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## EMPLOYEE AND VEHICLE TRACKING USING ANDROID

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**Abstract:** The rapid growth of technology is creating a great impact on our lives. The aim of this research employee and vehicle tracking system using android is to automate the employee and vehicle tracking process in company by their employee's office cell phone and also improve the organizational growth of the company. In this paper we discuss about the design and implementing application for monitoring company's employee and vehicles using android technology. In this system we are providing database utility which retrieves data or information from local database. The android application in smart phone contains all information about the employee phone usage like SMS history, call logs, location, data usage, web browser history and unauthorized data usage details. All communication between the employee phone and manager is done through Wi-Fi. This application is user friendly. This system improves accuracy in managing employees and vehicles of company by saving time, reducing manager efforts, avoid the unnecessary use of company phone which are provided to the employee for their office use only. The main aspect of our paper is managers to navigate their all employees and vehicles through mobile phones and know the employee behavior.

**Keywords:** Android, Smartphone, IMEI, Tracking, GPS.

### I INTRODUCTION

Employee and vehicle tracking using android is an advanced monitoring technique in which Wi-Fi network is used for communication among the company. In this we are going to developed android application which is continuously running in background on the android phone of the Employee. The manager can access all the details of the Employee including incoming call history, outgoing call, SMS history, web browser history, live location and their call list as well as Vehicle Details like vehicle co-ordinates etc. It helps to determine the behaviour of the Employee's working in the company as Good, Loyal, Best, Average or Worst.

We can monitor and track employee and vehicle using GPS (Global Positioning System). GPS is actually a space-based navigation system that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an un-obstructed line of sight to four or more GPS satellites. The system provides critical capabilities to military, civil, and commercial users around

the world. This system is really very helpful for the managers to monitor their employees through mobile phones. The developed system was able to increased productivity, reduction of cost, instant access to employee attendance record.

### II LITERATURE REVIEW

Priti et al (2015), worked on monitoring employee's smartphone using android application. This system uses Android based mobile phones for the software to be run. The mobile device in the hand of the Employee should be an Android based device and the Managers may have any kind of mobile device, since the manager is going to receive alerts from the Employee in SMS format only. For convenience, the alerts are also stored in the centralized server like the details of incoming call, text and multimedia messages and the timely location update of their Employee and their attendance. Manager may later login into the centralized server and view the details of their Employee's mobile usage. This system is helpful for the Managers to monitor their Employee through mobile phones.

Jindan Zhu et al. discussed that many popular mobile applications require the continuous monitoring and sharing of a mobile User's location. However, exploiting a user's location leads to disclosing sensitive information about the Users daily activity. Several location privacy-preserving schemes have been proposed, but it remains challenging for a user to achieve visibility of the associated threats as well as to control the impact of those threats. This paper presents an adaptive location privacy-preserving system (ALPS) that allows for a user to control the level of privacy disclosure with different quality of location-based service (LBS). We have identified key attack models on location tracking using powerful map-matching algorithms, and then defined a scheme that allows a user to control the privacy of tracking Information. We have implemented ALPS on Android OS and evaluated the implementation extensively via trace-based simulation, showing the effectiveness of user-controllable privacy preservation.

Nitin et al (2015), worked on Mobile Activity Monitoring System Using Android Spy, this system was implemented for tracking the daily activity of the users with their android mobiles. The information such as missed call, incoming call, outgoing call, call duration, incoming SMS, outgoing SMS along with its date and time will be tracked and updated to the server this server will be monitored by the administrator. This information can be maintained for security purpose of the organization such as leaking the confidential data and maintaining policies of organization.

**III EXISTING SYSTEM**

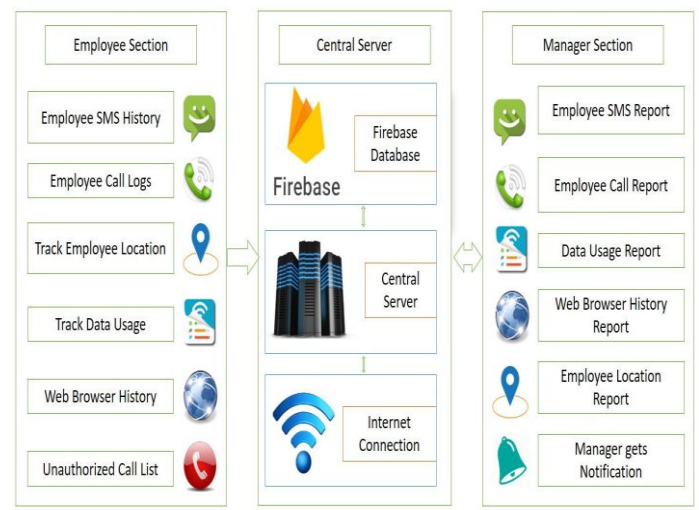
In existing system, the tracking of the employee is done by fixing tags in different location for identifying the actual position of an employee. Also the android smart phone is connected to Bluetooth. So the tracking of employee is done to a very shorter distance by using Bluetooth. The tracking system in existing is not secure as compared to the proposed system because the communication link between centralized servers & employee phone is maintained by wired LAN which is relatively slow as compared to the WIFI network. For vehicle tracking existing system is using GSM technique which does not give exact location information.

**IV PROPOSED SYSTEM**

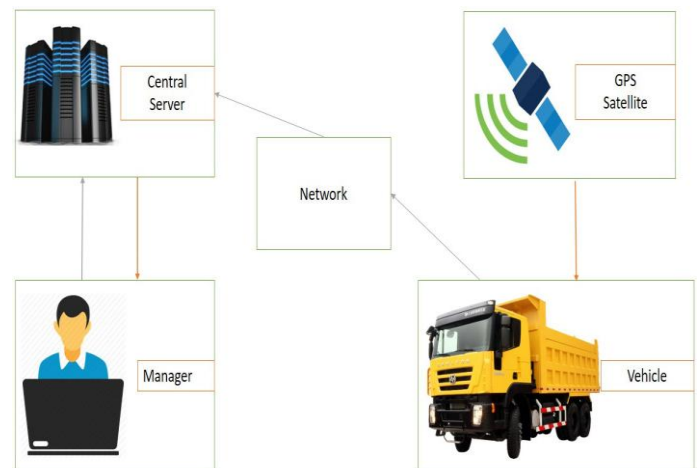
To overcome this problem, we are developing applications which implement some functionality by using android phone for manager to handling of the company employee to avoid the misuse of their office phone. The Android mobile provided to employee is connected to high speed Wi-Fi network. So the manager can track the employee at a very high speed and because of the high speed network there should be not any interrupt in the network.

We are using IMEI as a verification of the employee login process which is more secure than the existing system.

The IMEI number is unique for each device so the employee's co-worker cannot mark his attendance. The employee tracking system uses centralised server for retrieving the detailed information of the employee phones uses like the incoming & outgoing calls. So whenever manager wants detailed information about the related employee he will login on to the centralized sever. For vehicle tracking we are using GPS technology which gives exact location information.



**Figure 1 Employee Tracking Methodology**



**Figure 2 Vehicle Tracking Methodology**

In our application there are mainly three modules: -

- Manager
- Employee
- Vehicle

Manager: - This module is main module. It is responsible for managing all the employee's activities, Assign task to the employees and track the vehicles.

Employee: - This module is for employees who need to login into the application in order to mark attendance. In this module all the activities of the employee will be tracked after successful login.

Vehicle: - This module is for vehicles which are used by the organisation. It contains GPS tracker which is responsible sending location information to the server.

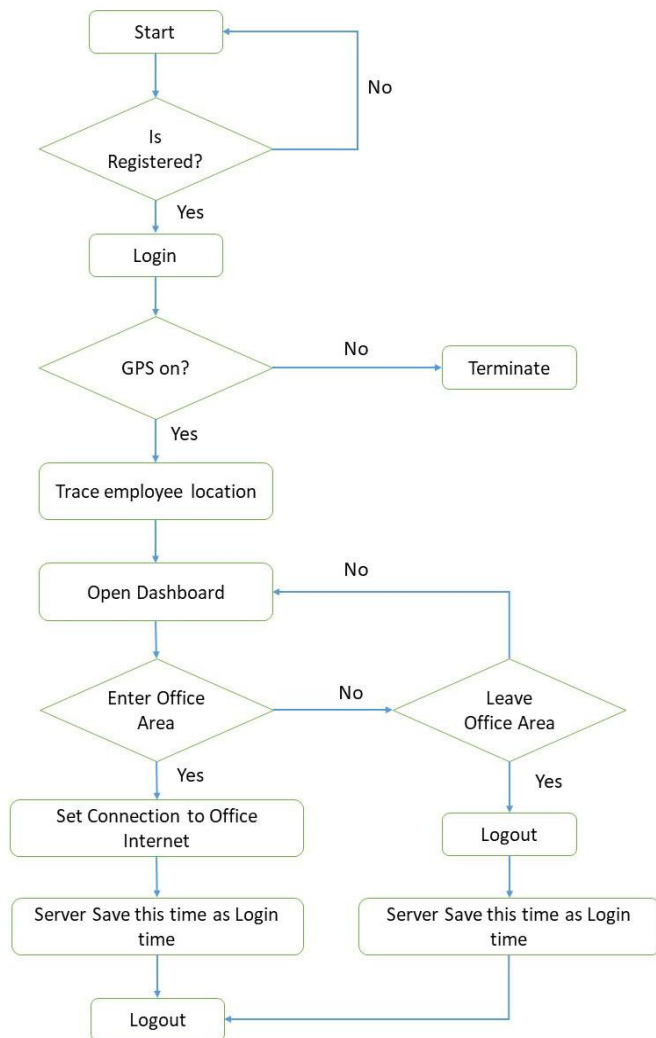


Figure 3 Activity Diagram

V SCOPE

- Attendance management system for large scale MNC’s.
- Useful in colleges and schools for tracking staff and student’s activities as well as tracking school and college buses.
- In future we can also use the NFC technology for verification purpose and it will become more reliable.

VI SYSTEM REQUIREMENTS

- Pentium 4 Processor
- 4GB RAM
- Minimum 250GB Hard Disk
- Android Emulator
- Windows or Linux Operating System
- Android Studio
- Java

VII RESULT

First the user will try to login in to the system. If the user is registered, then it will go to the next stage that is login. If the credentials that is email id and password matches with the mobile IMEI number, then he will successfully logged in to the system. Then the application checks whether the GPS is on or not. If it is off, then system send alert message to the user to turn on the GPS. After the GPS is turned on the application will track its location and save the co-ordinates to the server. This time is also considered as office entry time. When user log off then that time will be considered as log out time.

VIII CONCLUSION

Using this system, we are able to monitor and track the Employees in the company and thus it helps the manager to examine each and every employee from and outside of the company also. The details like SMS history, incoming call list, outgoing call list, web browser history, data usage, and unauthorized call list accessible to the manager using this system. It helps to increase the output of the company thus getting good position in the world. The company’s annual growth is increased and the wastage of time is minimized. It helps to track easily employee's log in and out. It helps to see employee details and their activities and also reduces the complexity of employee detail maintenance.

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