

Bitter Guard Employee Monitoring System Using Android Mobile Application

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Abstract

Now a days Android mobiles are everywhere in the world, but if we consider the area such as IT industry, Organizations, Educational, Business in these sectors all the employee with their Android mobile phones performs much activities. Every company, organization having their own policies, rules, future Projects so in such cases the privacy, security and confidentiality must be maintain by the employee of the organization. So it's very important to track their mobile phones whether they are leaking the confidential data or they are doing wrong call, wrong SMS, or crossing out the organizations geographical area in working hours. Another thing there are so many criminal cases happening like child kidnapping so in order to avoid this all cases we need to track the location of childs mobile.

After considering all these factors we implemented the system Bitter Guard System Using Android Mobile Application. This system is 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, out-going 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.

Key Words: Android, Cloud, Employee, GPS, Mobile Computing, SMS, Tracking.

1. INTRODUCTION

This chapter briefly introduces all scope and objective of the Bitter Guard System Using Android Mobile Application. Employee Surveillance System is actually a software that will allow the Manager of an organization to track the activities of his employee both on his cell phone and PC. All the activities of the employee such as all incoming and outgoing calls, web browsing, accessing unwanted sites, their location during office hours will be monitored by the manager.

This will restrict the unwanted usage of the resources of the organization and will help it to grow faster.

In case the employee violates any protocol of the company like unwanted usage of cell phone or PC, making unwanted calls etc. then alert messages will be send to the cell phone of the manager via cloud which acts as a middleware between the employees and the manager of the organization Android is a mobile operating system currently under Google and is based on Linux kernel. Today there are numerous users of Android smart cell phone. Based on this fact, surveillance on employees using android smart phone is possible as most of the employee uses an android device, may it be cell phone or tablet. This application has motivated us to propose a new era Employee Surveillance System using Android Smart Phone. It will enable the manager of an organization to improve and cross check the performance of his employees in their respective fields and to check their loyalty and dedication towards their job. It is a complete monitoring system that will use android cell phones and PC of the employees to track their incoming and outgoing call log, web browsing history and their location during working hours. Hence there is no need to maintain the call records or other information manually on record files or on other sources. Monitoring system will provide an alternative to conventional systems and will set all the unwanted activities of the employees in an organization under surveillance.

1.1 Motivation

The goal is to maintain proper track on employee activities which perform by employee the system is mainly use to reduce mangers efforts.

1.2 Objectives

a. Employee has to install application in their Smartphone.

b. The activities like SMS, Call, Browsing History and Location are performed by employee stores on cloud.

c. Manager can get the all detail information related to an Employee/User.

2. FLOW OF APPLICATION

Following diagram shows flow of application

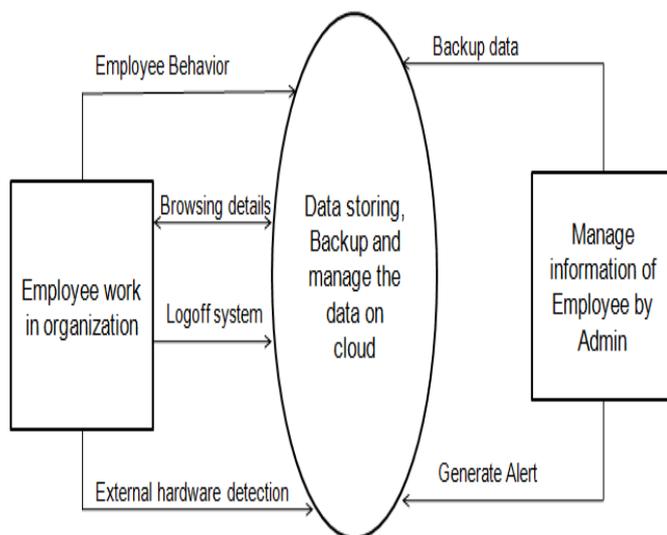


Fig. flow

A. Client Side Design:

An Android application is designed and it can be installed on Android smartphones. This application uses Android smartphones for the software to be run. Client side refers to operation that is performed by the client in a client-server relationship in a computer networking. The mobile phone in the hand of the employee should be an Android phone. It also helps to keep the profile of each employee in the organization. The reason to choose Android phone is because of its increasing consumer reach and popularity.

B. Server Side Design:

A server is implemented to store, generate and view the details which are sent by the software which is installed in the mobile phone. The server can receive the data from the software and can store the data in an efficient manner. Server side refers to operations that are performed by the server in a client-server relationship in computer networking. And this helps the manager to review the details and can know the performance of the employees in the organization.

C. Database Design:

Database design is the process of producing a detailed data model of the database. Database is used to store the information of employees in the organization. The data which is gathered by the software is stored in the database for further usage. SQLite is used as a mobile back-end database and MySQL is used as a portal back-end database.

3 COMMUNICATION INTERFACES

A. Hardware Requirements:

- Processor: Pentium P4 or higher version
- Motherboard : Genuine Intel
- RAM : Min 512MB
- Hard Disk : 20 GB HDD and higher
- Monitor and Android Smart Phones
- Mouse and Keyboard as Input Devices

B. Software Requirements:

- Operating system : Linux Operating System and Android
- Technology Used : Android 2.2 or higher version
- IDE : Eclipse
- Emulators : Android Emulator
- Tools used: Android SDK, Android Studio and Visual Studio 10
- Java and C# programming language
- Cloud as a storage

4. PROPOSED SYSTEM

We have proposed the system which eliminates the drawbacks of the existing system and improves it

to a better extent, we have proposed an integrated surveillance system which will monitor the activities of the employee both on their cell phones and PC. All the activities whether it may be data usage, internet surfing, call logs or location of an employee will act as an input domain to the system. The manager can track Employees all day to day activities like SMS, MMS, call, data usage, unauthorized call/website list. It also brings the current location of the Employee. If the Employee crosses the specified Geographical location then an alert message will be sent to the Manager's mobile as a SMS format. Managers may later login into the centralized server and view the details of their Employee's mobile usage. The manager can calculate the behavior of their employee's.

5. MODULES OF THE PROJECT

1. Call Log Module

Call Logs should show the details of incoming and outgoing calls history from employees phone like date, time, and phone number.

2. Message Log Module

Manager can get the message history from employee cell phone like text messages and multimedia message with date and time.

3. PD Detection Module

This Module will help Admin to identify the External Hardware detection by Alert notification on Smartphone.

4. Log-Off Module (using IR sensor)

This Log-Off module will help to Employee protect the data form unauthorized access when user leave their position form the system the with the help of IR Sensor it detect the users absences and make the system Log-Off

5. Location Module

By using GPS employee location can be traced. This component stores the location trace of individual users.

6. Browsing History Module

The module can show the web browser history of employee's phone and update these details on server. List of authorized sites is maintained in server database.

7. Data Usage Module

This module gives data usage in the form of MB/GBs of data. Manager can easily know the data usage of each employee.

CONCLUSION

Employee monitoring system using android Smartphone is presented in this paper. Using this

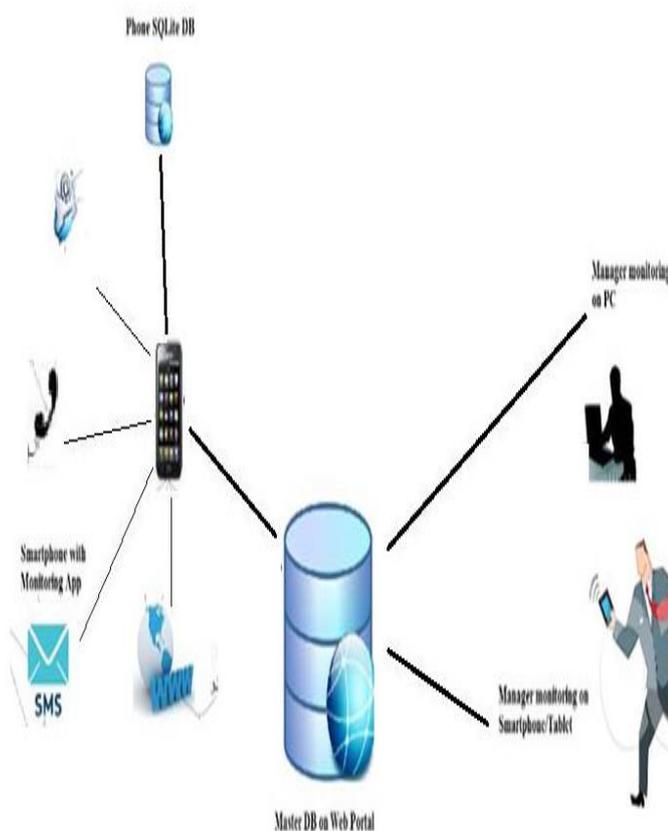


Fig. Proposed System

system it is possible to track all the activities of employee's cell phone which is provided by particular organization and it is also possible to know manager behavior of employee's according to their cell phone activities like Incoming and Outgoing call history, SMS history, Web history, Data usages. It is also possible to track employee's current location

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ACKNOWLEDGEMENT

We feel great pleasure in presenting this partial report on "Bitter Guard Employee Monitoring System Using Android Mobile Application".

We take this opportunity to thank all those who have contributed in successful completion of this report.

We are also thankful to Dr.V.H.Patil, Head of Department, Computer Engineering, MCERC, Nasik, for her timely suggestion and helpful guidance.

We are thankful to our guide Miss.A.A.Borse, for her guidance and encouragement in this work. Her expert suggestions and scholarly feedback had greatly enhanced the effectiveness of this work.

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