E-FIR APP AND WEB PORTAL

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Abstract : The traditional ways of expressing oneself has changed a lot in recent times of pandemic. We are getting to observe an era that is transitioning to digitization. However, there are so many day to day events that still haven't been revamped. They continue to be old fashioned. Thus we have made an attempt to digitize and automate one of the rights of citizen to speak up against wrong, that is, registration of FIRs. No matter how used to we are of this culture of reporting crimes and hideous actions, there are still some parts/people of our society that are restricted to do so. The primary motive of this application is to be able to reach common people just like technology and let them be able to stand up against such activities if they encounter any. This solution can help commoners report about illicit activities without needing to actually go to the police station.

IndexTerms – **FIR Registration, Ambulance booking and tracking, flutter.**

I. INTRODUCTION

India is a developing nation and being so has its own pros and cons. The major concentration has always been on supporting and empowering the rights of citizens of the nation. As huge as the constitution of India is, not always does each person get to benefit from the same. Talking of benefits, it is a privilege if a citizen can express him/herself without needing to think twice about the consequence. But such privileges are only enjoyed by people of great statuses. For commoners it is very difficult to achieve such great privileges. They are even forbidden to speak of felonious behaviors even though they are the victims of such inhuman behaviors. Sad, but it is true.

Considering above scenario in mind, it is very crucial for us to empathize the fact that we need some change in the way we express. We need a powerful system that is unbiased of cast, creed, race, relationship and statuses. And hence we came up with the idea of the application. The wide spread use of technologies like mobile phones has become a boon and bane. And to add up to the boons, we decided to build an application system that is capable of being multi user, to reach even the remote corners where mobiles have reached to hear their pleas, their pain and to help them empathize, to speak up against shady activities to achieve and restore justice. The application also focuses on building a mechanism for booking of an ambulance in case of emergencies.

II. BACKGROUND

The paper is written by Muhammad Baqer Mollah, Kazi Reazul Islam, Sikder Sunbeam Islam discusses about the aims to ensure solutions and means for the police officers that support their main activity and it will be interesting for audience in the context of law and order situation in developing countries by the medium of E-Police System for Improved EGovernment Services of Developing Countries [1]

The paper is written by Archana Iyer, PrachiKathalSagarGathoo, Nikhil Surpam they wrote the model paper for an application that provides an easily accessible way that forms the front end and a web portal for the police department by the medium of E-Police System- FIR Registration and Tracking through Android Application [2]

The paper is written by Prof. Swati Bhavsar, Shreya S. Deshpande, Poonam S. Lad, Nikita K. Aher, Pratiksha S. Khalkar talks about creation of an online system, all the drawbacks of manual process are overcome in it. There are many complaints lodge in a day from the public. So to handle all these complaints is very difficult to police department. By using online application they maintained a database of users or victim. They could categorize, organise the data received from people by the medium of Online FIR Management System [3]

III. PROPOSED SOLUTION

The reason for our proposal continues as follows. The Flutter framework allows us to build cross platform applications using the Dart language. The Flutter framework is capable of converting the Dart code to corresponding native SDK APIs and build native applications. Such an application will be used to fulfill our requirements of registering an FIR and booking ambulances with the relationship of 1: many. Below is the diagram that depicts the architecture of the proposed solution.
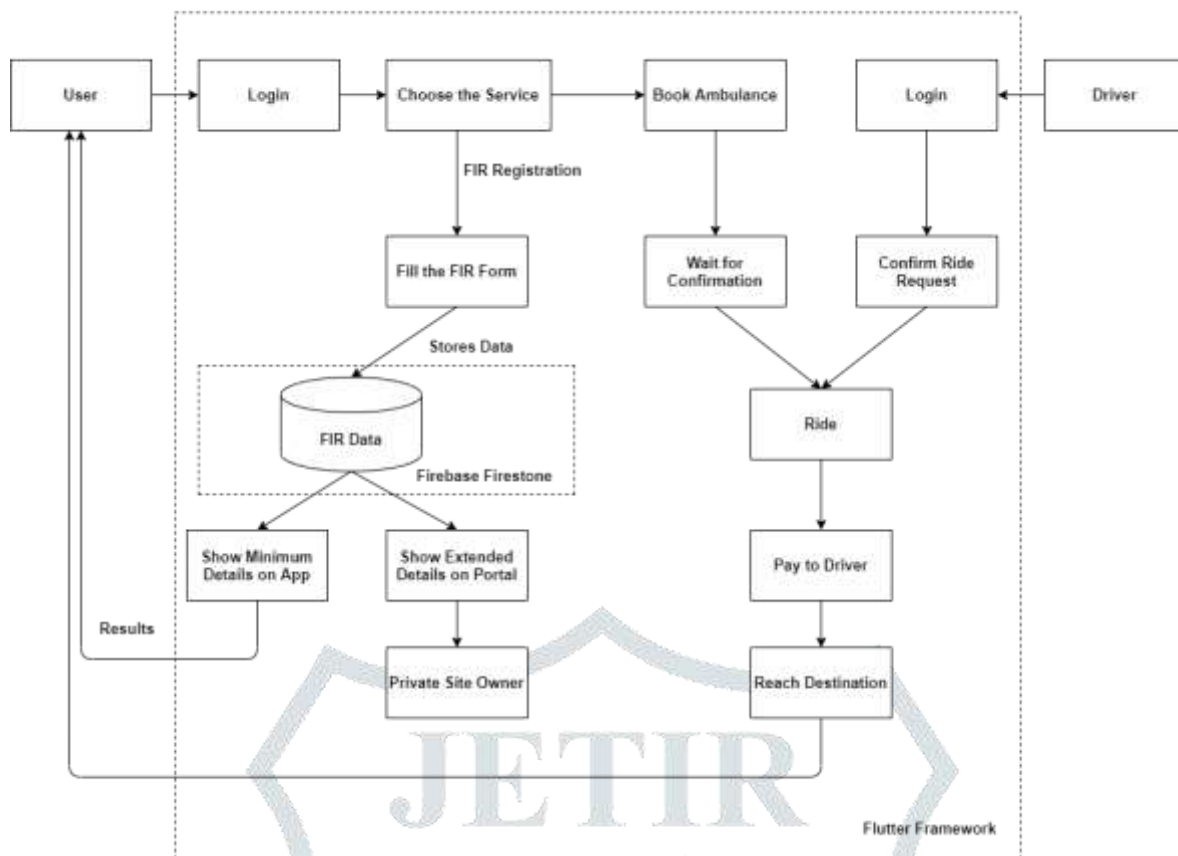
figure: system architecture

Since the users will be connected to the Firebase Firestore database, authentication will be easy. The Flutter framework helps in the creation of these modules of application and web portal which used the OpenGL graphics for rendering. The Dart code is compiled by the Dart VM's JIT compiler. The Flutter engine makes the application robust.

The users will have an application to login which will be different from the ambulance driver login. The web portal will be a private site to whom the users will not have access as it may contain sensitive data .

IV. METHODOLOGY

The proposed solution aims to continuously update the FIR data to the application and web portal like a real time system. The system relies upon Flutter packages and APIs for rendering and real time database connectivity. The architecture is tightly coupled with the extensive use of Firebase Firestore at the backend which provides a lot of benefits.

    1)   The user needs to login to the application. If the user isn't a registered user, the registration process can be done by filling out a form or directly choosing to sign-in via Google account that is currently active on the device.

    2)   After the registration, the user can navigate to either the FIR Registration section, where he can view all the FIRs that have been currently registered and tap on the '+' button to file a new FIR.

    3)   The filing of FIR requires the user to provide:

        a) Reporter Name: Name of the person filing the FIR.
        b) Reporter Address: Address of the person filing the FIR.
        c) Reporter AADHAR Number: A mandatory field for legitimate people to file the FIR.
        d) Phone Number: Phone Number for further proceedings.
        e) Crime Type: Short description of the crime.
        f) Crime Location: Location of the crime.
        g) Description: Detailed description of the crime.

    4)   The users can also book an ambulance in case of emergency which requires:

        a) Pickup Location: The location for pick up.
        b) Destination Location: The location for drop.

4.1 Flutter Framework

Flutter is an open-source UI software development kit created by Google. It is used to develop cross platform applications for Android, iOS, Linux, Mac, Windows, Google Fuchsia and the web from a single codebase.

The major components of Flutter include:

- Dart platform
- Flutter engine
- Foundation library

- Design-specific widgets
- Flutter Development Tools (DevTools)[4].

4.2 Firebase

Firebase is a platform developed by Google for creating mobile and web applications. It was originally an independent company founded in 2011. In 2014, Google acquired the platform and it is now their flagship offering for app development[5].

V. RESULTS AND OBSERVATIONS

To initiate the instance we check whether the user is logged in, only then can he/she proceed with the services of the application. We get various data structured and unstructured data related to the FIR that is stored in the Firebase real time data storage and constantly updated as a stream to the application and the web portal.

The ambulance booking and tracking is powered by the Google Maps APIs for real time tracking of the ambulance. The data in the web portal is not lost even without the internet connectivity as a stream is being loaded. The data can then be used as an input source of a legitimate filing FIR process.

VI. CONCLUSION

Indian Police System has remained devoid of web technology, with most works being carried out on a pen and paper basis. This traditional method is prone to delays and inefficiency. This paper proposes to simplify and speed up the process of FIR registration and emergency ambulance booking and tracking. With the advancement and incorporation of internet and technology into the Indian Police System, it will definitely boost up the proceedings. This paper aims to help the common people and the police officers alike. The updates about case details are notified directly to the complainant. The ease of access of the android application by the citizens of India will encourage a more judicial and lawful society. The extended ambulance booking and tracking feature makes it more suitable for use in times like this pandemic.

VII. REFERENCES

[1] Muhammad Baqer Mollah, Kazi Reazul Islam, Sikder Sunbeam Islam, E-Police System for Improved EGovernment Services of Developing Countries.
[2] Archana Iyer, Prachi Kathale, Sagar Gathoo, Nikhil Surpam, E-Police System- FIR Registration and Tracking through Android Application.
[3] Prof. Swati Bhavsar, Shreya S. Deshpande, Poonam S. Lad, Nikita K. Aher, Pratiksha S. Khalkar, Online FIR Management System.
[4] Flutter, Wikipedia.
[5] Firebase, Wikipedia.