Mobile Theft Tracking Application

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Abstract- *This project aims to find stolen or lost phone with the help of different GPS location, IMEI (International Mobile Equipment Identity) Number of phone. When the application is install it will work in background. This application stores the unique user id & password, SIM Number, alternative phone number, E-mail id, whats app number, phones current location. When phone is stolen or loss user will get the images which are capture by front camera, GPS location on alternative phone number & also on given mail id, with the help of these information we can easily find out phone & the person who has stolen the smartphone.*

Key Words: Mobile tracking, sim tracking, latitude and longitude, user registraction, sms/email/text/whatsapp.

1. INTRODUCTION

Smart phone is a mobile phone which offers advanced technologies with functionality similar as a personal computer. With the growing speed of technological advancement, smart phones have become the essential components of our daily performance. These smart phones today can do almost everything. Faster networking systems, attractive and powerful applications and the technology literate users are making these smart phones very powerful these days. Smart phone are the best digital devices of present which provides what a human needs. Today everyone has a smart phone instead of having a simple phone which provides features of only doing calls or text messages but having a smart phone is beneficial by this we can do our office work on MS Office, can check our mails any time anywhere and there are a lot of more things that we can do.

Mobile phone has the personal information. If the phone is stolen then there is possibility of misuse of this information. There may be any personal or financial problems can be happen. So finding stolen phone is very important task. There are some technology and technique available. Using that we can find out the stolen phone. In India if the phone is stolen or loss then finding that phone becomes very complicated process. We need to file a case in police station and follow a lengthy procedure. So to make this process easy and comfortable. We have developed an android application. [2]

In this application we can find the smartphone by the help of IMEI (International Mobile Equipment Identity) numbering system, which is a 15 digit unique code that is used to identify the GSM (Global System Mobile) phone. This application uses the latest technology like SMS, Internet (Short Message Services) through using it you can send thief's picture which will be captured using front camera and current location of the IMEI number. It gives the exact details about the thief and his/her last location. If the SIM is changed then the location will be sent to email id or the alternative number of the user which is given by user at the time of installation of this application. [3]

3. METHODOLOGY & RELATED WORK

We have proposed three methods to track location of the lost smartphone. One is the basic where we get SMS whenever SIM card is changed, second method is track GPS location of phone by using google map and the third method is we capture the images of thief.

3.1 Basic Method

In Basic Method we use SIM unique number for identification of authorised user. SIM number is nothing but the sequence of ten digit numbers. Every SIM has its own unique number. When the phone is stolen thief will replace the SIM by its own SIM card then so the new SIM number will not match with previous SIM number, this will create an alert message

and this alert message will be sent to the alternative number which is registered at the time of installation of application. With the help of this new number we can easily find out the location of the smartphone.

3.2 GPS Location

In Second method we can find the location of phone number. Every phone has unique IMEI number. And we can easily track this number using GPS system. A GPS satellite revolves round the earth twice a day in an orbit and transmit signal data to earth.

When a mobile is lost or stolen then the application will run and it activates the GPS and mobile network. This application sends location to the user through mail in interval of one minute. The user goes to the location and catches the lost phone. Then the users stop the application by using his password.[6]

3.2 Snapshot of thief

When the phone is stolen thief will replace the SIM by its own SIM card then so the new SIM number will not match with previous SIM number, which will create an alert message and capture some of the snapshots from front camera and send those snapshots to registered alternative number & also on user's email id. Using these three methods it is easy to find stolen phone.
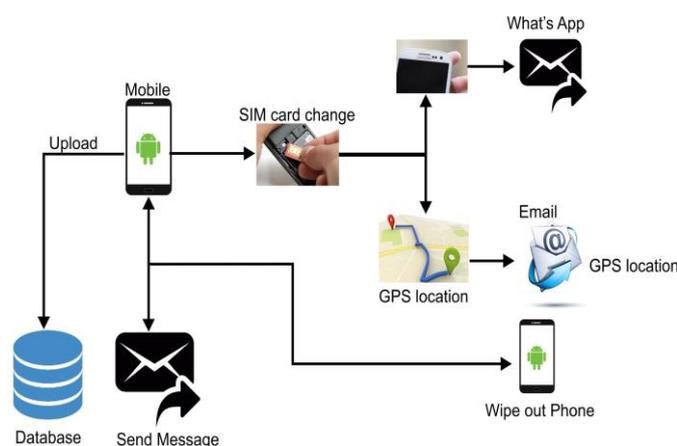
4. SYSTEM ARCHITECTURE

Fig. -1: System Architecture

Above figure shows the architecture & flow of application. It shows the use of each object.

5. SYSTEM IMPLIMENTATION

Applicaton installation module is used to build the android application using eclipse environment with an android development kit. To start the emulator for development of the application. There will be the emulator to create the new application. There will be the main module to develop. To create an innovative android application for anti-theft mobile tracker for smart phones and to install the application to mobile. It is used to fetch the real data from user and store into database using SQL Lite. [2].

In this module first user interface where user has to provide User Id, Password, SIM, IMEI number, E-mail ID and alternate number then click submit button. Next it will store information in the database. This information is surely protected by encryption. User can change the alternate number and IEMI number whenever they want.

5.1 How to open CAMERA Automatically

To do such operation android SDK provides some libraries or API (Application Program Interface). Using these API we can operate the camera using another application. To do this we need to assign some camera permission in manifest file.

<uses-permission android:name=""android.permission.CAMERA"/>

We should also check whether camera is ready or not and number of available camera. For ex. Front & rear camera. This can be check by calling following method

PackageManager.hasSystemFeature()   and Camera.getNumberOfCameras()

To capture Photos and Video Android framework gives *Camera API* & *CameraIntent.* After it finishes capturing photos it will call *onActivityMethod ()* where the data gets stored in the SD card.

5.1 How to Send MMS & Email Automatically

As we are going to use SIM & message services for sending the location and SIM number we need to assign some permission. To perform such operation one has to take permission by declaring in manifest file. MMS is different than SMS. So we have to request some

extra permission. MMS uses private API's. This API's are not provided by android SDK. To send MMS we use Android GIT repositories. Which it gives internal permissions to send MMS with any image file.

To send email we have to set permission for internet services in manifest file to open network socket for an application.

<uses-permission android:name=""android.permission.INTERNET";>

To send email we can also use private API's like providing Gmail. In this there are three jar files mail.jar, activation.jar, additionl.jar which provides to send email automatically.

7. ADVANTAGES & DISADVANTAGES

7.1 ADVANTAGES

1) You will gate Current location of the thief.
2) User & alternative Number get SMS from new SIM CARD if it is changed.
3) You will get thief's pictures

7.2 DISADVANTEGES

1) -Your phone should be connected to internet
2) -Your phone should be GPS System

CONCLUSION

This paper presents an anti theft mobile tracking application. This application provides strong security to Smartphone when it is lost or stolen by thief. It gives the location as well as photos of thief to user on alternative number and email id provided by user. With the advent of time, technology is updating every day. Our application further will be updated and improved. Currently this application works on android operating system. In future we are trying to make this application for iOS & windows mobile OS. This will be our future scope.

ACKNOWLEDGEMENT

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