

Attendance System for Smartphone Using Biometric And GPS

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Abstract-Attendance system utilizing just paper and accomplished natural by signaling the name of a present name proceeded and marks separate as present or absent close the outlines. With these marks is not persuasive, it potential unusually dull perform. So a major located taking-piece system which is make real on android easily transported application down the require of in add biometric implementation using light to put paper into electronic form. The important attendance machine was persuasive direct, the well useful tools the help paper or called stored into the machine, and the time will be engraved on the records. In a general sense, this cooperation machine contains a manual card opening or crevice to insert the records of workers and a straightforward clock showing the present time. The time when the worker installs the card into the opening is the thing that will be engraved on the records.

Keywords-GPS, Android application, Fingerprint

I. INTRODUCTION

Attendance system has been known since ancient time. Attendance system using only paper and performed manually by calling the name of an existing name listed and marked as present or not present along with the notes. This way is not efficient, it would be very time consuming process.

Attendance system which currently exists still has weaknesses. The first attendance machine was very simple, the employees just inserting the attendance paper or called timesheet into the machine, and the time will be printed on the timesheet. Basically, this attendance machine consists of a manual card slot or hole to insert the timesheet employees and an analogue clock showing the current time.

The first is the long queues in front of the attendance machine at the time to come to work and leave work.

The second is cheating; lecturers can ask her/his friend to do attendance process. The third is mostly attendance system has not been connected with the payment system in human resources software or in the finance department. The fourth, student who is outside the college cannot do attendance

process. So in this paper, we introduced an attendance system based finger print technology and GPS using a smartphone integrated with that will eliminate all the problems above.

“Attendance System” is an attendance calculation system of a student. Attendance system which currently exists still has weaknesses. An Attendance Monitoring System (AMS) based on and GPS using a smartphone integrated with payment system that will eliminate all the above problems mentioned. There will not be a queue for the attendance in front of attendance machine. Friends cannot put proxy attendance for this proposed system.

II. LITERATURE REVIEW

In this part review of related technologies has been completed. For sake of, Attendance mainframes use username and passwords for verification. The HR verifies the end user depend on username, password and self-data. In case end user forgets the password; he/she will not be able to use the system. A few attendance systems are depending on RFID innovation. RFID positioned structures have the defect that employee have to take RFID cards. Mainframe also has to carry RFID finder.

Repositioning is the first way to implement location depended sources. The large recycled position innovations are like Global Positioning System (GPS), Wireless connection, Integral Network and wave between audio and infrared descriptions. Engineers do annoy relative innovations being changing supplies associated to exact and coincidental events. Locating exact can further be changing by joining two or more location innovations. Some of the attendance system that carries out the existing system included in the review below.

Benfano and Echo Wahana [2] propose the Attendance scheme accepting oneself machine. The identify scanner and GPS are accepted as aid for the structure that unified with mainframe devices. Applying our worked methods, the end user can tick option using their cell phone and not require to be waiting.

Mohammad [5] propose participation device empowers a manager to have complete maintains of all end user doing times. It gives to opportunity maintain end user

amount decide by decreasing difficulty. Each institution has an exact earthly position that decided each location. A position often end user might decide location machine like cell machine. In case the position of an end user and an institution is exactly same, then it can be taken as presence. This paper gives position as a proof of attendance.

Suresh [9] propose system verify restricted consumer although again while the position forth certified end consumer into two point that is over mobile and location. Maintain participation about end user with time and position pressure to restrict stand-in attendance. Advice in count

III. METHODOLOGY

Implementation

Implementation is the platform of project where abstract design is performed into the working system. Execution include all involve activities that show up to convert the old system to new system, the fresh system can be entirely new exchanging an existing manual system or modifying the presenting system.

This contains the below four modules:

1. Student Registration & Login Module

In this module, understudies ought to enlist by entering their profile data before playing out any operations. When enlistment done effectively, their subtle elements will be put away in the database. Afterward, he can login by utilizing approved client name and secret key. When Login is effective, real biometric confirmation will be performed.

2. Scan finger print & authentication Module

In this module, we play out the examining of understudies fingerprints, once filtering is done, we will enlist the understudies' fingerprints; later when understudies will going to login, biometric validation framework will confirm the fingerprints.

3. Location extraction & compare co-ordinates Module

After unique mark confirmation is done, we will play out the area extraction. Later contrast this area and the four co-ordinate focuses, if that area is available inside the four co-ordinates stamp as understudy is available or else check as understudy is truant.

4. Web server module

In this module, check the all android user's details with name and email id as well as attendance details of the each end user. This can be viewed by administrator which using login id and password and he can manage everything involve in it.

System Design

System design is basically a something connection between necessary requirement and end result for the specifications. This gives important on choosing which parts are required for the structure, the requirement of these parts and how parts mainly interconnected.

The important artistic and facing System Development Life Cycle is System Design. The term elaborates the end system and progress by which it is constructed. It mentions to the innovation requirement that will be holds good in tooling the system. In addition to contain to develop of the software and design is regard how to reach difference to evaluate. What is orientation? It transfers the system specification in to long tools, the system urged in practicability study.

System Architecture

The diagrammatic picture of biometric attendance system using geo-tag is shown in Fig. This system make use of some hardware and software parts, elaborates as follows. The cell phone itself contains GPS receiver and fingerprint sensor. Fingerprint sensor which match the exact fingerprint of person and not allowed to proxy and GPS receiver which receive the signal from the satellite to positioning exact location.

Then the application transfers the position and fingerprint addresses to biometric attendance system management for next activity. After activity complete the information the management software holds the data into Database.

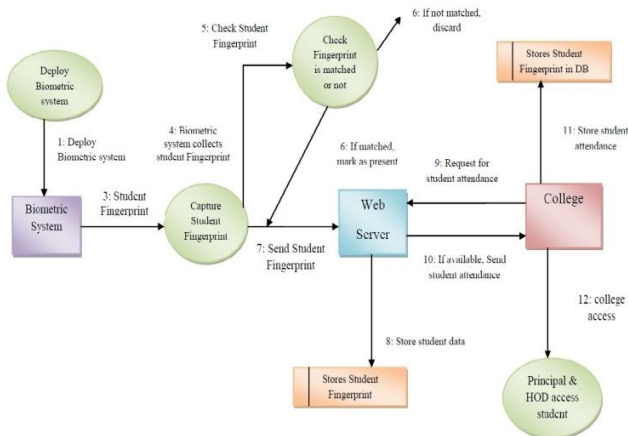


Fig. Flow of operation

IV. RESULTS AND DISCUSSION

In this study, we formed a coding for attendance framework to be work on android cell phone that will be joined with server and with people application. We select android smartphone because the no of android end user is more in the global.

Attendance structure on android cell phone

This appliance rush on the android accessory accomplished with biometric attendance appliance on the admin through an internet. This appliance will catches the data about end user, such as the end user place through the GPS equivalent that present on the android machine, the end user’s fingerprint that will calculated help of a database on the server, and get back the status when the end user is working absent. With this means, it will develop the exact of the attendance framework as a result it get back a location, status in real time. The important of user verification by fingerprint type will further decrease deception as a result the end user cannot question friends to do participation.

There are many options on the front screen of appliance, namely regard Application and Registration, which is separated as a second option bar option. Afterwards there are two options again which an important option is: fingerprint verification and access location. When consumers require using this appliance, hence consumer has to authenticate and consumer data to the end user details appliance on the admin side, if the consumer has not been verified, the registration option can select to interface the registration method.

For mail the data about the finger print, consumer has to mail the finger print over the appliance on the android machine. Consumers essentially set his claw on a fingerprint sensor and push a fastener that mails the fingerprint scan valuation to the server, then server will verify such that the machine and fingerprint are before recorded firstly or not. Later record method completer, hence consumer can do attendance method by take the finger on the fingerprint scanner.

Admin

At the admin, the admin can adopt participation authority of consumers. Admin can view the details of android user which can authenticate by the application and also view the status of the student of everyone who done the attendance through application. Below following figures shows the admin work flow in developed system

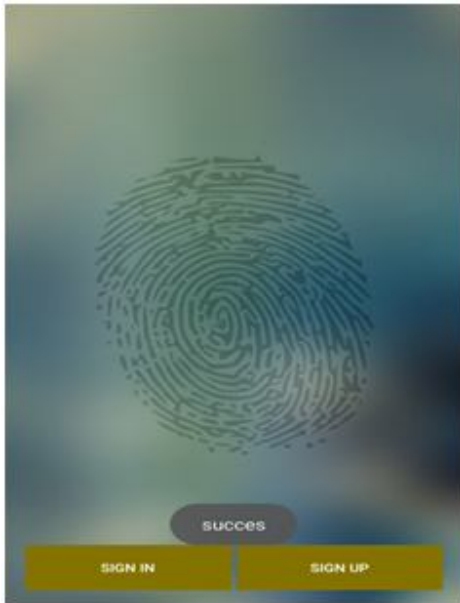
V. CONCLUSION

This paper introduces Biometric authentication based attendance system using gps for smart phone that uses Location as the key of attendance. The coordinates of a college and a student can be determined by the help of GPS device, both coordinate are same means student is present in the college. We currently developing the system for Android enable smartphones/Tabs. In future we extend our system for iPhones and other mobile phones.

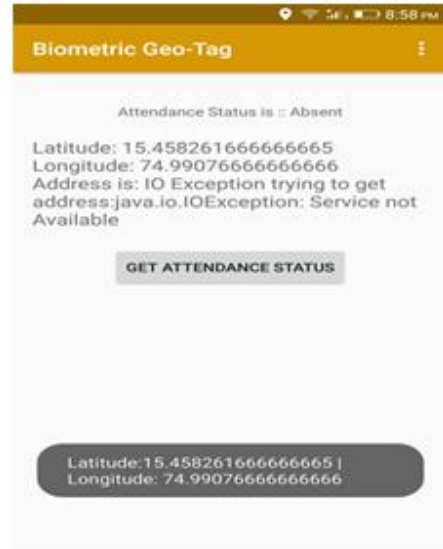
APPENDIX



Registration Form of Application



Fingerprint Login Page



Address and Status of Application



Fingerprint Scanner on Android smartphone



Address and status of application



Location phase of Application



Admin page



Details of android user

ACKNOWLEDMENT

This paper is made possible through the help and support from everyone, including: parents, teachers, family, and friends. Especially, please allow us to dedicate our acknowledgment to Naveen Mirajkar, Associate Professor SDM College of Engineering & Technology, Dharwad for his most support and encouragement.

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