VIRTUAL POLICE STATION AND SAVE OUR SOULS(SOS) SYSTEM

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Introduction:

There is great amount of reluctance among people for writing FIR's as they hang back and find it hesitating as it could be a long hustling process. This leads to uninformed crimes and encourages those criminals who are not reported. The police officials have been adopting the fundamental methods of carrying out the proceedings with the traditional "pen and paper" method being highly prevalent. But in today's India, it has become a very tedious task to manage the case and all its related documents, manually. Digitization in Police department is the need of the hour. The existing base papers have not been implemented practically. The conceived systems are theoretical.

In many states there are different systems and approaches for tackling this issue. In Odisha, Naveen Patnaik has proposed the idea of implementing the virtual police system. Previously, Odisha had an ATM like system for reporting crimes. In Karnataka, there is a mobile application named Karnataka State Police Application which allowed people to view the reported crimes, find the nearest police station and other important functionalities.
But there is no implemented system which allows people to lodge a FIR online and get the feedback regarding the investigation. Hence, developing such an application will be beneficial to both the people and the Indian Police System.

The application also provides the additional features like Requesting and Granting permission for protests, religious gatherings, events, concerts, and etcetera. This feature is effective in the current pandemic situation. The application also allows Employee and Tenant document verification.

Implementing this application will be beneficial to the Indian Police System by digitizing the Traditional File Storage system and encourages the Citizens to immediately inform any criminal activities.

Objective:

      The crime rate (crime incidence per 100,000 of population) in India was 383.8 in 2020 according to the National Crime Records Bureau, but many of the crimes aren't reported due to the consideration of the very long process which consumes a lot of time and is also a very hectic process. Also, In the current situation of the police system, maintaining of the records is the same old way of storing data in big fat files which is very hectic to maintain. Through our project we have proposed to develop a system which provides an easily accessible 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 registering to the application then, complainant would be providing the details related to the incident over the application. The user has to upload his/her signature after providing the details of the incident. These details would then be received by the police officials on the web portal in PDF format. They will verify the details of the complainant and carry out further proceedings of the case. The user can track the status of the FIR through the Application and once the FIR is accepted, the user can also be updated with the findings of investigation proceedings. Thus, the entire process of filing the FIR would be carried out online, without much manual intervention.

      Along with this we will also be including some added features like Requesting and granting permissions for events, protests and religious gatherings, Verification of employee details and an Advanced SOS System. A user can send a SOS signal to the Police control room using the advanced SOS system, the Control Room will track down the location of the SOS signal and will send an emergency message containing the location of the SOS signal to the nearby Patrolling vehicles.

Methodology:

Login Module:
1. Option for Sign-up or Login using Mobile phone or username and Password.
2. Authentication using OTP to registered Mobile No or Email Id.
3. User Information, such as Name, Mobile, Address, Aadhar Card, etc.
4. Option to Edit Information after verification Through OTP.
5. Forgot Password/Recovery through OTP.

FIR Module:
1. A Full-Fledged form with necessary Input Fields, Drop downs, according to the FIR Format FIR format should be the same as that of offline.
2. On Successfully Lodging the FIR, it should be saved in database and visible in Police personnel's Portal.

3. Police personnel can Edit the FIR as per he/she wishes.

4. Police personnel should have option to accept or reject the FIR.
5. Real-time Updates should be shown to the User's describing the status of the FIR, i.e., Received, In-process, Verifying, Verified, Accepted, Rejected.
6. The user can Download the PDF file of the FIR if it is successfully accepted and case-Id is generated for the same.

Case Proceeding Module:
1. A higher Authority login Should be provided.
2. The higher Authority can look into the case assigned and the information related to that case.
3. Real-time updates of the Case proceedings should be provided which will be updated by the higher authority and visible to the user.
4. Status of the Case (Ongoing or closed) should be associated with each case and the Final verdict when the case is closed.

SOS/ Emergency System Module:
1. Option to send SOS Signal in the Android app.
2. User can add emergency contacts for the SOS system after signing up in the VPS application.
3. In emergency situations, user can use the SOS feature by clicking the SOS button.
4. On clicking the SOS button, the app will connect to the emergency contact number via Messaging or Calling.
5. Current location is also shared to the police's portal.
6. The emergency contact numbers can be replaced or edited.

Results and Conclusion:

The outcome expected is to have an application which will provide majority of the features of a police station to its users and will create a bridge between the citizen and the police by virtualization of the process of the Police System. This will offer more flexibility and transparency to the citizen who is seeking the police assist and will provide an efficient working environment to the police personnel.
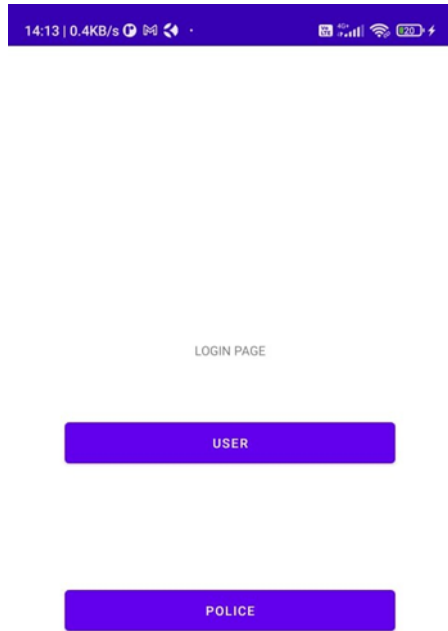
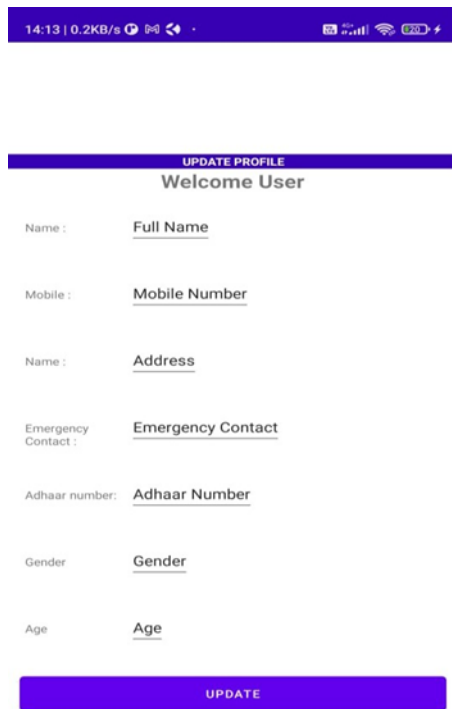Figure 1: Login/Landing

Figure 2: Police Home PageWindow

Figure 3: Update User
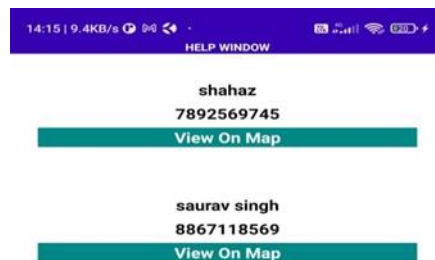

Figure 4: Sos Window

Figure 5: View And Download Page For User

Scope For Future Work:

In the near future, by combining ML and computer vision, along with security equipment such as surveillance cameras and spotting scopes, a machine can learn the pattern of previous crimes, understand what crime actually is, and predict future crimes accurately without human intervention.

A possible automation would be to create a system that can predict and anticipate the zones of crime hotspots in a city. Law enforcement agencies can be warned and prevent crime from occurring by implementing more surveillance within the prediction zone.

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