Criminal Management System

[1] Vishal Jayaswal, [2]Saumya Gupta, [3]Ricky Yadav, [4]Shivani Sharma
[1][2][3][4] Department of Computer Science and Engineering, MIET, Meerut

Abstract: The project aims at developing a criminal management system that will be capable of working online and which is effortlessly approachable to the police department along with all the other residents of the country also. The residents of the country can file the F.I.R. online and their F.I.R. will get registered in the nearby police station through centralized data handling. To keep away the fake users, system will make use of O.T.P. generation and QR code technique. Also, to access the previous records of the criminals correctly, system will use biometrics and images of the criminals for accuracy. The system also generates the report of crime rate in a particular area through statistical analysis of crime rate. It enables the interstation communication in real time for reduced time consumption. We intend to make a system which overcomes the shortcomings of primitive manual criminal management system and make it run parallel to the developing world.

I. INTRODUCTION

Criminal management system is developed using MySql, PHP and Apache HTTP Server. The main objective of this project is to enhance the crime recording operation quality of the security agencies exponentially. This system can work 24/7 and open to every resident of the country. It takes care of the social workers also by enabling a feature of data analysis based on crime records of the particular area. People will be able to judge the security in the areas on the basis of the number of crimes reported in the area. The older methods involves the problems of deficiency of funding, corruption and extortion and dearth of required skills and resources for recording data appropriately.

This system is also immune to uncensored manipulation by any corrupt police personnel, making it more secure and trustworthy. It results in reduction of threat level to the residents. No formal knowledge is required for the usage of this system, all the steps to be followed while using it are self explanatory. It will make the process of record keeping, a hassle free task, so that the precious time wasted in record keeping can be utilized in more important tasks. This system will make the manual system to be updated to digital system which is the need of an hour.
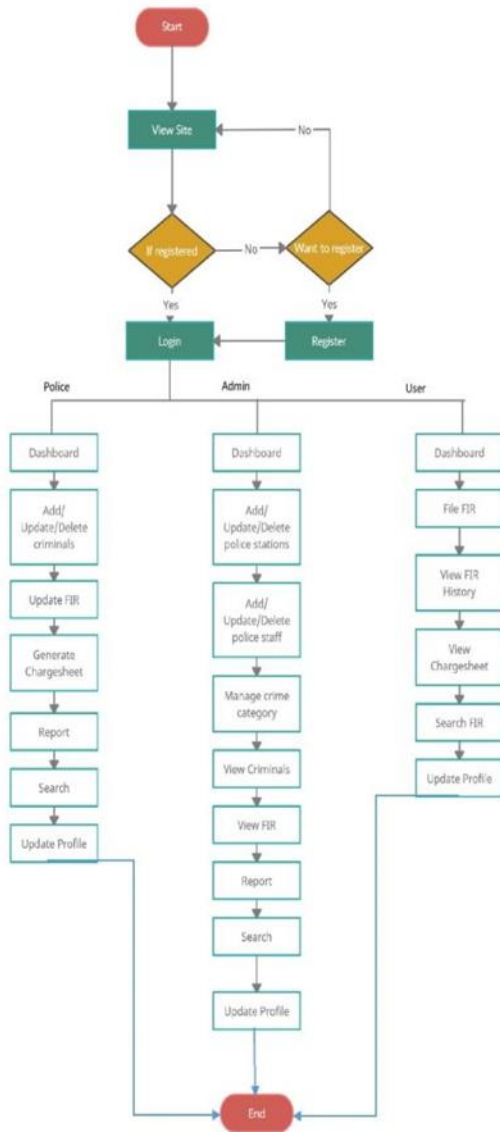

Process Data Flow Diagram
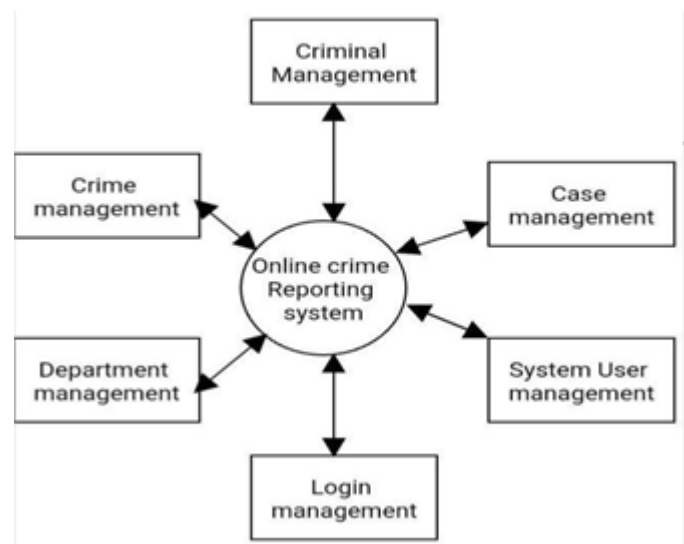
II. LITERATURE SURVEY

[11]Behavioural analysis of crime against women using a graph Based clustering approach.2017 International Conference on Computer Communication and Information (ICCI):

Crimes related to women are expanding in an unstoppable way in almost every part of India and Indian society's women are facing indignity, torment behaviour of many people, harassment and ill treatment towards them. It was in existence earlier also but recently this issues has come to light for consideration. As per the data issued by the

National Crime Records Bureau (NCRB) recently, crimes in which women are the victims are

increasing and they have doubled in last decade. A number of surveys and analysis have been done in the respective area covering the detection of patterns of crime, but no one has done a deep research on the crime happening against Indian women. The present paper narrates a behavioural research and analysis of crime that is done against women in India during the years 2001 to 2014.

The research assess the effectiveness of Info map clustering algorithm to detect various sections of society of different states and UTs in India on the basis of crimes. As this clustering approach makes use of graphs, all the states and the union territories are used as nodes or junctions of the graph and closeness among those junctions have been measured on the grounds of different forms of crimes. Each section or a community comprises a cluster of states or UTs which consist some closeness on the grounds of crime trends. In the starting, the proposed method will find and differentiate the communities on the grounds of present year data on crimes. Afterwards, in the end of a year when new crime data and analysis for the next year is accessible.

PROBLEM STATEMENT

To design a program for the police department to easily access the criminals' records online and analyse the crime rate of a particular area along witch some other additional features.
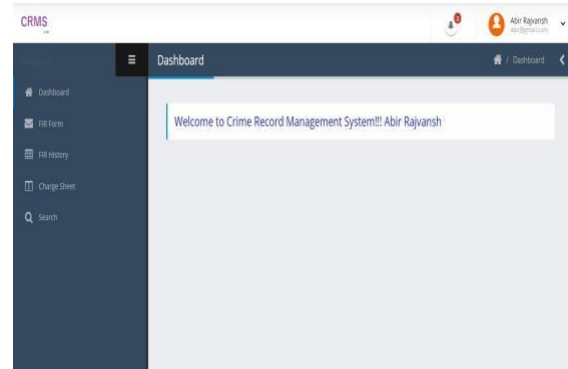
PROPOSED MODEL

The main purpose lies in online reporting at people's side and centralized data handling at police's side. The system is capable of overriding the shortcomings of manual record system where files of records go missing and Flow chart of Proposed Model which is prone to corruption also.

Modules

Admin Module :

Firstly, each of the station has to register with the software.
Once the prospective station's registration is completed with the software, they can upload the record.
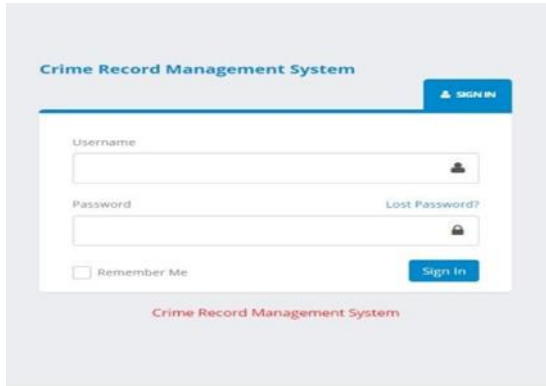
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#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID	int(10)			No	None		AUTO_INCREMENT
2	AdminName	varchar(120)	latin1_swedish_ci		Yes	NULL		
3	UserName	varchar(120)	latin1_swedish_ci		Yes	NULL		
4	MobileNumber	bigint(10)			Yes	NULL		
5	Email	varchar(200)	latin1_swedish_ci		Yes	NULL		
6	Password	varchar(120)	latin1_swedish_ci		Yes	NULL		
7	AdminRegdate	timestamp			Yes	current_timestamp()		

Admin table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ID	int(10)			No	None		AUTO_INCREMENT
2	PID	varchar(20)	utf8mb4_general_ci		Yes	NULL		
3	Name	varchar(200)	utf8mb4_general_ci		Yes	NULL		
4	MobileNumber	bigint(10)			Yes	NULL		
5	Email	varchar(200)	utf8mb4_general_ci		Yes	NULL		
6	Address	mediumtext	utf8mb4_general_ci		Yes			
7	Password	varchar(200)	utf8mb4_general_ci		Yes	NULL		
8	JoiningDate	timestamp			No	current_timestamp()		

User table

Users Module :

This is a police dashboard where the police can accept the absolute information using login password.

To access the online criminal management system we need to-
Add on users (police office bearers along with the background screening agencies) and allocate them various levels of entitlements.
Verify user login particulars and also make sure user level prerogatives to data.
Stock as well as recover all the data about crime and criminals.
Execute search tasks on the grounds of some defined standards.
Execute crime inspection and analysis along with the statistics to generate adequate reports • Now, generate the criminal reports.
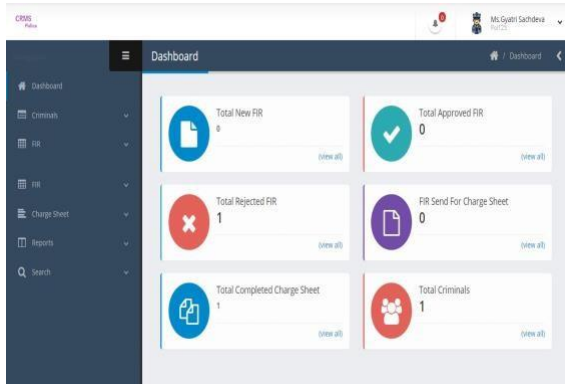
1. Police module :

Police office bearers can shortly view number of new FIRs, total approved FIR, chargesheet and criminals.
Police officers can search for criminals and FIR particulars with the aid of criminal ID and FIR number respectively.

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#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
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2	PoliceStationId	int(11)			Yes	NULL		
3	PoliceStationName	varchar(200)	utf8mb4_general_ci		Yes	NULL		
4	PID	varchar(20)	utf8mb4_general_ci		Yes	NULL		
5	Name	varchar(200)	utf8mb4_general_ci		Yes	NULL		
6	MobileNumber	bigint(10)			Yes	NULL		
7	Email	varchar(200)	utf8mb4_general_ci		Yes	NULL		
8	Address	mediumtext	utf8mb4_general_ci		Yes	NULL		
9	Password	varchar(200)	utf8mb4_general_ci		Yes	NULL		
10	JoiningDate	timestamp			No	current_timestamp()		

Police table

Advantages of the Proposed Model

Interstation communication can be done immediately
Data handling becomes centralized
Time consumption also reduces
Operational efficiency
Cost reduction
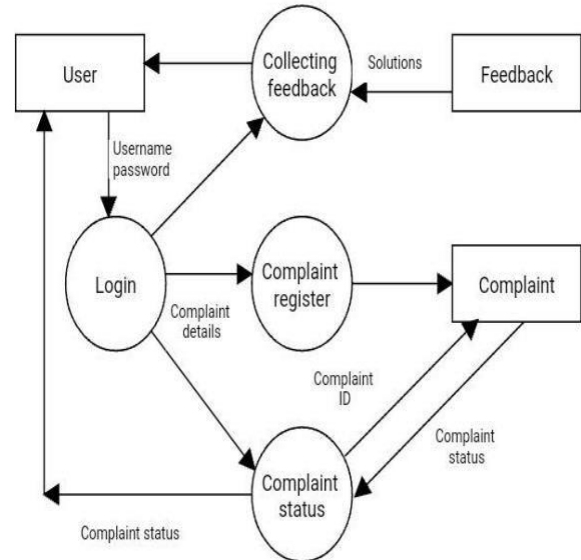
Architecture of the Proposed Model

V. METHODOLOGY

The employed model here is the Waterfall model in software development. The proposed model adhere to a subsequent order which makes sure that one phase is concluded prior to the new phase.

The stages of the waterfall model comprises of :

Requirements analysis: This is the phase which incorporates the assembling of all requirements from the end users. The requirements are accumulated and stocked as a requirements specification document.

System Analysis and Design: The requirement specifications referred in the above mentioned first phase are to be considered in this second phase and after this the system design is constructed. Proper research and analysis of existing system is completed in this phase only; the shortcomings of the already existing model are examined and then work is done on them to eliminate or reduce them.
Design tools used for this project include: PHP, MySQL, APACHE HTTP server.

Implementation: The CMS is implemented through HTML and JavaScript for graphical user interface.

MySQL is employed in scheming a strong and robust database and PHP is the application logic that sanctions transactions in the middle of the front end and the backend.

Testing: All of the units evolved in the implementation phase are unified into a system following testing of each unit. After integration, the complete system is tested for any faults and failures present.

Deployment of system: Following the functional and non-functional testing, the product is dispatched in the customer environment or allowed to go in the market. After this, our offered system model is installed and the transition phase starting from the old environment and reaching to new environment is looked upon consistently. This phase includes training of the officers who will operate the system in future.

Maintenance: In this phase, problems appearing on deployment of the system in the client environment are inspected and solved. To do so, patches are allowed to be released. And to enhance the working of product, some better versions are also released to keep it updated with respect to upcoming technological transitions. Maintenance is done consistently to deliver these changes in the customer environment on regular basis.

VI. COMPARATIVE ANALYSIS

[13]"A Real-Time Records Management System for National Security Agencies", Onulri Ernest.E, Oludeli Awodeli.
This system was having an objective of keeping record of arrested or to be arrested criminals. This system provided opportunity for storage information about escaped criminals also. But it was having a drawback also which has been removed by our model of criminal management system. Above mentioned system does not generate QR code for verification. Our proposed model generates QR code for more authentic verification.

[8]"Crime Reporting Interface Design using Mobile Technologies",
Priyanka Vakkalagadda, Ramya Sahithi Amathi and Srinidhi Eragam Reddy
This system was having an objective of developing a crime file to maintain a computerized records of all FIR

against the crime. However, this system was having a drawback that it was only accessible to police department, common public couldn't use it. But our system provides interface for common people also to file an FIR, check its status and history, hence overcoming the drawback of above mentioned system.

VII. CONCLUSION

This project fulfils the gap of easy interaction between police and common public. It will prove to be a perfect replacement for the manual crime recording system. The greatest strength lies in the fact that it is parallel to the digitalization era of new world. It will also prove to be beneficial in crime reduction in the long run, making it a better option to adopt. The Software made is found to be running efficiently and effectually. It results in consistent and timely action in case of crime reported. It can be perceived that the details can be obtained effortlessly and precisely. The Software is made adaptable to the maximum so that any layman can run the software provided he could access to the system via login password. It believes that partnership work is highly beneficial to the organization and that partnership work is the way forward to lessen crime and disorder.

VII. FUTURE WORK

In this project, an integrated system is going to be developed which will be valid for future generations also. However, best suited way to deal with the crime specific to a particular area system can also be developed on the basis of crime rate analysis.

After carrying out extensive research on crime record management at home and abroad and on full implementation of the CMS, some points to ponder about improving the efficiency of the existing CMS of the security agencies include;

A generic platform for keeping human records from birth till death throughout the country. Then CMS can be linked to this system and provide comprehensive data of all the people in the country.

The CMS should be amalgamated with the criminal justice system to give output to a bigger and better system

that includes all the facets of the justice system. This will enhance synchronization between the court of law and security forces

Verification using Biometric: A biometric system be added to the system to enhance the security of data. This is a recommendation that can help develop this system even better. This restricts the system from the reach of unauthorized users.

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