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# Survey on Employee Tracking System

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***Abstract:*** ***In this paper, an employee tracking system based on web based operating system was developed. All the activities of the Employee will be monitored using this system. Scheduling information and time off requests are often considered part of personnel tracking; as this information will enable managers know when employees are expected to actually be in the office or other work areas. This system is really very helpful for the managers to monitor their employees through mobile phones. It was implemented using JAVA programming language, and the result was stored in SQLite database. An object-Oriented Analysis and design (OOAD) approach was adopted which consist of a well-planned iterative steps. Data was collected using document analysis and field Methods and the application of relevant analytical methods like bar-charts were used to interpret the facts collected. The developed system was able to increased productivity, reduction of cost, instant access to employee attendance record.***

***Keywords: Android Operating System, Tracking system, Employee, JAVA programming and SQLite database.***

## I. INTRODUCTION

In a government owned enterprise, the number of employees needed to perform certain functions could run into hundreds if not thousands. Managing and keeping track of these number using traditional methods could prove cumbersome and problematic. The need for an employee tracking information system to assist in the management, monitoring, searching, tracking, updating of the employees records becomes paramount. For instance, some corporate organizations have over 1000 employees. From the process of recruitment up to the employment phase, several data are collected from these employees. The personnel department stores these data manually. Searching for a particular employee record could take hours to find which is not productive in today's fast paced and technologically driven enterprises. This is a simple scenario which currently affects employee tracking system within some corporate organization. Another case scenario could be in keeping track of an employee's current department or departments. It is well known that an employee can serve in more than one department or be moved from one department to another. Keeping track of these transitions could become tedious if no proper system is in place. In this paper, an employee tracking system based on Android operating system was developed. All the activities of the Employee will be monitored using this system. Scheduling information and time off requests are often considered part of personnel tracking; as this information will enable managers know when employees are expected to actually be in the office or other work areas. 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 SURVEY

Sonal et al (2016), worked on Employee Tracking and Monitoring System Using Android. In their study the provided different security profile on same smartphone. They used dynamic database utility which retrieves data or information from centralized database. They provided separate mode to employee when he enters company premises. Trough smart phones all information about the employee phone like their SMS history, Incoming calls, Outgoing calls, Employee Locations, Data usage, Web browser history, and Unauthorized Call History details are tracked. The necessary condition is that Employees should have the web based phone whereas Manager Activities are also monitored. Shermin et al (2015), worked on a Smart, Location Based Time and Attendance Tracking System Using Android Application. They proposed a smart location based time and attendance tracking system which is implemented on android mobile application on smartphone reducing the need of additional biometric scanner device. The location of an organization has a specific location, which can be determine by the GPS. Each employee's location can be determined by the GPS using web based.

Nirmal, et al, (2016), worked on Employee Surveillance System Using Android Smart Phone, Their system integrates Employee monitoring and GPS location Tracking System using Android phone. All the activities of the Employee will be monitored using this system. The system works on 3G communication between the terminal ends.

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All the activities of an employee on his cell phone and computer, like data usage, all incoming and outgoing calls, web browsing and secured document modification and illegal transfer of company's informative details like blue print, stocks, projects etc. will be set under surveillance. Not only this, the global geographic position of the employee will be traced using GPS. Therefore the organization will be set to surveillance that will restrict the unwanted usage of its resources by the employees during working hours. The system was beneficial for the progress of the organization and will allow the Manager to check the dedication of his employees towards work.

Ashwini et al (2015), worked on Employee Monitoring System Using A WEB BASED . In their study all activities such as incoming, outgoing, missed call, SMS history, web history, data usage, unauthorized call list/web site list are stored on centralized database. Manager can see that history by logging into centralized server. Manager can also trace out employee's current location (through GPS).Employee are going outside of company premises then manager get alert message in SMS format. They analyzed the employee behavior by using numbers of unapproved calls and exceeding data usage (good/bad/average/loyal).The device which is given to employee should be android based device. Manager does not need android device. It may be any device. This system is very helpful for the manager to find out the activities which are done by employee.

Shoewu, et al (2015) worked on Design and Implementation of An Employee Monitoring System InLasuEpe Campus, Lagos State University, The employee monitoring system is an android application used to monitor the call logs, sent and receive messages and the GPS location of an employee. The application is implemented using Java script, the application interface was designed with Xml and Php for the automatic mailing system. The organizations success depends on employees' performance; poor performance is detrimental to the company's success. It is necessary for an employer to keep track of his employees' at all times to ensure the quality of service from the employees' and maximum output from them. This paper deals with the design and development of an employee monitoring system using

Avinaash et al (2015), worked on Mobile Attendance Management and Employee Registration. Staff attendance management and employee registration is a mobile application which can be used by the staffs to login their attendance through mobile phone and track other staffs location through mobile phone. Manual registration in biometric systems and entering in the attendance catalogues in different physical locations is the current system used in all the colleges Android which will be accessed from the company's email account.. The staff will get updates regarding their attendance regularly from the admin as they login and log out so that they can keep a track on their attendance by using this application.

## III. PROBLEM DEFINITION

Now a days, two types of attendance system are available, i) Manual and ii) Automated. Manual time and attendance systems use paper time cards and time sheets that employees fill out and managers oversee for accuracy. However, time and attendance information is subject to human error when various employees such as workers, managers, and payroll administrators all perform tasks that involve recording the numbers. Employees punch in and out when they arrive at work, go to lunch, take a break, or leave for the day.

Generally, managers must add up the minutes and hours worked, using each employee's time card, and fill in a time sheet indicating hours worked for the week. Managers also spend time filling out attendance records based on whether employees punched the clock. A lot of man hours go into calculating time and attendance when using a manual system.

## IV. PROPOSED SYSTEM

In the proposed system, employers make use of a specifically created website through which they can view a list of all employees, track them real-time, assign them with daily tasks, monitor their work and obtain a final report about all the employees. New employees may be added anytime by providing required details and also a password, which the employees will be informed about. The website can be Personalized according to company preference.

The employees make use of an Android application through which they can receive daily work/tasks, view their location on map [3] and also find routes [4] to task destinations get a time schedule and also personalize their application and profile.

The employees initially have to sign up using the password that is given to them, by their employer. Later on, they only need to give their ID and scan their fingerprint for signing into the application.

The program uses Android based cell phones for running the implemented software. In this system we can use different modules, and main two apps are employee app and server app. Employee time tracking phone uses data will be stored in centralized server. Mobile device which is on the Head of Department's table should be an Android device and the administrative manager can get the alert through text messages only.

For detailed data it can be 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 rate of attendance. The classes in the application can be broadly divided into those for UI, background services, data-structure and utilities Design of the new system.

Figure.1. Flowchart Diagram

Figure 1 shows the flow chart of the proposed system, from the flow chart, the application have to be installed in an android phone. From the chart it can be seen that the application was designed for the employee and the employer, the employer is the sole administrator of the application. The administrator uses it to monitor the employee sign in and sign out.

## V. SYSTEM ARCHITECTURE

Google maps API (Application Programming Interface) is used here for finding personal meaningful location; based on the GPS readings, the application can perform geo-locationing to estimate the current location of the user. Then the application sends the location and user Id to Software for further process. After processing the data the management software store the information to Database.

### *A. Flows of operation of the Mobile Application are*

*1)* Determine the location using GPS
*2)* Check the location with pre-stored (office/workspace) location
*3)* Encrypts user ID and Location
*4)* Send information to the system

Fig.2 shows the flows of operation of Mobile application. First, the application figure out the location using GPS. Then, its check the location with pre stored (office/workspace) location, if location matched then the application makes a data packet containing user ID and location , encrypt them and send it to the management system.

Figure.2. Flow of operation of Application

### *B. Flows of operation of the Management Software are*

*1)* Receive data from Mobile application
*2)* Decrypts the data
*3)* Retrieve user ID from Database
*4)* User Identification
*5)* Store the information

Fig. 3 shows the flows of operation of the management system software. The software first receives the information from the mobile application. Then its decrypt the information and check for validation. After passing the validation steps it store the information to the database according to the user ID.

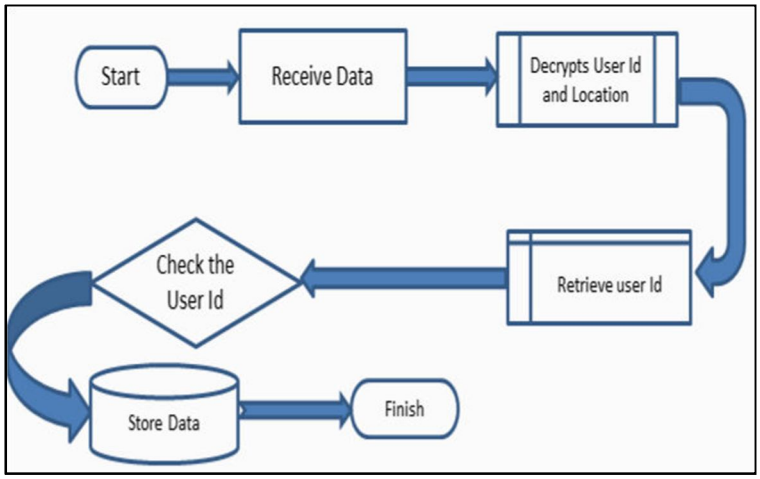



Figure.3. Flow of operation of the management system software

## VI. CONCLUSION

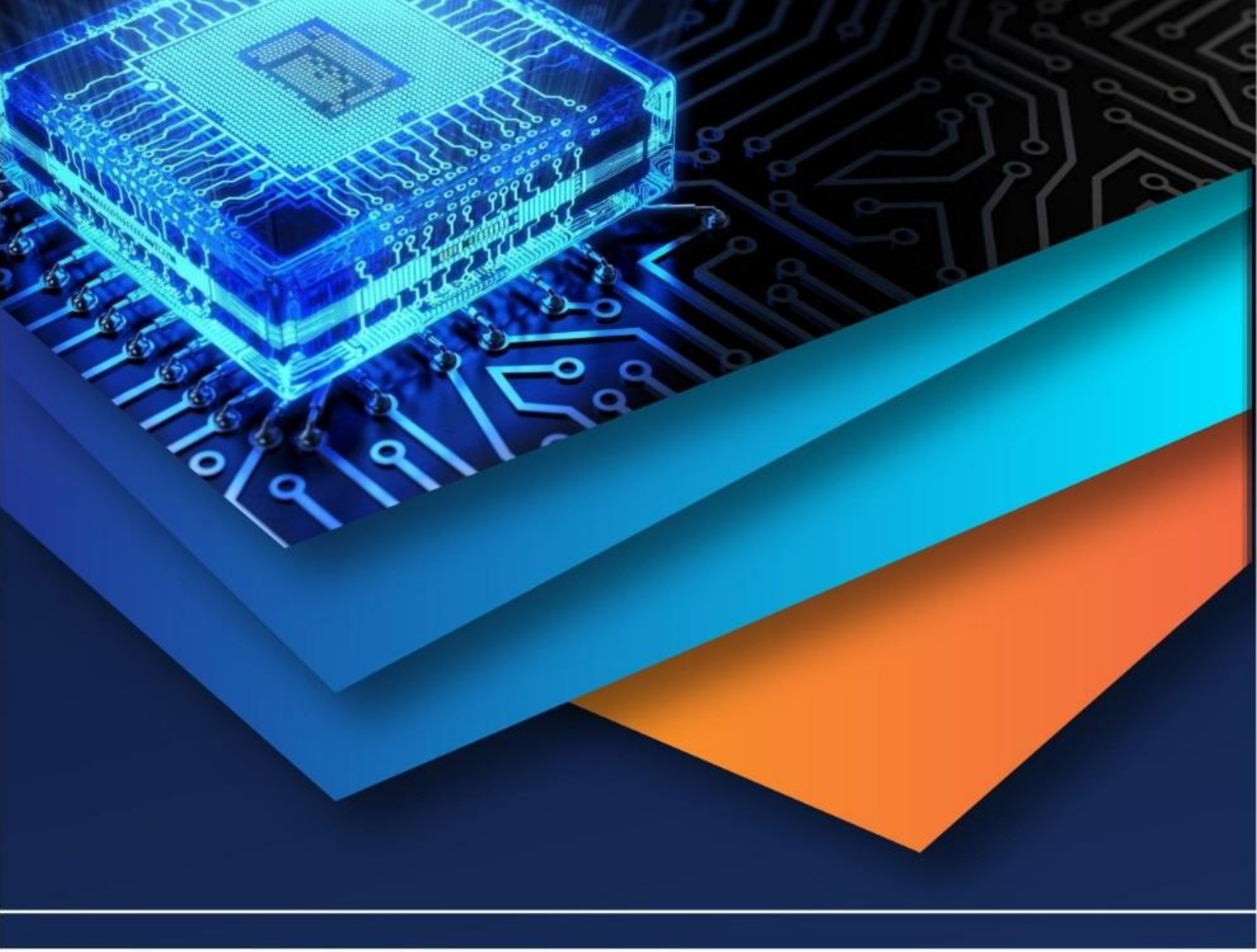
The main purpose of coming up with this project is to create an easy-to-use and efficient platform on which employers can easily monitor their employees' daily work. The outcomes of our project are, better employee supervision at work site, guaranteed work efficiency as a result of automatic time scheduling, maximum reduction of employee truancy, efficiency in terms of time, cost and effort for employer and better working environment, due to buildup of employeeemployer trust.

## VII. ACKNOWLEDGEMENT

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