

# Research on Online Crime Server and Management

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**Abstract-** Nowadays, much of the crimes committed were unreported to the authorities. Given this fact, the study presents the development of Online Crime Server through idea draws its motivation from the inconvenience of going to the police station and personal belief of the weak investigative capabilities of the authorities to resolve petty crimes and limited spreading of crime information to the community. The project specifically looks into the crime detection and prevention. This study aims to provide an overview of the investigative process and, in doing so, identify effective and efficient approaches to the investigation and detection of the volume of crimes. The review is particularly aimed to highlight the research evidence those investigative practices and actions that are likely to lead to a positive outcome. The development of software includes system architecture, flow chart, project module formulation, modules and many more. This also shows that distance is also a factor that influences greatly how crimes are being handled with many crimes going unreported as a result. Crime Server would really help the complainant and the authority to communicate privately and easily with regards to the reported issue. In addition, it would be easier for the complainant to report a witnessed crime without the fear of getting involved in the problems because of the security that the only authorized user can see the report.

**Keywords-** Online crime, online server, crime management, crime portal.

## I. INTRODUCTION

Online Crime Management System is the Computerization of present manual system of Police Stations. There are many flaws and shortcomings in the present system. The present system is a manual system. In case of present manual system all the record is kept in documented form and stored in various types of registers. The manual system has no proper system for record storage and storing the information about crimes and criminals. The present system of police is not automated.

The documentation of criminal records is done manually. Case files are dumped in heaps while some are kept on shelves. These important documents quickly get dusty and because of lack of proper storage, some criminal documents are seriously damaged. With this kind of situation, it becomes highly difficult and even impossible to track down known criminal, access past criminal history of a suspect and know the status of some concluded cases. In police stations all the file work is done by the staff, so burden of work leads to the criminal's information to be delayed. There are also problems of record storage, updating, backup and recovery and redundancy of data.

To overcome the problems in present system we design such a computerized information system, which is free of all the flaws, present in the manual system of the

institute. As computer is one of the leading technologies nowadays, so we propose a computer based system that will fulfill the requirements of the police stations easily and will be the solution to the problems faced by Police stations. It will facilitate both the user as well as administrative staff of the Police Stations. Computerized system provides accuracy, security, and reduced redundancy, reduction of work load, backup facilities and faster information retrieval.

This system is made to keep the records about the prisoners and about the crimes. Admin can login someone as a user and can add the details of prisoners like name, age, address, crime and punishment and other details as well. FIR's date, time, number and details can be seen any time if required by the registered user. This system gives unique id to ever FIR as required and the prisoner number will also be unique. This system has one more user which is admin. Admin can add the user and delete the user. All other attributes can only be changed by user.

This system tells about any crime that is done and id any complaint is made to the police or if any fir is done and if the criminal gets caught and we can update the information about the case and one other benefit is that if the complaint is registered online then it can be checked by all the registered users and if there is any update about any complaint then it can be added online.

It increases the efficiency of the police to caught criminals. Crime management system can be implemented in every prison without any problem. This system has the capability to maintain infinite number of records. It is very useful as the written papers have a limited time period and can get lost but in crime management system this is not possible as a backup file will be created automatically and also updated automatically when any change is made in any record.

The other important function given is postmortem, if any dead body is found in any case then the postmortem report will also be updated online with the case. Some other features are criminals' details, checking records, registering user, hot news, FAQ, feedback, and many more.

## II. PROJECT OBJECTIVE

Online Crime Management & Public Services is a web based application that is developed using PHP and MySQL. The Objective of Crime Management System is to develop a web based application using which people can report crime online. It provides the facility of uploading images or videos of crime scenes so that police can take action immediately. It also provides the information of missing persons, most wanted criminals and safety tips for the awareness of people.

The product provides a framework within which a user can easily work with. That was our next objective we know users are of many categories like users who knows how to work with computers very well to users who didn't know about computers. For the entire category can use the software, it should be user friendly & error free.

We know a crime management system is actually a critical process having so many calculations in operations. So each simple error leads to a big problem. It should be error free and our objective is to build error free software. It is made to work efficiently and effectively. It results in regular and timely actions against crime reported. It can be observed that the information can be obtained easily and accurately.

## III. EXISTING SYSTEM

In the existing system, we can only see particular information about the police station in our state i.e only in a particular state. And many drawbacks are listed : It is time consuming, needs manual calculations, consumes large volume of pare work, size of database increases day by day, increasing the load of database, no backup and data maintenance, activity training for simple computer operation is necessary for the users working on the system. In order to report any complains related with crime, people have to contact nearest police station. People of the particular city are not aware of crime related things such

as list of most wanted criminals of their city, latest crime related news, missing persons of their area etc. People have to view News Channels or Read News Paper for such crime related information. Thus we can say that existing system is manual and does not provide all the information from one source.

## IV. PROPOSED SYSTEM

The manual system has some throwback which can p overcome by using the web based software citizens not need to go to police stations to see the criminal information taken directly see the information on site visitors can easily get the information about the crime and criminal producers manpower and time members can view the current status of criminal. In order to overcome the problems of existing system we proposed to develop a new system. It is going to be developed in PHP and MySQL.

Following are the advantages of New System:

- Online Crime Reporting Facility
- Information of Most Wanted Criminals
- Information of Missing Persons of their Area and City
- Address and Contact Details of Police Station of their City
- Latest Crime Related News and Updates
- Feedback to Police Stations

Thus, we can say that New System is fully dynamic and, time saving and requires less man power as compared to existing System.

## V. PROJECT DEVELOPMENT

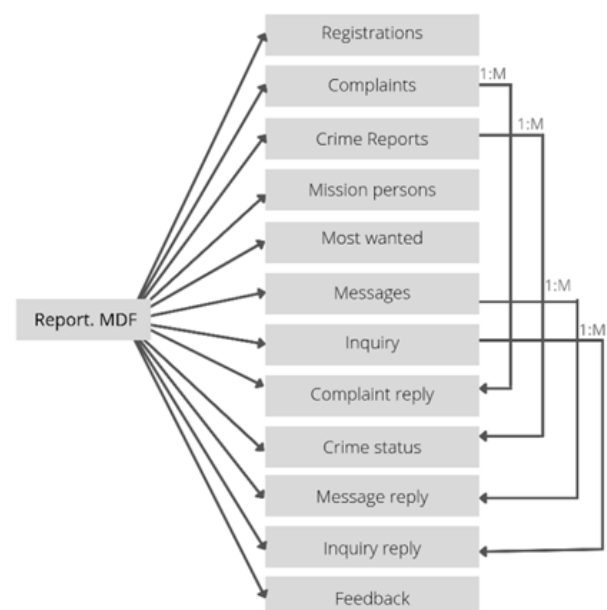
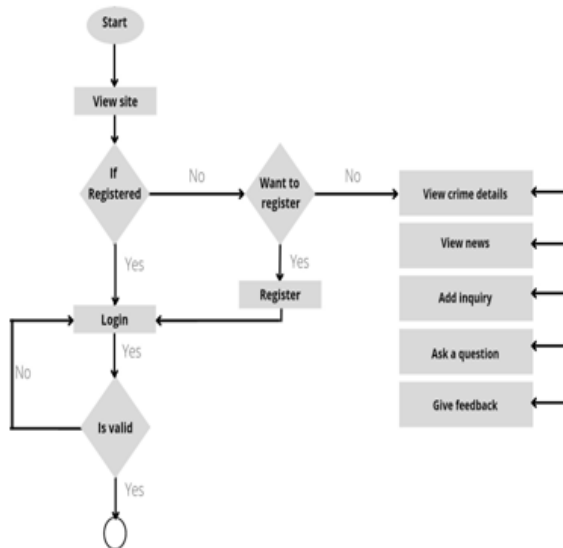


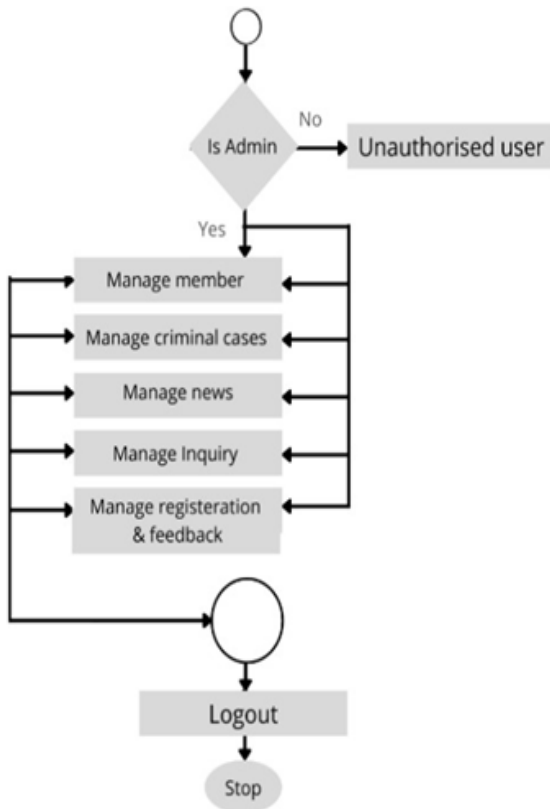
Fig 1. The System Architecture.

The researchers made use of system architecture to develop the way finding system application software because it gave the researchers an easy overview of the software based on the required specifications, and to present the general flow on the development of the software application.

## VI. FLOW CHART



(a)



(b)

Fig 2. Dataflow Diagram for Administrator.

## VII. PROJECT MODULE FORMULATION

There are mainly 3 modules: Admin, User & Visitor

### 1. Admin Module:

This module helps the admin to:

- View & reply user complaint, crimes Add, delete & hide latest hot news
- View & delete user's feedback
- Add, delete & view most wanted persons
- Add, view & delete missing persons
- Add, view & delete criminal registration
- Send message to Users
- Change Password

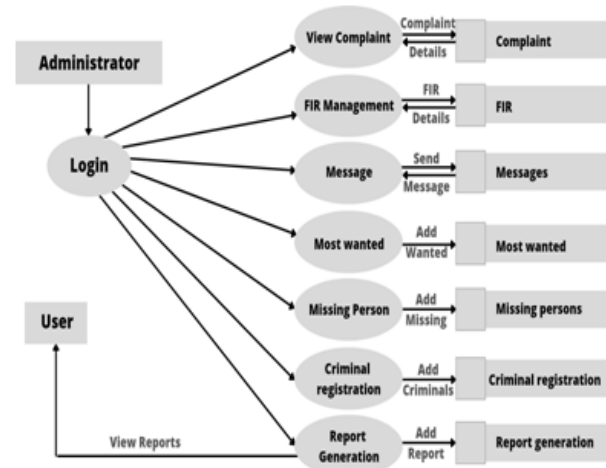


Fig 3. Dataflow Diagram for Administrator.

### 2. User Module:

This module helps the user to:

- Add online complaint
- Check complaint status
- Edit complaint
- Add missing person report
- Ask questions
- Send messages
- Give feedback
- Change password

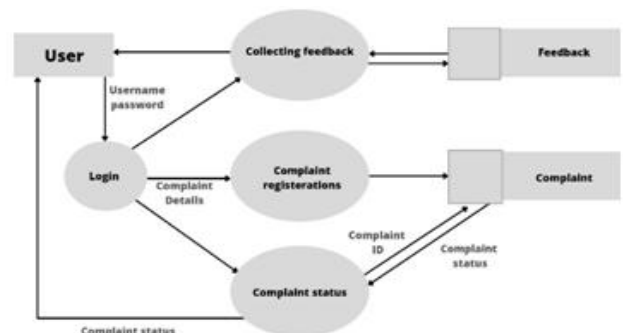


Fig 4. Dataflow Diagram for User.

### 3. Visitor Module:

This module helps the Visitor to View:

- Hot News
- Missing persons Crime types FAQ's
- Most wanted
- Helplines
- Safety tips
- Stolen vehicle

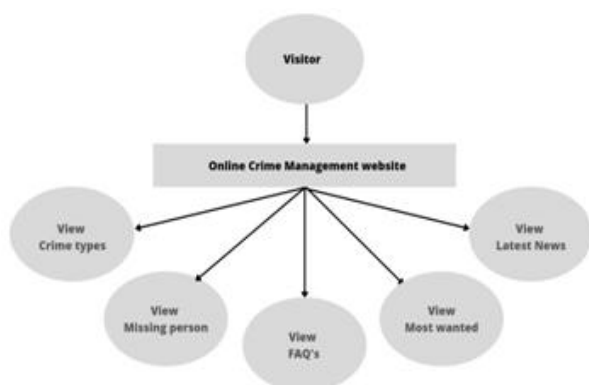


Fig 5. Dataflow Diagram for Visitor.

## VIII. MODULES INFORMATION

### 1. Admin:

This module is provided to add employees of all levels. It will create all base categories that are needed. It will create roles, create user types, create users i.e. employees. It will also be used to create record types, i.e. FIR (First Information Report), CD (Case diary), CCD (Court Case Diary), CS (Charge Sheet), RCD (Remand Case Diary) etc. It will allow the user to create different forms for different record types. Admin can also view complaints that are logged in by the public as registered users and assign it to an employee in the sense officials.

### 2. Criminal-Info Module:

This module will provide an option to create a profile of criminal and enter all data related to him or her. The option will be provided to scan any documents of the criminal.

### 3. Diary Module:

This module will have options to view and save data for different record types for different criminals for whom cases are registered. It will be accessible to certain roles only. This module will be used to save data in the different type of records and assign criminals to it while creating a case. Hence a case is created in this module and a criminal is attached to it on submission of the record type.

### 4. Employees Module:

This will be accessible by employees and they can log in and update their profile info. View their info. Depending upon the role they will have access to different record types like Senior inspector will have access to save data in

FIR, CD, CCD etc. but if a constable logs in he can only view the info for a certain criminal. A logged in an employee can view cases assigned to him or her. This module will be provided with the option to scan any documents and attach it to the case records.

### 5. User Module:

This will allow public to register them and login complain which can be viewed by admin and also view the status of logged in complaints. They can upload any scanned docs or attach videos or pics. (Feasibility for attaching videos can be covered on a live server but not for the local case).

### 6. Blogs or Posts module:

This module is accessible to any public user who will register and then blog on the site. It will have like, views and comments options and reply to comments too. This will need multithreading concept to handle the posts and a related web service too.

### 7. Future enhancements:

Updating data, deleting data and saving data, provisions for these activities will be provided as per roles assigned to an official. For this we can come with a role management module which will be provided with a UI interface. It will have options to assign a role to save or delete or view as per different screens that are available in the application. It will be a sophisticated module which is accessible to certain users only like admin, front office and senior officials only.

### 8. Writing FIR:

First option that is provided in the prison management system is writing FIR. We all know FIR is First Information Report. All FIRs have unique complaint number, date, time and location. Similar interface is provided for writing FIR in this system. FIR written cannot be lost and fast actions can be taken on the basis of it as it will be uploaded on server and others can see it. In this system FIR has all the options that are in the old handwritten system but is more secure as no changes can be made once the FIR is submitted and only the authorized users can see it.

## IX. ER DIAGRAM OF ONLINE CRIME MANAGEMENT SYSTEM

### 1. Entity User:

Every Users details need to be stored in proper manner with every needed attributed. As all the other tasks can be performed only if the user is authenticated. After the user has registered and is verified by the admin then the user can perform all the tasks on it.

### 2. Primary key User id:

User id is system generated and unique, which can be referenced in any other entity. This mostly for recognizing it in unique way anywhere in the program.



### 3. User name:

User name is taken from the user and fed into this it is properly validated so that no mistake happens.

### 4. Number:

The phone number is taken here to keep the member updated and for the confirmation of the event is also managed through this method.

### 5. Email:

Email is taken to make member aware of new offers and new events and for future references it is also relevant.

### 6. Password:

The password is required to login into the system and the password must contain a special character, a numeric character and an upper case letter.

### 7. Entity Admin:

Admin is only a single user which can verify the user who is trying to register on this prison management system. If the admin verifies the user then only the user can see the details and can make changes according to the given privileges. No other user can register as admin as there is only one account for admin.

## X. FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS OF ONLINE CRIME MANAGEMENT SYSTEM

The functional requirement of online crime management system is that it does what it is meant for. A functional requirement describes what a software system should do, while non-functional requirements place constraints on how the system will do so. Functional requirements specify a function that a system or system component must be able to perform. It can be documented in various ways. The most common ones are written descriptions in documents, and use cases.

Few of its functional requirements are as given below:-  
This system is doing that properly in user entity.

- **User can add the prisoners:** Users are able to add prisoners, which is they are doing with this system.
- **Writing FIR:** The user can write the FIR and other complaint reports that the user came to know about.
- **Able to add and delete complaints:** User can add the complaints and their details and if required he or she can also delete the details of the complaint and many more.

Non-functional necessities square measure the other demand than practical necessities. This square measure the necessities that specify criteria which will be won't to choose the operation of a system, instead of specific behaviors.

Non-functional necessities square measure within the style of "system shall be", associate degree overall property of the system as a full or of a specific facet and not a particular operate. The system's overall properties remarkably mark the distinction between whether or not the event project has succeeded or unsuccessful.

Non-functional of online crime management system necessities – are often divided into 2 main categories:

- Execution qualities, like security and usefulness, that square measure evident at run time.
- Evolution qualities, like liabilities, maintainability, flexibility and quantifiable, that square measure embodied within the static structure of the code.
- Non-functional necessities place restrictions on the merchandise being developed, the event method, and specify external constraints that the merchandise should meet

Our project qualifies all the criteria of functional and not functional accordingly and system is up to mark performance wise. Here we need to take care of few more things before heading towards the system.

The most important feature of online crime management system application world is that application's ease of usage .application will easy to use if made while keeping in mind that user need not to think twice about searching any feature. Everything should be made distinctive by using the color combination such that everything needed most frequently highlighted with focus colors. We can use simple layouts like card and grid layout etc.

By varying color and other UI combination many good intuitive interfaces can be made. Which ultimately make interface easy to use for a long time? Unlike ancient style wherever the goal is to form the thing or application physically enticing, the goal of interface style is to form the user's interaction expertise as straightforward and intuitive as attainable, What's typically known as user-centered style. Where smart graphic/industrial style is daring and eye catching, smart interface style is commonly delicate and invisible.

- **Keep things simple and consistent:-**Simple and Harmonic way making UI is very intuitive and needs to followed
- **Make good use of typography:-**The typography is taken care very strictly as the need of the system.
- **Use color and contrast properly:-**Color combo of light and dark is good way emphasis and done well in this system
- **Consider feedback messages:-**feedback form is a very good way taking feedback of forms and improving the system.
- **Simplified forms:-**form is made simple to fill with the clean user interface.

## XI. BRIEF OVERVIEW OF THE TECHNOLOGY

### 1. Front end:

HTML, CSS, JavaScript

### 2. HTML:

HTML is used to create and save web document. E.g. Notepad/Notepad++ CSS: (Cascading Style Sheets) Create attractive Layout

### 3. Bootstrap:

Responsive design mobile friendly site

### 4. JavaScript:

It is a programming language, commonly use with web browsers. Back end: PHP, MySQL

### 5. PHP:

Hypertext Preprocessor (PHP) is a technology that allows software developers to create dynamically generated web pages, in HTML, XML, or other document types, as per client request. PHP is open source software.

### 6. MySQL:

MySQL is a database, widely used for accessing querying, updating, and managing data in databases.

## XII. SOFTWARE REQUIREMENT (ANY ONE)

- WAMP Server
- XAMPP Server
- MAMP Server
- LAMP Server

## XIII. CONCLUSION

Online Crime Management & Public Services would really help the residents to be aware and to be concerned about what is happening in their surroundings, the system makes the reporting of crime easier. The system provides users with the most reliable and complaint process. The simplicity and the friendliness are the advantages of this application. The application was made user-friendly so that anyone could access the system via login and enter their password and initially, users have all details without any risk.

The software is built with options such as the complaint registration, the area of the incident where it happens, the type of crime and many more. In the modern world nowadays, the use of computer and mobile phones are becoming rampant that is why the researchers presented a simple but efficient, convenient crime reporting and the requirements provided better perspective and very user-friendly and flexible for all the times. The researchers used

the Modified Waterfall methodology in the development of the system, Crime Management, and Reporting System because the approach is assertive and logical. This makes the development to be efficient.

The system prototype allows users to report a crime or incident paving the way for residents to report or verify incidents by providing information about the incidents encountered or witnessed.

In addition, the reported address given by the complainant of the incidents is a great help to identify the location where common crimes happened. The result of the system showed that the potential users are willing to participate and already recognized the usefulness of the system. The willingness of the police to use the system and their recognition of its usefulness is enough to try the system for community use.

Based on the findings of the study, the researchers recommend the following for further study: widening the limit of the system by considering other cities; upgrade the system by detecting double reported crimes or incidents and examine the success of citizens' self-reporting crimes online from the perspective of the law enforcement agencies receiving the online reports. Examining the validity of reports using the crowd is worth attention. This is a good source of information, but validation is a challenge that needs to be studied. They can add an email verification and an auto-reply SMS in an off-line reporting, which is texting using mobiles phones or tablets.

A generic platform for keeping human records from birth till death is also a good idea, deploying this sort of platform will serve as a source of information on persons from various states within the country and even those outside. Verification using Biometric is highly recommended to enhance the security of data stored in the system. This increases the restriction on access to the system, thus unauthorized users have no access to the system. Face recognition technology can be added.

The researchers also recommend that the Crime Management system will be running as an android with GPS to support the development and implementation to be accessed by the users of an operator. The plan should include the identification and prioritization of potential recipients, the appropriate method to reach each group, the resource requirements and performance measures for monitoring purposes. Therefore, Online Crime Management and public services would indicate more of an interactive way to communicate with the users and the beneficiary of the system.

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