© 2017 IJSRSET | Volume 3 | Issue 2 | Print ISSN: 2395-1990 | Online ISSN : 2394-4099
Themed Section: Engineering and Technology

Employee Attendance and Payroll System Using Image Capturing and GPS Tracking

Sampada A Chavan , Neelam D Gaikwad, Vinay V Sakpal, Javed Bilakhia, Rupali Pashte
Department of Computer Engineering, Padmabhushan Vasant Dada Patil Pratishthans College of Engineering, Mumbai, Maharashtra, India

ABSTRACT

In todays world, the phrase "Time is Money" is very pertinent. public want to get their things done as quickly as possible. They want effortless and fast access to each and everything .The task of processing the salary of an employee manually is very tedious and time consuming. Processing the salary of an employee is a very tedious job if done manually and may even more time consuming process. Hence this process if automated would be of great profit. It would be less time consuming. As a solution in this paper the software for payroll management system service on the cloud is provided as a solution in this paper.[2] This system provides multiple user data access. Each user like employee or HR or admin can login into the software by writing username and password which are allocated to them from the company. It involves keeping track of hours worked and is capable of keeping a record of employee data including their pay, allowances, deductions and taxes on monthly bases so that fresh definitions are reflected from the month onwards, which leaves all the past data intact.[3] The proposed payroll system is advantageous as it provides a user friendly environment and also increases security and minimizes human calculation errors.

Keywords : Automated Payroll System, GPS Tracking System, Image Capturing By Android, JavaScript, PHP MYSQL.

I. INTRODUCTION

In an organization there are several departments and each department has payroll section to manage payroll activities. Each section has to perform necessary operations like data collection and preparation, entry, updates monitoring and reporting of data. Many of these existing practices and procedures need to be reassessed at this time of changing needs, changing demands of employees and changing technology so an organization needs a payroll system that would manage the personnel and payroll related details, processing in each department and payroll audit in a more efficient way.[1] With this payroll system, we Implementing admin application, employee application and MySQL server for monitored company employee's using android technology. In this system we are providing dynamic database utility which retrieves data or information from centralized database. All communication between the Employee phone and the admin is done through network technology.

Android Smartphone mobile application is platform, we are implementing a new generation Automated payroll system with GPS tracking And image capturing system called as proposed system. This proposed system has the five requirements respectively. For Easy to implement and add no. of functions, ability to manage many employee efficiently, tracking of employee easily for checking either who is present approved area or unapproved area. Very secured and Low cost[2].

Also to satisfy the above all requirements, the proposed employee monitoring system adopts 3G communication network function between Android mobile terminals, and collects users information using Global positioning system (GPS). In additional we are use one new module such as know the employees image capturing for storing and retrieving related employee details such as Login, Logout , and Location[5][6].

Main aim of developing Employee Payroll Management is to provide an easy way not only to automate all functionalities involved managing leaves and Payroll for

the employees of Company, but also to provide full functional reports to management of Company with the details about working hours of the Employee attendance and Salaries to be paid to the employees. We are committed to bring the best way of management in the various forms of EPM. We understand that EPM in not just a product to be sold, it is a tool to manage the inner operation of Company related to employee work and Payroll[3].

II. METHODS AND MATERIAL

A. Employee payroll system and Attendance:-

In this module the day to day attendance of an Employee will be punched. At the end of the month total attendance of an Employee will be calculated.

An allowance is the financial benefit given to the employee by the employer over and above the regular salary. These benefits are provided to cover expenses which may be incurred to facilitate the discharge of service for example Conveyance Allowance is paid to foot expenses incurred for commuting to workplace. Some of these allowances are taxable under the head Salaries. A few of them again could be partly taxable and few others are non-taxable or fully exempt from taxes.

This Application will help to automate payroll system of an organization. Multiple authorized users will be able to login and logout from a web browser. Login checks (username, password) are controlled by administrator. Administrator will have total web based control to completely customize the payroll system.

B. GPS Tracking:-

GPS feature for location tracking to assist field employees to find client location and vice-versa. Attendance system should let field employee to stay connected with peers for exchange of information.

The Employee will have this application in his android phone, when the user will login to the system his image will be captured and his GPS location will be send to the admin where admin will view image and GPS location in web application. After Login, GPS location of the employee will be tracked automatically by the system and send to the admin .When employee logout the system again the image will be captured as well as GPS location will be send to the admin. In order to keep track of the attendance as well as payroll of the employee, this system plays a major role.

Office employees connect with mobile employees through a web-based management Application, giving them greater visibility and management of activities occurring on filed. Employee tracking turn off when the employee clock out.Following algorithm is been referred.

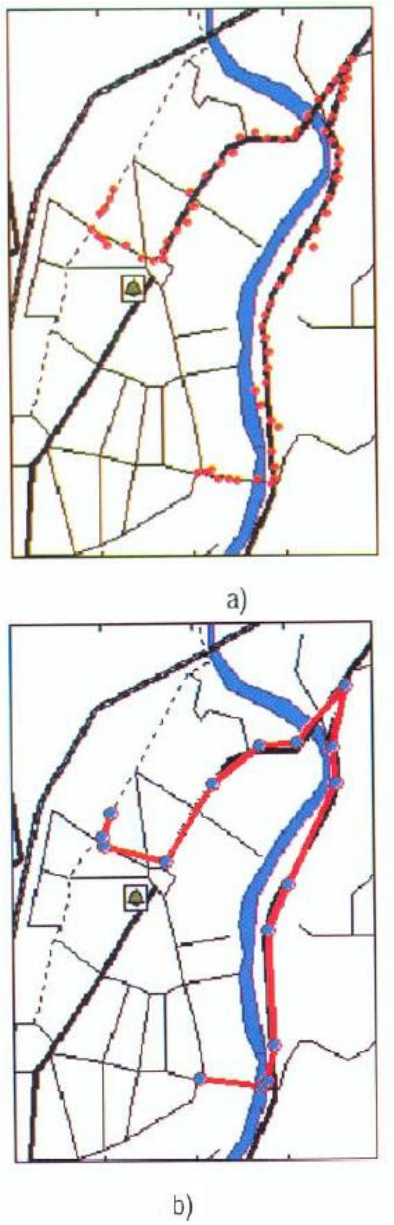
[1].Algorithm Based on tracking system

1. E=10 last on=0, lastlat=0,distTh=0 Vn-1=0
2. Get New GPS data {Lon, lat, alt, speed, direction, hdop, status}
3. Add NewPoint (GPS data)
4. Go to step 2.

[2]Algorithm ADD New point(GPS data)

1.Vn =speed, V n=filter speed (Vn-1,Vn)
2 .if (V n> V th)
3 .HDO P max=4.5
4. else
5. HDO P max=3.5
6. if (hdopn<HDO P max)
7. en = E.hdopn
8. If (Vn>100)
9. distTh=S max
10. else
11 .distTh=en +[(Smax-en)/100]Vn
12. endif
13. [filt Lon,filt Lat n]=filterPosition(Lon,Lat)
14. dist=GPSDist(filtLon,filtLat,lastLon,lastLat)
15.if(dist>distTh)
16. lastLon=lon n

17. lastLat=lat n
18. POBox.add(“newpoint”)
19. endif
20.endif



C. Image Capturing

The Employee will have this application in his android phone, when the user will login to the system his image will be captured and his GPS location will be send to the admin where admin will view image and GPS location in web application.

III. RESULTS AND DISCUSSION

The propose system consists of two panels viz., the admin panel and the user panel. The admin panel has the authority to make desired changes in the data that is fed in the application where as the user can access the data provided. The user can locate their current position, navigate them from one position to another as well as search for desired products. The above functionalities are shown in the figures that follow.

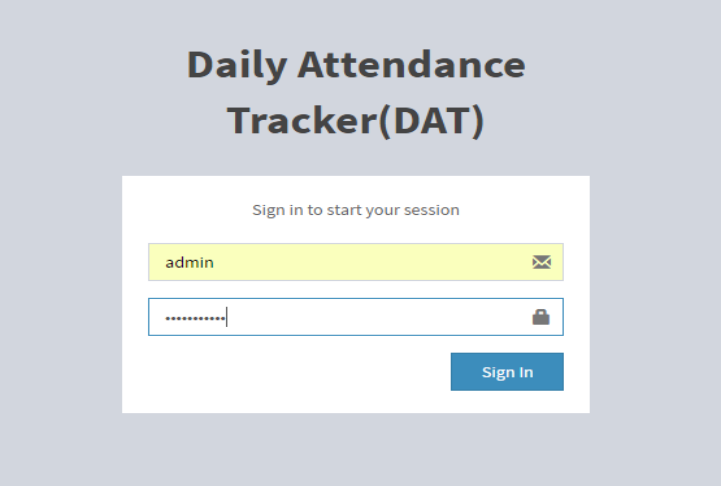


Figure 2. Admin Login Form

Fig 2 show that web based application page of login of admin form where admin will have all access to payroll system management.

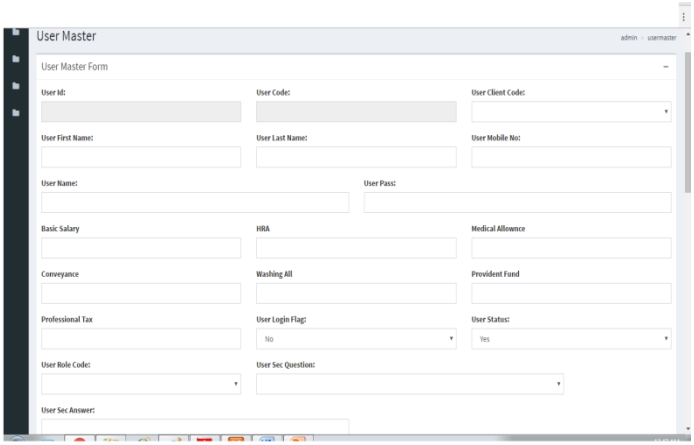


Figure 3. User Master Form

Fig 3 Show that after the login it as User Master form where admin will have access to fill User detailes and give access to particular employee or user .

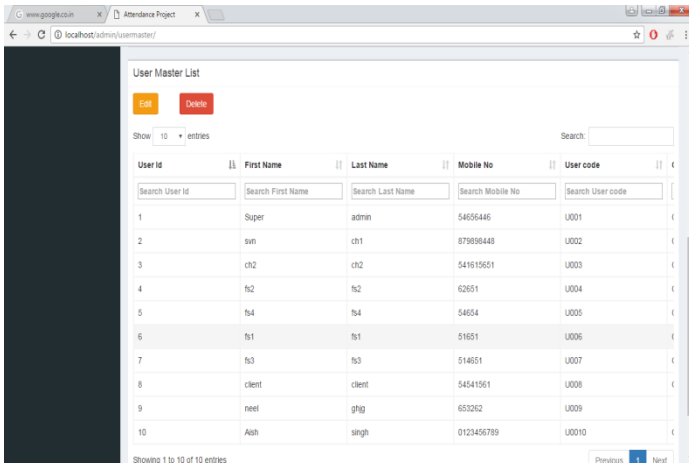


Figure 4. User Master Details

Fig 4 Shows that admin as filled the details of all user it is been displayed in these page.

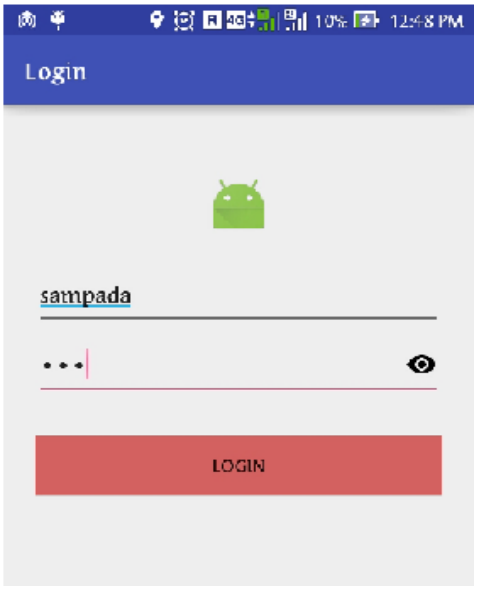


Figure 5. EMP_Login Form

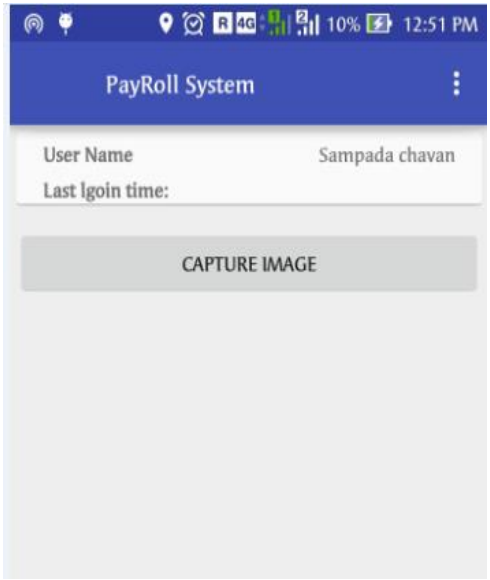


Figure 6. Login Page

Fig 5 Shows an Android app of payroll system Login page of Employee user id and password

Fig 6 shows a login page of employee sampada.

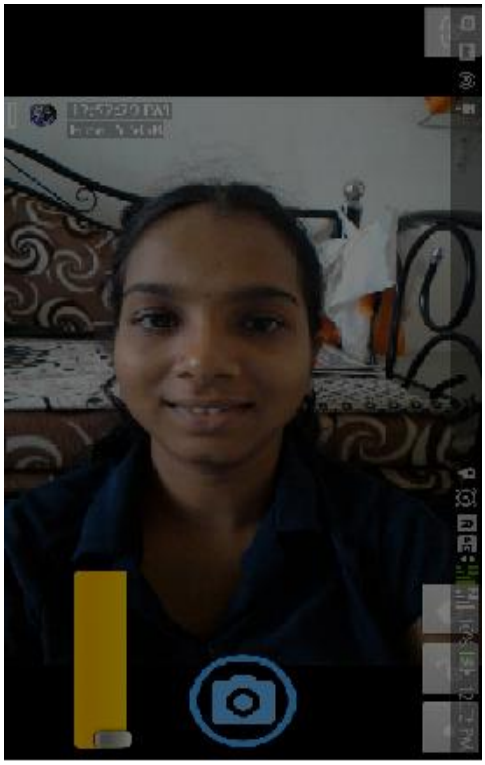


Figure 6. Capturing Image

Fig 6 Shows that as soon employee gets Login GPS location is tracked and image Is been captured and get marked her attendance.

Figure 7. Emp_Salary

Fig 7.Shows that employee can look his salary.Salary is been calculated in days Wise its Basic, HRA, MA etc. than total net Salary is calculated.

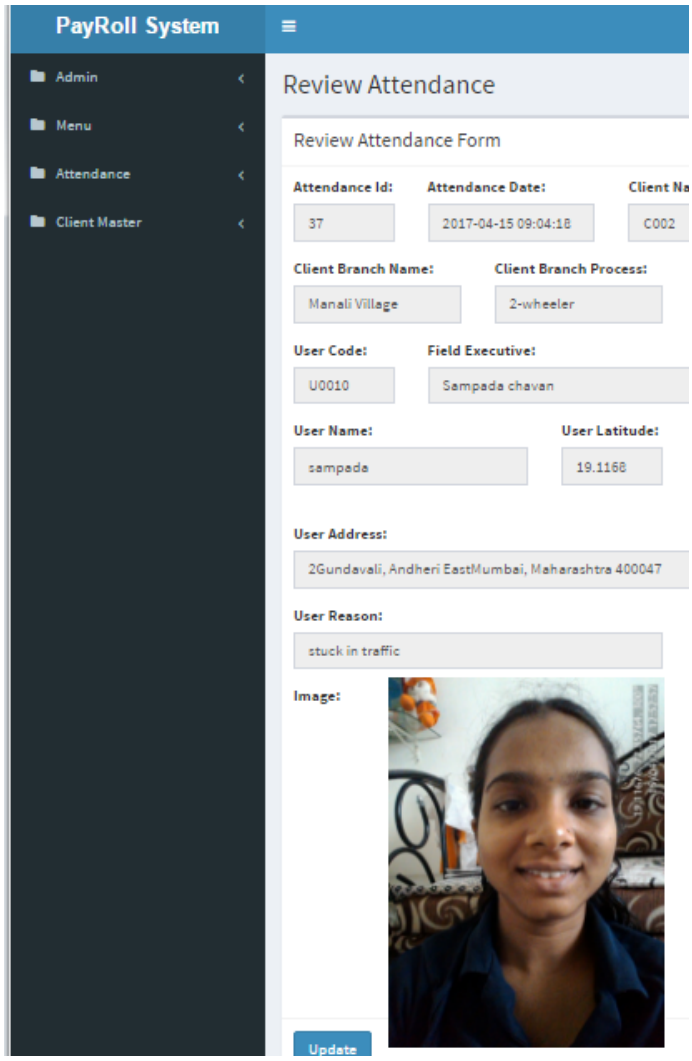


Figure 8

Fig 8 Shows that employee Attendance,GPS location and image capture is been received by admin.

IV. FUTURE ENHANCEMENT

The prototype automated payroll system is complete in itself and ready to be implemented but changes and growth in requirements will be a reality on every software project so there is need to timely update them. The same applies to this payroll system [1].

V. CONCLUSION

The goal of this review paper was to a desktop based payroll system using .Net, SQL and MS-Access. This automated payroll system calculates, maintains and records the payroll Information of the employees. This application will help to automate payroll system of an organization. The administrator of particular organization will have the full control to completely customize the payroll system because there is only one person who is authorized that is admin of the organization will be able to login and logout into the system. The another supervisor who is authorized by Admin will be able to authenticate new employees update existing employees pay, view reports in the absence of administrator. The system is user friendly, whenever there is any error in entering data, it immediately shows an error. The Application will equipped with tools for updating salary records, tax calculations, add new allowances and employees ,new clients, deductions and many other features that are easy to be operated by the administrator [3].

VI. REFERENCES

[1]. International Journal of Model Trends in Engineering and Research, Automated Payroll System (A-PAY), Volume 03, Issue 02, February-2016].

[2]. International Journal of Engineering Research and Development , Punjab Agricultural University, http://www.ijerd.com/paper/vol5-issue3/H05035560.pdf.

[3]. Payroll Management System "Bangladesh SCHOOL OF SCIENCE AND TECHNOLOGYA Project Prepared bRafiqu Alam Khan, Md. Jahirul Kader Institute of Science & Technology.

[4]. Payroll Management System as SaaS, Dhanamma Jagli, Ramesh Solanki, Parth Chandarana, Proceedings of National Conference on New Horizons in IT - NCNHIT 2013,Pg.90

[5]. Android Developer Guide: http://developer.android.com/guide/index.html accessed at 18th January

[6]. AndroidAPI:http://developer.android.com/reference/packages.html accessed at 20th January.

[7]. International Journal of Research (IJR) Vol-1, Issue-6, July 2014 ISSN 2348-6848 Implementation and Development of a Proposed Payroll System.

[8]. International Journal For Research And Development In Technology,Survey On various Automated Payroll System, Volume-7,Issue-3 (Mar-17) ISSN (O) :- 2349-3585