can easily keep a track if some criminal is trying to use this application. This application is asked mandatorily to upload a profile picture and Aadhar card details from which the department can easily track every person who is using this application. (BhavnaGopchandani et al., 2020)

In the last few years, an array of smartphone apps have been designed to prevent crime, violence, and abuse. The affirmation of these apps has, however, yet to analyze systematically. To correct this, the aims of this review were to establish the extent, range, and nature of research into smartphone apps with a primary crime prevention function; to locate gaps in the primary crime prevention app literature; and to develop a typology of primary crime prevention apps. Employing a scoping review methodology and following Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines, studies were identified via Web of Science, EBSCO-host, and Google Scholar. We included English-language research published between 2008 and 2020 that examined smartphone applications designed explicitly for primary crime prevention. Sixty-one publications met our criteria for review, out of an initial sample of 151 identified. Our review identified six types of crime prevention app examined in these publications: self-surveillance apps,

decision aid apps, child-tracking apps, educational apps, crime-mapping/alert apps, and crime reporting apps. The findings of our review indicate that most of these forms of primary crime prevention apps have yet to be rigorously evaluated and many are not evidence-based in their design. Consequently, our review indicates that recent enthusiasm over primary crime prevention apps is not supported by an adequate evidence base. (Wood et al., 2021)

Now a days, crime has become a global issue that can have a negative social and economic impact on a country. Controlling crime is a necessary first step. It is necessary for the wellbeing of a country and long-term growth. They are well aware of the difficulty in identifying criminals and the sensitive regions that they are consistently harming in the digital world. Police forces of every country are constantly pacing themselves to keep up with crimes, criminals, and their methods. For police department personnel, the challenge of investigating a lot of data about crimes and offenders has grown significantly. (Vijetha et al., 2022)

As the rate of criminal activities increasing is a growing concern for any particular area, country or region. The system is a user-friendly web-based application for its stake-holders, i.e., supervisor and end-users. The system accommodate the stakeholders by reporting of incidents by the individuals, who can not only report about a crime but also see the status of crime solution anywhere at any time. The system analyzes crime data from various criminal activity acknowledging websites and also filters them and provides data for every single relevant crime queried. (Shivathare et al., 2022)

CHAPTER 3

PROJECT ANALYSIS

3.1 Analysis of Project

The strategy followed for the improvement of the framework "Understudies App" is talked about underneath. The specific temporary position site indicates to the strategies and cycles of the association between the crime reporting and the citizens. It consolidates temporary position as a control and specifically, it is an online crime reporting platform to report a crime. An online crime reporting website, which helps people to report crime without any hesitation. Thus, these perspectives can be portrayed by the accompanying situation.

For this situation, zeroing in on an online innovation as a whole is commenced because innovation is a quickly emerging crime reporting platform that is developing of its foundations in regular daily existence with a quick movement.

3.2 Exploring the Available Technique

There is a lot of programming environments available to be used for such kind of elaborations. The point is to choose such an environment that will be able to operate in a convenient and easy way. This is more or less optional and individual processes that depends on the developer's experience as well. After searching, it is concluded that object oriented developing technique should be used and the platform on which this software is built is PHP.

3.3 Database Analysis

The database should be design and implemented in a way that a user would expect it to be. For this kind of project, SQL-Server database server is used. How far as this website is the Main linking website of the different management systems running in the college and all of them have their own databases and most of the management systems were using the SQL databases.

3.4 Programing Structure Analysis

The application program as an interface between the users and the database should be an accurate reflection of the database; hence a well analyzed and defined structure is needed. The analytical project structure is usually defined as the schematization of the project. An outline of the relationship of the optimal alternative with the objectives and actions.

3.5 GUI

After analyzing the program's structure and defining what it should be consisting of, a graphical representation of this stuff is needed in order to enable the user to interact with the data. The GUI at the top level have been categorized as:

- Administrative User Interface
- The operational or generic User Interface

The admin panel UI focuses on the predictable data that is essentially, important for the hierarchical exercises and which needs appropriate verification for the information assortment. The interfaces help the organizations with all the conditional states like Data inclusion, Data erasure and Date refreshing alongside the broad information search capacities. The operational or nonexclusive UI helps the clients upon the framework in exchanges through the current. The operational UI additionally helps the citizens in dealing with their own data helps the conventional users in dealing with their own data in a way according to the helped adaptabilities.

3.6 Test

To ensure that everything works properly and as it has been expected, test performance has to be done upon the systems functionality.

The unit testing method is used for this project. Unit testing is used to validate unit components with its performance. A unit is a single testable part of a software system and tested during the development phase of the application software. So that the error detection can be done and the admin can work on its information system process.

3.7 Software Methodology

There are many different methods and models which are used by the people according to their work and planning for the development of the software or project. Here, we used Iterative Waterfall Model for development of the Crime Reporting System because it is the most reliable and rewarding model. It is perfect methodology for our project after analysis of different methodologies. To fulfill our software development requirements, we have selected Iterative Waterfall Model.

3.7.1 Iterative Waterfall Model

The Iterative Waterfall Model is the oldest and the most well-known SDLC model. This model is widely used in development projects by many major companies. The special feature of this model is its sequential steps. This model is used because of its track back feature. It goes downward through the phases of requirements analysis, design, coding, testing, and maintenance. Moreover, it ensures the design flaws before the development of a product.

Following are the advantages of Iterative Waterfall Model:

- Feedback Path
- Simple to use
- Cost Effective
- Well Organized
- Accommodates Shifting Teams
- Early Revenue Generation
- Milestones are evident
- Every step of process is documented

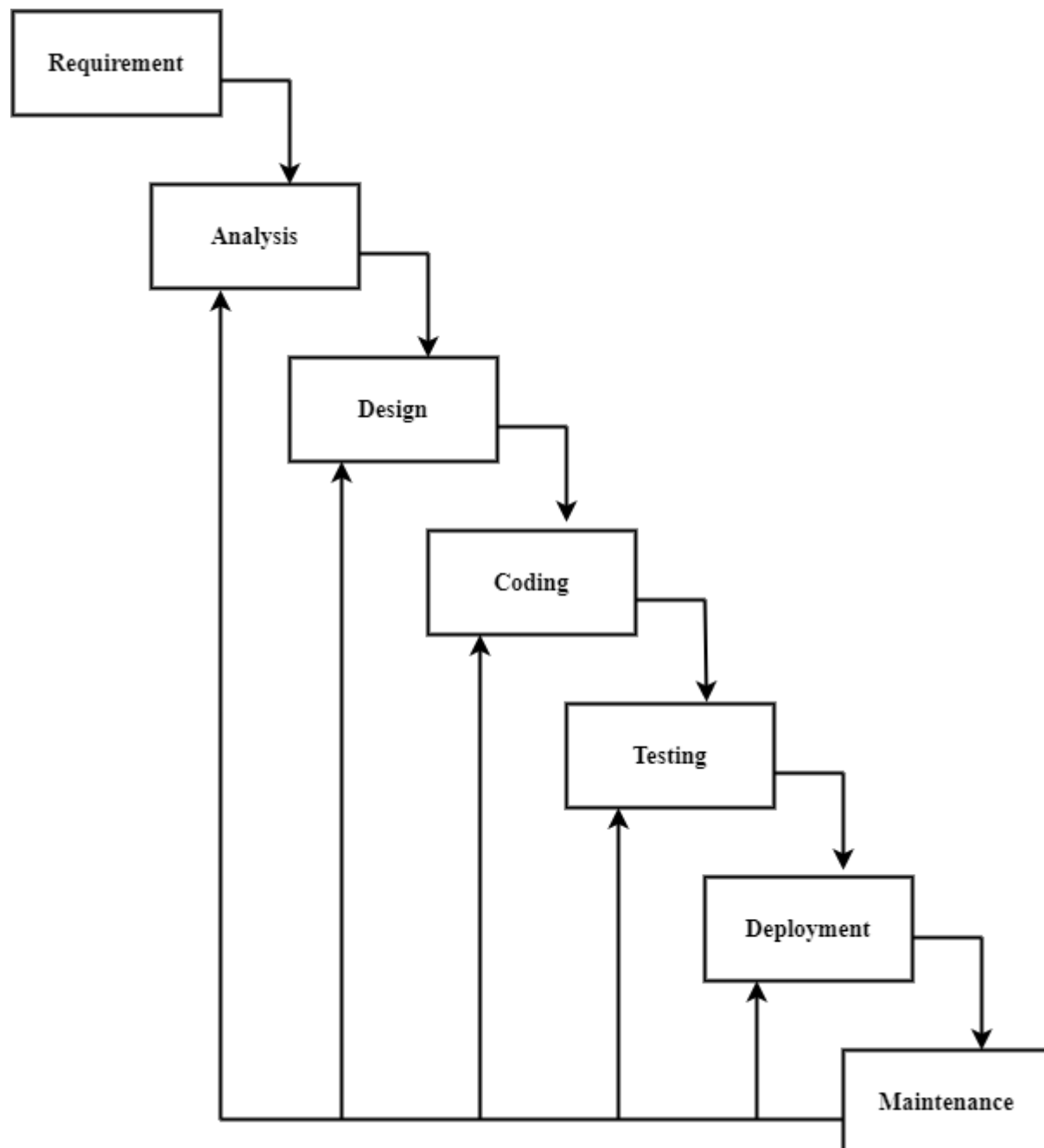


Figure 3.1 Iterative Waterfall Model

3.8 Modules

3.8.1 User Authentication System

All the login details and user authentication process are managed by user authentication module.

There are two types of accounts i.e. Admin and User accounts.

3.8.2 Crime Reporting System

In crime reporting module, the user is able to report any type of crime that he comes to know about. The details of the crime are verified before uploading the data on the blog.

3.8.3 Image, Audio, Video and Document Upload System

A user is able to upload the image, audio, video and document of the crime with an easy method to alert the community of the Crime Reporting System.

3.8.4 Crime Blog System

The details of the crime are uploaded on crime blog module after verification process. Information on crimes in blogs especially valuable for those who are not familiar with tips for preventing being victimized.

3.8.5 Admin Panel

It is a module that supports the Admin performance. By using the admin panel, an admin can edit or delete the whole crime report of the user by using edit and delete button respectively. He is also able to approve the crime report by checking the criteria of the report, if he approves the report then the whole report display on the crime blog section for the user convenience.

3.9 Front-End Technologies

3.9.1 HTML

The HTML is used to display the body of our project in a significant manner. It is used to make the front end design because it is a very powerful and impactful language for the front end development. The main body of the project has been written in HTML. In other words, all the web pages of Crime Reporting System are composed in HTML, which is used to display text, images and other stuff through a web browser.

3.9.2 CSS

CSS is used to design and to enable the separation of presentation and content, including layout, colors and fonts of the web pages of the project. It provides more flexibility and control in the specification of presentation of the web pages in Crime Reporting System. It increases the beautification of all the pages of the website and makes the project more attractive, reliable and enhance the user experience.

3.9.3 Bootstrap

Bootstrap is used as a front-end framework for HTML, CSS and JavaScript for the developing of mobile-first and responsive system. Bootstrap increases the responsiveness of the project and can easily reachable for all type of devices. The bootstrap classes are used for the development of the web pages. All type of specifications of the web pages are set using the Bootstrap frame work in easy and flexible manner.

3.9.4 JavaScript

JavaScript makes our web pages dynamic and more interactive with the user. It is used to make the location section and manage the animation scripts in the project. All the users feel more flexibility when they visit this website.

3.9.5 JQuery

JQuery is used for the animation and effects of the web pages of Crime Reporting System. As, JQuery is the framework of JavaScript so, JQuery provides reliability and flexibility for the user. It is used for the making of the sliders of the home page section.

3.10 Back End Technologies

3.10.1 MySQL

MySQL database is used to create the tables that store the content that is entered by the users in the forms of Crime Reporting System. It is used to store the images and all the related matter that will be feed in the database. The Admin can add, delete and update all the record in the database very efficiently and effectively by using the MySQL database. Here, MySQL is used with PHP.

3.10.2 Laravel (PHP)

In Laravel, a form is made that have text fields and image upload section. The Admin can manage the crime reporting by using this form and then show this information on the crime blog page. Users can easily enter the text information of the crime and upload the images in the elegant way. Laravel provides a very good interface for the users that makes a very strong interaction between the user and the system. All the information that is gathered by using the form then stored in the

sequential manner so, it can easily be access by the authority. Following are the reasons that why Laravel framework is used for the Crime Reporting System:

- It is quick and simple
- Provides security
- Enhance the website performance
- Great for traffic handling
- Really flexible
- Maintenance is very simple
- Website is cheap in term of cost.

3.11 Software

3.11.1 Visual Studio Code

Visual Studio Code is a streamlined code editor with support for development operations like debugging, task running, and version control. It aims to provide just the tools a developer needs for a quick code-build-debug cycle and leaves more complex workflows to fuller featured IDEs, such as Visual Studio IDE. It is used for front end as well as back end coding of the project. It is used because increases developer agility and productivity, and streamlines every stage of development with tools and resources to support developers as they build the next generation of apps.

3.11.2 XAMPP (Local Host)

XAMPP helps a local host or server to test its website and clients via computer and laptops before releasing it to the main server. It is used as a suitable environment to test and verify the working of project that is based on MySQL database and PHP through the system of the host itself. It also provides a graphical interface for SQL (phpMyAdmin), making it easy to maintain data in a relational database. It is free and easy to use and easily available for Windows, Linux and Mac OS.

CHAPTER 4

PROJECT DESIGN

4.1 Use Cases

A use case is a methodology used in system analysis to 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.

Use cases are typically written by business analysts and can be employed during several stages of software development, such as planning system requirements, validating design, testing software and creating an outline for online help and user manuals. A use case document can help the development team identify and understand where errors may occur during a transaction so they can resolve them.

4.1.1 Use Case for Registration

Use Case	User Registration
Use Case Id	01
Actor	User
Action	1. User will click on Register 2. Registration form will be appeared 3. User will fill the Registration form by giving all required information 4. User will click on Register button
Pre-condition	The application must be in running state and User have to put correct information.
Post-condition	User will register successful and use the application
Alternate Scenario	1. User enter invalid username OR 2. User enter invalid password 3. User is not Logged in

Table 4.1 Use Case of Registration for User

4.1.2 Use Case for Admin Login

Use Case	Admin Login
Use Case Id	02
Actor	Admin
Action	<ol style="list-style-type: none"> 1. Admin will click on login 2. Admin log in form will be appeared 3. Admin will fill the Log in form by giving all required information 4. Admin will click on login button
Pre-condition	The application must be in running state and admin have to put correct information.
Post-condition	Admin will login successful and use the application
Alternate Scenario	<ol style="list-style-type: none"> 1. Customer enter invalid username OR 2. Customer enter invalid password

Table 4.2 Use Case of Login for Admin

4.1.3 Use Case for User Login

Use Case	User Login
Use Case Id	03
Actor	User
Action	<ol style="list-style-type: none"> 1. User will click on login 2. User log in form will be appeared 3. User will fill the Log in form by giving all required information 4. User will click on login button
Pre-condition	The application must be in running state and admin have to put correct information.
Post-condition	User will login successful and use the application
Alternate Scenario	<ol style="list-style-type: none"> 1. User enter invalid username OR 2. User enter invalid password

Table 4.3 Use Case of Login for User

4.1.4 Use Case for Admin Search

Use Case	Search
Use Case Id	04
Actor	Admin
Action	1. Admin will click on search bar 2. Admin will enter the type of crime with respect to date of crime report
Pre-condition	The application must be in running state and admin have to put correct information.
Post-condition	Admin will see the crime information
Alternate Scenario	Admin enter invalid crime name and date

Table 4.4 Use Case of Search for Admin

4.1.5 Use Case for User Search

Use Case	Search
Use Case Id	05
Actor	User
Action	1. User will click on search bar 2. User will enter the type of crime
Pre-condition	The application must be in running state and user have to put correct information.
Post-condition	User will see the crime information
Alternate Scenario	User enter invalid crime name

Table 4.5 Use Case of Search for User

4.1.6 Use Case for Report

Use Case	Report
Use Case Id	06
Actor	User
Action	<ol style="list-style-type: none"> 1. User will click on Report Crime 2. Report form will be appeared 3. Select the type of crime 4. Enter the required data 5. Image and video will also be upload by using image and video upload buttons
Pre-condition	The application must be in running state and user have to put correct information.
Post-condition	Form will be submitted
Alternate Scenario	User enter invalid crime information

Table 4.6 Use Case of Report for User

4.1.7 Use Case for Edit

Use Case	Edit
Use Case Id	07
Actor	Admin
Action	<ol style="list-style-type: none"> 1. Admin will click on Edit button 2. Admin will edit the whole report form or specific information
Pre-condition	The application must be in running state.
Post-condition	Admin edit the form successfully
Alternate Scenario	Server is down

Table 4.7 Use Case of Edit for Admin

4.1.8 Use Case for Delete

Use Case	Delete
Use Case Id	08
Actor	Admin
Action	1. Admin will click on Delete button 2. Admin will delete the whole blog
Pre-condition	The application must be in running state.
Post-condition	Admin delete the form successfully
Alternate Scenario	Server is down

Table 4.8 Use Case of Delete for Admin**4.1.9 Use Case for Approve**

Use Case	Approve
Use Case Id	09
Actor	Admin
Action	1. Admin will click on Approve button 2. Admin will approve the whole report
Pre-condition	The application must be in running state.
Post-condition	Admin approve the form successfully
Alternate Scenario	Server is down

Table 4.9 Use Case of Approve for Admin

4.1.10 Use Case for Admin Logout

Use Case	Logout
Use Case Id	10
Actor	Admin
Action	1. Admin will click on logout 2. Admin will log out successfully
Pre-condition	The application must be in running state.
Post-condition	Admin will logged out from the system
Alternate Scenario	Server is down

Table 4.10 Use Case of Logout for Admin**4.1.11 Use Case for User Logout**

Use Case	Logout
Use Case Id	11
Actor	User
Action	1. User will click on logout 2. User will log out successfully
Pre-condition	The application must be in running state.
Post-condition	User will logged out from the system
Alternate Scenario	Server is down

Table 4.11 Use Case of Logout for User

4.2 Use Case Diagram

Use case charts models the framework and the subsystems of an application. While use case outlines can be considered as a significant level necessity investigation of the framework, they give away from of the entertainers and their jobs (use cases) and thus is a significant pictorial portrayal to comprehend framework determinations right off the bat in the task. In this system there are 3 actors namely admin, new user, registered user.

4.2.1 Use Case Diagram for Admin

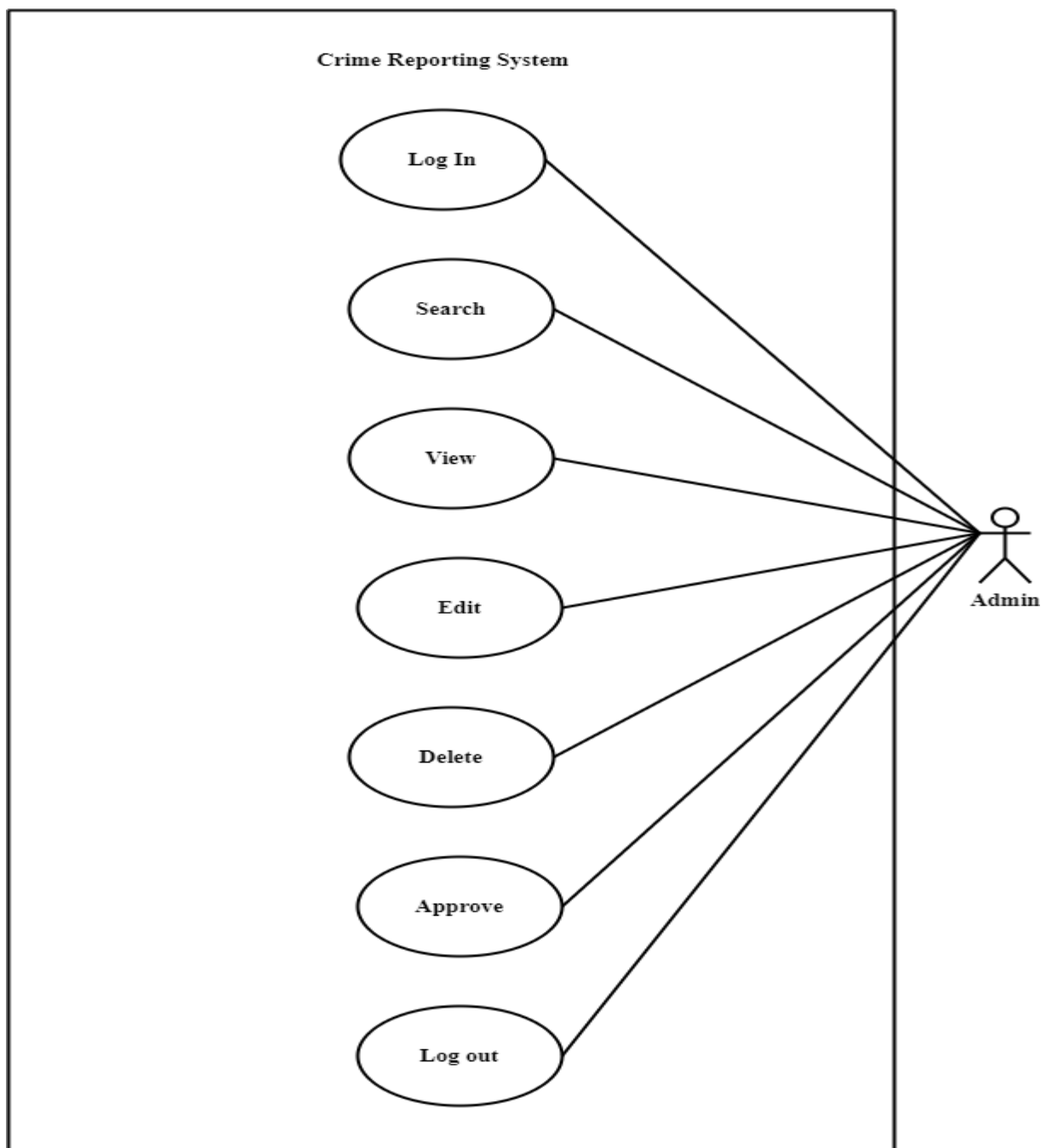


Figure 4.1 Use Case Diagram for Admin

4.2.2 Use Case Diagram for User

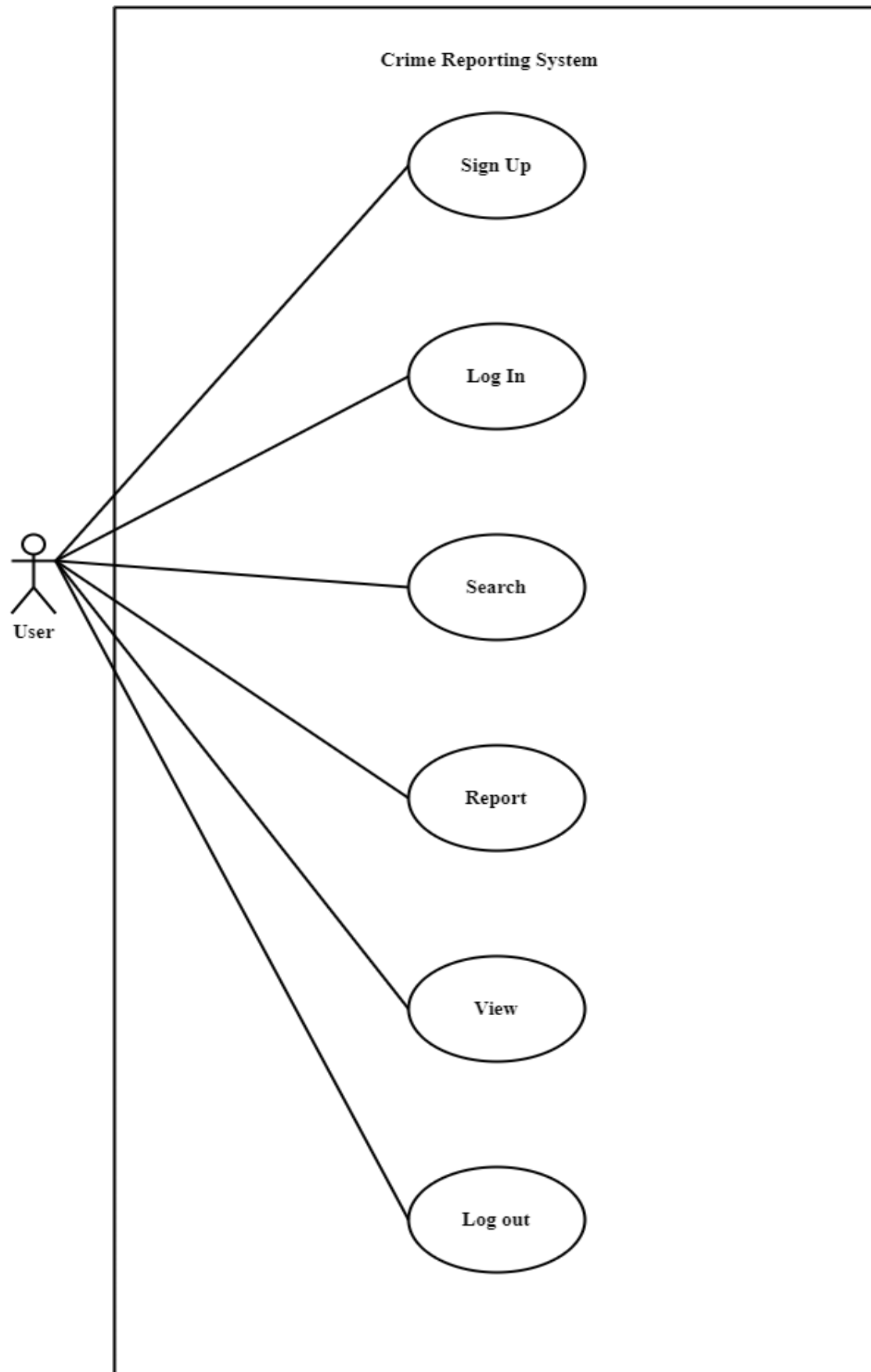


Figure 4.2 Use Case Diagram for User

4.3 Sequence Diagram

The consecutive progression of a framework alongside its sub framework is pictorially spoken to by the succession chart. As the accompanying outline is a general framework grouping graph, arrangement charts can likewise be drawn at the measured level for each segment in the framework.

Arrangement graphs underscore more on the framework necessities than on the framework plan. Its zeros in additional on the arrangement of messages conveyed soon after a succession of movement happens. Generally speaking, a succession chart helps in displaying and archiving how a framework ought to act and helps in approving the consistent conduct of complex activities and capacities.

4.3.1 Registration for User

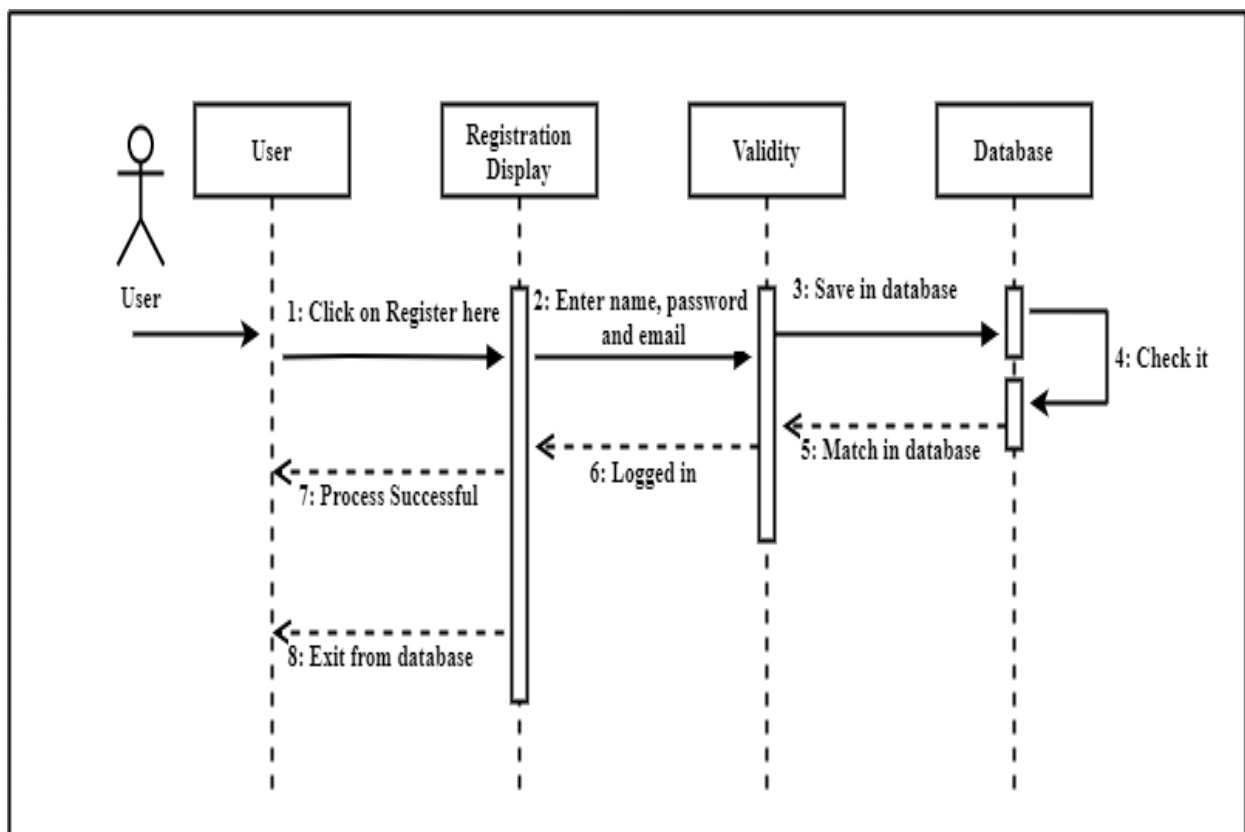


Figure 4.3 Registration

4.3.2 Login for Admin

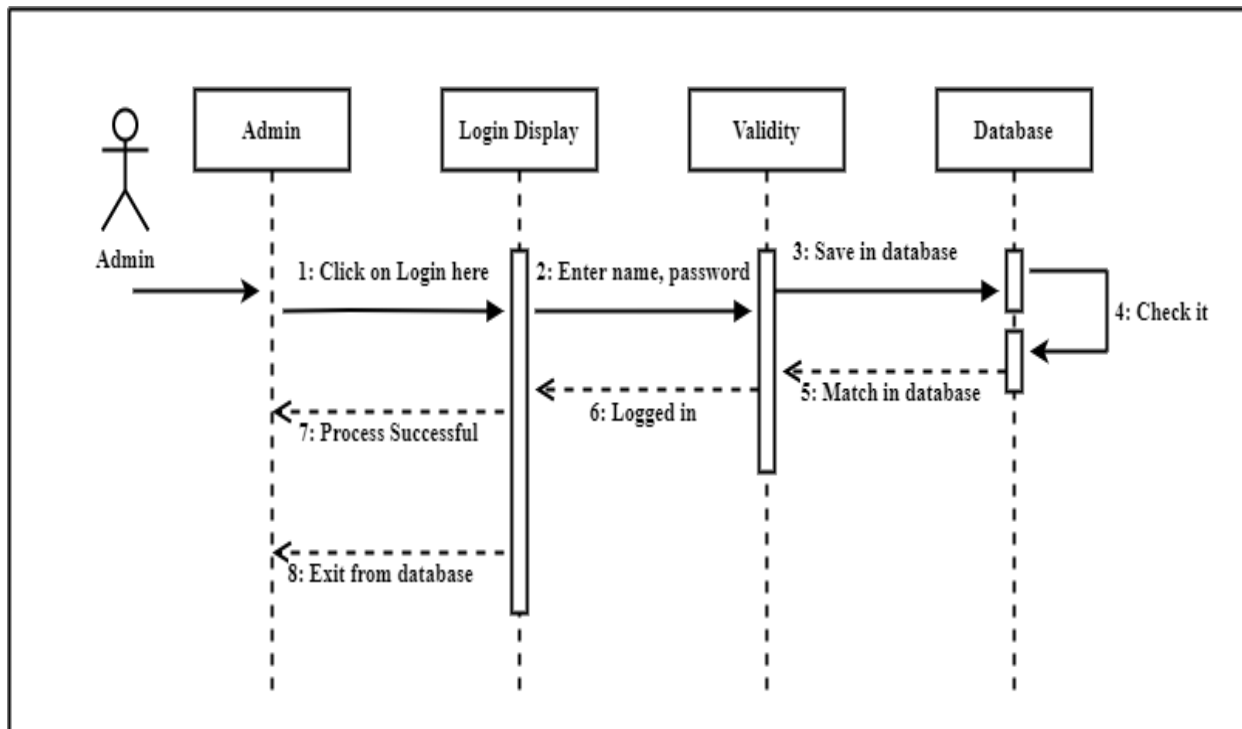


Figure 4.4 Login for Admin

4.3.3 Login for User

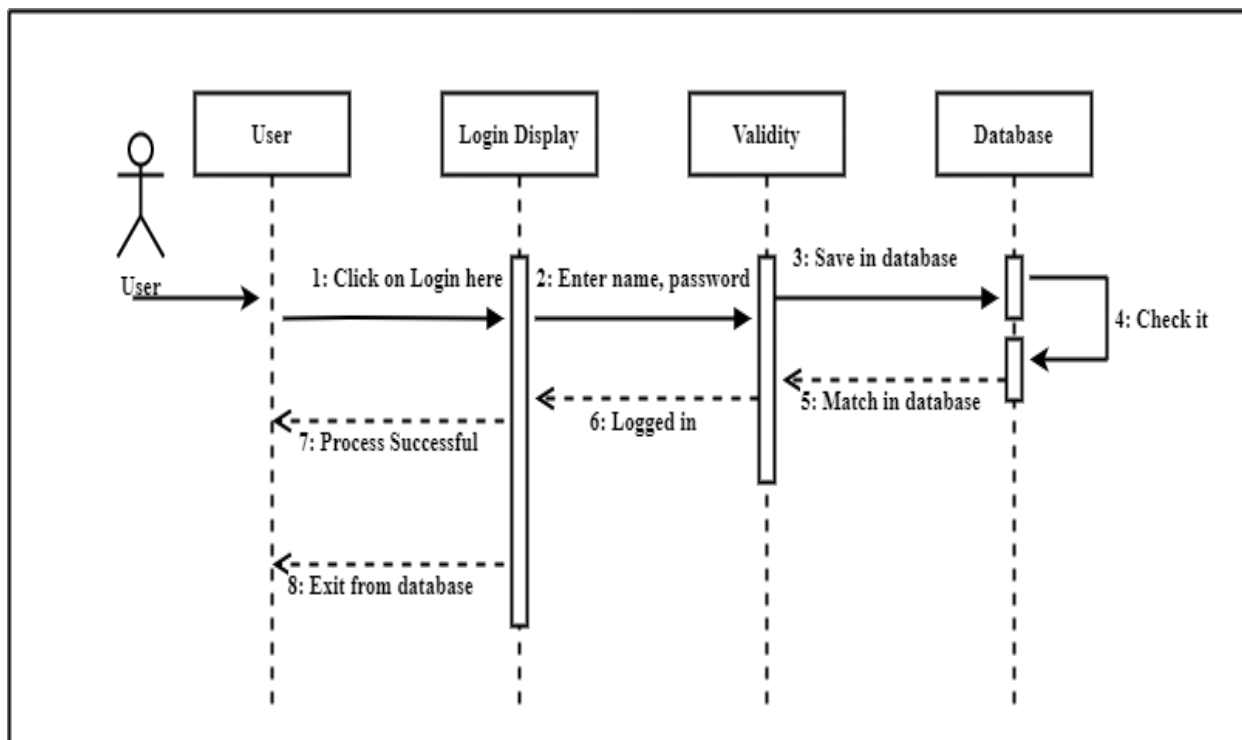


Figure 4.5 Login for User

4.3.4 Search for Admin

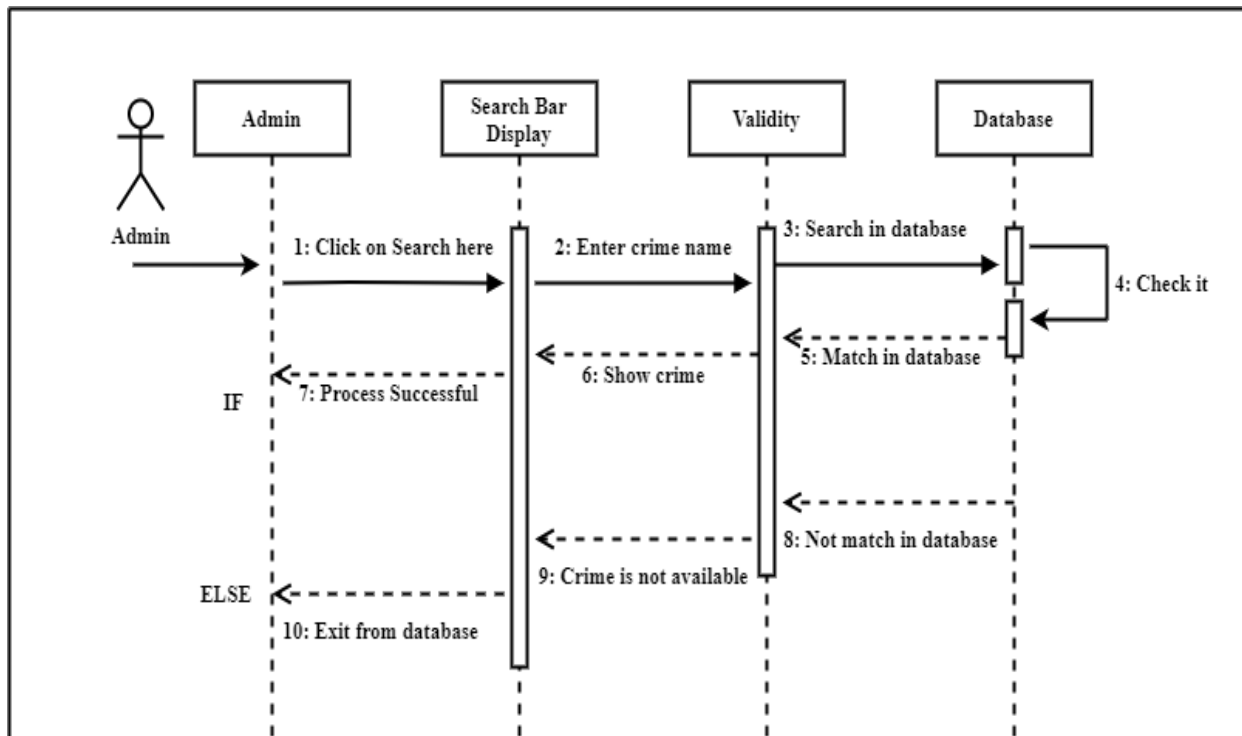


Figure 4.6 Search for Admin

4.3.5 Search for User

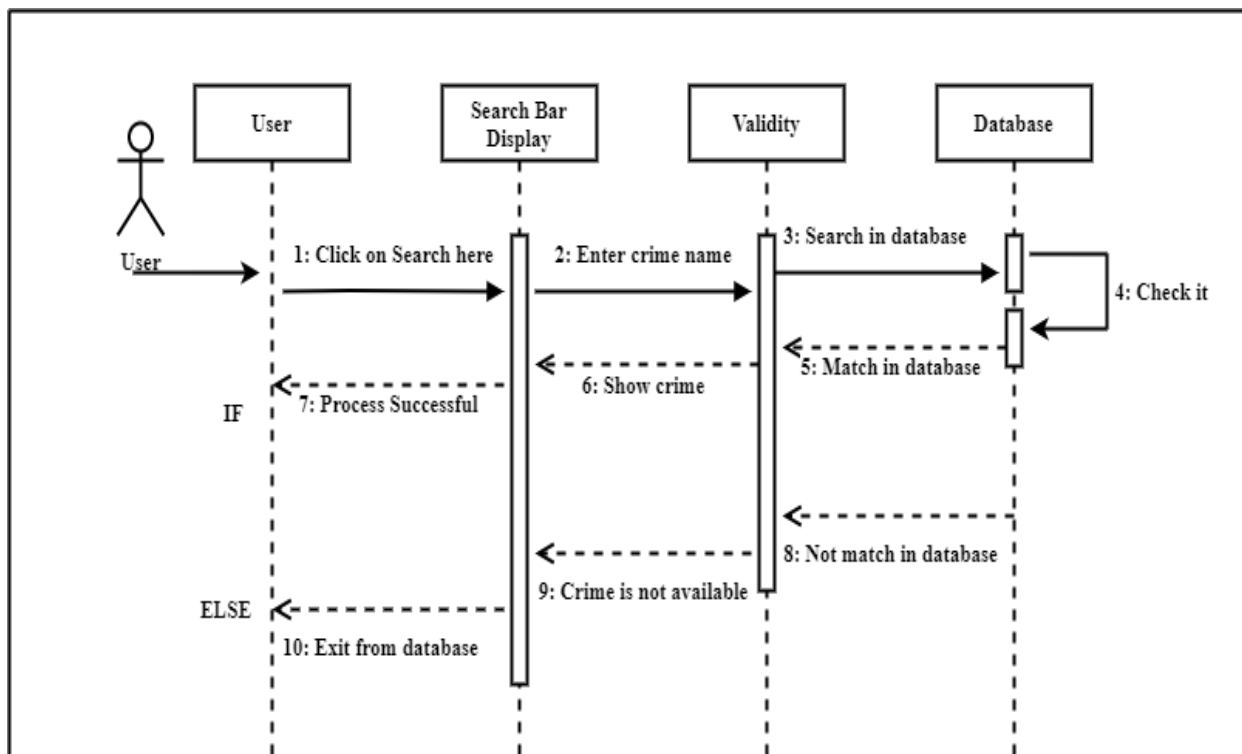


Figure 4.7 Search for User

4.3.6 Report for User

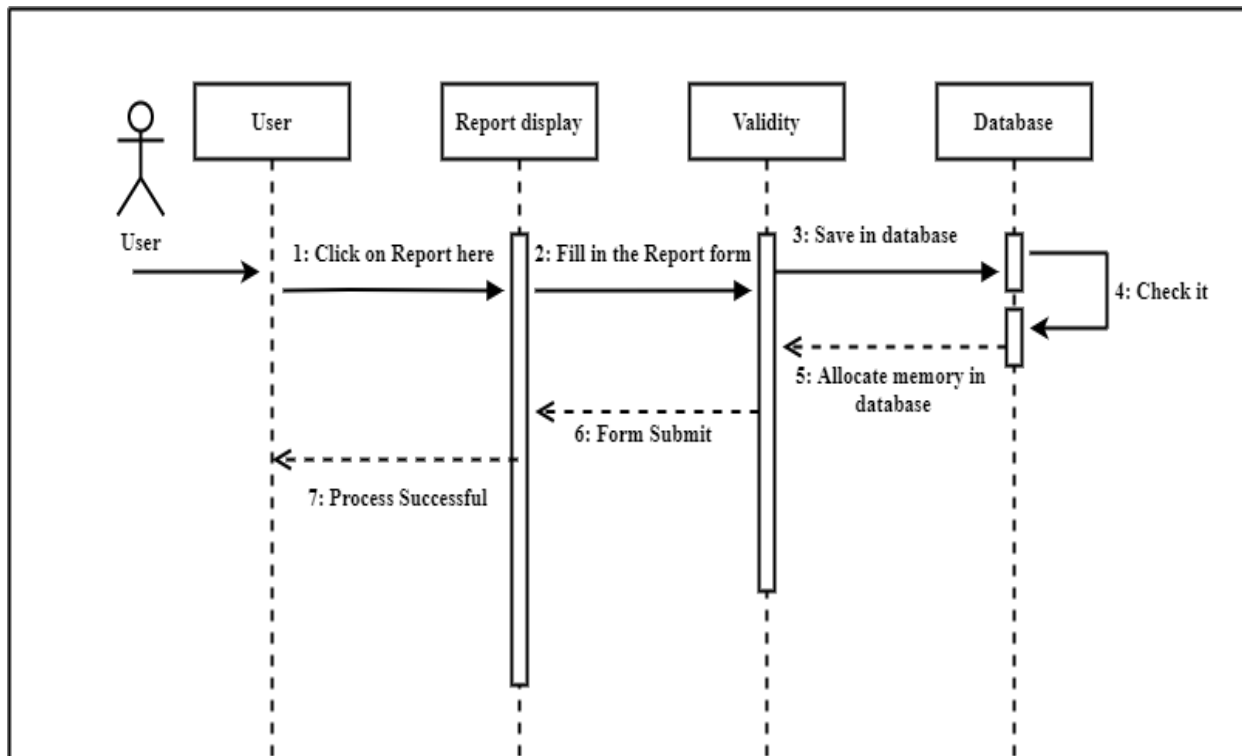


Figure 4.8 Report

4.3.7 Edit for Admin

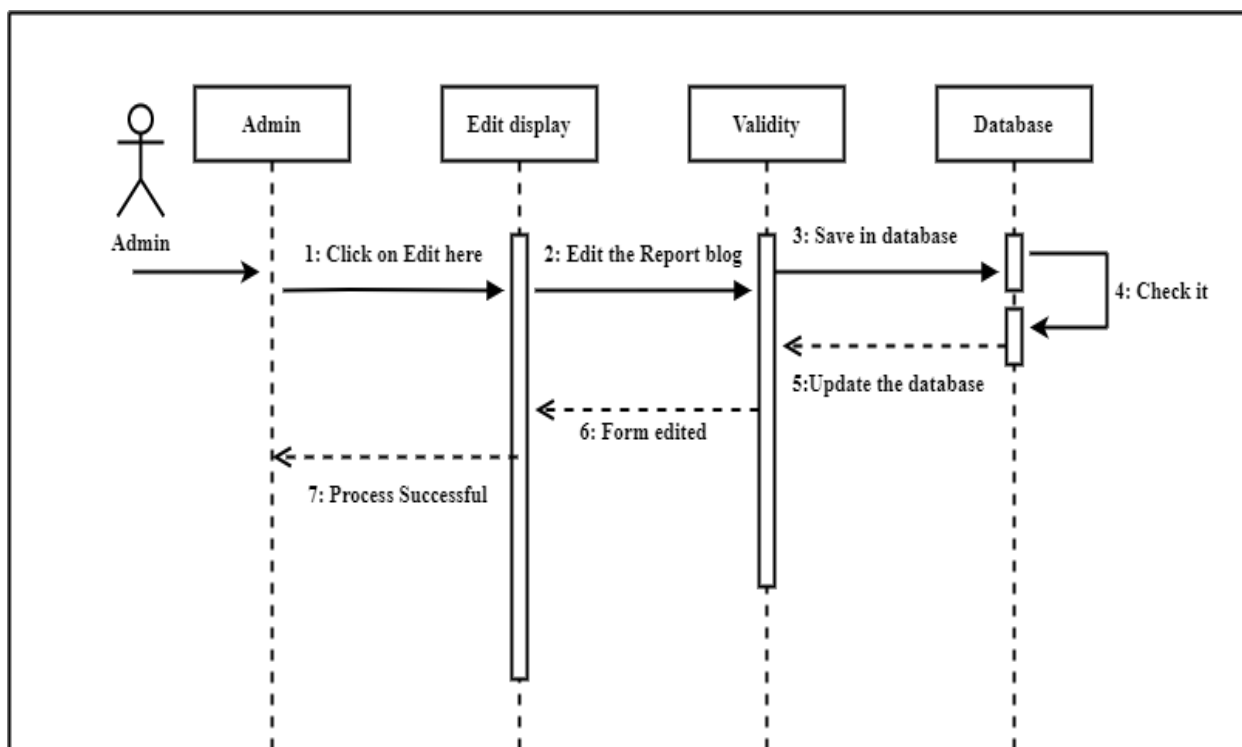


Figure 4.9 Edit

4.3.8 Delete for Admin

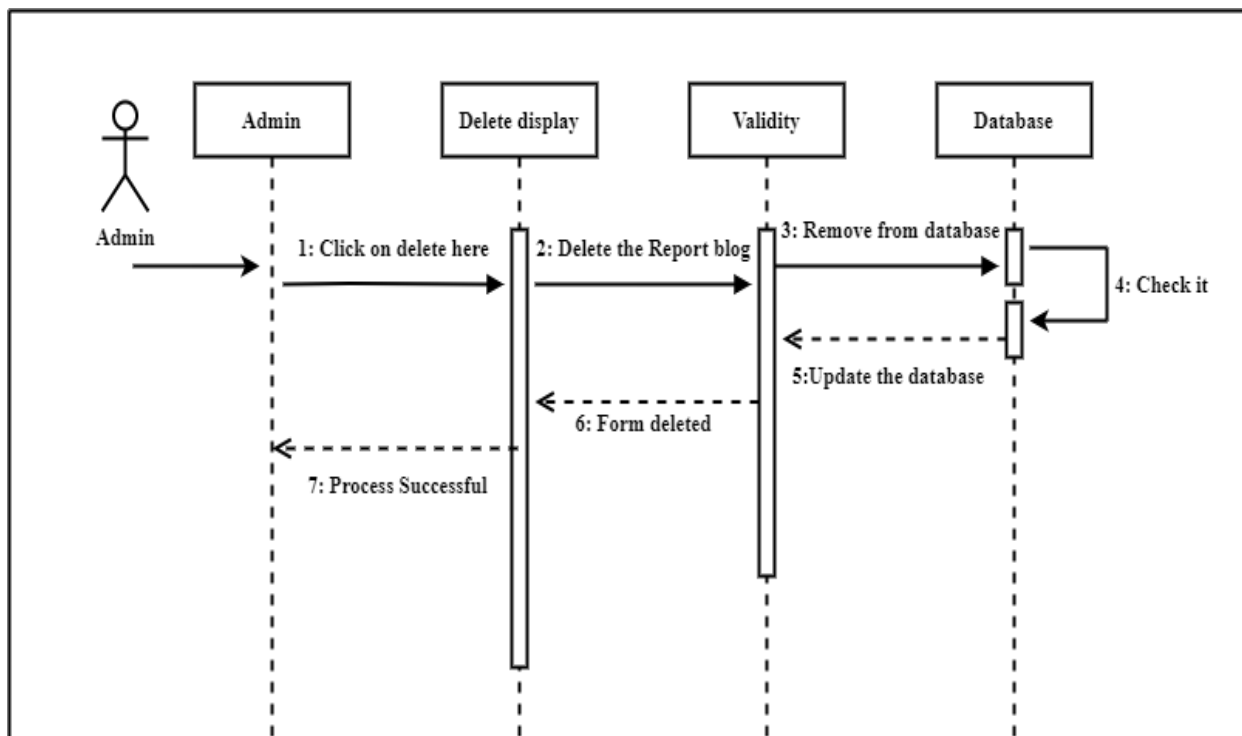


Figure 4.10 Delete

4.3.9 Approve for Admin

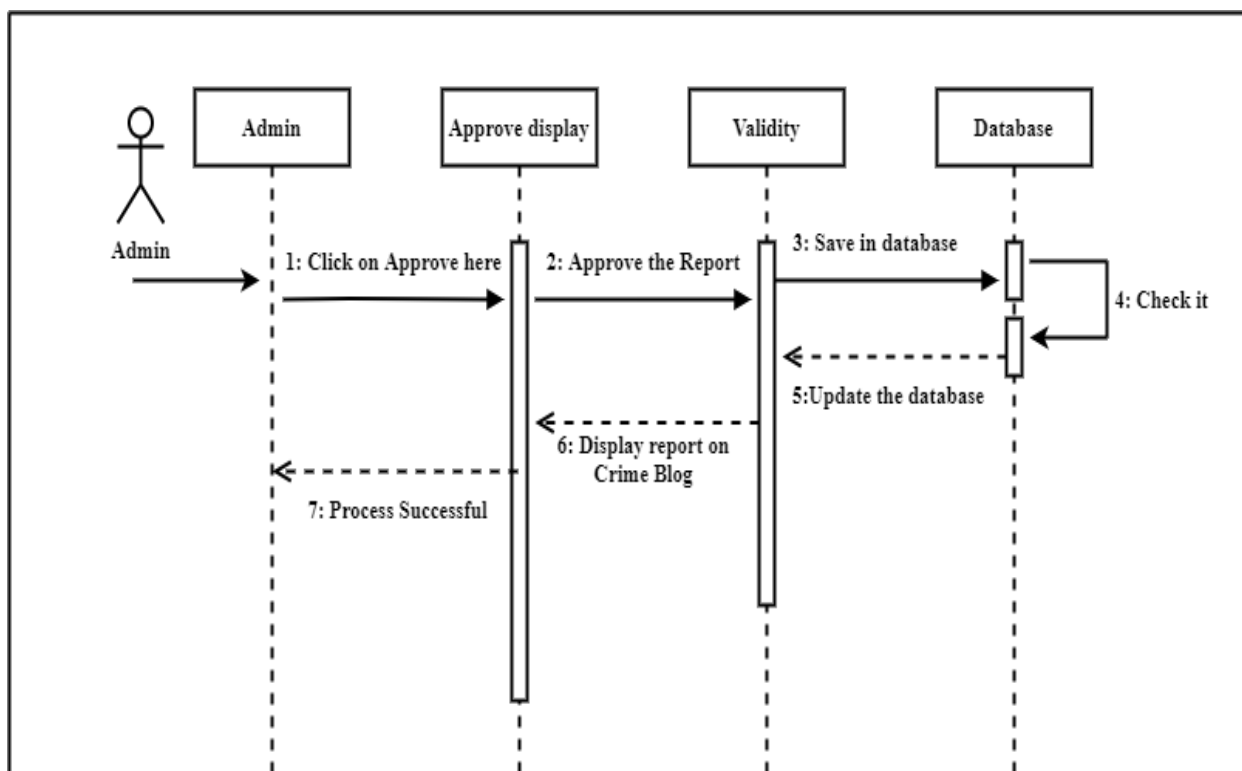


Figure 4.11 Approve

4.3.10 Logout for Admin

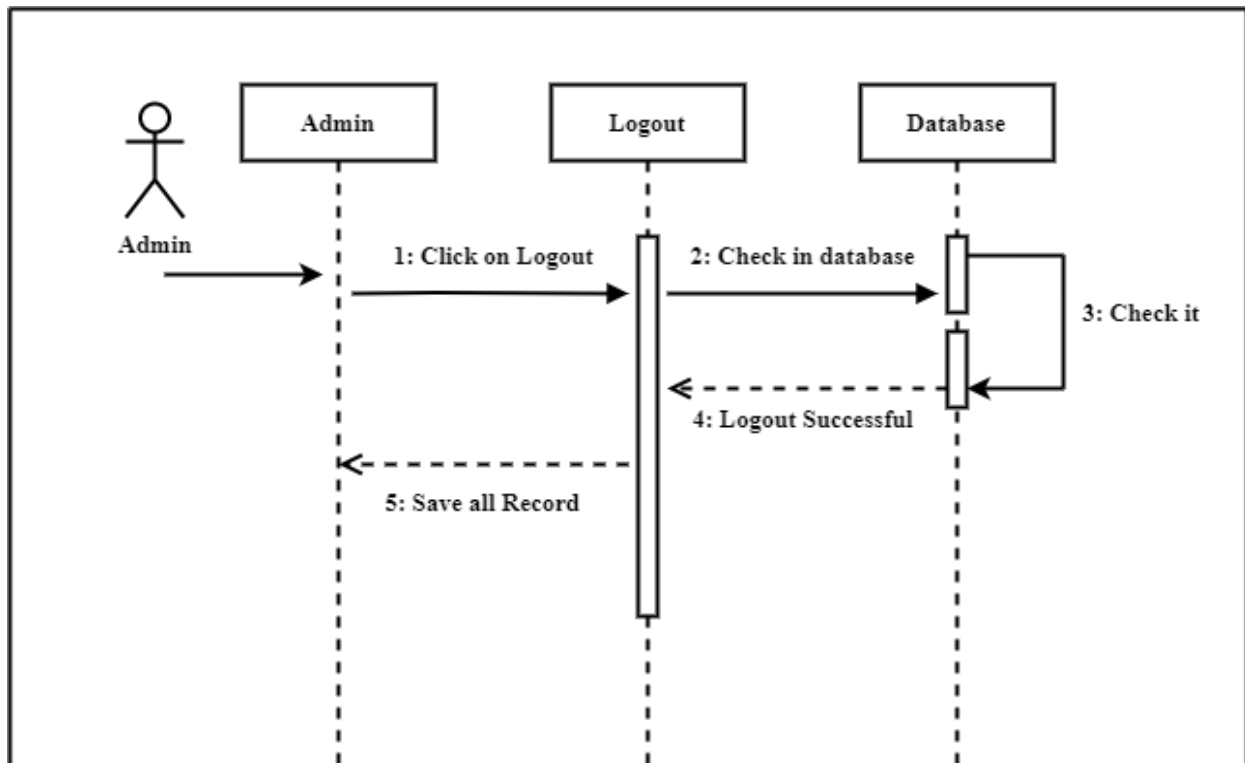


Figure 4.12 Logout for Admin

4.3.11 Logout for User

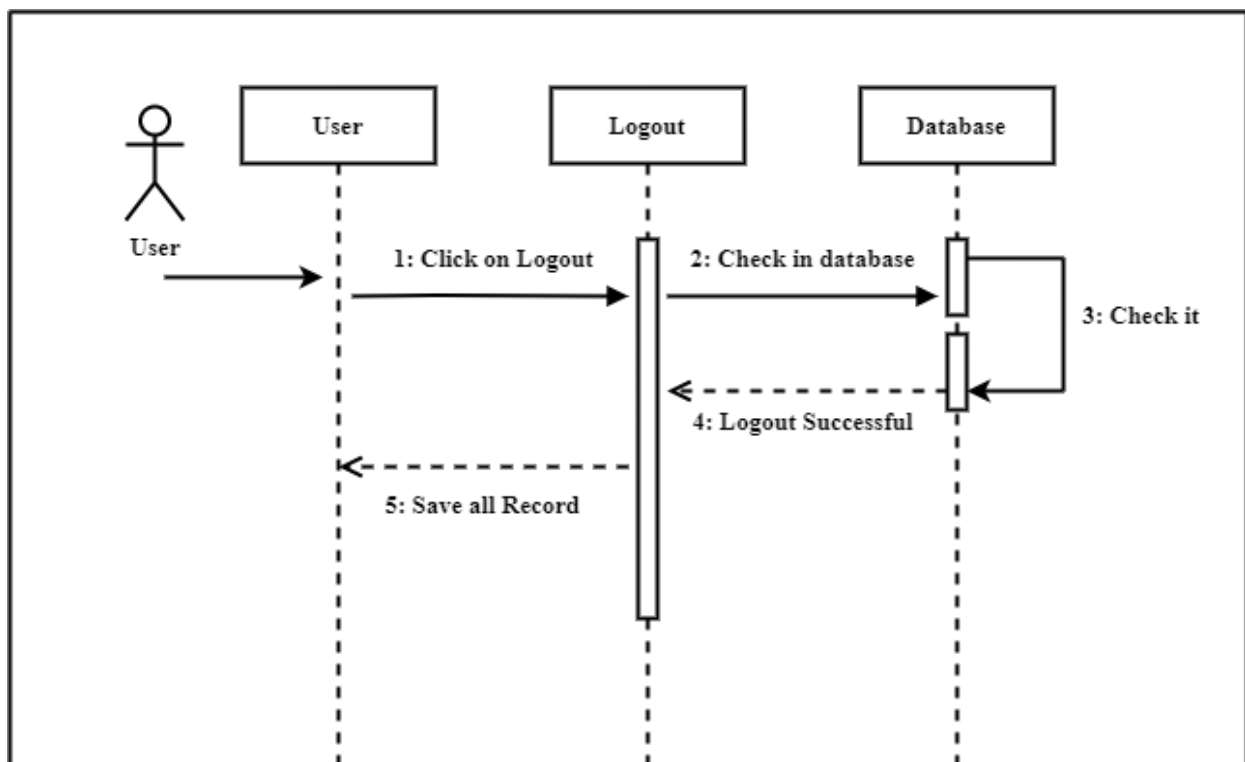


Figure 4.13 Logout for User

4.4 Activity Diagram

The activity diagram is used to graphically represent the flow of control in a system similar to a flow chart or a data flow diagram. It shows step by step flow from one activity to another. The basic purpose of an activity diagram is to describe the dynamic behavior of the system.

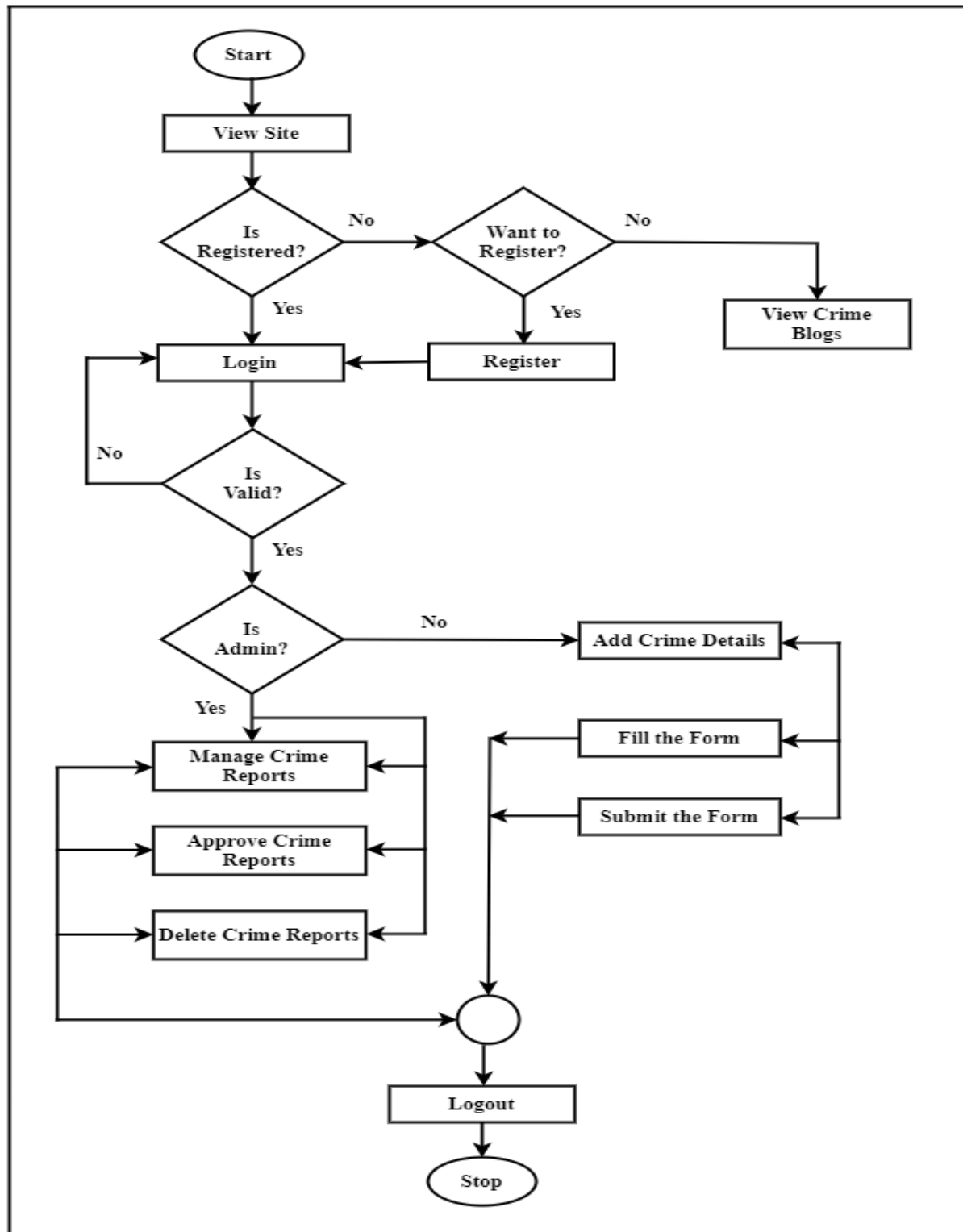


Figure 4.14 Activity Diagram

CHAPTER 5

DATABASE DESIGN

5.1 Database Design

A good database design plan is the foundation of a decent web application. It is described by certain traits like a standardized information base, uprightness requirements and very much characterized connections among various data set tables. At the point when one information base table is identified with another information base table or to multiple, it is considered a social data set framework. Likewise, characterizing the term requirements like some characteristic can be invalid, while another can never be invalid. There are ID segments in each table which are special, such qualities are called essential keys. While there are others table which likewise contains a similar essential key for reference and are called unfamiliar keys. XAMPP is utilized as a information base apparatus and as a database language. It has 3 tables in the information base which have been recognized to make the application functional:

- User Login
- Admin Login
- Crime Report

5.2 Entity Relationship Diagram

An Entity Relationship Diagram (ERD) is a type of flowchart that illustrates how “entities” such as people, objects or concepts relate to each other within a system. ER Diagrams are most often used to design or debug relational databases in the fields of software engineering, business information systems, education and research.

Also known as ERDs or ER Models, they use a defined set of symbols such as rectangles, diamonds, ovals and connecting lines to depict the interconnectedness of entities, relationships and their attributes.

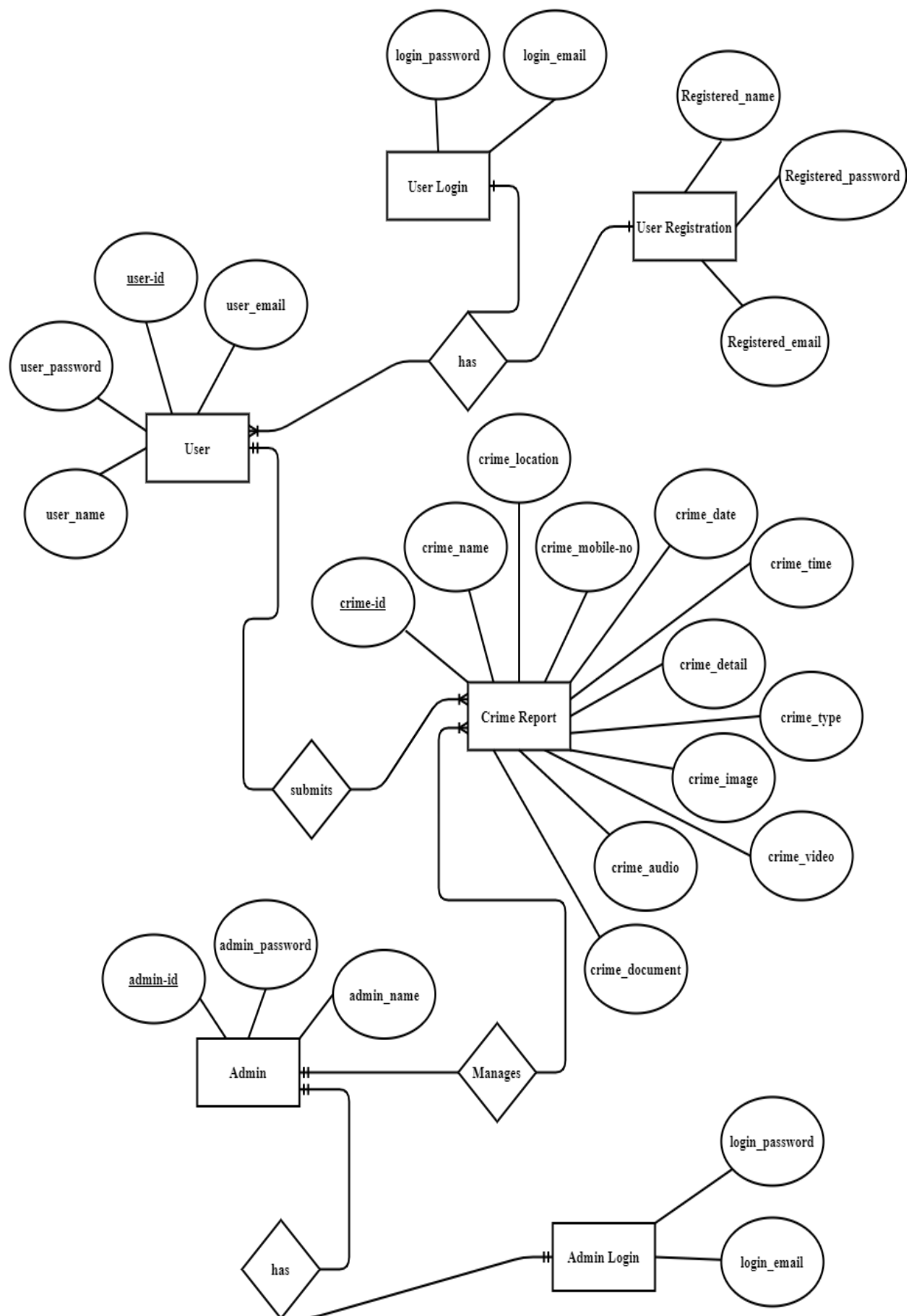


Figure 5.1 Entity Relationship Diagram

5.3 Class Diagram

In software engineering, a 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 objects.

Class diagrams are the blueprints of your system or subsystem. You can use class diagrams to model the objects that makes up the system, to display the relationships between the objects, and to describe what those objects do and the service that they provide. Class diagrams are useful in many stages of system design.

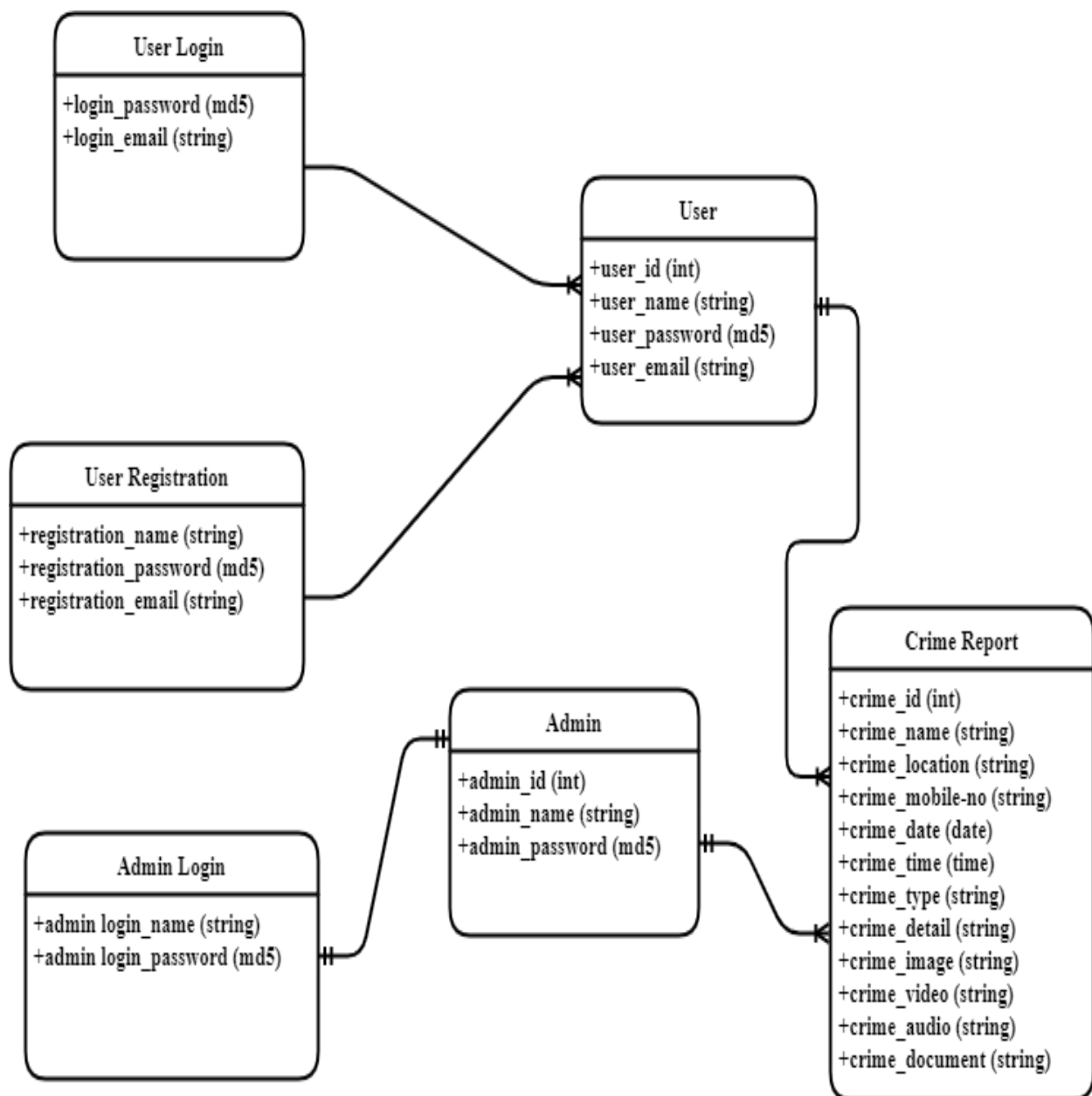


Figure 5.2 Class Diagram

5.4 Database Tables

A table is a collection of related data held in a table format within a database. It consists of columns and rows. In relational databases, and flat file databases, a table is a set of data elements using a model of vertical columns and horizontal rows, the cell being the unit where a row and column intersect.

In the created Database (Login page in this case), click on the 'Structure' tab. towards the end of the tables list, the user can see a 'Create Table' option. Fill the input fields titled "Name" and "Number of Columns" and hit the 'Go' button. Now, the columns are initialized based on their type.

5.4.1 Crime Reporting Database

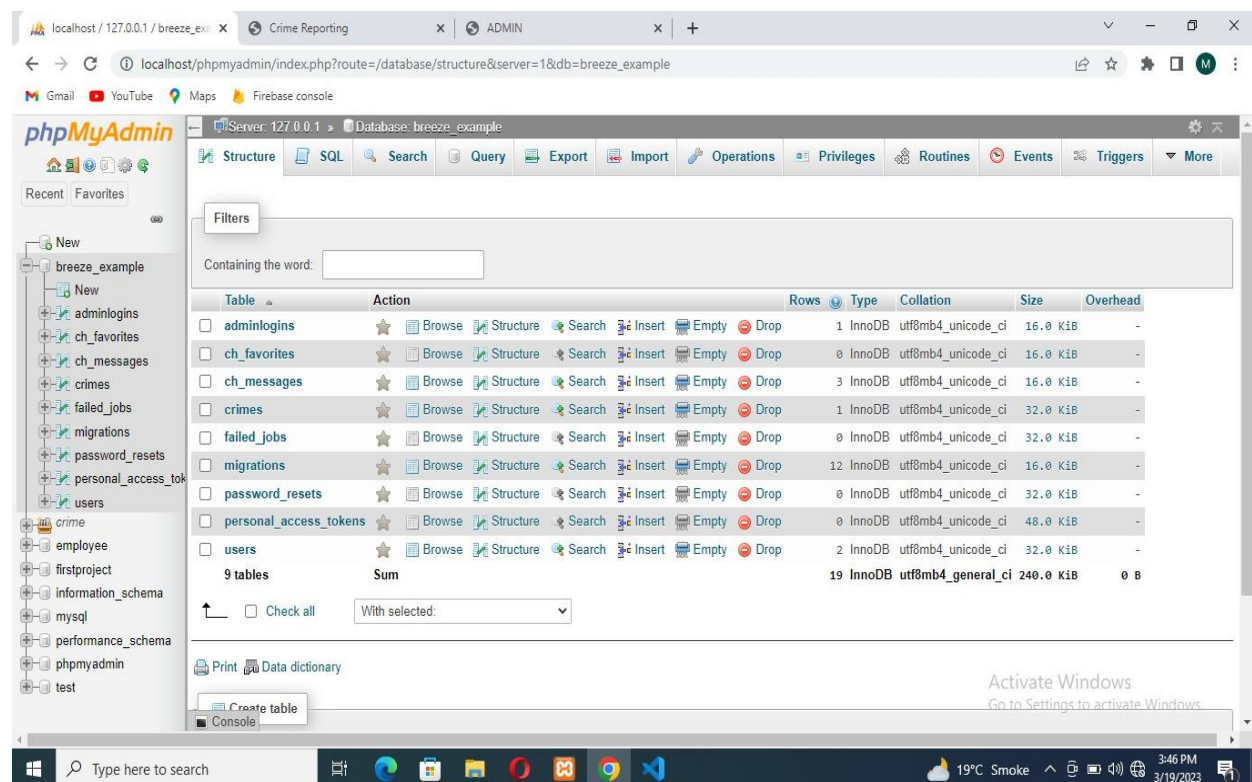


Figure 5.3 Crime Reporting Database

5.4.2 Admin Login Table

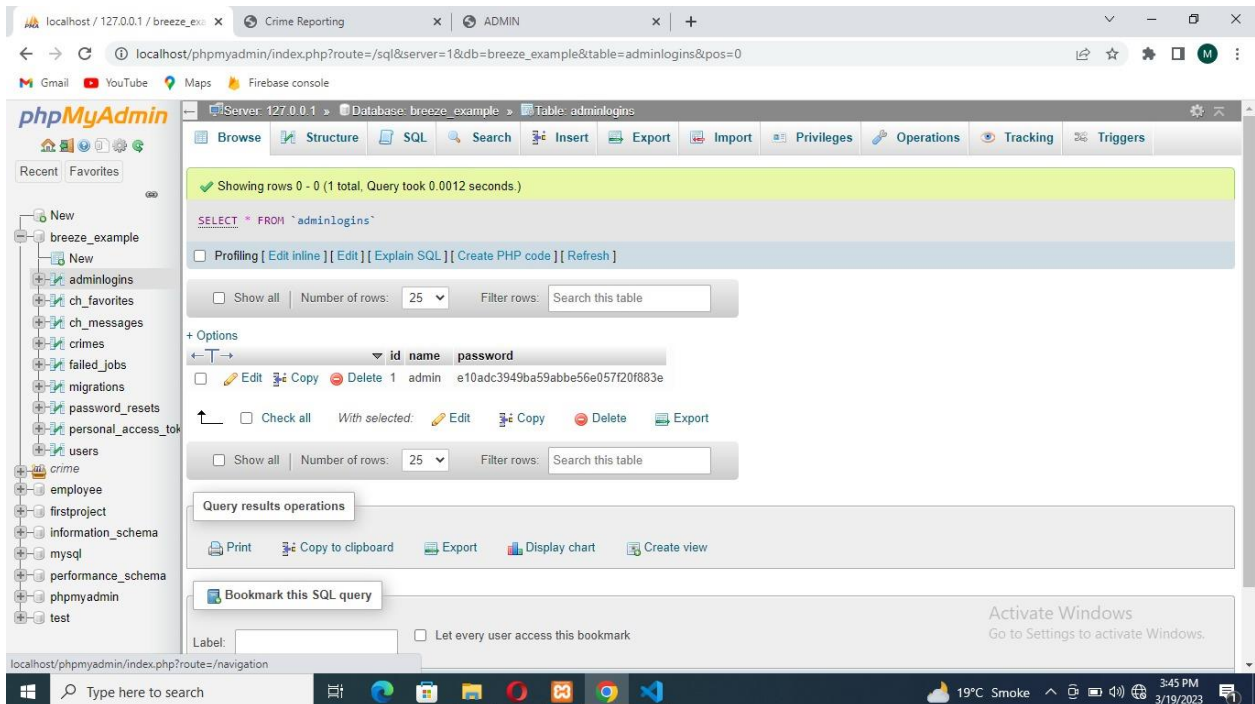


Figure 5.4 Admin Login Table

5.4.3 User Login Table

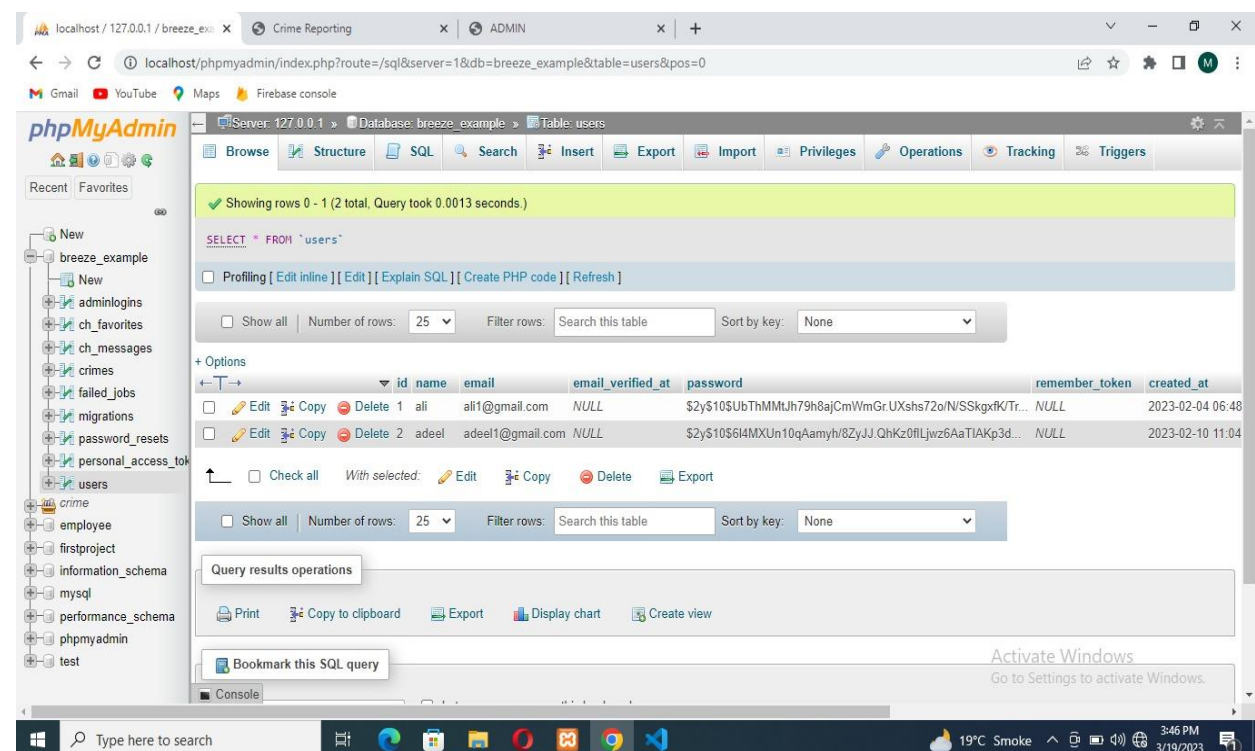


Figure 5.5 User Login Table

5.4.4 Crime Report Table

Showing rows 0 - 0 (1 total, Query took 0.0011 seconds)

```
SELECT * FROM `crimes`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table

+ Options

	id	name	hide_name	email	date	time	crimetype	details	image	video	document
<input type="checkbox"/> Edit <input type="button" value="Copy"/> <input type="button" value="Delete"/>	12	ali	0	ali1@gmail.com	March 20, 2023	18:20	Pocket Picking	dddddddddddddd	image_upload/1679152832.jpg	videos/1679152832.mp4	CRS1_Final.jpg

Check all | With selected:

Show all | Number of rows: 25 | Filter rows: Search this table

Query results operations

Print | Copy to clipboard | Export | Display chart | Create view

Figure 5.6 Crime Report Table

CHAPTER 6

TESTING AND VERIFICATION

Software testing is an essential part of software development to verify the functionality of the software. Software Testing is a method to check whether the actual software product matches expected requirements and to ensure that software product is Error free. It involves execution of software/system components using manual or automated tools to evaluate one or more properties of interest. The purpose of software testing is to identify errors, gaps or missing requirements in contrast to actual requirements. Software testing techniques are the ways employed to test the application under test against the functional or non-functional requirements gathered from business. Each testing technique helps to find a specific type of defect. For example, Techniques which may find structural defects might not be able to find the defects against the end-to-end business flow. Hence, multiple testing techniques are applied in a testing project to conclude it with acceptable quality. Software Testing is Important because if there are any bugs or errors in the software, it can be identified early and can be solved before delivery of the software product. Properly tested software product ensures reliability, security and high performance which further results in time saving, cost effectiveness and customer satisfaction.

6.1 Black Box Testing

Black box testing is a Software Testing method that analyses the functionality of a software/application without knowing much about the internal structure/design of the item that is being tested and compares the input value with the output value. The main focus of Black Box Testing is on the functionality of the system as a whole. The term ‘Behavioral Testing’ is also used for Black Box Testing. The customer’s statement of needs is the most common source of black box testing. In this approach, the tester chooses a function and inputs a value to verify its functionality, then examines whether the function produces the desired results. If the function returns the expected result, it passes the testing, otherwise, it fails. The project “Crime Reporting System” is tested with this technique to check and verify the working of components of software.

6.2 Compatibility Testing

A compatibility test ensures a software application is properly working across different browsers, databases, operating systems (OS), mobile devices, networks and hardware. There are two types of Compatibility Testing:

6.2.1 Backward Compatibility Testing

Backward Compatibility Testing is a technique to verify the behavior and compatibility of the developed hardware or software with their older versions of the hardware or software. Backward compatibility testing is much predictable as all the changes from the previous versions are known.

6.2.2 Forward Compatibility Testing

Forward Compatibility Testing is a process to verify the behavior and compatibility of the developed hardware or software with the newer versions of the hardware or software. Forward compatibility testing is a bit hard to predict as the changes that will be made in the newer versions are not known.

The project “Crime Reporting System” is tested in different browsers such as Internet Explorer, Google Chrome, Microsoft Edge etc. and on different devices with different operating systems such as Windows OS, Linux OS, Mac OS and made sure that it is running on all the above-mentioned operating systems, devices, and browsers without any issue.

6.3 Performance Testing

Performance testing evaluates the speed, responsiveness and stability of a computer, network, software program or device under a workload. Organizations run performance tests in order to identify performance-related bottlenecks. It is a vital phase in verifying the quality of the software. The project “Crime Reporting System” is tested with this technique to check the processing speed, data transmission speed, and response times of system.

6.4 Usability Testing

Usability testing, also known as User Experience (UX) testing, is a testing method for measuring how easy and user-friendly a software application is. A small set of target end-users, use software

application to expose usability defects. The well-known principle for this testing is KISS (Keep It Simple Stupid). It is a design principle which states that designs and/or systems should be as simple as possible. Wherever possible, complexity should be avoided in a system as simplicity guarantees the greatest levels of user acceptance and interaction. Usability testing mainly focuses on a user's ease of using application, flexibility of application to handle controls and ability of application to meet its objectives. This testing is recommended during the initial design phase of SDLC, which gives more visibility on the expectations of the users. The project "Crime Reporting System" is tested with this technique to uncover its usability flaws.

6.5 White Box Testing

White Box Testing is software testing technique in which internal structure, design and coding of software are tested to verify flow of input-output and to improve design, usability and security. In white box testing, code is visible to testers so it is also called Clear box testing, open box testing, transparent box testing, Code-based testing and Glass box testing. It is one of the two parts of the Box Testing approach to software testing, the other being Black box testing.

The term "White Box" was used because of the see-through box concept. The clear box or white box name symbolizes the ability to see through the software's outer shell (or "box") into its inner workings. The basic goal of white box testing is to verify a working flow for an application. It involves testing a series of predefined inputs against expected or desired outputs so that when a specific input does not result in the expected output, you have encountered a bug. White box testing is done by software engineers. They check every line of the program's code. The white box testing of the application includes numerous testing such as path testing, means all the paths are covered at least once, loop testing means all the loops are tested, and condition testing means all the logical decisions are based on true and false values. The project "Crime Reporting System" is tested with this technique to uncover the logical and structural flaws of the system like logical errors, design errors, syntax errors etc.

6.6 Test Cases

6.6.1 Registration with Valid Credentials

Project Name	Module Name	Test Case ID
Crime Reporting System	Registration	ID- 01
Test Case Description	Go to Registration page and enter username, email and password	
Test Steps	Click on register button Enter required credentials Click register button	
Test Data	Users entered data tested	
Pre-Condition	Enter valid username, email and password.	
Post-Condition	Successful message will be show	
Expected Result	Successful to register	
Actual Result	Successfully registered	
Status	Pass	

Table 6.1 Test Case of Registration

6.6.2 Registration with Invalid Password

Project Name	Module Name	Test Case ID
Crime Reporting System	Registration	ID- 02
Test Case Description	Go to Registration page and enter username, email and invalid password	
Test Steps	Click on register button Enter required credentials Click register button	
Test Data	User entered password tested	
Pre-Condition	Enter username, email and a password of characters less than six or greater than twelve.	
Post-Condition	Show error message you entered invalid password	
Expected Result	Registration fails	
Actual Result	Registration unsuccessful	
Status	Fail	

Table 6.2 Test Case of Registration**6.6.3 Registration with Empty**

Project Name	Module Name	Test Case ID
Crime Reporting System	Registration	ID- 03
Test Case Description	Go to Registration page and do not enter username, password and email	
Test Steps	Click on register button No enter required credentials Click register button	
Test Data	Users do not enter username, email and password tested	
Pre-Condition	Do not enter password, username and email.	
Post-Condition	Show error message required credential is empty	
Expected Result	Registration fails	
Actual Result	Registration unsuccessful	
Status	Fail	

Table 6.3 Test Case of Registration

6.6.4 Login with Valid Credentials

Project Name	Module Name	Test Case ID
Crime Reporting System	Login	ID- 04
Test Case Description	Go to Login page and enter correct email and password	
Test Steps	Click on login button Enter required credentials Click Login button	
Test Data	Users and admin entered data tested	
Pre-Condition	Enter valid email and password.	
Post-Condition	Successful message will be show	
Expected Result	Successful to login	
Actual Result	Successfully logged in	
Status	Pass	

Table 6.4 Test Case of Login**6.6.5 Login with Invalid Email**

Project Name	Module Name	Test Case ID
Crime Reporting System	Login	ID- 05
Test Case Description	Go to Login page and enter correct password and incorrect email	
Test Steps	Click on login button Enter required credentials Click login button	
Test Data	Users and admin entered email tested	
Pre-Condition	Enter correct password and incorrect email.	
Post-Condition	Show error message that you entered incorrect email	
Expected Result	Failed to login	
Actual Result	Login unsuccessful	
Status	Fail	

Table 6.5 Test Case of Login

6.6.6 Login with Invalid Password

Project Name	Module Name	Test Case ID
Crime Reporting System	Login	ID- 06
Test Case Description	Go to Login page and enter correct email and incorrect password	
Test Steps	Click on login button Enter required credentials Click login button	
Test Data	Users and admin entered password tested	
Pre-Condition	Enter correct email and incorrect password.	
Post-Condition	Show error message you entered incorrect password	
Expected Result	Login fails	
Actual Result	Login unsuccessful	
Status	Fail	

Table 6.6 Test Case of Login**6.6.7 Login with Invalid Email and Password**

Project Name	Module Name	Test Case ID
Crime Reporting System	Login	ID- 07
Test Case Description	Go to Login page and enter incorrect password and incorrect email	
Test Steps	Click on login button Enter required credentials Click login button	
Test Data	Users and admin entered email and password tested	
Pre-Condition	Enter incorrect password and incorrect email.	
Post-Condition	Show error message that entered credentials incorrect	
Expected Result	Login fails	
Actual Result	Login unsuccessful	
Status	Fail	

Table 6.7 Test Case of Login

6.6.8 Login with Empty

Project Name	Module Name	Test Case ID
Crime Reporting System	Login	ID- 08
Test Case Description	Go to Login page and do not enter password and email	
Test Steps	Click on login button No enter required credentials Click login button	
Test Data	Users and admin do not enter username and password tested	
Pre-Condition	Do not enter password and username.	
Post-Condition	Show error message required credential is empty	
Expected Result	Login fails	
Actual Result	Login unsuccessful	
Status	Fail	

Table 6.8 Test Case of Login**6.6.9 Search Crime with Correct Crime Type**

Project Name	Module Name	Test Case ID
Crime Reporting System	Search Crime	ID- 09
Test Case Description	Go to search bar and enter correct name of crime type	
Test Steps	Click on search bar Enter crime type Click on search icon or press enter	
Test Data	Users entered correct crime type tested	
Pre-Condition	Enter correct crime type and related entries must be present.	
Post-Condition	Show related crime blogs with detail	
Expected Result	Show blogs related to the crime type with detail	
Actual Result	Shows blogs related to the crime type successfully	
Status	Pass	

Table 6.9 Test Case of Search Crime

6.6.10 Search Crime with Incorrect Crime Type

Project Name	Module Name	Test Case ID
Crime Reporting System	Search Crime	ID- 10
Test Case Description	Go to search bar and enter incorrect name of crime type	
Test Steps	Click on search bar Enter crime type Click on search icon or press enter	
Test Data	Users entered incorrect crime type tested	
Pre-Condition	Enter incorrect crime type and related entries must not be present.	
Post-Condition	Show message that crime type is not available	
Expected Result	Show error message	
Actual Result	Crime type does not exist	
Status	Fail	

Table 6.10 Test Case of Search Crime**6.6.11 Search Crime with Empty Search Bar**

Project Name	Module Name	Test Case ID
Crime Reporting System	Search Crime	ID- 11
Test Case Description	Go to search bar and do not enter any crime type	
Test Steps	Click on search bar Do not enter any crime type Click on search icon or press enter	
Test Data	Empty search bar tested	
Pre-Condition	Do not enter any crime type.	
Post-Condition	Show error message	
Expected Result	Show error message	
Actual Result	No result	
Status	Fail	

Table 6.11 Test Case of Search Crime

6.6.12 Form Submission with All the Required Entries

Project Name	Module Name	Test Case ID
Crime Reporting System	Form Submission	ID- 12
Test Case Description	Go to crime report page, input all the required entries and click on submit button	
Test Steps	Click on crime report page Enter all the required entries Click on the submit button	
Test Data	Users entered required form entries tested	
Pre-Condition	All the required entries must be filled.	
Post-Condition	Show message that crime report submitted successfully	
Expected Result	Form should be submitted successfully	
Actual Result	Crime report submitted successfully	
Status	Pass	

Table 6.12 Test Case of Form Submission**6.6.13 Input Date within Specified Period**

Project Name	Module Name	Test Case ID
Crime Reporting System	Input Date	ID- 13
Test Case Description	Go to crime report page, input date of crime within specified period and click on submit button	
Test Steps	Click on crime report page Input date of crime within specified period Click on the submit button	
Test Data	Users entered date of crime in the form tested	
Pre-Condition	Date of crime must be filled within mentioned period.	
Post-Condition	Show message that crime report submitted successfully	
Expected Result	Form should be submitted successfully	
Actual Result	Crime report submitted successfully	
Status	Pass	

Table 6.13 Test Case of Input Date in the Form

6.6.14 Input Date Prior to Specified Period

Project Name	Module Name	Test Case ID
Crime Reporting System	Input Date	ID- 14
Test Case Description	Go to crime report page, input date of crime prior to specify period and click on submit button	
Test Steps	Click on crime report page Input date of crime prior to specified period Click on the submit button	
Test Data	Users entered date of crime in the form tested	
Pre-Condition	Date of crime must be filled prior to specified period.	
Post-Condition	Show message that date before January 01, 2022 cannot be input	
Expected Result	Show error message	
Actual Result	Crime report submission unsuccessful	
Status	Fail	

Table 6.14 Test Case of Input Date in the Form**6.6.15 Input Date After the Specified Period**

Project Name	Module Name	Test Case ID
Crime Reporting System	Input Date	ID- 15
Test Case Description	Go to crime report page, input date of crime after the current date and click on submit button	
Test Steps	Click on crime report page Input date of crime after the current date Click on the submit button	
Test Data	Users entered date of crime in the form tested	
Pre-Condition	Date of crime must be filled after the current date.	
Post-Condition	Show message that date after the current date cannot be input	
Expected Result	Show error message	
Actual Result	Crime report submission unsuccessful	
Status	Fail	

Table 6.15 Test Case of Input Date in the Form

6.6.16 Form Submission with Incomplete Required Entries

Project Name	Module Name	Test Case ID
Crime Reporting System	Form Submission	ID- 16
Test Case Description	Go to crime report page, input incomplete required entries and click on submit button	
Test Steps	Click on crime report page Enter incomplete required entries Click on the submit button	
Test Data	Users submitted incomplete form tested	
Pre-Condition	Enter incomplete required entries.	
Post-Condition	Show message that form is incomplete	
Expected Result	Show error message	
Actual Result	Crime report submission unsuccessful	
Status	Fail	

Table 6.16 Test Case of Form Submission**6.6.17 Form Submission with Empty Required Entries**

Project Name	Module Name	Test Case ID
Crime Reporting System	Form Submission	ID- 17
Test Case Description	Go to crime report page, keep all the required entries empty and click on submit button	
Test Steps	Click on crime report page Keep the required entries empty Click on the submit button	
Test Data	Users submitted empty form tested	
Pre-Condition	Keep required entries empty.	
Post-Condition	Show message that empty form cannot be submitted	
Expected Result	Show error message	
Actual Result	Crime report submission unsuccessful	
Status	Fail	

Table 6.17 Test Case of Form Submission

6.6.18 Delete button is working properly

Project Name	Module Name	Test Case ID
Crime Reporting System	Delete	ID- 18
Test Case Description	Go to the admin page select a blog and tab on the delete button, here the button is working properly	
Test Steps	Go to the admin page Select a crime blog Click on the delete button	
Test Data	Admin applied for deleting a blog data tested	
Pre-Condition	Direct click on the delete button.	
Post-Condition	Successfully deleted the crime blog message will be shown	
Expected Result	Crime blog should be deleted successfully	
Actual Result	Successfully deleted the crime blog	
Status	Pass	

Table 6.18 Test Case of Delete**6.6.19 Delete button is not working properly**

Project Name	Module Name	Test Case ID
Crime Reporting System	Delete	ID- 19
Test Case Description	Go to the admin page select a blog and tab on the delete button, here the button is not working properly	
Test Steps	Go to the admin page Select a crime blog Click on the delete button	
Test Data	Admin applied for deleting a blog data tested	
Pre-Condition	Direct click on the delete button.	
Post-Condition	Unsuccessful in deleting the crime blog message will be shown	
Expected Result	Crime blog should be deleted successfully	
Actual Result	Unsuccessful in deleting the crime blog	
Status	Fail	

Table 6.19 Test Case of Delete

6.6.20 Approve button is working properly

Project Name	Module Name	Test Case ID
Crime Reporting System	Approve	ID- 20
Test Case Description	Go to the admin page select a blog and tab on the approve button, here the button is working properly	
Test Steps	Go to the admin page Select a crime blog Click on the approve button	
Test Data	Admin applied for approving a blog data tested	
Pre-Condition	Direct click on the approve button.	
Post-Condition	Successfully approved the crime blog message will be shown	
Expected Result	Crime blog should be approved successfully	
Actual Result	Successfully approved the crime blog	
Status	Pass	

Table 6.20 Test Case of Approve**6.6.21 Approve button is not working properly**

Project Name	Module Name	Test Case ID
Crime Reporting System	Approve	ID- 21
Test Case Description	Go to the admin page select a blog and tab on the approve button, here the button is not working properly	
Test Steps	Go to the admin page Select a crime blog Click on the approve button	
Test Data	Admin applied for approving a blog data tested	
Pre-Condition	Direct click on the approve button.	
Post-Condition	Unsuccessful in approving the crime blog message will be shown	
Expected Result	Crime blog should be approved successfully	
Actual Result	Unsuccessful in approving the crime blog	
Status	Fail	

Table 6.21 Test Case of Approve

6.6.22 Edit button is working properly

Project Name	Module Name	Test Case ID
Crime Reporting System	Edit	ID- 22
Test Case Description	Go to the admin page select a blog , tab on the edit button, edit and submit the data, here the button is working properly	
Test Steps	Go to the admin page Select a crime blog Click on the edit button Edit the user input data Click on the submit button	
Test Data	Admin applied for editing a blog data tested	
Pre-Condition	Direct click on the edit button.	
Post-Condition	Successfully edited the crime blog data will be updated	
Expected Result	Crime blog should be edited successfully	
Actual Result	Successfully edited the crime blog	
Status	Pass	

Table 6.22 Test Case of Edit

6.6.23 Edit button is not working properly

Project Name	Module Name	Test Case ID
Crime Reporting System	Edit	ID- 23
Test Case Description	Go to the admin page select a blog , tab on the edit button, edit and submit the data, here the button is not working properly	
Test Steps	Go to the admin page Select a crime blog Click on the edit button Edit the user input data Click on the submit button	
Test Data	Admin applied for editing a blog data tested	
Pre-Condition	Direct click on the edit button.	
Post-Condition	Unsuccessful in editing the crime blog message will be shown	
Expected Result	Crime blog should be edited successfully	
Actual Result	Unsuccessful in editing the crime blog	
Status	Fail	

Table 6.23 Test Case of Edit**6.6.24 Logout button is working properly**

Project Name	Module Name	Test Case ID
Crime Reporting System	Logout	ID- 24
Test Case Description	Go to the logout page and tab on the logout button, here the button is working properly	
Test Steps	Go to the logout page Click on the logout button	
Test Data	Users and admin applied for logging out data tested	
Pre-Condition	Direct click on the logout button must be logged out.	
Post-Condition	Successfully logged out message will be show	
Expected Result	Should be logged out successfully	
Actual Result	Successfully logged out	
Status	Pass	

Table 6.24 Test Case of Logout

6.6.25 Logout button is not working properly

Project Name	Module Name	Test Case ID
Crime Reporting System	Logout	ID- 25
Test Case Description	Go to the logout page and tab on the logout button, here the button is not working properly	
Test Steps	Go to the logout page Click on the logout button	
Test Data	Users and admin applied for logging out data tested	
Pre-Condition	Direct click on the logout button must be logged out.	
Post-Condition	Unsuccessful in logging out message will be show	
Expected Result	Should be logged out successfully	
Actual Result	Unsuccessful in logging out	
Status	Fail	

Table 6.25 Test Case of Logout

CHAPTER 7

IMPLEMENTATION

7.1 User-Interface

The user-interface (UI) is a point of human-computer interaction and communication. This can include display screens, keyboards, a mouse and the other devices. It is also a way through which a user interacts with an application or a website.

The growing dependence of many business on web applications and mobile applications has led many companies to place increased priority on UI in an effort to improve the user's overall experience.

7.1.1 Home Page

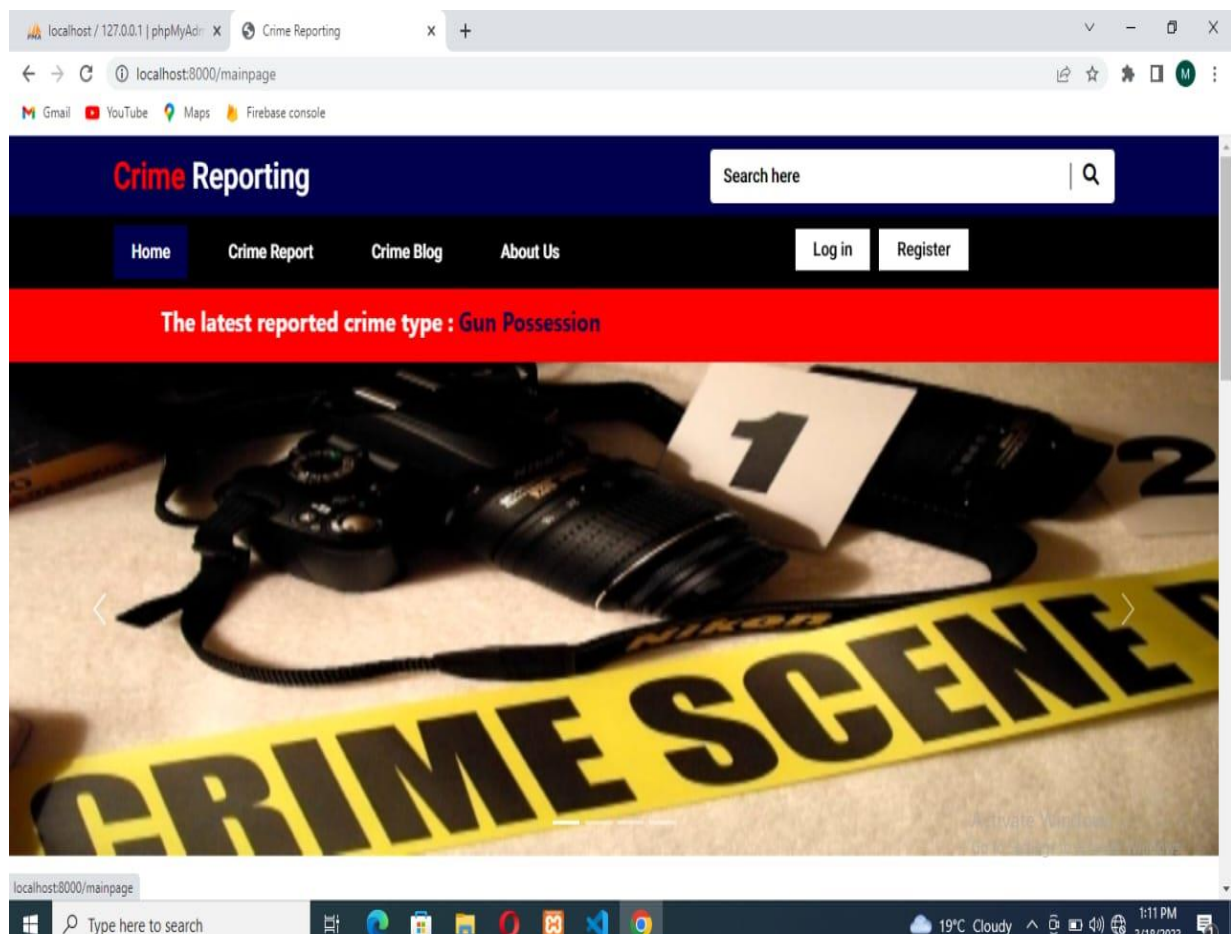


Figure 7.1: Home Page

7.1.2 Slider

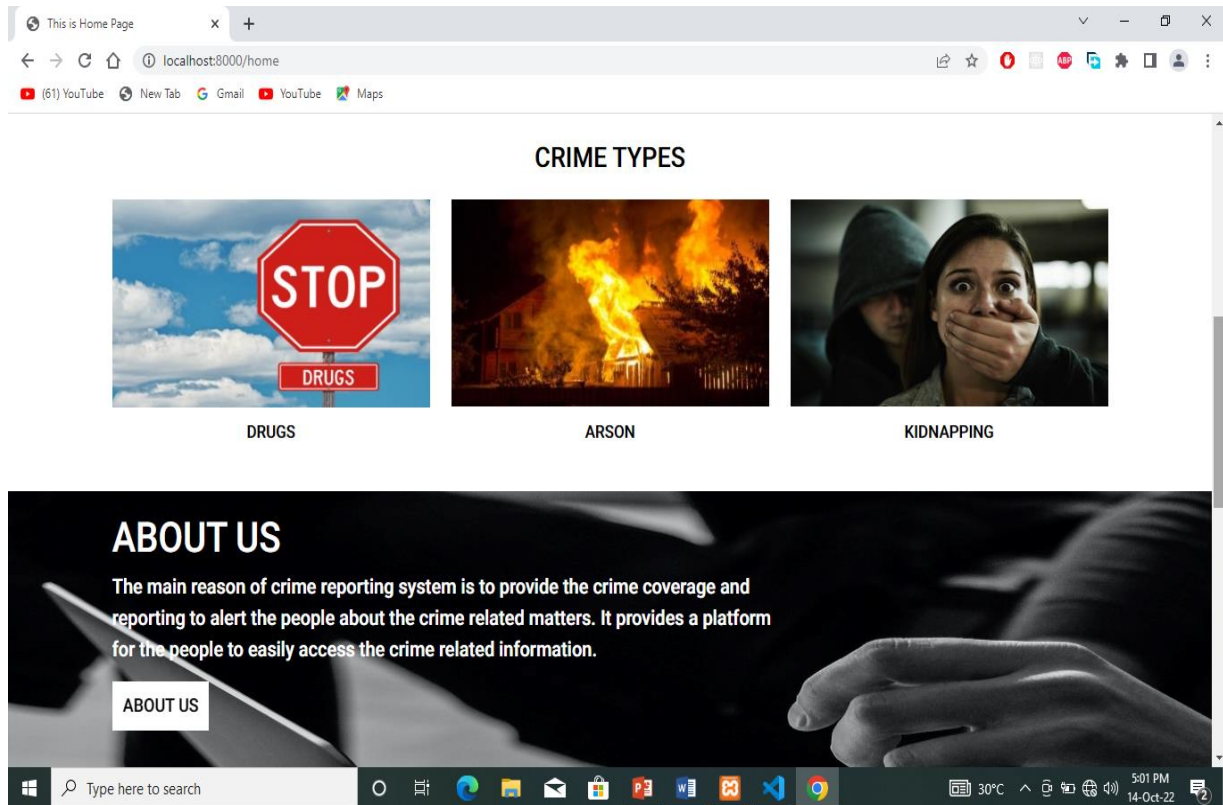


Figure 7.2 Slider

7.1.3 Footer

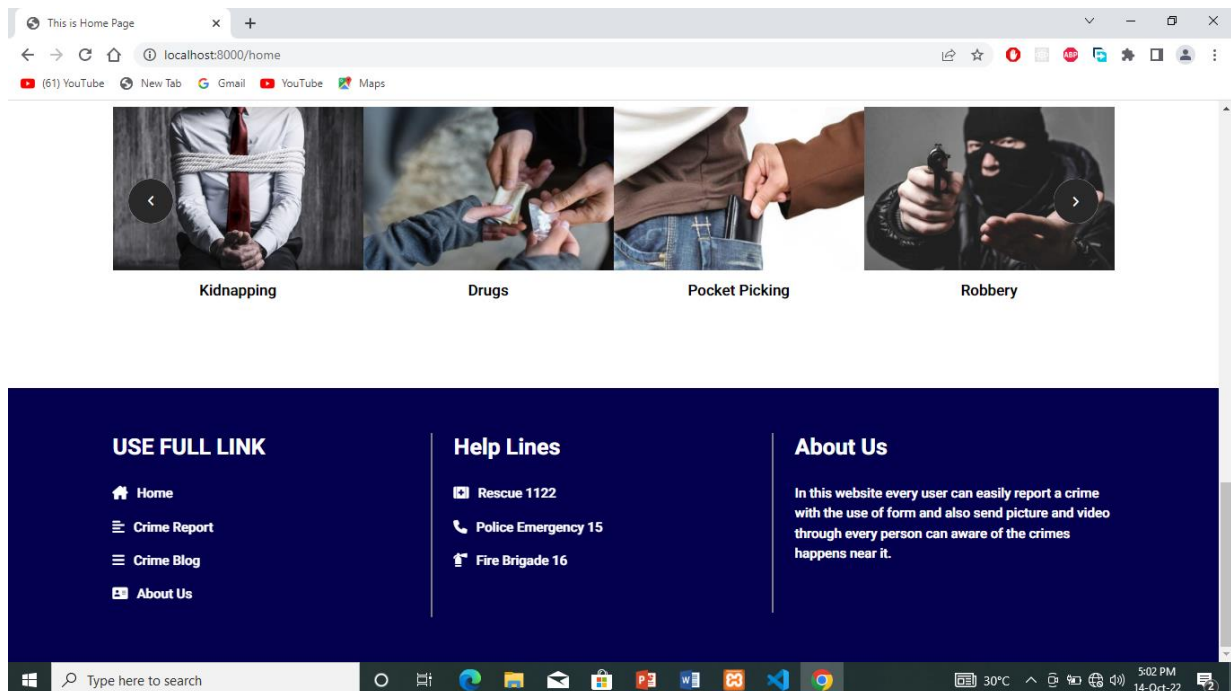
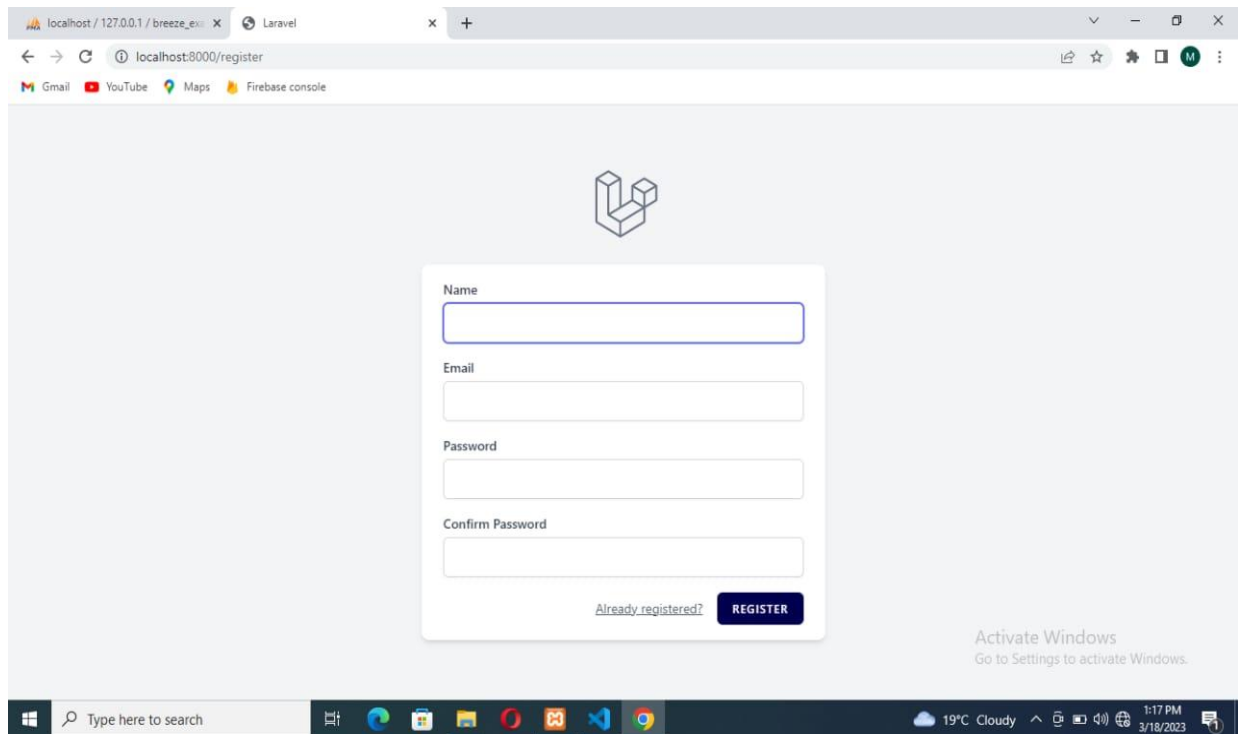


Figure 7.3 Footer

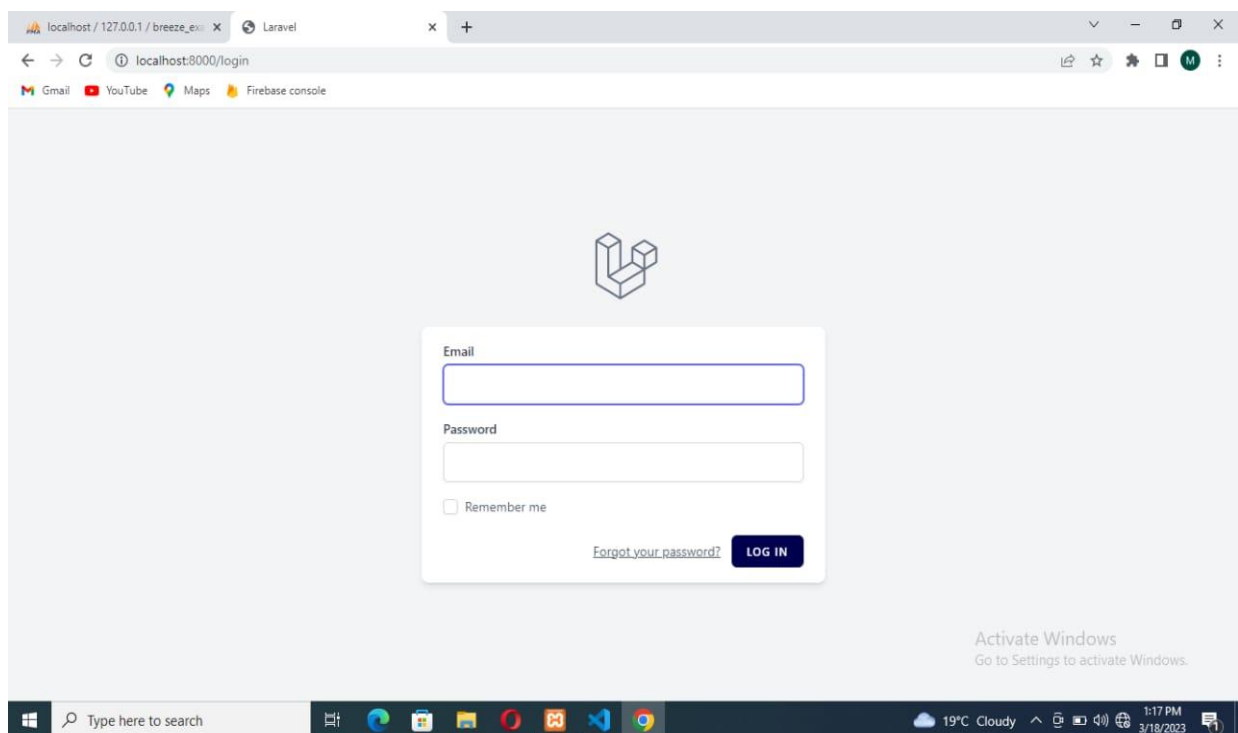
7.1.4 Registration Page



The screenshot shows a web browser window with the address bar displaying 'localhost:8000/register'. The page features a light gray background with a central white registration form. At the top of the form is a logo consisting of three stacked cubes. The form contains four input fields: 'Name', 'Email', 'Password', and 'Confirm Password'. Below the 'Confirm Password' field is a link that says 'Already registered?' and a dark blue button labeled 'REGISTER'. In the bottom right corner of the page, there is a 'Activate Windows' watermark with the text 'Go to Settings to activate Windows.' The Windows taskbar is visible at the bottom of the screen, showing the search bar, task view button, and several application icons. The system tray on the right indicates a temperature of 19°C, cloudy weather, and the time 1:17 PM on 3/18/2023.

Figure 7.4 Registration Page

7.1.5 Login Page



The screenshot shows a web browser window with the address bar displaying 'localhost:8000/login'. The page features a light gray background with a central white login form. At the top of the form is a logo consisting of three stacked cubes. The form contains two input fields: 'Email' and 'Password'. Below the 'Password' field is a checkbox labeled 'Remember me'. At the bottom of the form is a link that says 'Forgot your password?' and a dark blue button labeled 'LOG IN'. In the bottom right corner of the page, there is a 'Activate Windows' watermark with the text 'Go to Settings to activate Windows.' The Windows taskbar is visible at the bottom of the screen, showing the search bar, task view button, and several application icons. The system tray on the right indicates a temperature of 19°C, cloudy weather, and the time 1:17 PM on 3/18/2023.

Figure 7.5 Login Page

7.1.6 Crime Report Page for Compulsory Things (Part 1)

The screenshot shows a web browser window with the URL `localhost:8000/crimepage`. The page has a dark blue header with the title "Crime Reporting" and a search bar. Below the header is a navigation menu with links: Home, Crime Report, Crime Blog, and About Us. The main content area is titled "Compulsory things to report a crime" in red. It contains several form fields:

- Name:** A text input field with the placeholder "Enter Your Name".
- Details of Crime:** A large text area with the placeholder "Details of Crime".
- Email:** A text input field with the placeholder "Enter Your Email".
- Mobile No:** A text input field with the placeholder "Enter Your 11 digit Mobile Number".
- Date:** A date picker with the placeholder "mm/dd/yyyy".
- Add Crime Image:** A file upload button labeled "Choose file" and the text "No file chosen".

Below the Name field, there is a checkbox with the text "Do you want to hide your name in crime blog then click the check box". The page also features a Windows taskbar at the bottom with various application icons and a system tray showing the date and time.

Figure 7.6 Crime Report Page for Compulsory Things

7.1.7 Crime Report Page for Compulsory Things (Part 2)

The screenshot shows the same web browser window as Figure 7.6, but with additional form fields visible. The "Optional" section is highlighted in green. It includes:

- Time:** A time picker with the placeholder "--:--".
- Location:** A large text area for entering the location.
- Crime Type:** A dropdown menu with the placeholder "Select".

The "Details of Crime" text area and the "Add Crime Image" file upload button are also visible. The Windows taskbar at the bottom shows the system tray with the date and time.

Figure 7.7 Crime Report Page for Compulsory Things (Part 2)

7.1.8 Crime Report Page for Optional Things

Optionals

Add Crime Video: ویڈیو:

Choose File No file chosen

Upload Document of Crime: اپ لوڈ فائل:

Choose File No file chosen

Audio Upload:

Choose File No file chosen

SUBMIT

Figure 7.8 Crime Report Page for Optional Things

7.1.9 Crime Blog Page

Location: G83P+VG2, Firdous Mkt Rd, Gulberg III, Lahore, Punjab, Pakistan

Date: 04 February, 2023

Time: 11:51

Crime Type: Robbery

Crime Details: glhjfljhflhjgl

Document : CRS Doc Final.pdf

Introduction to Laravel

0:00 / 10:05

0:00 / 0:10

Activate Windows
Go to Settings to activate Windows.

Figure 7.9 Crime Blog Page

7.1.10 About Us Page

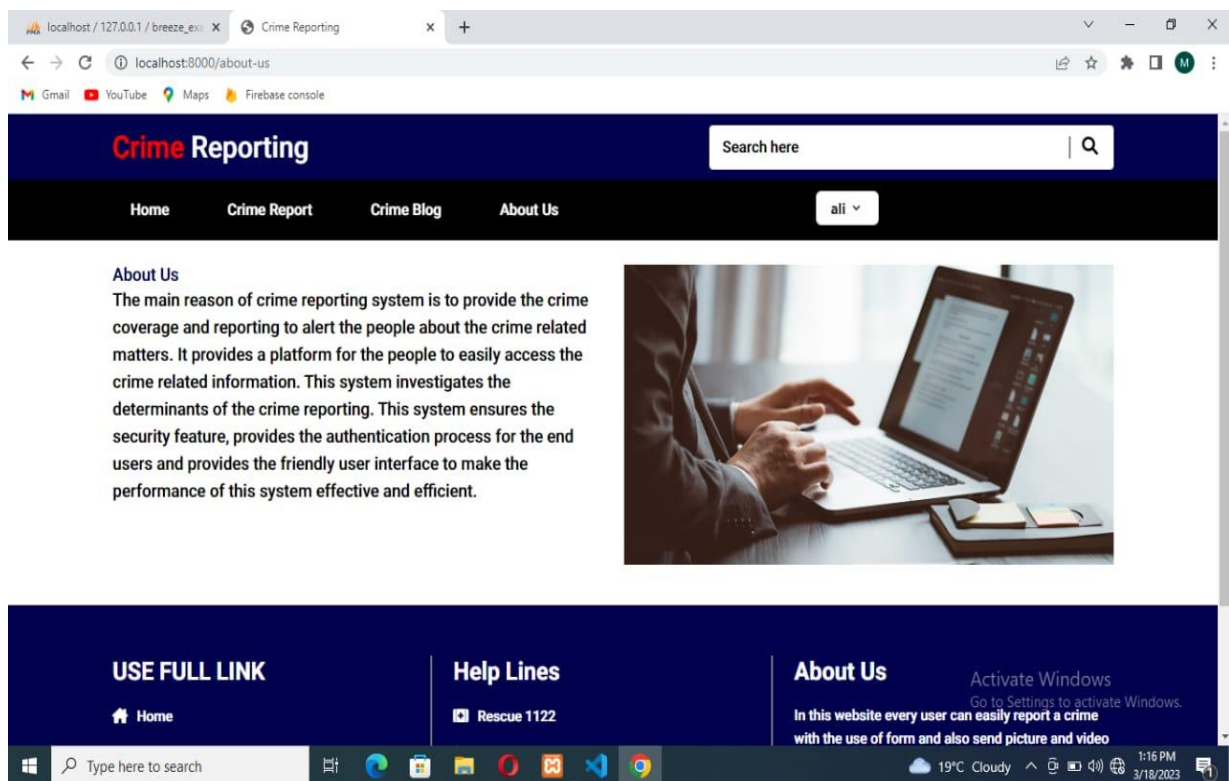


Figure 7.10 About Us Page

7.1.11 Admin Login

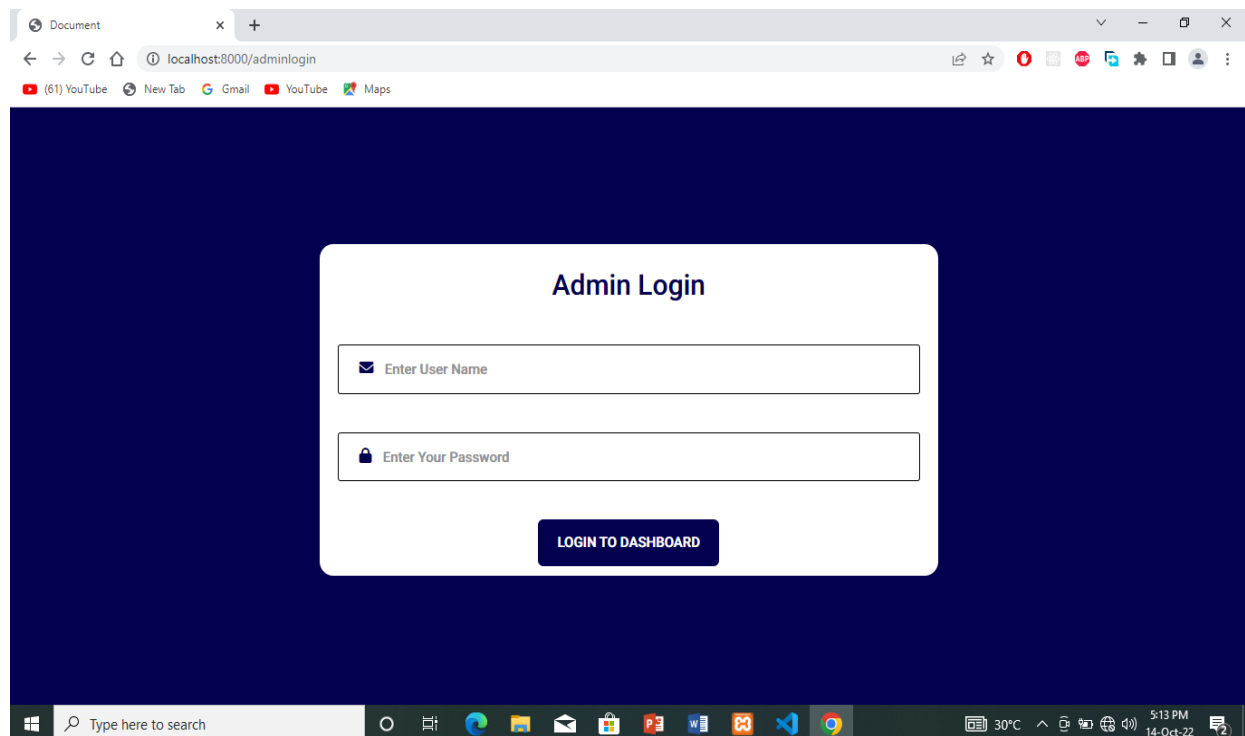


Figure 7.11 Admin Login Page

7.1.12 Admin Panel (Not Approved)

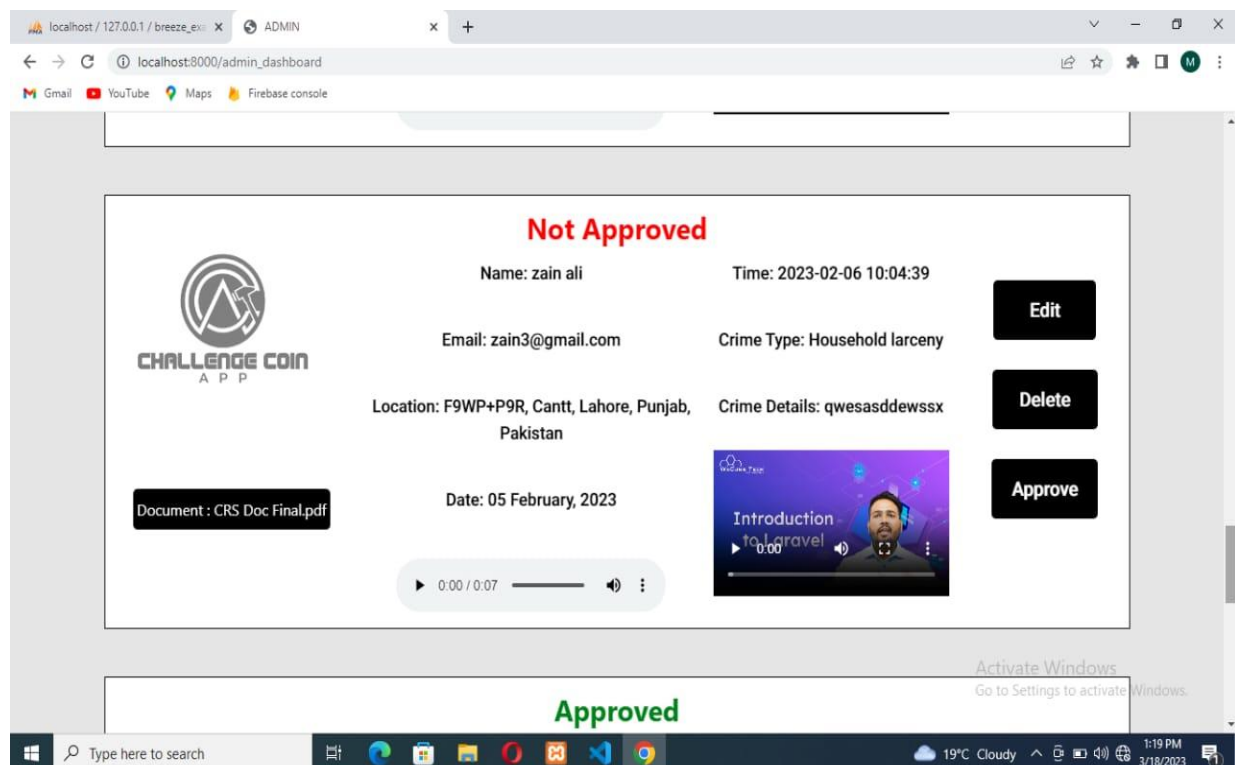


Figure 7.12 Admin Panel Page (Approved)

7.1.13 Admin Panel (Approved)

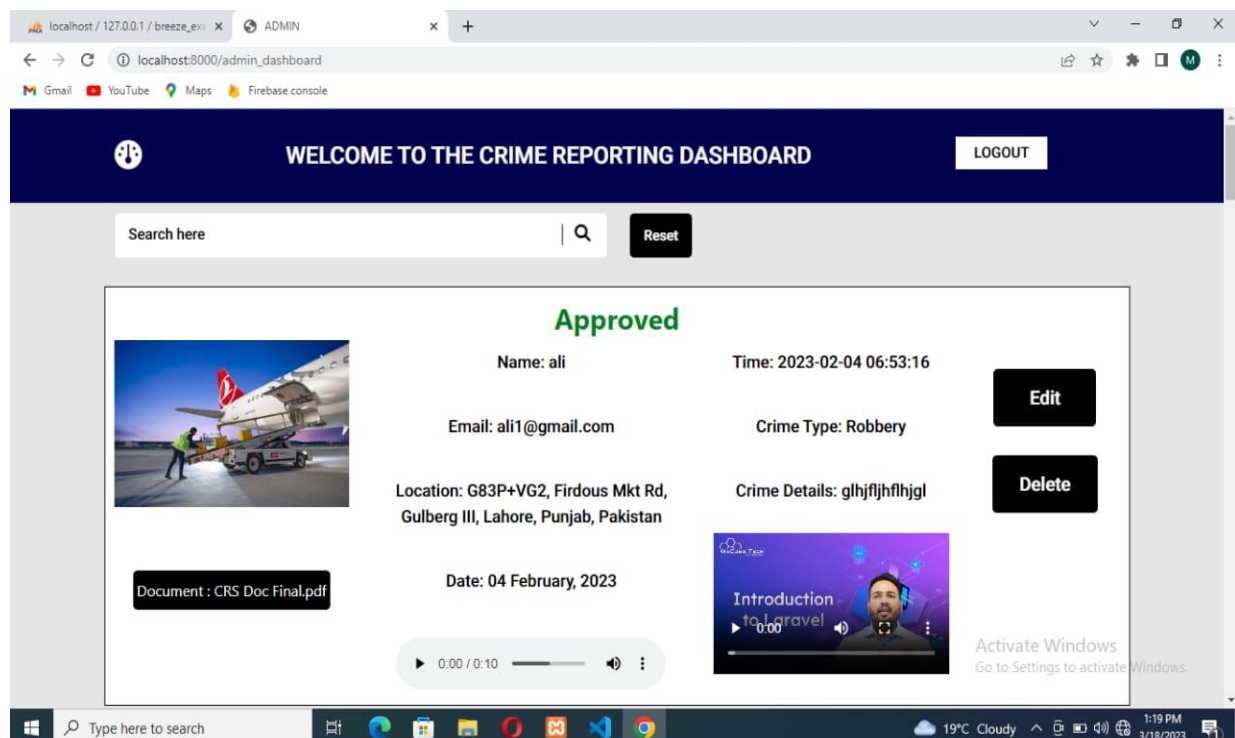


Figure 7.13 Admin Panel Page (Not Approved)

CHAPTER 8

CONCLUSION AND FUTURE WORK

8.1 Conclusion

The main purpose of developing the Crime Reporting System is for the welfare and safety of the public. A system is created which is well accessible to the general public as well as government officials. Due to some factors in today's time public sometimes does not trust the government officials, due to this they don't ever want to go to the police station and file a report. So, this system will reconstruct the bridge between the two - public and government officials respectively. So now if anyone experiences or observes a crime or a misconduct and does not want to file a complaint or contact the officials directly, they can upload it on our website and convey the news to the masses and officials from their home without revealing their identities. They can update any incident which was violating the law. In manual systems, all the crime records are manipulated by government officials and mostly, we can only learn their side of story. So, there is a need of a system that reflects the opinion of a common man. By using this system, the opinion of a victim or an observer related to the crime can be learned without getting government personnel involved in it. This makes this product very beneficial and favorable. The conclusion of this system includes that Crime Reporting System is a web-based application which is built on PHP, so, it is platform independent. It means that it can run on various operating systems such as Windows, Linux, Unix, Mac OS. etc. CRS is based on a very simple and non-complex approach. MySQL database is used to store the data of the system. The messages among visitors, users, and admins are conveyed through E-mail system. The users can also upload the pictures or videos of the crime as per they have which will then be displayed on crime blog page. The consumption of the time taken by Crime Reporting System is lowered as compared to the manual system.

8.2 Limitations

- Only video of length up to five minutes can be uploaded.
- This Website can only be used by technical users (such as mobile users).
- The authentication of crime that is reported can only be done manually.
- The user authentication system is not too secured and trusted.

8.3 Future Work

- The length of video will be increased according to the database.
- The statistical analysis of the rate of crime at a particular area can be shown.
- We will improve user authentication through user face recognition.
- Machine learning can also be used for the authentication of the crime that is reported.

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APPENDIX

1. INTRODUCTION

A crime is a deliberate act that causes physical or psychological harm, damage to or loss of property, and is against the law. There are lots of different types of crime and nearly everyone will experience a crime at some point in their lives. Crime affects people from all backgrounds, locations and ages. The causes of crime are complex. Poverty, parental neglect, low self-esteem, alcohol and drug abuse can be connected to why people break the law. Some are at greater risk of becoming offenders because of the circumstances into which they are born.

Crime reporting has always been a central part of news coverage in the media societies, because crime stories are usually very useful. There are several reasons why should people want to read about or listen to stories of crime. The audience always want an explanation of why crimes happen.

Now-a-days computer has started to play a very important role in journalism. The journalism through computer is the application of computing and a way of thinking that how all the activities work together in which the news information gathering, organization, sense making, communication, presentation and public response to news information are included. These all activities upholding core values of journalism such as accuracy in the news. (Diakopoulos, 2018).

The main reason of Crime Reporting System is to provide the crime coverage and reporting to alert the people about the crime related matters. It provides a platform for the people to easily access the crime related information. This system investigates the determinants of the crime reporting. This system ensures the security feature, provides the authentication process for the end users and provides the friendly user interface to make the performance of this system effective and efficient.

1.1 Classification of Crime

More important is the classification of crimes according to the level of punishment. The crimes are generally graded into four categories which are given: felonies, misdemeanors, felony-misdemeanors, and infractions. Often the criminal intent element affects the grading of crime.

1.1.1 Felonies

Felonies are the most serious crimes. They are either supported by a heinous intent, like the intent to kill, or accompanied by an extremely serious result, such as loss of life, grievous injury, or destruction of property.

1.1.2 Misdemeanors

Misdemeanors are less serious than felonies, either because the intent requirement is of a lower level or because the result is less extreme. Misdemeanors are usually punishable by jail time of one year or less.

1.1.3 Felony-Misdemeanors

Felony-misdemeanors are crimes that the government can prosecute and punish as either a felony or a misdemeanor, depending on the particular circumstances accompanying the offense.

1.1.4 Infractions

Infractions, which can also be called violations, are the least serious crimes and include minor offenses such as jaywalking and motor vehicle offenses.

1.2 List of some crimes that can be reported

- **Kidnapping:** Kidnapping is defined as the carrying away of a person by force.
- **Homicide:** Homicide includes crimes such as first and second-degree murder or involuntary manslaughter.
- **Rape:** It means sexual assault.
- **Theft:** It refers to a type of crime in which a person takes another person's property and carries it away.

- **Embezzlement:** It refers to a type of white-collar crime in which a person entrusted with the finances of another person or business illegally takes that money for their own personal use.
- **Arson:** Arson is the wilful and malicious burning of another property of a person or structure.
- **Receipt of Stolen Goods:** It is a crime to receive or purchase property that you know or believe to be stolen or otherwise obtained through theft.
- **Robbery:** It is the crime of taking or attempting to take anything of value by force, threat of force, or by putting the victim in fear.
- **Drug Crime:** A drug-related crime is a crime to possess, manufacture, or distribute drugs classified as having a potential for abuse.

1.3 Existing System

1.3.1 True Crime Daily

In this website, news about the crimes occurring all around United States is showed in the form of blogs and videos. The information is collected by Admin from different sources.

Drawbacks

- The system relies on the different sources.
- The admin may not be able to reach out every criminal incident occurring in the scope of his system.
- The admin controls all the perspectives of the system, so the view of public about the incident cannot be displayed.

1.3.2 True Crime Reader

True Crime Reader is a site dedicated to the category of true crime-reviews, news, films and television adaptations. In this website, news about the crimes is collected from different sources and showed in the form of text and images.

Drawbacks

- The system relies on the different sources.
- The information is only in the form of text and images.

- The admin may not be able to reach out every criminal incident occurring in the scope of his system.

1.4 Proposed System

In this system, crime is reported by the user who represents the ordinary public. So, public's view about the incident can be observed in the system. The crime is directly reported by the user, so this system does not rely on other resources (like news channels and magazines etc.). Along with text and images, audios and videos can also be uploaded in this website. A user can report crime even if he does not know how to write.

1.5 Gantt chart

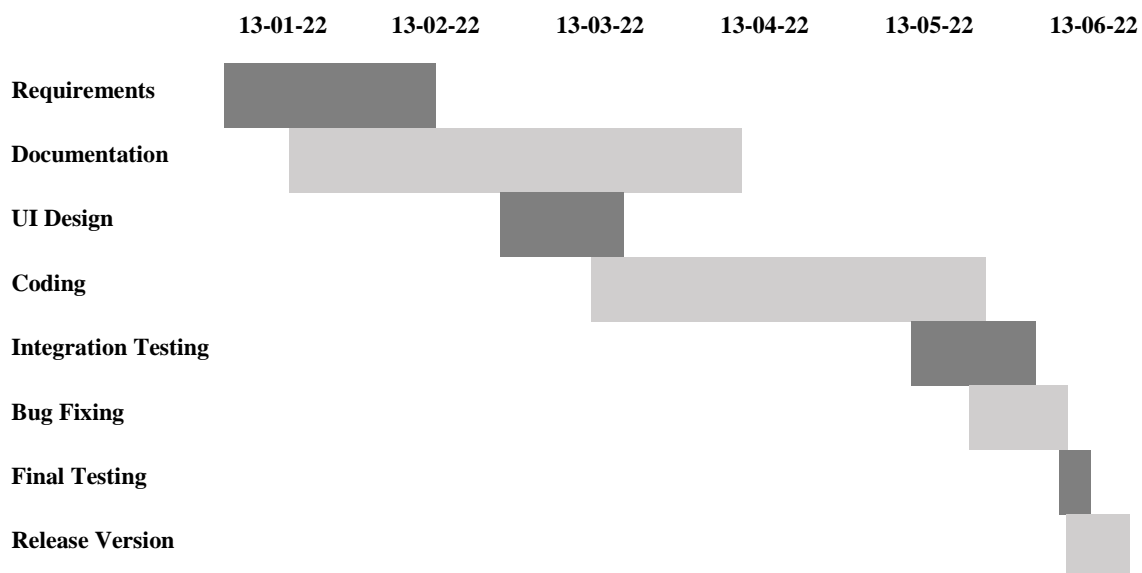


Table 1.1 Gantt Chart of CRS

1.6 Project Overview Statement

Project Title: Crime Reporting System	
Group Leader: Malik Ali	
Project Goal: To help the Citizens to access the different modules of Crime Reporting System from a single platform.	
Project Objectives	
Sr.#	Objectives
1	To manage User Authentication System.
2	To manage Crime Reporting System.
3	To manage Crime Blog System.
4	To manage Image, Audio & Video upload system.
Project Success Criteria: All the modules will be integrated at one platform and the admin can access the system at one point.	
Organization Address: Govt. Islamia Graduate College, Civil Lines, Lahore.	
Target End Users: The following are target users for C.M.S. <ul style="list-style-type: none"> • All Users • Admin Staff 	
Project Type:	<input type="checkbox"/> Development
Development Technology:	<input type="checkbox"/> PHP <input type="checkbox"/> MySQL
Platform:	<input type="checkbox"/> Web Based Application
Project Supervisor:	<input type="checkbox"/> Mian M. Munir-ud-Din
Approved By:	
Date:	

2. LITERATURE REVIEW

The word Criminology originated in 1890. The general meaning of the term is the scientific study of crime as a social phenomenon, of criminals and of penal institutional. Criminology is a branch of criminal science which deals with crime causation, analysis and prevention of crime. Criminology as a branch of knowledge is concerned with those particular conducts of human behavior which are prohibited by society. (Nirmala, 2009)

Violence is a controversial and highly emotive topic, arousing both fear and fascination. We can be attracted to acts of violence or violent individuals in one context, repelled in another. Our perceptions of the individuals involved their brutality, their vulnerability, their culpability also inform our judgments of their behavior. On the one hand, unprovoked attacks of violence can unleash a wave of public anger and abhorrence. (Maguire et al., 2013)

A general perspective stating that the causes of criminal behavior can be found in the mind of the individual. This theory believes that criminal activity is the result of a defective, deviant, or inadequate personality of a person. Examples of deviant personality traits include hostility, impulsiveness, aggression, and sensation-seeking. (Akers & Sellers, 2013)

Today, criminal investigation is a broad term encompassing a wide range of specialities that aim to determine how events occurred, and to establish an evidence-based fact pattern to prove the guilt or innocence of an accused person in a criminal event. In some cases, where a person is found committing the criminal act and apprehended at the scene, the criminal investigation is not a complex undertaking. The investigation team can easily go through the crime scene and solve the matter. (Gehl & Plecas, 2017).

Crime as a concept is very complex and very incorporates a very large range of behaviors. For example from petty shop theft to violent assault, large scale corporate crimes and murder. Crime is also a social construction and behavior defined as a criminal vary across time and place. (Hayes & Prenzler, 2019)

Through crime-reporting citizens make their security needs very well without any interruption of the police. In crime reporting system the data will kept in soft form such as small medium like mobiles, tablet or laptop. All the users are able to enter the data of the crime that they have seen or observed easily in the system. (Torrente et al., 2017).

As in the increase in the ratio of the crimes, public want to report the crime to the high level authorities. But the fear in the mind of the peoples stops them to report the crime. All the peoples have concerns regarding a family member that the person who commit the crime can harm him or his family. We want to provide a reliable and strong medium for the citizens on which they is free and able to report crime without any fear. (Cole & Stickings, 2017).

In June 2014 the Coral Project launched with a \$3.9M grant from the Knight Foundation. The main reason of this foundation is to provide a platform for the community to achieve the goals that they set. The main goals of this project is to provide a platform for the citizens to read all the related stuff and to empower the publishers to report with the support and encouragement of the public. (Diakopoulos, 2017)

News media around the world have given extensive coverage to the issue of disinformation. This highlights that while the negative effects of social media have dominated the discussion. They use the United States and Sweden as case studies about how digital media have helped to achieve electoral success and shift the political direction in both countries. (Schroeder, 2019).

The uncertainty concerning the age of a person had led to discussions on what methods to use in order to determine the age of a person. The issue was also raised in criminal cases where the age of a suspect was unclear and concerned, more precisely, the burden of proof regarding the age of a suspect and the legal grounds for a body examination when estimating an age of suspect. In this article I will with reference to the fundamental principles of proportionality, predictability, equal treatment and consistency the legal grounds for a body examination when there is an uncertainty concerning age and the suspect claims to be under the age of criminal responsibility. (Nordlöf, 2021)

The continuous authentication has a great importance to maintain the security level of a system. It is very useful for any system for the effective and efficient performance. (Lin et al., 2017).

The Crime Reporting System is a web based system to register the complaint online. Today, rate of crime is highly grown and not in the control of the authorities. There is no transparency in the police department and most of the peoples don not believe in them that their problems will be recognized or not. They provided them a platform on which they can easily describe their problems and the crimes that what they are¹ facing. This system was able to registered the reports from people by online method and is very helpful to the police department in identifying criminals. In that system, any person can register their report online. Generally, many crimes seen by the public will not reach to the police due to many reasons like fear, lack of time, ignorance. (Anees & Ahmad, 2017).

In the human societies, criminal activities have always been a part of their lives. Even today, in a very advanced world many different kinds of crimes are still committed in almost every social environment. But all those people who commit crimes are not representative of the majority of their community. Members of these communities always wish to report crime but they do not do this because of the fear which they are faced by the society. They feel a fear of being identified. So most of the crimes are unreported, and investigations fail to gain key evidence from witnesses. The Crime Reporting System provides an environment which gives reliability for all the users of not being victimized and can report crime without any fear. (Shih et al., 2019).

Most of the crimes committed are unreported to the authorities. Given this fact, Crime Reporting System through online is always the active participation of the citizens. The main idea of the Crime Reporting System is to spread the crime information to the community. The project specifically looks into the crime detection and prevention. It provides the safe and powerful authority to all the users to report the crime without any fear. (Ganiron Jr et al., 2019).

3. METHODOLOGY

There are many different methods and models which are used by the people according to their work and planning for the development of the software or project. Here, Iterative Waterfall Model is used for development of the Crime Reporting System because the working of this model and reliability of this model make it most rewarding model. It is perfect methodology for this project after analysis of different methodologies. To fulfill the software development requirements, the Iterative Waterfall Model is selected.

The Iterative Waterfall Model is the oldest and the most well-known SDLC model. This model is widely used in development projects by many major companies. The special feature of this model is its sequential steps. It goes downward through the phases of requirements analysis, design, coding, testing, and maintenance. Moreover, it ensures the design flaws before the development of a product.

3.1 Iterative Waterfall Model

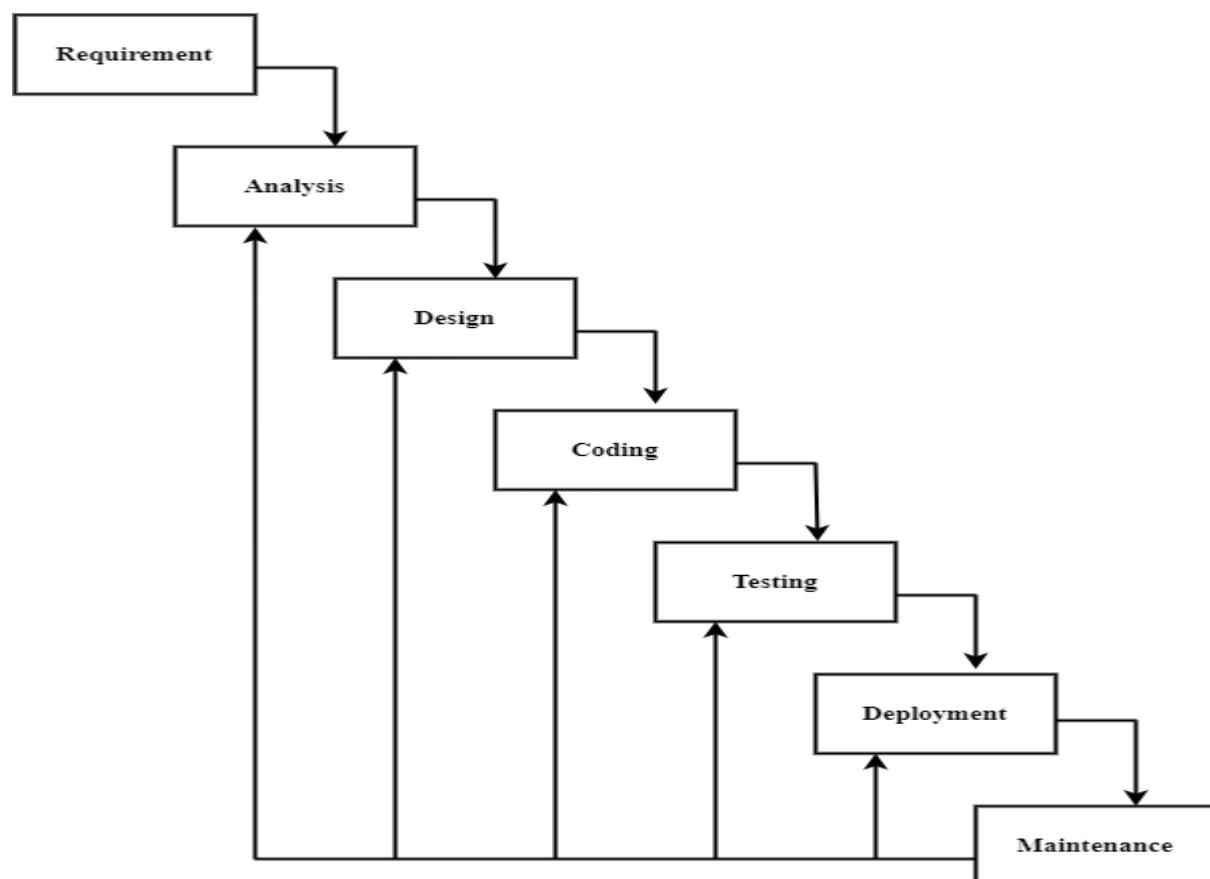


Figure 3.1 Iterative Waterfall Model

3.2 Modules

3.2.1 User Authentication System

In this module, all the login details and user authentication process will be managed. There are two types of accounts i.e. Admin and User accounts.

3.2.2 Crime Reporting System

In this module, the user is able to report any type of crime that he come to know about. The details of the crime is verified before uploading the data on the blog.

3.2.3 Crime Blog System

In this module, the details of the crime is uploaded after verification process. Information on crimes in blogs especially valuable for those who are not familiar with tips for preventing being victimized.

3.2.4 Image and Video Upload System

In this section, a user can able to upload the image and video of the crime with an easy method to alert the community of the Crime Reporting System.

3.3 Front End Technologies

3.3.1 HTML

The HTML is used to display the body of our project in a significant manner. The HTML is used to make the front end design because it is a very powerful and impactful language for the front end development. The main body of this project has been written in HTML. In other words, all the web pages of Crime Reporting System are composed in HTML, which is used to display text, images and other stuff through a web browser.

3.3.2 CSS

CSS is used to design and to enable the separation of presentation and content, including layout, colors and fonts of the web pages of our project. It provides more flexibility and control in the specification of presentation of the web pages in Crime Reporting System. It increases the beautification of all the pages of the website and make our project more attractive and reliable.

3.3.3 Bootstrap

Bootstrap is used as a front-end framework for HTML, CSS and JavaScript for the developing of mobile-first and responsive system. Bootstrap increases the responsiveness of the project and can easily reachable for all type of devices. The bootstrap classes are used for the development of the web pages. All type of specifications of the web pages are set using the Bootstrap frame work in easy and flexible manner.

3.3.4 JavaScript

JavaScript makes our web pages dynamic and more interactive with the user. It is used to make the location section and manage the animation scripts in the project. All the users feel more flexibility when they visit this website.

3.4 Back End Technologies

3.4.1 MySQL

MySQL database is used to create the tables that store the content that is entered by the users in the forms of Crime Reporting System. It is used to store the images and all the related matter that will be feed in the database. The Admin can add, delete and update all the record in the database very efficiently and effectively by using the MySQL database. Here, MySQL is used with PHP.

3.4.2 Laravel (PHP)

In Laravel, a form is made that have text fields and image upload section. The Admin can manage the crime reporting by using this form and then show this information on the crime blog page. Users can easily enter the text information of the crime and upload the images in the elegant way. Laravel provides a very good interface for the users that makes a very strong interaction between the user and the system. All the information that is gathered by using the form then stored in the sequential manner so, it can easily be access by the authority.

3.5 Requirements

3.5.1 Hardware Requirements

- Dual core processor or above
- 128 GB hard-drive or above
- 4 GB ram or above
- Keyboard
- Mouse

3.5.2 Software Requirements

- Operating System: Windows OS
- Front End: HTML, CSS, Bootstrap, JavaScript, JQuery
- Back End: PHP (Laravel)
- Database: MySQL
- XAMPP (local host) for Windows