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## Employee Monitoring System Using Android Smartphone

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**ABSTRACT :** Growth of android applications is Rapidly increases and which has a great impact on our life. In some company, office cell phones are provided to employee. Employee do lots of activities which are unknown to manager and it may affect in degrade the growth of company. "Employee Monitoring System using Android Smartphone" is an android application for log the data on the server automatically. This application is helpful for the managers to track their Employees office cell phone activities. This application is use to maintained transparency between manager and employee. It create and maintained logs of call and message, Browsing history, Data usage, Location. And generate report of employee on server. It also send alert message to manager's phone if employee goes outside the campus. The Global Positioning System is used to trace location of employee. By using this system, the organisation can avoid the unnecessary activities done by the employee. The aim of this "Employee monitoring system using android Smartphone" is, to monitor activities of their Employee's office cell phone and also improve the organizational growth of the company.

**KEYWORDS :** Employee monitoring system, Android, GPS, AES Encryption Algorithm, K-means Algorithm

### I. INTRODUCTION

Google developed android operating system for mobile device which is based on Linux kernel[13]. Android mainly focus on touch screen mobile devices. User interface is mainly based on direct manipulation. We can give input on-screen objects by using virtual keyboard. Application frame work has Dalvik Virtual Machine and native libraries. Native libraries support the miscellaneous functionalities of multimedia data processing, web browsing, database access, and GPS reception optimized with resource-limited hardware environment. The DVM (Dalvik Virtual Machine) runs Java code with low memory demand as being register-based. At the highest point of the layers, Android gives a component based programming structure so that developer can easily manufacture their own applications. Android has four Application components. Application components are crucial building blocks of an Android application. These parts are approximately combined with the AndroidManifest.xml which is application manifest file that describes each component of the application and interaction between them. First component is Activity, which is nothing but action on screen and also handle the user interaction with smart phone screen. Any screen on Android phone is activity. Second is Services, They handle background processing associated with an application. then third is Content provider, Provide data to your activity. and the last one is Broadcast Receivers, They handle communication between Android OS and applications.

The organization's success depends on employees' performance. There are a number of reasons to monitor an employee's mobile activities. The manager needs to ensure quality of service, detect misuse of company phones, and avoid exposure of confidential data. Employee monitoring system using android system have Employee application, Server and Centralized mysql database. In this data or information retrieves from centralized database. It uses telephony manager system for identification of employee.[9] All incoming and outgoing call log, texts and multimedia messages, browsing history, data usage can be seen by the Managers, who can also track their Employee location through GPS. Alerts message is send on mangers phone if their Employee goes outside the approved geographical area. After monitoring all data it store in Array List. This application is user friendly. It improves accuracy of managing employees, generate report and also reduce manager efforts. It gives employee behaviour weather it is Good/Average/Bad. It avoid unnecessary use of office cell phones which are provided for office use only. [7]

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This application provide functions like, able to mange many employee efficiently, Security, Low cost. This application is truly extremely accommodating to increase the growth of organization.

## II. LITERATURE SURVEY

In 'Location tracking of the employee is implemented using Global Positioning System', by using GPS it calculate the exact location[6]. Drawback of this system is user have to provide input to the system. But in proposed system there is no requirement of user input.

In 'Smartphone monitoring System' Only call log are update on server. Other data is not Updated but in proposed system All data like call log, SMS history, browser history, data usage can updated on server.[5]

## III. SYSTEM ARCHITECTURE



Fig 1. System Architecture

Employee may use their office cell phone for their personal use. This system avoid such misuse by tracking all activities such as Call Logs, SMS, Browsing History, Data usage and Location of employee's office cell phone. All activities are stored in SQLite database. If data connection is off then data is stored in SQLite database and updates on server when internet connection is available. 'MasterDB.dat' file is maintained to store data in Array list format. It also maintain the flag of all data. If data is updated on server then value of that data become '1'. If data is not uploaded then values of those element is '0'. Next time only those data is uploaded on server whose value is '0'. The user of the system is any employee and manager. First user is employee, Application runs on employee's office cell phone which must be android phone. Another user is Manager or team leader who has authority to check all the details of employee.

### A. Android Side :

Input : All activities of employees office cell phone.

Output : Data store in masterDB.dat file in array list format.

Connectivity : This screen shows connectivity with server. Here IP address and port no is entered and by using connectivity button we check connectivity. Another screen gives update button. Data which is stored in SQLite database is get updates on server. If data connection is not available then it updated when internet is available.

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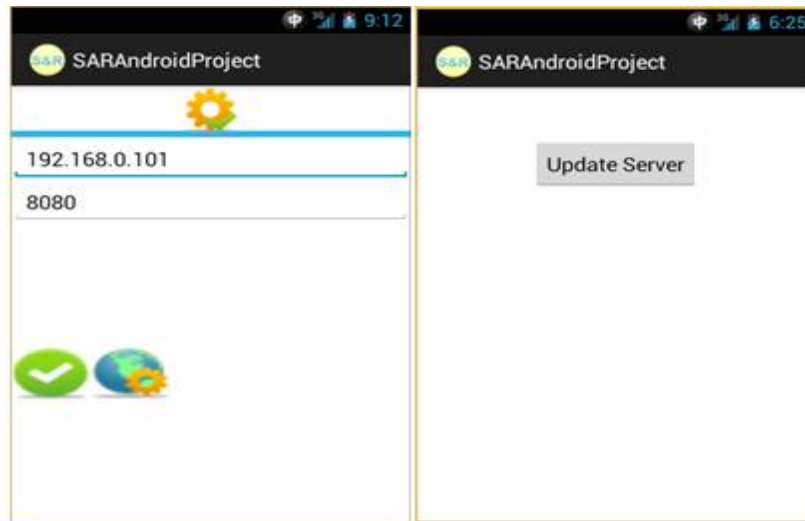


Fig 2. Connectivity Screen

## B. Web Side :

A server is implemented to store, generate report and view detailed report of employee which are trace by the application which is installed on the android side[7].

Input : masterDB.dat file

Output : Generate a employee report.

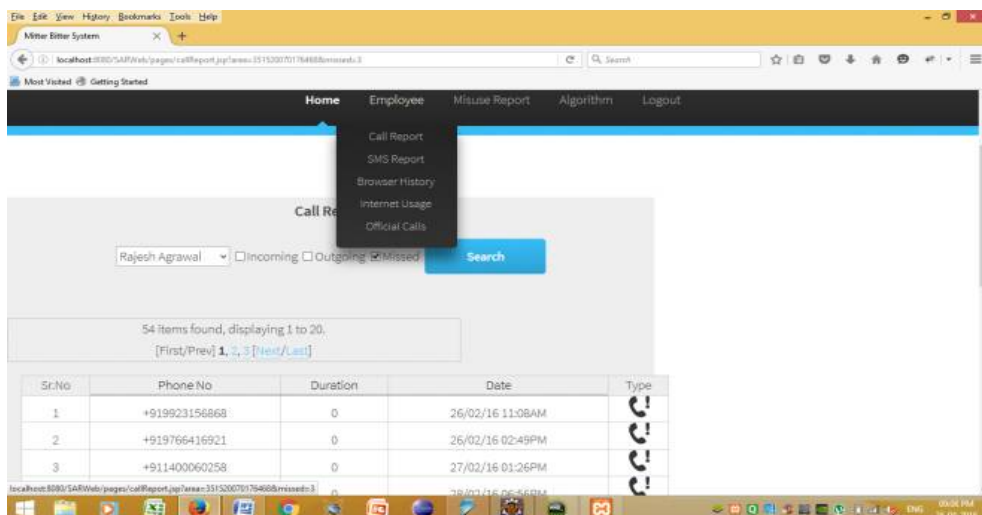


Fig 4.Call Log details

## C. Database :

The data which is gathered by the application which is installed on android phone stored in the database for the further usage. SQLite server is used as a mobile back-end database. MySQL is used as a back end database which store all the detailed information in table format. So it is user friendly and easy to access as shown in following screen.



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## IV. IMPLIMENTATION

### A. Hardware and Software Implementation :

The aim of project is to develop a system that can partially computerize the work performed by the manger. Android phone is required with greater version 1.2. This project is developed by using Java, JSP and MySQL. JSP (Java Server Pages) are used as a front end which is use for database access from centralized server. Java programming language and Android SDK, JDK are use for developing the application. MySQL is a back end database used to access data from server. HTML used for structure designing and CSS is used for web page formatting

## V. ADVANTAGES OF THE APPLICATION

1. Helps to increase the growth of the organization.
2. No need to physically check daily activities and performance of the employee.
3. Employee report is generated.

## VI. APPLICATIONS

This application can be used in many organizations like IT industry, for monitoring the employee office cell phone activities and according to that performance can be calculated.. It can also be useful for parents to protect and monitor their children even they are far from them. Field service management is possible. Manager can access real-time locations of employee. It can also be used as a theft prevention and retrieval device. Police can simply follow the signal emitted by the tracking system and locate the theft.

## VII. RESULT

A final result gives the behaviour of employee with in clustering report. With the help of report companies can easily judge employee. following screen show that employee behaviour report.

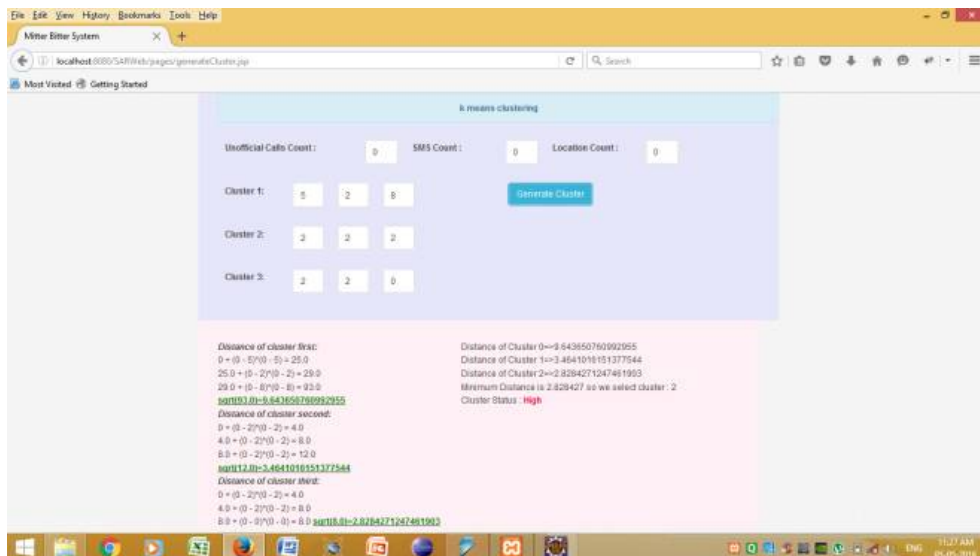


Fig 7. Report



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## VIII. CONCLUSION

In this project, New generation employee monitoring application is implemented. Using this application manager can easily monitor their employees office cell phone activities like all call log, SMS history, browsing history, data usage. Manager can also trace employee location in organization. This application can calculate overall performance of their employees. It is completely new way of calculating employees performance.

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