A Review On Employee Monitoring Application Using Android Smartphone’s
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ABSTRACT

Employees are the important part of any company. Employee monitoring system using android smart phone’s is trying to build an android application for log the data on the server automatically. This application is helpful for the managers to monitor their Employee through mobile phones. This application is use to maintained transparency between managing team and employee, maintain logs of call and messages, maintain location of user for track user for there working achievements, online attendance system, design emergency security using sending notification to friends and security team. It also access a history of where they’ve been and set up alerts if their employee are going outside of approved geographical zones, are receiving texts from unapproved numbers or calls from banned persons. 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 mobile devices, since they are 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. Managers may later login into the centralized server and view the details of their Employee’s mobile usage. Manager can directly send any notice directly to all employees via this application. This system is really very helpful for the Managers to monitor their Employee through mobile phones. By using this system, we can avoid the unnecessary things happened for the Employee those who are having mobile phones by monitoring their mobile phone usage and also by tracking their current location through the GPS. The Application is Client-Server Based. The client application runs on android enabled mobile phone and tracks employee’s call and phone details.

Keywords—GPS, Employee detection, tracking, Android, monitoring

1. INTRODUCTION

Employee monitoring application using android mobile is, essentially, software that allows Managers to monitor their Employee's office cell phone. All incoming and outgoing calls, texts and multimedia messages can be seen and interrupted by the Managers, who can also monitor where their Employee are (through GPS), access a history of where they've been and set up alerts if their Employee are going outside of approved geographical zones, are receiving texts from unapproved numbers or calls from banned persons. Android is an open mobile platform developed by the Open Handset Alliance (OHA) led by Google, Inc. Employee Tracking System using network technology is supported by Organization. Employee tracking adopts a mobile cell phone network. Based on the experiences and findings of the field experiments, we propose a new generation Employee tracking system. This system enables the managers to update the overall performance of the employees in their respective areas or in company. This management application is a revolutionary mobile application which uses Android OS for monitoring incoming call details, outgoing call details, messages, email, web history and location. There is no need of manual entering of the daily activity details of each employee onto the database. The system has the following five
requirements. Easy to implement and add functions, able to manage many employee efficiently, Adaptive for mobility of employee who is working in concern. Secure against suspicious individuals, Low cost. To satisfy the above requirements, the proposed new generation employee tracking system adopts 3G communication function between Android mobile terminals, and collects employee information using Global positioning system. The use of mobile technology and services serve as a communication platform which tremendously influence and improve the efficiency, effectiveness and productivity of work. Monitoring System is an application for Android smartphones. Mobile applications also called mobile apps is a term used to describe Internet applications that run on smartphones and other mobile devices. Mobile applications usually help users by connecting them to Internet services more commonly accessed on desktop or notebook computers, or help by making it easier to use the Internet on their portable devices. A mobile app may be a mobile web site bookmarking utility, a mobile-based instant messaging, Gmail for mobile, and many other applications. Android is a software stack that use for mobile devices that includes an operating system, middleware and key applications. The Android SDK provides the tools and APIs necessary to begin developing applications on the Android platform using the Java programming language.

1.1 Android Architecture:

![Android Architecture](image)

Android is a software stack for mobile phone devices that includes an operating system, middleware and key applications. The Android SDK provides the tools and APIs necessary to begin developing applications on the Android platform using the Java programming language. The modified Linux kernel operates as the HAL, and provides device driver, memory management, process management, as well as networking functionalities, respectively. The library layer is interfaced through Java (which deviates from the traditional Linux design). It is in this layer that the Android specific libc (Bionic) is located. The surface manager handles the user interface (UI) windows. The Android runtime layer holds the Dalvik Virtual Machine (DVM) and the core libraries (such as Java or IO). Most of the functionalities available in Android are provided via the core libraries. Android relies on Linux version 2.6 for core system services such as security, memory management, process management, network stack, and driver model. The kernel also acts as an abstraction layer between the hardware and the rest of the software stack. Every Android application runs in its own process, with its own instance of the Dalvik Virtual machine. Dalvik has been written so that a device can run multiple VMs efficiently. The Dalvik VM executes files in the Dalvik Executable format which is optimized for minimal memory footprint. The VM is register-based, and runs classes compiled by a Java language compiler that have transformed into the .dex format by the included “dx” tool. The Dalvik VM relies on the Linux kernel for underlying functionality such as threading and low-level memory management. Android uses SQLite which is a powerful and lightweight relational database engine available to all applications. There are various features available in the android and them mainly focuses on application framework enabling reuse and replacement of components, Dalvik virtual machine optimized for mobile devices. Integrated browser based on the open source Web Kit engine. Optimized graphics powered by a custom 2D graphics library; 3D graphics based on the OpenGL ES 1.0 specification. SQLite for structured data storage Media support for common audio, video, and still image formats. GSM Telephony, Bluetooth, EDGE, 3G, and Wi-Fi, Camera, GPS, compass, and accelerometer. Rich development environment including a device emulator, tools for debugging, memory and performance profiling, and a plug-in for the Eclipse. Employee Surveillance program application allows the manager to monitor the usage of cell phones of every employee. Manger can send the notice to all employee directly within minimum time on their cell phones, he/she can monitor their attendance, their messages, their call logs also. It also allows the employee to give their attendance from any location within their campus area, can view notice immediately send by
manager and can also ask for help if they are in a danger situation just by clicking on a button and sending a message to other people along with their current location.

2. LITERATURE REVIEW

Kuntze, Rieke, Diederich, Sethmann, Sohr, Mustafa, Detken implemented business intelligence system in order to support and improve business decisions and cooperate competitiveness; IT systems are used to collect and process business data [2]. These business intelligence systems (BI systems) strive to combine formerly spread and fragmented data from different parts of a company. Through analysis and transformation, data is turned into information, a basis for strategic decisions. The increased availability and system performance of mobile systems allows flexible on site data collection and processing, thus extending business intelligence to mobile business intelligence.

Mori, Y. Kojima, H. Kohno, E., Inoue, S. Ohta, T, Kakuda, Y, Ito implemented “A Self-Configurable New Generation Children Tracking System Based on Mobile Ad Hoc Networks Consisting of Android Mobile Terminals” which focuses on Children Tracking system is widely used all over the world to assure parents that their wards are safe from suspicious actions and their kid is happy in school atmosphere without crying. The proposed system includes tracking the child’s movement to and from school [7]. The information pertaining to missed child is sent to control room of the school as well as to their respective parents, if they move beyond the coverage area. Not only the information about the child’s whereabouts but also whether the child is crying is sent to parents through text message to their Android mobile device. System developed by Yuichiro MORI, et.al, uses “Autonomous Clustering technique” for managing groups of Android terminals attached to children in school.

Atsushi Ito, Yoshiaki Kakuda, Tomoyuki Ohta and Shinji Inoue, proposed the implementation of “New safety support system for children on school routes using mobile ad hoc networks” which developed a new safety support system for children on school routes by using a mobile ad hoc network constructed from mobile phones with the Bluetooth function[1]. The support system provided good performance and accuracy in maintaining the safety of students on the way to school. The basic idea of the safety support system is the grouping of children and volunteers using a mobile ad hoc network.

2.1 Existing system

In the existing system the tracking is done by fixing tags in different location for identifying the exact position of an employee. The android terminal is connected to Bluetooth and wireless LAN. Tracking is made to shorter distance while using Bluetooth. The tracking system is not secure when compared to the proposed system. The communication link to the management server is managed by wireless LAN which is relatively slow when compared to the 3G network. The dynamic paring of mobile terminal is mandatory. The network is more complex and it is not reliable. The message is transferred through wireless LAN and it is not secure.

3. PROPOSED SYSTEM

The proposed system makes use of the Android mobile application to monitor their employee activities and thereby increasing the performance. The registers and notes are replaced with Android Smartphone’s. The managers can view the calls, messages, location, emails and web access history of their employee by using website or their Android devices. There will be having an option to update the activities to the server database. If the employee gets any calls, messages then it will automatically save to the SQLite database of the phone and will update the database of the server. Whenever there is no internet connection is available in employee’s Smartphone, all the details will be saved to the SQLite database and later the details will be sending by the software to the server database at the time internet connection is available. This proposed system will also monitor the employee’s current location as well as the previous location using GPS. The software which is installed in employee’s android device will also keep track the web accessing history and then update into the server database. All the details can be managed by the managers without the need of any other person. This system is really effective and faster than the traditional system. Due to the usage 3G network the data is retrieved and stored in the server at a very high speed. With the help of the encryption algorithm the messages are sent to the mobile terminal very securely.
3.1 The Features of the Proposed System

This system automates the complete employee scheduling process and allows the user to maintain employee attendance records, inventory details in the easiest way. This system automatically sums up employee work hours, time off etc. Employee scheduling tool also facilitates to print various reports including payroll reports, leave details, attendance details, inventory details and employee reports in paper form.

This system provides user friendly software which saves the user time and efforts, allowing users to focus on their business goals. The System also handles the inventory management .Appropriate procedures have been applied and defined for collecting, processing, communicating, and archiving quality data & information. Employee management System is powerful tool to streamline the time-consuming and complex task of employee scheduling/planning in your Company.

Software with generous Feature set allows you to easily maintain employee data, leaves along with complete inventory details. Easy-to-use software can easily adjust into any business frame and helps to reduce overall management costs, save time and efforts to run your company smoothly. This planner gives a simple and integrated view of employee information across the department. Employee Information System helps in effective decision making using timely and reliable management information. This system provides integration with other related applications.

4. CONCLUSION

In this project, we have implementing the new generation employee monitoring system and system features to meet the requirements. Using this system it is possible for the manager to track an employee in the organization and it is also possible for the manager to know all the incoming calls, outgoing calls and text messages sent by an unknown person to the employee.

Using telephony manager technique, the proposed new generation employee tracking system can adapt to various mobility of employee by adjusting network.It is possible to monitor the call activity of an employee so that manager can predict the suspicious activity if found. It is useful to maintain the sovergenity of an organization. It also act as indirect austerity control measurement. As far as attendance module is concern employee has freedom to give attendance irrespective of mobility constraint. It is convenient for manager to convey the message to an employee using information and communication technology.

REFERENCES

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