Time Efficient Based Biometric Smart Attendance System Using Wi-Fi Network

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ABSTRACT

The existing system of academics is highly manual. In this system staff has to go to the account section for attendance and have to stand in the queue for attendance .Then user has to go to the stationary without knowing weather items are present or not. Then we have to go to the college to check updated notice boards. Then we have to go to the teachers without knowing whether they are available or not. This manual system takes more time and increases maintenance cost.This online system we are going to developed to aid and to take care of the chores of the current system to offer users a secure and authenticated system to work. System which we are going to develop will be fully online and will be secure to authenticate user. In this system user can give his/her attendance online through their smartphones. In this system we are providing online noticeboard also we are going to provide online stationary items to check whether they areavailable or not. Then we are providing a facility to check whether teachers or HOD's or Principals are available in their cabin or not. So this system will going to be a more secured and simple to use.

Keywords

Global Positioning System (GPS), Authentication, Fingerprint recognition, Cryptography.

1. INTRODUCTION

The main objective of the system is to reduce time, maintenance cost and provide full satisfactory application to the customer. This system focuses on improvement of current scenario of the college campus by making it more secure, less time consuming and less tedious. This system focuses on elimination of the downsides of the current system.The main key solution to the current system problem is to develop an online application which would contain all the same procedure of academics once the user is verified and authenticated. In this system we are going to use image processing, figure print detection Algorithms for digital attendance. Then for stationary and to check teacher's availability online by using real time database. This system will be more secure, fast and less time consuming will also help increasing the count of people that appear for this application to use.

LITERATURE SURVEY

In A smart,location based time and attendance tracking system using android application written by Shermin Sultana, Asma Enayet and Ishrat Jahan Mouri In this paper they proposed that a smart location based time and attendance trackingsystem 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 smartphone. This location is defined as a key of time and attendance tracking in this paper.In this paper they have proposed location based time and attendance system. We are also going to used time based attendance.

In A Minutiae-based Fingerprint MatchingAlgorithm Using Phase Correlation Written byWeiping Chen and Yongsheng Gao.In Thispaper they have proposed a new minutiae-based fingerprint matching algorithm using phase correlation. They have defined a new representation called Minutiae Direction Map (MDM). First, they convert minutiae sets into 2D image spaces. Then the transformation parameters are calculated using phase correlation between two MDMs to align two fingerprints to be matched. The similarity of two fingerprints is determined by the distance between two minutiae sets.this paper they have proposed a fingerprint matching algorithm.We are also going to done attendance we the help of fingerprint detection hence we have studied this paper.

In Design, Implementation, and Evaluation of a QoS-Aware Real-Time Embedded Database written by Woochul Kang, Sang Hyuk Son, Senior Member, IEEE, and John A. Stankovic, Fellow, IEEE.Quality-aware realtime Embedded DataBase (QeDB) is a database for data-intensive real-time applications running onembedded devices. In this paper they have proposed that QeDB uses a novel feedback control scheme to support QoS in such embedded systems without requiring all data to reside in main memory. This approach is based on simultaneous control of both I/O and CPU resources to guarantee the desired timeliness.We are going to use real time database to store stationary data notice board data and staff and students data hence we have studied this paper.

In Exprimental study of minutiae based alogorithm for fingerprint matching Written by Cleopas Officer Angaye, Oluwole Charles AkinyokunandGabriel Babatunde Iwasokun.In this paper, a minutiae-based algorithm for fingerprint pattern recognition and matching isproposed. The algorithm uses the distance between the minutiae and core points to determine the pattern matching scores for fingerprint images. Experiments were conducted using FVC2002 fingerprint database comprising four datasets of images of different sources and qualities. False Match Rate (FMR), False Non-Match Rate (FNMR) and the Average Matching Time (AMT) were the statistics generated for testing and measuring the performance of the proposed algorithm.In this paper they have proposed a fingerprint matching algorithm.We are also going to done attendance we the help of fingerprint detection hence we have studied this paper.

In User-Defined Privacy Grid System for Continuous Location-Based Services Wrote by Member, I:Roman Schlegel, EEE, Chi-Yin Chow, Member, IEEE,Qiong Huang, Member, IEEE,and Duncan S. Wong, Member, IEEE.In this paper, they have proposed a user-defined privacy grid system called dynamic grid system(DGS); .The system only requires a semi-trusted third party, responsible for carrying out simple matching operations correctly.This semi-trusted third party does not have any information about a user's location. Secure snapshot and continuous location privacy is guaranteed under our defined adversary models.The communication cost for the user does not depend on the user's desired privacy level, it only depends on the number of relevant points of interest in the vicinity of the user.In this paper they have proposed a location based services an we are also going to have maps in our system so for reference we have studied this paper.

In Android Based Mobile Attendance System wrote byFreya. J.Vora, Pooja. L. Yadav, Rhea. P. Rai, Nikita. M. Yadav.In this paper they have propoed that the mobile application they have attempted to build were required connecting to the internet through Wi-Fitechnology or through GPRS.Lecturers will first have to sign up for this and then they can take attendance any time they wish by first logging in with the help of a smartphone to the server. After attendance has been taken lecturer will send it over to sever via GPRS.The lecturers can also enroll new students, delete information about a particular student, modify some information etc.We have going to have attendance system in our project so we studied this paper.

2. PROPOSED STATEMENT
The main problem of current academics system is the amount of time people have to spend while standing in the queue for attendance , stationary and for teachers so we are going to develop this application to improve current scenario of the system .

3. PROPOSED SYSTEM
The below fig.1 shows the interaction between user, smartphone and web server database. This application is useful for various academics related activities so anystudents or staff member or any new person who is in the college campus need not to be in the waiting state for a long time. Attendance of staff members would be done by using finger print detection or selfie from their smartphones from anywhere in college campus.We can see availability of the stationary items on this application.We can see availability of the teachers or any other dignitaries on this application when we want to meet them.We can watch daily notices of the department and account section on this application.User no need to install lot of applications individually we are providing multiple modules under one platform. Through the system user can check for their need of availability online so it reduces time of user. Attendance is going to done digitally on smartphones through finger print or selfie so it reduces maintenance cost. No need to go to the notice board sections to check notices we can check it on this application.
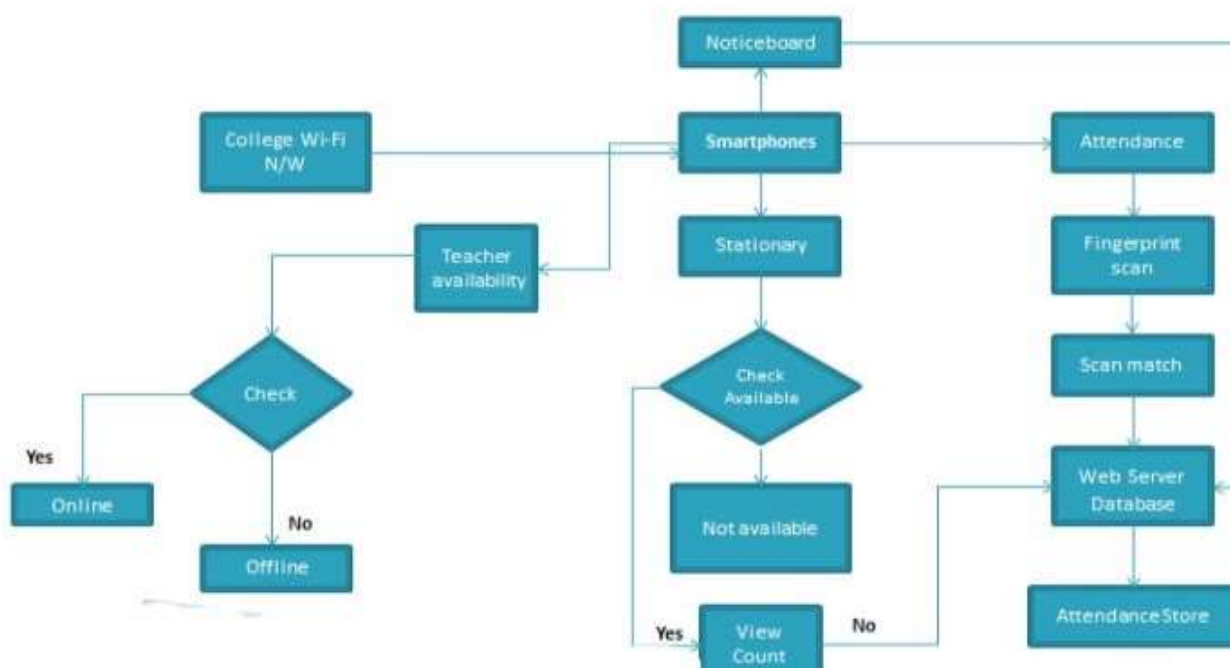

Fig 1: Interaction between user, smartphone and web server database

4. CONCLUSION
As the complexity and the change of speed of academics increases there is an increasing interest and need for this technology to analyze academics data.Our approach can be utilized to find student and staff satisfaction and reduce manual system and therefore can develop one's own academics system under the complicated, specialized and rapidly changing academics environment.

5. ACKNOWLEDGMENTS

6. REFERENCES

[1]. Shermin Sultana, Asma Enayet and Ishrat Jahan Mouri February 2015. "A SMART, LOCATION BASED TIME AND ATTENDANCE TRACKING SYSTEM USING ANDROID APPLICATION" International Journal of Computer Science, Engineering and Information Technology (IJCSEIT), Vol. 5,No.1

[2]. Weiping Chen and Yongsheng Gao 2007."A Minutiae-based Fingerprint Matching Algorithm Using Phase Correlation" Digital Image Computing Techniques and Applications.

[3]. Woochul Kang, Sang Hyuk Son, Senior Member, IEEE, and John A. Stankovic, Fellow, IEEE JANUARY 2012. "Design, Implementation, and Evaluation of a QoS-Aware Real-Time Embedded Database". IEEE TRANSACTIONS ON COMPUTERS, VOL. 61, NO. 1.

[4]. Cleopas Officer Angaye, Oluwole Charles Akinyokun and Gabriel Babatunde Iwasokun.2012." EXPERIMENTAL STUDY OF MINUTIAE BASED ALGORITHM FOR FINGERPRINT MATCHING" National Information Technology Development Agency (NITDA), Abuja, Nigeria Department of Computer Science, Federal University of Technology, Akure, Nigeria

[5]. Roman Schlegel, *Member,* IEEE,Chi-Yin Chow, *Member, IEEE,* Qiong Huang, *Member, IEEE,* and Duncan S. Wong, *Member, IEEE. "* User-Defined Privacy Grid System forContinuous Location-Based Services". This article has been accepted for publication in a future issue of this journal, but has not been fully edited. Content may change prior to final publication. Citationinformation: DOI 10.1109/TMC.2015.2388488, IEEE Transactions on Mobile Computing.

[6]. Freya. J. Vora, Pooja. L. Yadav, Rhea. P. Rai, Nikita. M. Yadav.Volume 6, Issue 2, February 2016**.** " Android Based Mobile Attendance System". International Journal of Advanced Research in Computer Science and Software Engineering**.**