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Criminal Records Information Retrieval System: A Conceptual Model

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Abstract: *This model helps to increase communication between Police and public. It will reduce time & increase the problem solving efficiency in time period it will be more helpful. In this admin is key person, user(police) is also have secure registration & public can communicate with all other users through mail. Here we are going to use clustering technique because it more powerful to forming accurate cluster, speed of creating cluster, identifying crime trend & crime zone ,crime density of state.*

Keywords: *Criminal Record Info Retrieval System; Criminal Record; Crime Retrieval System; Criminal Information System*

I. INTRODUCTION

Developing an online comprehensive crime reporting system to improve the communication between police and public which helps to improve the time utilization for solving crimes and not much time is wasted to communicate with police. So, to reduce the time and increase problem solving efficiency in time period, this application will be more helpful.

- 1) The Administrator is the key person for the entire application. He maintains all the users details, manages and view graphs, logs, alerts, help book, maintains backup, generates reports. He also has secure registration. He can communicate with the other users through chat besides can send mails to the users.
- 2) Police also have secure registration. He views the crime report sent by the public and starts investigation on the case. He verifies whether all the proofs attached to it are valid or not and take the next step in the investigation. After the investigation, he sends the report containing the proofs to the administrator and closes the case.
- 3) User can report through online by filling the report form. This form has different fields to describe the crime details regarding the crime type, details of victims, suspects, reporters. They can check the status of their case through progress tracking. Proofs should also be submitted along with the report.
- 4) Public may communicate with all the other users through mails. To make the people aware of the crime and criminals, alerts are included in the application. Along with this, first-aid information, help book are there to guide the people in emergency. Feedback form is also included in the application to improve the efficiency of the system.

II. OVERVIEW

A. Scope

It will reduce time & increase the problem solving efficiency in time period it will be more helpful. In this admin is key person, user(police) is also have secure registration & public can communicate with all other users through mail.

- 1) The System maintain two levels of users:
 - a) Administrator Level
 - b) User Level
- 2) Main facilities available in this System.
- 3) Maintaining records of criminal.
- 4) Maintaining criminal details.
- 5) Providing registration form.
- 6) Providing admin and user login page.
- 7) Retrieve information about criminal.
- 8) Providing news.
- 9) Maintaining backup of data as per user requirements.
- 10) In this System collection of data is from different police station.

B. Futures Scope

- 1) Reporting forms are available on web.
- 2) Proofs are enclosed online.
- 3) Allot unique identity number to each complaint.
- 4) Track all the police and complainers contact details.
- 5) Complainer's details are hidden by the user's request.
- 6) Police are only liable to access to investigation tool.

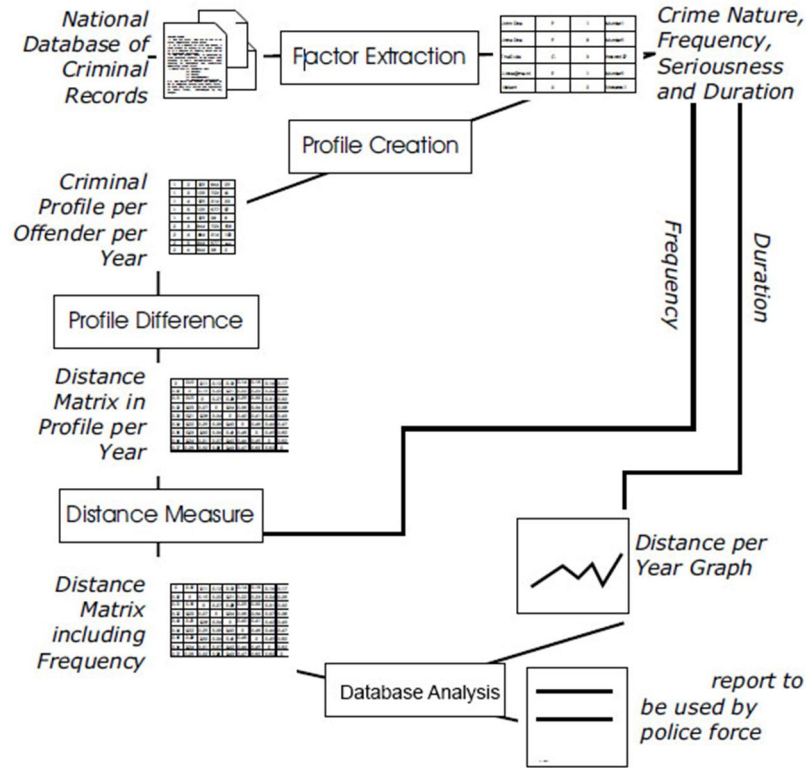


Fig. 1 Analysis of Criminal Careers

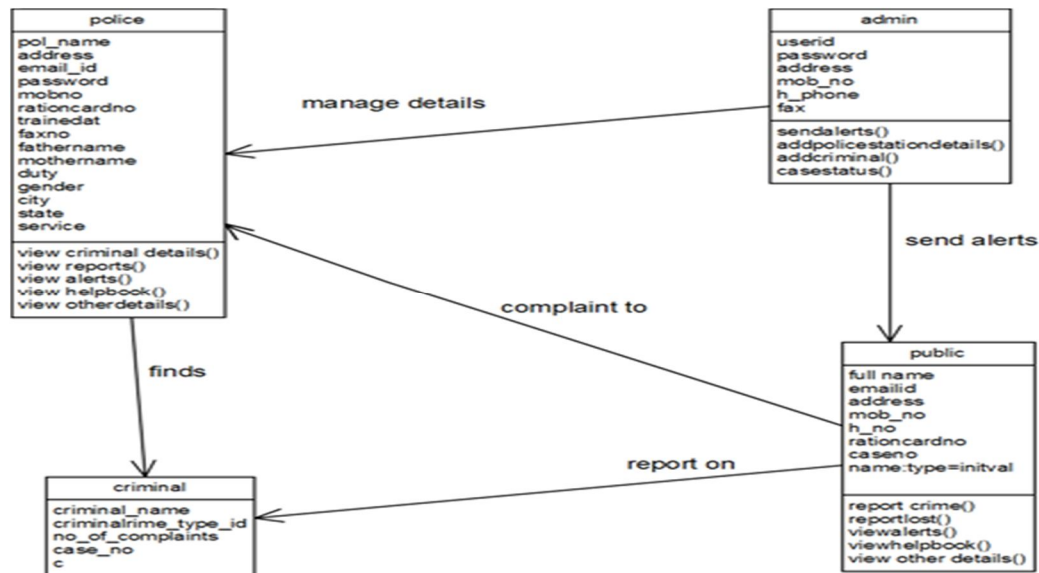


Fig. 2 Class Diagram

III.OBJECTIVES

A. Problem Statement

My Mission-City without Crime- an online comprehensive crime reporting system to engage public, NGOs, police and government agencies to be more quick, proactive and responsive to fight with crime and criminal.

Conventionally the citizen has to go to Police station in person to report the crime and anonymous events like thefts, murder, missing citizens, dead bodies and other miscellaneous events. Where we produce an online comprehensive crime reporting system, police and other officials responds in right time .So crimes are solve and conclude in an effective period.

B. System Objectives

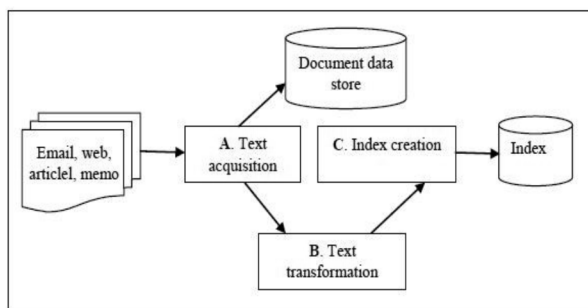
- 1) Proposed system is providing facilities for secure registration and profile management facilities for police station & authorities.
- 2) Proposed system is providing Facilitate communication between all Departments.(Crime branch, police stations)
- 3) Proposed system is providing facilities for searching capabilities like crime and criminal search – region, crime-type, gender, age group wise etc.
- 4) This provides the facility of Alerts, Acts for citizens and other users.

IV.IMPLEMENTATION

Lucene is an open source Java library, which supports the process and techniques of information retrieval. Applications such as Amazon are among the commercial application that uses Lucene for indexing and allowing effective searching. Lucene is able to index text from a various formats such as PDF, HTML and Microsoft Word, and also in various languages.

Information retrieval (IR) is a field concerned with the structure, analysis, organization, storage, searching, and retrieval of information . It emphasizes on the process of matching user queries to the index in finding relevant documents. In fact, the main issue in this area is to ensure a good match with high similarity score by comparing between the queries and the document index. Search engines such as Google are the practical applications of IR techniques on large-scale text collections. Search engines should include the concept, models, techniques and the processes of IR.

Two major components of search engines are the indexing and query processes . The indexing process aims to create data structures or the indexes that allows the searching. Meanwhile the querying process will use the structures and user queries to generate a ranked list of documents. Figure depicted the indexing process(lucene algo) in search engines. It involves three components; text acquisition, text transformation and index creation as described.



V. CONCLUSIONS

We are using data mining for identifying crime patterns. Crime pattern using the clustering techniques. Our contribution here was to formulate crime pattern detection as machine learning task and to thereby use data mining to support police detectives in solving crimes. Lucene is the *state of the art* in document preprocessing and in index creation. Thus, it was relevant to enforce the students to use Lucene. It will increase their understanding of the IR theory and approaches in developing a search engine.

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