

“Mobile Activity Monitoring System Using Android Spy”

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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, Organisations, Educational, Business in these sectors all the employee with their Android mobile phones performs much activities. Every company, organisation having their own policies, rules, future projects so in such cases the privacy, security and confidentiality must be maintain by the employee of the organisation. 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 organisation's geographical area in working hours. Another thing there are so many criminal cases happening like child kidnaping so in order to avoid this all cases we need to track the location of child's mobile [10]. After considering all these factors we implemented the system “Mobile Activity Monitoring System Using Android Spy” 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, 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 organisation.

Another thing this system consists of an alert of location if any of user crosses the specified geographical area of the organization instantly an alert will be sent to the manager's mobile phone in the form of E-mail [6]. This is very helpful system to the administrator to monitor any user in the organization with their personal data and location they exist through GPS. Through tracking such information organization can improved their performance in working hours.

Keywords: Android, GPS, SMS, Tracking, E-mail;

I. INTRODUCTION

The system “Mobile Activity Monitoring System Using Android Spy” is implemented in android as Front-End and My SQL in Back-End. Now a day's android mobiles are everywhere specially in organizational area maximum user having the android mobiles. Users are performing more activity with their mobile phones in the organization even in working hour so the system is implemented to track over the users what activity they are performing in working hour in the organization. The information will be tracked such as incoming and outgoing calls (with date, time, source and destination mobile number, call duration and type) will be tracked also the information about incoming and outgoing SMS (with date, time, source and destination mobile number, call duration and type) will be tracked and sent to the server and an alert will be sent to the administrator's mobile device as soon as the activity will be performed by the user through their android mobiles. The tracking will be done base on background services running on the user's android mobile device, the apk file will be installed at the registration time of users. All the necessary information about the user such as User id, User name, User Designation, user department, user mobile number will be maintained by the administrator.

Administrator can access the users location at any point and if the any user crosses the specified geographical area of the organization or banned area of the organization an alert will be sent to the administrator's mobile this will done by fetching latitude and longitude by the spy working in the user's mobile device.

This system plays an important role to receive an alert from breaches of security of the organization through GPS on their mobile phones with the details of employee. Administrator can easily detect the breaches of security and leaking of the confidential data from one organization to another organization.

This system brings awareness in working hours and increases the efficiency in work and provides high level logical security to the industry.

This system is not only helpful for organization but also useful for tracking victim with their location, tracking of students performing activity on their android mobile phones in classroom, tracking of kids performing unnecessary activity on their mobile phones by the parents and also can get location alert from their kids, for the government agencies to prevent the data leakage.

A. *This system focuses on following parameters:*

- 1) Easy to use and track devices
- 2) It is Less Expensive
- 3) Number of users can be tracked
- 4) Provides Security to find data leakage and security breaches in the organization
- 5) Provide instant alert to the administrator

To meet the all this parameters “Mobile Activity Monitoring System Using Android Spy” is proposed.

II. FEATURES FOR SYSTEM REQUIREMENTS

In This section the requirements for “Mobile Activity Monitoring System Using Android Spy” is described. As per described in previous section for parameter (1) we use Android programming [12] because it is very easy to install app on android operating system’s device on the other hand it provides several permission like internet permission, GPS permission, SMS permission, reading contact permission and several others therefore we used Android programming to add functions and flow to our system. For parameter (2) and (3) we use multithreading in Android and database technology [3]. For (4) parameter we use [7] and we use [8] for (5) parameter to implement the “Mobile Activity Monitoring System Using Android Spy”.

III. EXISTING SYSTEM

In existing system there is tracking of location can be done of user by using Bluetooth functions i.e. the location will be tracked within a specified range and alert will be send to the administrator’s mobile device through Bluetooth. Mobile activity such as missed call, incoming and outgoing call, incoming and outgoing SMS with content is not easily tracked of number of user at a time in existing system.

A. Drawbacks of the Existing System

- More complexity to execute
- Bluetooth has no scope as the Wi-Fi and hotspot concept taking place of it
- It is less efficient
- Installing app on existing system is very hard process
- Through Bluetooth functions we can track one user at one time.
- Security can easily break.
- Limited to short distance

IV. PROPOSED SYSTEM

A. Proposed Approach

We proposed the system “Mobile Activity Monitoring System Using Android Spy” tracks the all status of user’s mobile such as missed call, incoming call, outgoing call, incoming SMS, outgoing SMS; in addition the administrator can get alert of what kind of message is transferring and receiving from the device. If any of the employee of organization crosses the specified geographical area instantly an automated alert message will send to the system administrator in the form of E-mail and one message will be send to centralized server for logs and analysis purpose. Administrator can monitor where the employee is exactly whether he is present in his department or other department or whether he is doing chat with other people in working hours?, or he is performing some illegal activities such leaking the confidential data?. All such monitoring can be done through this proposed system. Fig. 1 represents the graphical presentation of proposed system.

V. OBJECTIVE

The objective behind the implementation of “Mobile Activity Monitoring System Using Android Spy” is to track the user’s daily mobile activity and send all the status to the administrator and also log will be maintained to the centralized server where users belong to student, employee, officer, kids, and others. The main objective of “Mobile Activity Monitoring System Using Android Spy” is to increase the security, confidentiality and integrity of any organization with their employees.

This system will not be misused as the one administrator will maintain all the logs of information and maintain confidentiality in it. This system is basically implemented using Android operating system and J2EE and MYSQL as back end tool. This system is implemented in Eclipse editor which provides better environment to write code using this tool instead of Text editor the main objective to use Android operating system because currently Android mobile users are growing faster across glob. So we use this operating system to meet our objectivity [2] [4].

VI. IMPLEMENTATION

This system is developed by using Android operating system we can also check it on emulator in debugging mode in which Android SDK provides virtual mobile device emulator which will runs on computer [3].

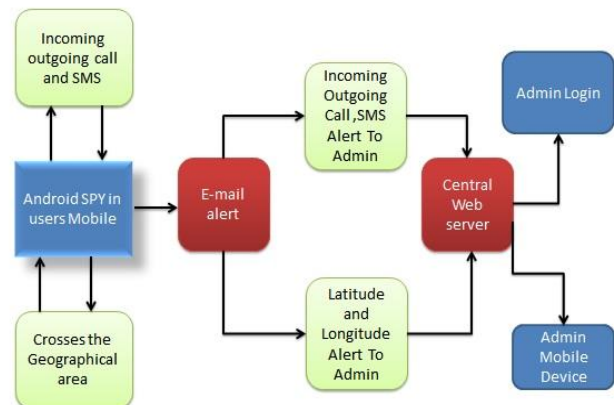


Fig.1. Overall Proposed System of “Mobile Activity Monitoring System Using Android Spy”

We implemented an Android Spy which will run in background service in users or employee’s mobile to run the application in background and to track all the information about Call, SMS, Location and other activity. We need to provide following permission in AndroidManifest.xml which will include in Eclipse tool at the time of creating Android Spy. To track and send information about user’s activity in mobile to the centralized server we need to provide following permission.

1. android.permission.INTERNET
2. android.permission.CALL_PHONE
3. android.permission.ACCESS_NETWORK_STATE
4. android.permission.SEND_SMS

5. android.permission.ACCESS_COARSE_LOCATION
6. android.permission.ACCESS_FINE-LOCATION
7. android.permission.READ_PHONE_STATE
8. android.permission.RECEIVE_BOOT_COMPLETED
9. android.permission.RECEIVE_SMS
10. android.permission.READ_CONTACTS
11. android.permission.READ_SMS
12. android.permission.WRITE_SMS

After that we have to register the Google’s API key for fetching the location of user through GPS on administrator’s mobile. If the user crosses the specified geographical area then only latitude and longitude will be sent to administrator’s mobile in the form of E-mail. He can see exact location by login in to the website which consisting of maps of organization and location of user’s mobile. Date, time, location will be displayed in map [11].

VII. RESULT AND DISCUSSION

After doing overall implementation of this project we come to following result after doing testing on two Android mobile phones we found some results which satisfies our mention objective, requirements and parameters.

We installed our Android Spy in one Android mobile which runs Android 2.3 minimum and performs call operation, SMS operation and crosses the premises of predefined location in it as soon as these activity done on mobile phone an alert was sent to the second mobile phone and. We found several results which are shown and discussed following.

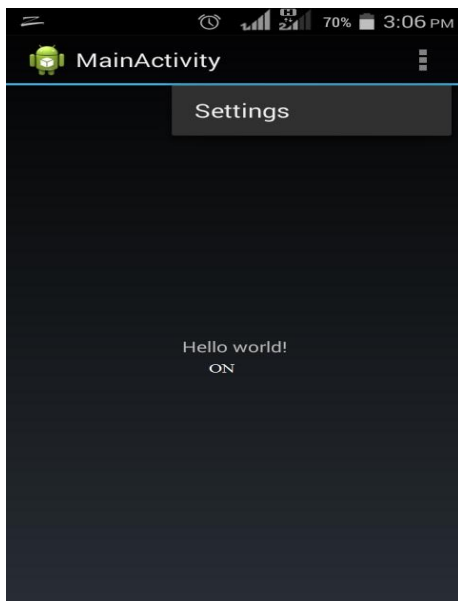


Fig. 2. Android Spy Main Activity Screen installed on users mobile

Here is our MainActivity in fig.2 showing ‘Hello World ON’ which runs in background in users mobile when user will perform any activity such as if he will make call or SMS and if he will receive a SMS and Call then this activity will simply send an alert message to the server and send E-mail to predefined mail of Administrator in it.

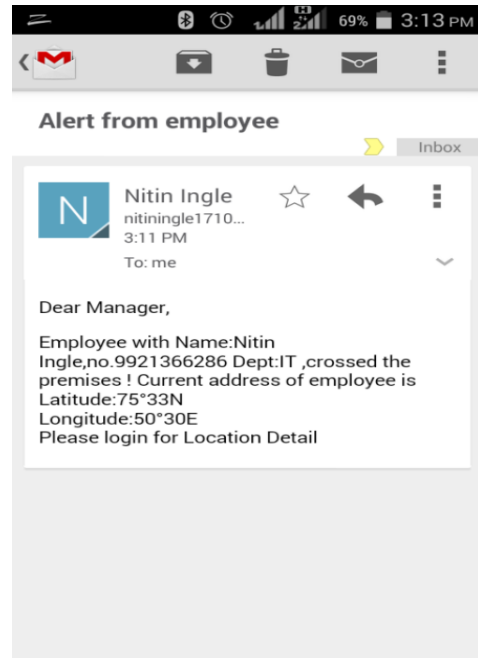


Fig. 3. An alert receives when employee crosses the geographical area

This Fig.3 shows output of an alert of E-mail when user will cross the predefined location of the organisation an alert will be send to the administrator’s mobile via E-mail with user’s current location, name, number and department.

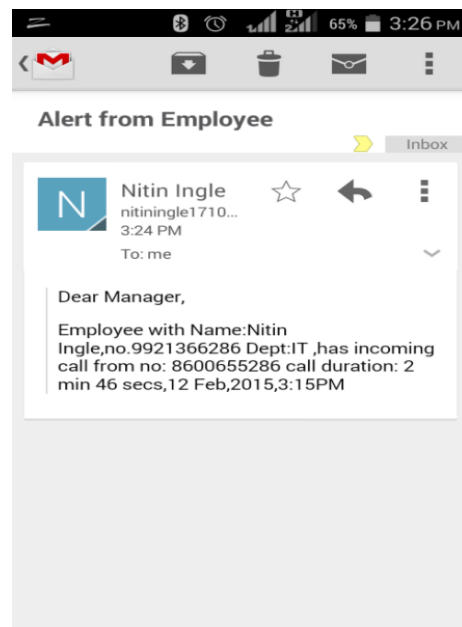


Fig. 4. An alert receives when employee receives any Call

The Fig.4 shows the output of an alert of incoming Call. If user has incoming call then Android spy tracked it and an alert was send to the administrator’s mobile phone with name, number, department, call duration, date and time.

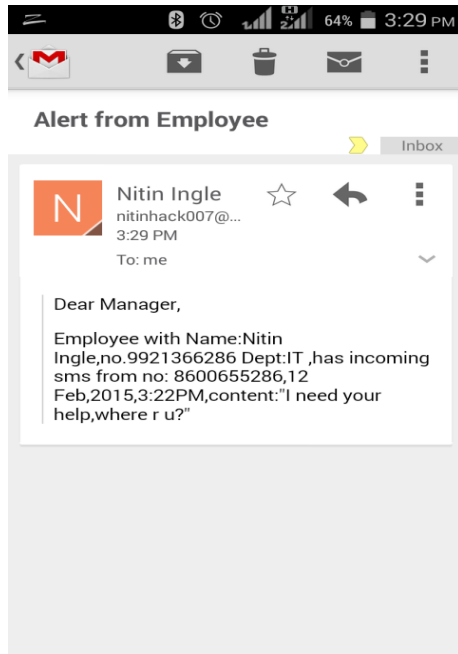


Fig. 5. An alert receives when employee receives SMS from any number

The Fig. 5 shows when user will receive or make a SMS an alert will be send to the administrator's mobile with the contents of SMS. It is similar when user will type the SMS and forward to any number the alert will be send of user's contents in it.

VIII. CONCLUSION

"Mobile Activity Monitoring System Using Android Spy" is developed for Android mobile phones. The main objective of this model is to monitor the employee or user in case what activity they are performing with their mobile phones for security purpose. All this information will send to the administrator's mobile device as well as on centralized web server through the Android Spy. This system also tracks the location of employee and sends to the manager if they crossed the specified geographical area of the organization. It is very useful system for monitoring user and employee of any organization. It will improve the performance of organization effectively. It also helps to use working hour effectively. This system helps to maintain the security of any employee base organisation; on the other hand it helps to track children also in minimum time. It is socially beneficial.

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2) "Implementation of Guilt Model with Data Watcher for Data Leakage Detection System" International Journal of Emerging Technology and Advanced Engineering Website: www.ijetae.com (ISSN 2250-2459, Volume 2, Issue 3, March 2012).



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