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Digital Police System: FIR Registration

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Abstract: We can see that technology has touched many spheres of our lives in India. There is technology in business, in education, in socializing and maintaining human relations, in purchasing, in agriculture, in banking, communication, and almost every part of our lives. This intrusion of technology has aided the work in all these sections, and has proved beneficial, and time and effort saving. The only major a part of our society that still remains majorly devoid of this luxury is the Indian Police Department. The Indian Police Department has ever since remained manually driven for most of its routine chores. The officials have been adopting the basic fundamental methods of carrying out the proceedings with the traditional "pen and paper" method being highly prevalent. These traditional practices were comfortable in earlier days, when the population was far less, and the crime rates were also comparably minimal. But in today's India, when the evil elements of the society are in a boom and so many cases being registered every day, it has become a very tedious task to manage the case and all its related documents, manually. Digitalization in the Police department is the need of the hour. The traditional method of visiting a police station for registering a complaint and getting updates needs to be replaced with an online process. Hence an Digital Police system is being developed which will collect complainant's data through a mobile application, sends the information over to the Police department on their web portal, and in this way the entire interaction occurs online, with information exchanges over the application and the web portal.

Keywords: Online FIR Registration, Database, Software Interfaces, Virtual Policing, FIR, Crimes.

I. INTRODUCTION

.This system has been proposed keeping in mind the difficulties that people face during registering complaints at any police station. First of all, the entire manual process is time consuming as the complainant has to physically go to the police station numerous times. The same also consumes a whole lot of money and energy. Other disadvantageous factors include, Fear of getting harmed from people against whom FIR is filed, Lodging FIR against highly reputed person is sometimes difficult task. By allowing citizens to lodge their complaints directly, this system circumvents police officers who are often reluctant to register FIRs, particularly in kidnapping and harassment cases. Harassment may include stalking just to create reasonable fear to the victims mind about their safety. In this case women are the victims in large numbers in India . It can be a great platform for such women. Another one can be cyber security which refers to stalking through the internet, mails and text, improper use of computers

and electronics for communication . Potentially, it will could be an effective tool in combating the endemic corruption and pressure at that level. We have proposed to develop a system which provides an easily accessible android mobile application which forms the front end and a web portal for the police department. The complaints would be registered over the application. The complainant would be filling up the FIR form, he would be providing the proofs and details related to the complainant on the application. These details would then be received by the police officials on the web 1the case. The police officer will be posting the advancements made in the case into the account of the complainant through the portal. An pdf file will be generated at both victims and police department side creating an registered FIR number

II. LITERATURE SURVEY

Muhammad Baqer Mollah, Kazi Reazul Islam, Sikder Sunbeam Islam 24 August 2015

In this, paper the aim was to provide a platform for the police officers that support their main activity regarding crimes and the records also which will be interesting for the citizens specially for developing countries. This e-police system was developed for managing and providing service to all citizens and make a better and safer place to live and work. The main motive to develop this system was to upload the rules and law, to ensure safety and security of citizen, to prevent and detect crime, to keep crime records in database, history of criminals etc. System provides E- Government necessity for good and corruption free nation, means by using information and communication technologies, especially internet, customer learning and cost-effective system. This system is developed so a person can file complaint without fear. The overall e-police can be defined as: It is divided into two parts. First one local police station, special branches, detective branches, prisons, traffic systems etc are

interconnected to Metropolitan Area Network. Second one is the home security department which is connected with the district police, intelligent software, government website and electronic database where citizens' documents, general documents and police personals' documents exist. The district level is given only the authority to share or update citizens information. Intelligent software was used to get criminal records which if in need can be sent to home security department or police station. Real time data sharing is provided by short message service or multimedia service. Police officers can upload the data about wanted persons, suspected persons, criminal history, news etc and update timely. Also citizens has access to website that one can go through criminal record of a person, latest news or updates. Other module in this system is managing traffic related issues, road accidents, signal break, increase in vehicle volume due to traffic jam etc, through traffic police stations of a city which are connected to whole traffic system. Online payment service for citizens to pay fines, To find out Stolen Cars as the electronic databases of the police department always store the entire document about all vehicles of the citizens. Communication between police stations and main office is done using SMS (short message service). Fingerprint verification is implemented here to check criminal records in the database. The main intent was about developing e-police administration to the world standard by using modern information and communication technologies. The necessity for upgrading the present police system to e-police system by overcoming the issues and challenges. To decrease the workload of local police station. Some issues like Inadequate access to Information and Communication Technology by government officials, police personnel and by citizens, Language Standardization, Less secure, Citizen verification and identification is not performed.

Edina Krisko
22 April 2016
Hungary is a country in Central Europe. Hungary is medium size member state the European union.And Hungarian its language of that country which is the most widely spoken Uralic language in the world. Virtual police officers assist in solving crimes & in sharing important police information. There is goal to encourage direct contact with the population contradicting the fearsome images heldof the authority. In this paper, The concept of virtual policing and the specificity of how it is different has not even been remotely explored to date, particularly in Hungary. There is a sort of a search for a path to traverse how police could establish an entry into the various virtual communities. When we look around the international scene, we find the same thing, there are cutting edge practices and hesitant
attempts that are at times contradicting themselves. This article is a kind of a situational snapshot, an overview of what the police profession is thinking, what initiatives are being taken advantage of by the various authorities worldwide.
What is somewhat cause for concern is that when searching on the internet for the term ,"virtuális rendészet" (virtual policing), barely any hits arise in the Hungarian language.

Prof. Preeti Karmore , Kanchan Mathankar, Aniket Kalaskar
16 March 2019
R-Help registers a complaint with minimum inputs and issues unique ID. It relays the complaintonline to relevant officials for immediate action. It allows passengers to lodge complaints through mobile application and enables them to check real time feedback on the status of redressal of their complaint. There are some existing applications for the registration purpose but with some drawbacks. The proposed system tries to overcome them. We have proposed to develop a system which provides
an easily accessible android mobile application. The complaints would be registered over the application. The complainant would be filling up the FIR form, he would be providing the proofs and
details related to the complainant on the application. The user can upload images, and details as records. These details would then be received by the Railway Police Force (RPF). They will verify the details of the complainant and carry out further proceedings of the case. There is an option of updating the status complaint for the user as well as the RPF. Thus the entire process would be carried out online, without much manual intervention. Slow registration of FIR in Accidents and assault cases is one of the biggest problems of the existing system. Often the victims are told by the hospital authorities that the treatment would not be started unless an FIR has been registered. The slow registration of FIR leads to loss of precious time and
other issues.

III. LIMITATION OF EXISTING SYSTEM

As the Digital-police system is new in the perspective of developing countries there are several issues and challenges related to implementation. Followings are the challenges which are faced during implementation of Digital-police system in developing countries.

1. Inadequate Information and Communication
2. Technology Infrastructure within the government as well as across the nation.
3. Inadequate access to Information and Communication
4. Technology by government officials, police personnel and by citizens.
5. Lack of adequate training programs in developing countries.
6. Lack of reliable maintenance and sustainability of Information and Communication Technology.
7. Lack of mother language standardization.
8. High cost and low reliability of Internet access.
9. Lack of awareness about future development.

IV. PROPOSED SYSTEM

The proposed approach achieves better performance, which is an existing summarization technique. The number of crime incidents reported per day in India is exploding. The criminals use various advanced technologies and commit crimes in tactful ways and this makes crime investigation a more complicated process and the police officers perform a lot of manual tasks to get thread for investigation. We have proposed to develop a system which provides an easily accessible android mobile application which forms the front end and a web portal for the police department. The complaints would be registered over the

application. The complainant would be filling up the FIR form, he would be providing the proofs and details related to the complainant on the application. The user can upload images, audio files, and video files as records. These details would then be received by the police officials on the web portal. They will verify the details of the complainant and carry out further proceedings of the case. The police officer will be posting the advancements made in the case into the account of the complainant through the portal. An pdf file will be generated at both victims and police department side creating an registered FIR number.

The Roles and action performed by proposed system will be as follows :

Aadhar Details: The Aadhar details will be fetched from Aadhar Database to save time.

Victim : The victim needs to register through mobile number after getting the OTP he/she can register their complaints and sign the FIR as an authenticated person.

CCTNS: (Crime And Criminal Tracking And Network System) in this the complaint registered by victims is authenticated by CCTNS and automatic FIR Number is generated and sends the complaint to selected Police Station.

Police Station : Here the complaint registered by the victim is received from CCTNS after verification is then signed by SHO (Station House Officer) and accepted.

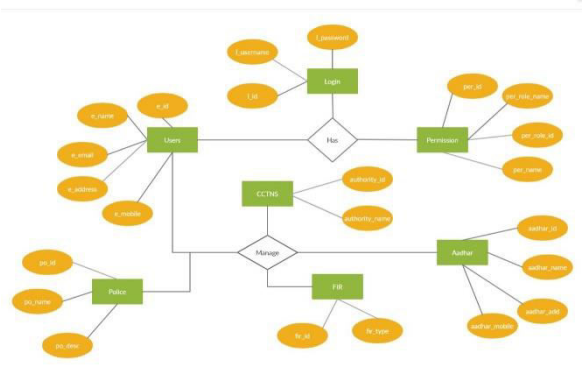
V. METHODOLOGY

A. Methodology

If we want to develop software, we need to follow a certain methodology in order to ensure its consistency. The entire software is being developed in a step-by-step procedure, which is called methodology

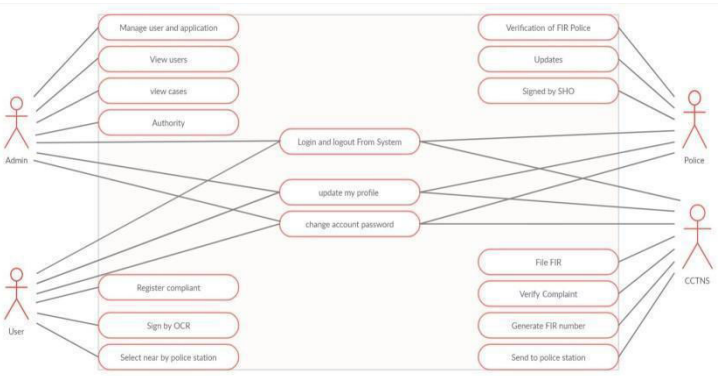
B. Entity Relation Diagram and Context Diagram

An Entity Relation (E-R) diagram can express the overall logical structure of a database graphically. The context diagram and E-R diagram is given in figure respectively.



C. Use Case Diagram

The use case diagram is dynamic in nature, there should be some internal or external factors for making the interaction. These internal and external agents are known as actors. Use case diagrams consist of actors, use cases and their relationships. The diagram is used to model the system/ subsystem of an application. A single use case diagram captures a particular functionality of
a system.



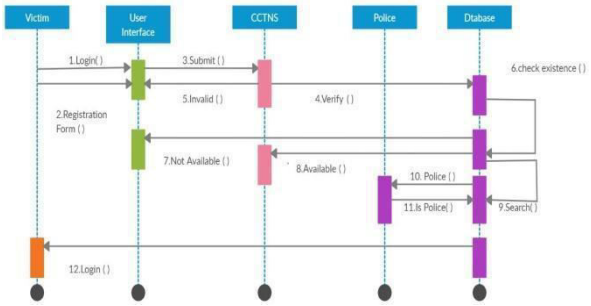
In brief, the purposes of use case diagrams can be said to be as follows −

- Used to gather the requirements of a system.
- Used to get an outside view of a system.
- Identify the external and internal factors influencing the system.
- Show the interaction among the requirements of the actors.

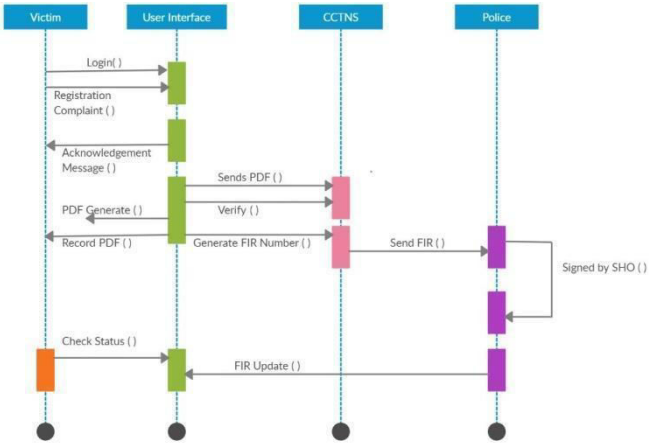
D. Sequence Diagram:

A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario. Sequence diagrams are typically associated with use case realizations in the Logical View of the system under development. Sequence diagrams are sometimes called event diagrams or event scenarios.

- **Login Through Aadhar Card**



- **Login Through General Details:**



E. Signature pad

Signature pad is a javascript library for drawing smooth signatures. It's HTML 5 canvas based uses variable with Bezier curve interpolation based on smoother signature post by square. It works in all modern desktop and mobile browser and doesn't depend on any external libraries.

F. JsPDF class

Many web applications have the requirement of giving the user the ability to download something in pdf format. In the case of applications, those pdfs have to be created using dynamic data, and be available immediately to the user. In this application , PDF is generated at both victim and CCTNSweb portal. A copy of FIR for the safety and security purpose.

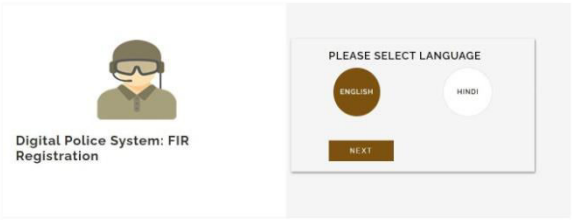
G. Speech to text convertor using Google API

Text to speech is a ideal for any application that play audio if human speech to users. It allows you to convert strings, words and sentences into text of the person speaking.
In our proposed application , speech is converted into English language which is also time consuming.

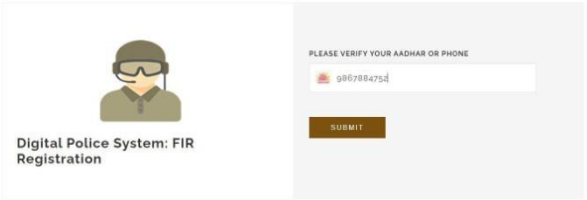
H. Project Description

In the following, represents how the system starts to work properly.

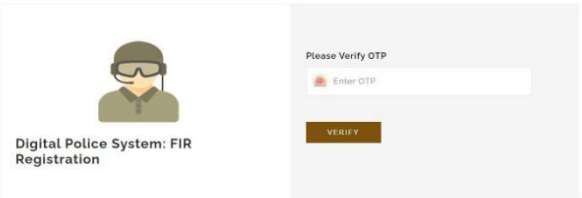
step1: Website page open.



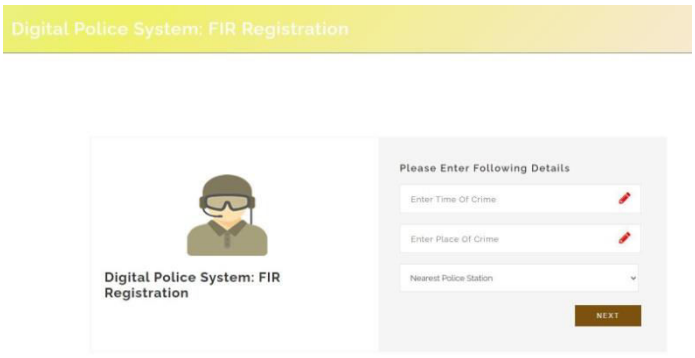
Step2: Sing up account using Mobile No or Aadhar No.



Step 3: Get OTP number on register Mobile No



Step 4: Registration of FIR



Step 5: Check the status of FIR

VI. CONCLUSION

Digital police is a web application to give to manage their data. The main aim to build this system is to make it easy for women to register complaint against Harassment , stalking and domestic violence, to upload platform for citizens to register FIR complaint and a electronic framework for police department evidence and get a pdf copy of it with FIR number. Technology has aided the work in all the sections , and has proved beneficial, time and effort saving. As we know The only major part of our society that still remains majorly devoid of this luxury is the Indian Police Department. The officials have been adopting the basic fundamental methods of carrying out the proceedings with the traditional "pen and paper" method being highly prevalent. These traditional practices were comfortable in earlier days, when the population was far less, and the crime rates were also comparably minimal. Digitalization in the Police department is the need of the hour. The traditional method of visiting a police station for registering a complaint and getting updates needs to be replaced with an online process. Also citizens find it a waste of time and energy going to police to register complaints, even the corruption happening in thana can be one of the reasons for victims from poor backgrounds. Hence, Digital Police system must be developed which will collect complainant's data through a system, sends the information over to the Police department on their web portal, and in this way the entire process occurs online, with information exchanges over the application and the web portal.

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