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CRIME PATROL APPLICATION (ANDROID)

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Abstract : India will soon exceed 200 million Smartphone users. Smartphones are used for different purposes. They are mostly used in multimedia, chatting, access Internet, video calling, and GPS navigation unit. There are very less number of smartphone applications which are helpful for society and police to notify crime. That is why we have created user friendly application. From this application anyone can capture images or video and send to specific police station and while sending the image or video we hide the information of sender by sending IMEI number and location of sender to web application which is handled by authorised police.

Keywords: Smartphone, GPS (Global Positioning System), Server, FIR (First Investigation Report)

I. Introduction

Latest technology advancement can be used to report crime and smartphone is one of the medium for that. It is easily available and accessible from anywhere. So here we are creating an Android application 'Crime Patrol' which is freely available for everyone. This android application is developed for only Kolhapur city.

For new user Crime Patrol application provides registration form to both Public and Traffic Police user. Then registered user just login with a username (mobile number) and password and then both user can use this application. First user is public. He can broadcast or post images and video. Whenever public user post the images or videos, the application tracks the location of user by using GPS tracker and send to the specific police station. Second user is Traffic Police. They can check if the vehicles number plate is fake or not by using chassis number or engine number. This would be a better way of sharing the information without any contact with police. Also this application gives the information related to all crimes, like murder, accident, rape, corruption, kidnapping, robbery etc. Photos or video are posted on web application which are provided to police. While filling FIR these images and videos would be useful to police, which have been already present on websites.

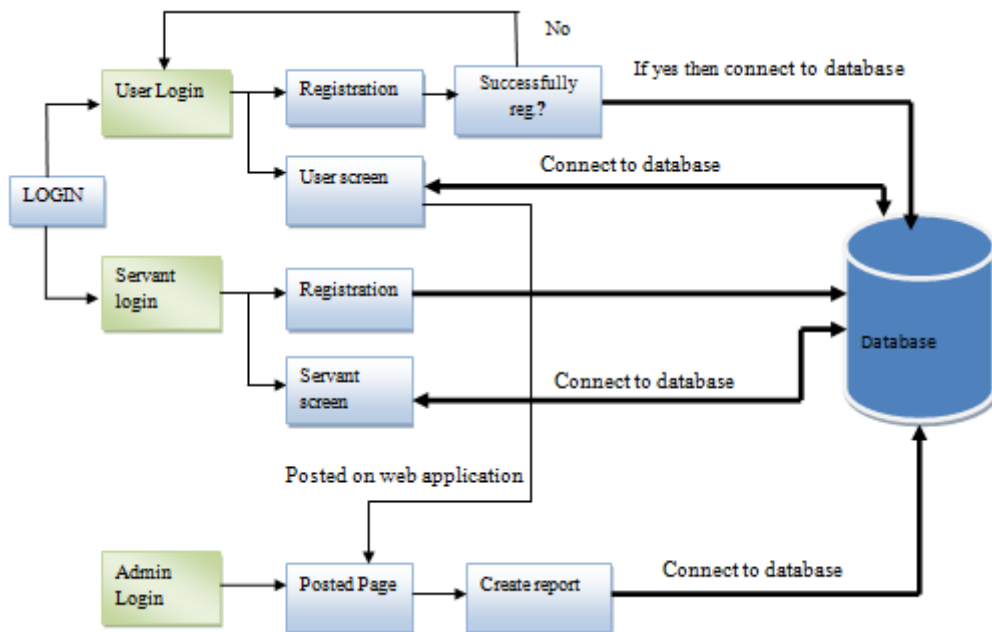
II. Proposed Work

The main objective of the proposed system is to automate the exiting work of police which required finding evidence records of the crime. When crime takes place, every time police may not be present at that location. People who are eyewitness of this crime, they are not able to report to police station due to their own security. In this real time application user have opportunity to send live images and video. When related FIR is registered, then these images or videos would be useful to police for solving the case at some level. Such information can be used as evidence in police station.

Crime Patrol application also provide a portal for authorized police user to access registered vehicle information. Police can check VIN (Vehicle Identification Number).

Crime Patrol application do not disclose any user information. Only Authorized Police user can access user information. Crime Patrol application hide the information of the user. This application just sends "IMEI" number and location to Web Application which is handled by Authorized Police of particular station.

System Architecture:



III. Model Description

A. Software Development Life Cycle

Waterfall Model is more suitable for this application because:

- Requirements of Crime Patrol application are very well documented, clear and not changed frequently.
- There is no requirement which is not understood.
- There is no ambiguous requirements.
- Definition, tools and technology of this application is stable.
- Resources for this application are well trained and are available.

Phase of Waterfall Model:

1. Requirement Analysis:

For this application capture all the requirements from police station and public. Do the requirements feasibility test to ensure that the requirements are testable or not.

2. System Design:

As per the police and public requirements, creating the design. For this application designing the HLD (High Level Design Document) and LLD (Low level Design Document).

3. Implementation:

As per the HLD and LLD requirements, creating the programs/code.

4. System Testing:

Integrate the unit tested code and test it to make sure if it works as expected. For this application perform all functional and non-functional activities.

5. System Deployment:

For this system make sure that environment is up, there are no defects open, it met all test criteria. Reliability of system is very high. Hence after deployment of the application smooth and efficient working of the system is ensured.

6. System Maintenance:

After deployment make sure that the application is up and running in the respective environment. In case user encounters any defect, make sure to note and fix the issues faced.

B. Technology used

i. JSON Parsing

This has general purpose such as JavaScript Object Notation (JSON) parser for handling JSON objects matching the template. JSON is a lightweight format, which is widely used to send data over the internet. It allows many data points for many components to be collected from a single Command data source. It also allows for collection of many events from a single Command data source. We have used JSON Parsing for sending data over internet and receive data from server through internet.

ii. Language used:

Android:

Android is software package and Linux based operating system for mobile device such as tablet computer and smartphones. The goal of android project is to create a useful real-world product that improves the mobile experience for end users.

Java:

Java for android apps is both similar and quite different from other types of java application. Any hardware or software environment in which a program runs, Java has its own runtime environment (JRE) and API.

PHP:

The PHP Hypertext Pre-processor(PHP) is a programming language that allows web developers to create dynamic content that interacts with databases. It is used to interface the web server, Database and Application. Crime Patrol.

MySQL:

We have used MySQL standard language for accessing and manipulating databases. Storing and accessing the data from database is created using this technology.

XML:

Xml is designed to store and transport data.It was created to provide an easy to use and store self-describing data. Xml is designed to carry data not to display data. Xml is platform independent and language independent.

IV. System Module Description

Module I. User Registration:

For first time both users Public and Traffic Police can register in this application using name/mobile number/email id/address etc. Gateway service provides verification code to verify mobile number. Using verification code both users can register in system. After code verification system provides registration successful message.

Module II. User Login:

After successful registration both Public and Traffic Police will be able to login by using his/her mobile number and password.

Module III. User Screen:

i. Public Screen: This system will have two section:

- **Screenshot:** In this section system will provide online camera for capturing live screenshot.
- **Video:** In this section system will provide camera for recording video.

These images and video would be send to nearest police station.

ii. Traffic Police Screen:

Registered Traffic Police user will check any vehicle information by using chassis number or engine number of that vehicle. The information of vehicles are already stored in Kolhapur RTO office.

Module IV. Web Application:

This web application is designed for Police Station. Public user would send images or video on this page. While filling FIR these images and videos would be useful to police. If taking some action on uploaded images or video, accordingly the police can send notification to user.

Module V. Admin Login:

This web application is handled by head of Police Station. Police will act as admin which are higher authority to delete and taking action on these images/video which are posted by public user.

Module VI. GPS:

GPS is used for Crime Patrol application. By using GPS system, nearest police station for sending images/video is located.

V. System Requirement

A. Hardware Interface:

I. Smartphone:

Any smartphone with minimum Android OS 4.0 (IceCreamSandwich) to Android OS 6.0 (Marshmallow), minimum 5 MP (mega pixel) camera and minimum 512 MB RAM

II. Server:

Computer with Windows XP/2007/8/8.1 Operating System, minimum 4 GB RAM and Processor from Third Generation up to Seventh Generation.

B. Software Interface:

We use **Eclipse and Android Studio** as development tool. Eclipse version is **adt-bundle-windows-x86-20140321**. It has

- An editor :-For writing your code
 - A GUI editor:- For drawing your application's screens
 - A compiler :-To build applications from your code
 - A debugger :- To probe your running applications
- Operating System:** - Windows XP/ Windows7/Windows8.1
- Programming Language:**-‘Java’, ‘xml’, ‘php’.
- Java:**

There are number of ways to create apps for android devices but recommended method for most developers is to write native apps using java and android SDK. Java for android apps is both similar and quite different from other types of java application. Java is high level, robust, secured and object oriented programming language. Java has its own runtime environment (JRE) and API.

PHP server - Xamp 1.8

The PHP Hypertext Pre-processor is a programming language that allows web developers to create dynamic content that interacts with database. PHP is server side scripting language that is embedded in HTML. It is used to interface the web server, Database and Application.

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