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Real-Time Anti-Theft System with GPS Motion Sensor and Cloud Alerts

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ABSTRACTThe methods for tracking a stolen laptop using GPS, GSM, Motion Sensors, and Cloud Services is described in this proposed work. Unlike previous laptop tracking solutions on the market, the methodology described in the study tracks the laptop even when it is turned off or not connected to the internet. With IOT, the owner will be able to follow his or her stolen laptop the instant it makes a slight movement and will be able to activate an alarm that will be incorporated into the laptop.

Keywords: Android, Anti-Theft, Laptop Tracking, Mobile, Alert, GPS, GSM, Cloud Computing, Tracking, Alarm, Theft.

INTRODUCTION

The modern world is characterized by a proliferation of technology and a ubiquitous presence of portable electronic devices, including laptops, which have become indispensable tools for both personal and professional use. However, this widespread adoption of laptops has also given rise to a growing concern security and the prevention of theft. The theft of laptops and the loss of valuable data represent a significant challenge in our digital age. Traditional laptop tracking solutions often rely on internet connectivity and the device being in an active state, leaving them ineffective when the laptop is powered off or disconnected from the internet. As a response to this limitation, we present a groundbreaking "Real-time Tracking and Alert System for Anti-Theft" that combines state-of-the-art technologies to ensure the security and recoverability of laptops, even under adverse conditions. Our system integrates GPS (Global Positioning System) technology, GSM

(Global System for Mobile Communications) communication, motion sensors, and cloud services to create a comprehensive anti-theft solution. The core idea is to enable laptop owners to track and protect their devices in real-time, irrespective of the laptop's power state or connectivity status. This paper explores the intricacies of our system's methodology, implementation, and real-world application. Unlike existing solutions, our system allows the owner to track their stolen laptop the moment it experiences even the slightest motion, and they can trigger an alarm directly from the laptop. This audible alarm serves as a potent deterrent to would-be thieves, compelling them to reconsider their actions. Simultaneously, the system empowers the owner to pinpoint the laptop's location through a dedicated mobile application, which establishes communication with the laptop's GPS and GSM modules via cloud services.

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In addition to enhancing laptop security, our innovative approach has broader implications for the field of asset protection and tracking. It exemplifies the potential of modern technologies, such as the Internet of Things (IoT), to address pressing challenges in security and anti-theft measures.

Existing system In the existing system, if we forget our phone, we call the phone from another phone. If it's silent then is very difficult to find our phone. It's not possible to track children's location of their parent.

Disadvantages of the existing system Unreliable way to find mobile.

Proposed system In the proposed system users will have main 3 options to find or track their mobile location. If a user forgets their mobile at home, then the user will send pre-formatted SMS to their phone then the mobile will start ringing. If user forgot their phone outside of the home, then they can track by the proposed system.

Advantages of the proposed system Easy way to find mobile location Save time and effort to find a mobile phone.

RELATED WORK

Amit Kushwaha & Vineet Kushwaha (2011). 'Location Based Services using Android Mobile Operating System' [1]. International Journal of Advances in Engineering & Technology, ISSN: 2231-1963. In this article, Amit & Vineet designed an Android-based tracking system, which can help users to find the nearest important locations like a hospital, markets, ATM booths, schools, etc. Manav Singhal & Anupam Shukla (2012). 'Implementation of Location-based Services in Android using GPS and Web Services' [2]. International Journal of Computer Science Issues, ISSN: 1694-0814. In this article, Singhal & Shukla designed an Android application that can find the nearest address and calculate the distance between the user's location to another address. Ch. Radhika Rani, A. Praveen Kumar, D. Adarsh, K. Krishna Mohan, K.V.Kiran (2012). 'LOCATIONBASED SERVICES IN ANDROID' [3]. International Journal of Advances in Engineering & Technology, ISSN: 2231-1963. In this article Radhika, Praveen, Adarsh, Krishna, and Kiran designed Android apps that input two addresses by using the r, one is the

source address and another is the destination address, and then show the route between these two locations. Radhika Kinage, Jyotshna Kumari, Purva Zalke, Meenal Kulkarni (2013). 'Mobile Tracking Application' [4]. International Journal of Innovative Research in Science, Engineering and Technology, ISSN: 2319-8753. In this article Radhika, Jyotsna, Purva, and Meenal designed an Android application that allows specifying different safety zones for a user. The application runs on a single mobile and the alert messages can be sent to any mobile. Prof. Seema Vanjire, Unmesh Kanchan, Ganesh Shitole, Pradnyesh Patil (2014). 'Location-Based Services on Smart Phone through the Android Application' [5]. International Journal of Advanced Research in Computer and Communication Engineering, ISSN: 2278-1021. In this article prof. Vampire, Unmesh, Ganesh, and Patil designed Android apps with 3 modules,

Profile changer based on place or area,

Person Location tracking by Family Member (SMS),

Nearest Friends notification reminder

Mahesh Kadibagil and Dr. H S Guruprasad (2014). 'Position Detection and Tracking System' [6]. International Journal of Computer Science and Information Technology & Security, Vol. 4, No. 3. In this article, Mahesh and Dr. Guruprasad designed an android application that can be used to locate the position of friends and family members. This application has an alert mechanism to send a popup SMS to the user when his friends or family members are nearby. Text messages can be shared with online users

SYSTEM ARCHITECTURE

Stolen Mobile Detection

In this case, the user will send an SMS on the stolen mobile in a predefined format with a PIN. The system will fetch the current location and capture photos from front and back cameras. This information is then sent to the registered email id.

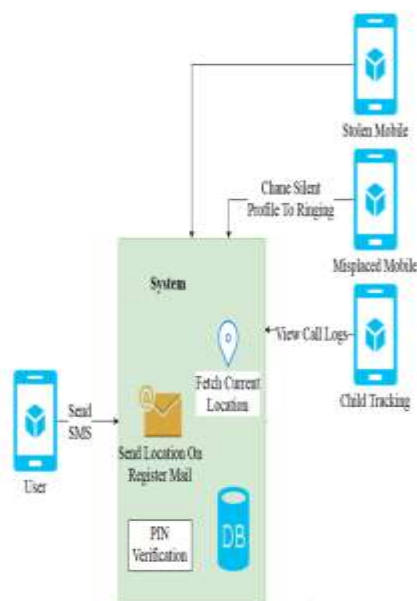
Misplaced Mobile Detection

In this case, the user will send an SMS on misplaced mobile in a predefined format with a PIN. The system will change the silent profile

to a general profile also system will fetch the current location and capture photos from the front and back cameras. This information is then sent to registered email IDs.

Child Tracker

In this case, the parent will send an SMS on the child's mobile in a predefined format with a PIN. The system will fetch the current location and capture photos from the front and back cameras. This information is then sent to the register email id. Parents also can check children's call logs.



RESULT

Our innovative application aims to combat phone theft by providing an effective and cost-efficient solution. This user-friendly application empowers individuals to remotely access their stolen phones while safeguarding the thief's data. With the built-in buzzer feature, immediate identification of the thief during a phone theft incident is possible, aiding in data recovery. Additionally, the application offers automatic GPS activation for tracking the stolen device's current location. Installation on Android smartphones is seamless, and the application also serves as a child tracking system, allowing parents to monitor their children's whereabouts and prevent abduction cases.

Fig. 1 Login Activity

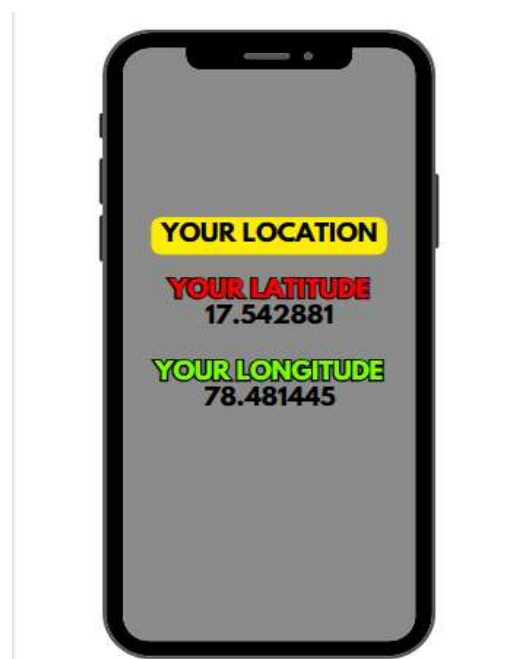


Fig 2. Location

CONCLUSION

Propose system is an anti-theft mobile tracking application. This application provides strong security to smartphones when it is lost or stolen by thieves. It gives the location, as well as photos of the thief to the user on the email's id provided by the user Parents, can easily track their children's locations.

FUTURE SCOPE

Android is now stepping up to the next level of mobile internet. There are chances of android mobile sales become way more than iPhone in the next current years So this system is useful Android is the most used technology of our current time, which is in the process to use in cars, watches, and also android TV There Are most of the chances of android may become the widely used operating system in the world.

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