

# Anti-Thief Android Application

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## ABSTRACT

Increase in the use of smart phones ,tablets and other android operating system base devices in today's world has led to a drastic rise in the number of mobile thefts The scenario proposed in this project is totally dependent on the hardware of your smart phone like front camera, back camera and support for multimedia messages. In this software we are going to use MMS instead of SMS. Once the installation of this software is complete, it will work in the background, it will store the current SIM number and keep on checking continuously for SIM change, whenever SIM card gets changed from mobile, it will take few snapshots and record a video in the background, without taking permission of the user and then it will send a multimedia message, and number of snapshots, to an alternate mobile number and an email id provided by the particular user, during installation of the software.

**Keywords:** Anti-Thief, Android application, Security.

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## I. INTRODUCTION

We present an android-based approach for the design of Anti-Theft Application for the smart-phone. Android environments provide several benefits to all the Common peoples of the society as android phones are the new trend of Society. Location privacy has become an issue because of the increase in GPS devices, location based services, WLAN and cell ID based on positioning technologies. A lot of research has gone into finding a wireless device for security reasons. Localization is often passive or active. A simple message from friends mobile will make the users phone ring even it is in silent mode if the phone is placed within the reachable range Company related information and documents can be viewed anywhere can be shared with anyone. People have to lose their confidential data like contacts, messages. To protect the phone from thefts, working on development of an android application helps to track the lost mobile phone. All the features have corresponding keywords that help to activate that particular feature including fetching of the device location, device lock, device wipe, mailing data, and SIM card change notification and sound an alarm. Also the camera of the phone works in the background without knowing the person and records the

video as well as captures the pictures and sends this to the actual user with the help of MMS or an Email.

## II. METHODOLOGY

There are basically seven major features that are provided by the android application which are:

1. Profile Change
2. GPS Location
3. Contacts Backup
4. Contacts Deletion
5. MIC Activation
6. SIM Change Notification

First feature is the change of the profile. Here, the profile mode is changed from Silent mode to General mode proceeding by ringing an alarm tone. In addition to this, it maximizes the ringing volume of the alarm to help the user locate it. Second is the GPS Location Feature which will get GPS location of the phone when it's being stolen. On receiving a message containing the special keyword, the GPS location of the mobile will be reverted to that message by fetching the current location of the phone with the precision of approximately 500 meters. The third feature is the Contacts backup. As the name suggests, it triggers the

application to create a backup of all the contacts in the phone and send it to the user's registered Email ID. Fourth is the contacts deletion feature. The contacts from the targeted phone will be deleted on getting the corresponding keyword before the thief misuses contacts. Next is the Screen Lock Feature which will simply lock the screen if it is unlocked. The sixth feature is the SIM Change notification. As soon as the SIM card is replaced, it will fetch the information about the new SIM and message it to the two alternative numbers that are pre-entered by the user during registration.

### III. APPLICATION DEVELOPMENT

The Application development includes the features and requirements for the development of the proposed intelligent android application.

#### A. System Requirement

The application includes two mobile phones. Any android based Smart phone starting from version Android 2.2 having the proposed application installed in it with GPRS and GPS enabled. And any other OS based mobile phones for sending and receiving SMS. GPS is used for tracking the lost phone. The current location is fetched and sent to the target phone as SMS. For this the lost android phone must be GPS enabled.

#### B. Application Features

During installation the applications reads the target mobile number and the application password from the user. The user interface contains two radio buttons for safe and alert mode. By default the application will always be in the alert mode. Each SIM card is identified by its Integrated Circuit Card ID (ICC-ID). ICC-IDs are stored in the SIM cards and are also engraved or printed on the SIM card body during a process called personalization. When started, the application checks if it is in safe or alert mode. If in safe mode, it compares the ICC ID of the current SIM card and the predefined ICC ID, if change is found then it is made by the real owner and the application will not send the notification SMS. If it is in alert mode, then the application will respond, since it is the unauthorized SIM card in the device.

In real life everyone might face the situation where we have misplaced the phone and find it difficult to trace since it is in silent mode or if the person who flicked the mobile phone is still around and has put it in silent mode, then the profile management feature in the application convert the profile of the phone from silent to general and thus helps us in finding it We retrieve the location by sending one SMS to the lost Smart phone in a particular format. The application sends the single GPS value

#### C. Technologies

The application is developed in Java programming language using the Android software development kit. The development tool chosen for this application was the Eclipse SDK

#### a. Comparative Study with the Existing System

parameters	Mobile Anti-theft	Mobile tracker	Lost android finder
Profile change	Yes	No	Yes
Sim change notification	Yes	Yes	Yes
Maling backup	Yes	No	No
Raising alarm	Yes	No	No
Gps location	Yes	Yes	Yes
Screen lock	Yes	No	No
Simple to use	Yes	Yes	No

### IV. NOTATIONS AND PRELIMINARIES

$S = \{I, K, U, F, P, O, A, L, U, T, \text{SUCCESS}, \text{FAILURE}\}$

I IS SET OF INSTRUCTION

$I = \{I_1, I_2, I_3, \dots, I_N\}$

K IS KEY USED FOR ENCRYPTION

$K = \{K_1, K_2, K_3, \dots, K_N\}$

U IS USER NAME FOR THE MODULE

$U = \{U_1, U_2, U_3, \dots, U_N\}$

P IS PASSWORD TO AUTHENTICATE

$P = \{P_1, P_2, P_3, \dots, P_N\}$

F IS SET OF FUNCTION

$F = \{ \text{AUTHENTICATE}(), \text{LOCK}(), \text{UNLOCK}(), \text{TRACK}(), \text{UPDATE}(), \text{DELETE}(), \text{NOTIFY}(), \text{PAIR}(), \text{INTIATE}(), \text{ENCRYPT}(), \text{DECRYPT}() \}$ .

$F1 \{ \text{AUTHENTICATE}(U,P) \} = A \ A = \{ D \text{---} D \text{ CONTAINS THE INFORMATION ABOUT SUCCESS/ FAILURE OF LOGIN} \}$

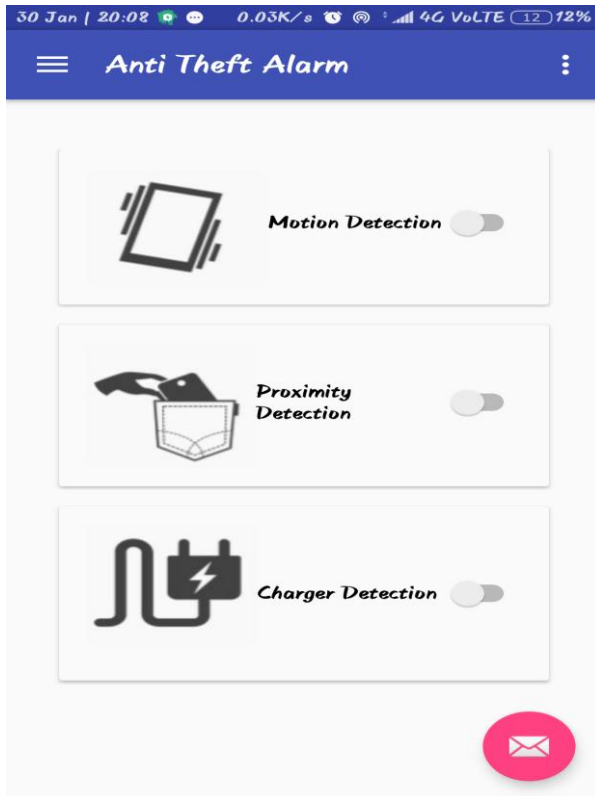
$F4 \{ \text{LOCK}() \} = L \ L = \{ D \text{---} D \text{ CONTAINS THE INFORMATION ABOUT SUCCESS/FAILURE OF LOCKING} \}$

$F6 \{ \text{TRACK}() \} = T \ T = \{ D \text{---} D \text{ CONTAINS THE COORDINATES OF THE LOCATION OF THE DEVICES} \}$

### V. SYSTEM ARCHITECTURE

A System architecture is a conceptual design that defines the structure and behaviour of a system. An architecture is a formal description of the system, organizing in a sequenced way. It shows the system components or the building blocks which provides a plan from which the systems developed, that will work together to implement the overall system. The system architecture shows the various components like application keep checking for SIM changing in user device and send MMS to the alternative user shows in fig.

## Design Model of Alarm System



## VI. APPLICATIONS

- Widely used in crowded places where there is a chance of losing the device.
- Also can be used where device is misplaced.
- Can also use to get the GPS location of device with surrounding images and videos.
- Application has a feature of remotely changing the ringer mode that can also be done

## VII.FUTURE SCOPE

Future work of our project is to make our project for different operating systems like Windows, Mac, and Blackberry. So we can extend the number of users of the software. So he/she can access our software on various platforms. With further enhancements, a software can be developed that can click an image or record a video and send that recorded file to the user entered email-ID. This will help to view the video or image and thus locate the lost cell phone.

## VIII. ACKNOWLEDGEMENT

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## IX. CONCLUSION

This is An Android Application to Locate and Track Mobile phones ,This is an unique efficient application which has a variety of features that enhances the Current mobile tracking system as we are using a totally new technology of multimedia message and camera functioning which will surely provide certain ease in tracking the Mobile Phone. For future work, it is proposed to implement some algorithm where the phone itself identifies that it is being lost. Whenever, the phone is off for more than 48 hours it should make it switch on automatically.

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