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Cloud Based Intra-College Information Communication With Bluetooth Attendance System Using Mobile Clients

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Abstract: ***In this paper, authors about the cloud computing architecture and other aspects that are required for communication over cloud. The users primarily focus on using web services through mobile phones. Cloud computing is the use of computing resources that are delivered as e-service over a network. Mobile phones and devices that is cheap and widely used all over the globe today. The cloud applications and services can be used by people for communication and various other activities. This system also provides automation of student attendance tracking using wireless technology such as Bluetooth and scalability using cloud computing. Now-a day student attendance tracking systems employed in universities require a lot of human intervention. Also its storage for future uses a lot of memory. People can use their mobile gadgets and other devices like tabs, laptops, ipad etc. for using these services. These services prove to be of great use in fields like education (e.g. providing educational resource storage and databases, e-mails, educational applications and tools for students and teachers and clients located within the college campus involving in an educational program). Considering the present communication system, the proposed system provides a cost effective application for users in their daily life. The' cloud based intra college communication system using mobile clients (CICCSM)' can raise the quality of education system to a new level [2].***

Keywords: Attendance Tracking using Bluetooth, Notification, Communication, Notes sharing.

I. INTRODUCTION

This paper puts forward the design method of network chat system based on cloud computing technology. Today's network times, "Network" this word already thorough popular feeling, the development of computer network speed is amazing, it greatly reduces the human distance, and it apparently expanded the computer functions. And as one of network application chatting tools, it is also more and more attention by people and welcome, a good network chat tool can make any distance communication convenient and quick. In fact, in modern social network chat software development has quite mature, all kinds of complete function and friendly interface of software is quite beautiful. The cloud supports server-based applications and data services to the user which display the output on the client device. If the user wants to create a document using a word processor, for example, the cloud gives a suitable application running on the server which displays work done by the user on the client web browser display. The memory allocated to the client's workstation for web browser is used to make the application data appear on the client system display, but all changes and computations are recorded by the server system, and final results including files created or altered are permanently stored on the cloud servers. The performance of the cloud application is dependent upon the network access, reliability and speed as well as the processing speed of the client device. Private company, such as their employer. The cloud computing works on a client-server architecture using web browser protocols.

Cloud Based Intra College information communication system using mobile clients , we are using software as a services (SaaS architecture). we need to implement web service for intra college communication. The communication will occur between non-teaching staff, teaching staff and students. The non teaching staff and teaching staff use pc's and students use mobile phones for the communication.

1.1) Cloud Computing

Cloud calculative fundamental is, through the analysis of the distribution of the distributed computer, rather than the local computer or the remote server, the operation of the enterprise data center will be more similar as Internet. This makes the enterprise can will resource switch on the application of need, according to demand access to the computer and storage system. This is a kind of revolutionary act, for example, this is just like is the old single generator model turned to the power plant to centralized power supply mode. It means computational ability to also can serve as a kind of goods circulation, as gas, water and electricity, take with convenient, fare is low. The biggest different depend on, it is through the Internet for transmission[2]. Cloud computing has the blueprint of be vividly portrayed: in the future, only need a laptop or a mobile phone, you can realize our need through network service everything, even including supercomputing such task. From this perspective, the end user is the cloud calculative true owner. Cloud computing applications include such a new idea or new concept: the power of the world together, to give which every member of the using,

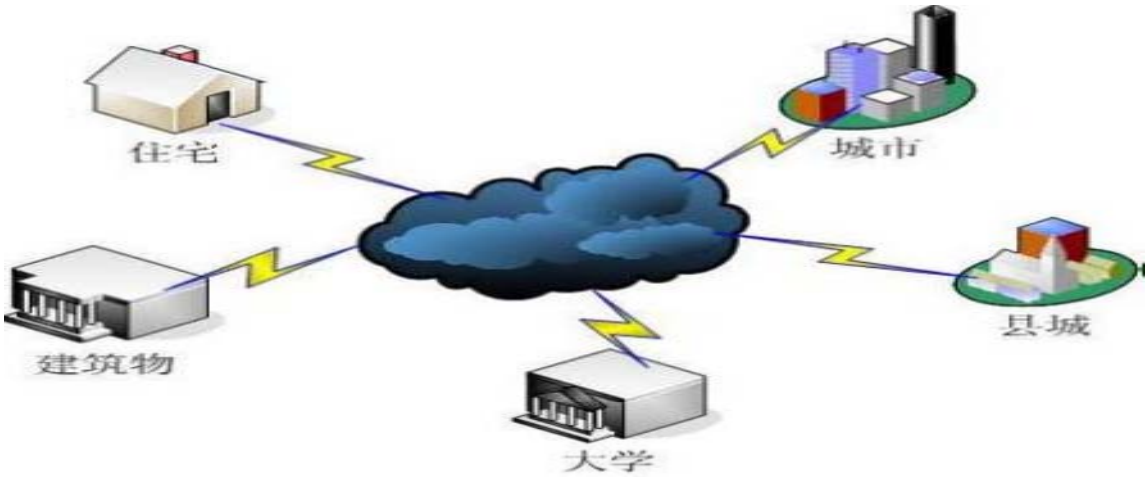

Figure 1. Cloud storage of cloud computing

At present, the PC is still our daily life of the core tools-we use PC documents, storage material, through E-mail or U plate and share information. If PC hard disk is broken, we will because material loss and stranded. And in "cloud computing" era (note: the following "cloud computing" are referred to as the "cloud"), "cloud" will be done for us storage and computing work, "cloud" is computer group, and each group includes the thousands of Taiwan, or even millions of computer. "Cloud" benefits are that one of the computers can update, guarantee "cloud" forever.

1.2) Security Using Cryptographic Hash Function

Cryptographic hash function is a hash function, that is, an algorithm that takes an arbitrary block of data and returns a fixed-size it string, the (cryptographic) hash value, such that an (accidental or intentional) change to the data will (with very high probability) change the hash value. The data to be encoded is often called the ”message,” and the hash value is sometimes called the message digest or simply digest[6].

The ideal cryptographic hash function has four main or significant properties:

1. It is easy to compute the hash value for any given message.
2. It is infeasible to generate a message that has a given hash.

3. It is infeasible to modify a message without changing the hash.

4. It is infeasible to find two different messages with the same hash.

Cryptographic hash functions have many information security applications, notably in digital signatures, message authentication codes (MACs), and other forms of authentication. They can also be used as ordinary hash functions, to index data in hash tables, for fingerprinting, to detect duplicate data or uniquely identify files, and as checksums to detect accidental data corruption. Indeed, in information security contexts, cryptographic hash values are sometimes called (digital)fingerprints, checksums, or just hash values, even though all these terms stand for functions with rather different properties and purposes.

The Secure Hash Algorithm is one of a number of cryptographic hash functions published by the National Institute of Standards and Technology (NIST) as a U.S. Federal Information Processing Standard (FIPS). What is the Secure Hash Algorithm (SHA and SHA-1)? The Secure Hash Algorithm (SHA), the algorithm specified in the Secure Hash Standard (SHS), was developed by NIST and published as a federal information processing standard (FIPS PUB 180). SHA-1 was a revision to SHA that was published in 1994. The revision corrected an unpublished flaw in SHA. Its design is very similar to the MD4 family of hash functions developed by Rivest The algorithm takes a message of less than 264 bits in length and produces a 160-bit message digest. The algorithm is slightly slower than MD5 (but the larger message digest makes it more secure against brute-force collision and inversion attacks.

1.2.1 Verifying the integrity of files or messages. An important application of secure hashes is verification of message integrity. Determining whether any changes have been made to a message (or a file), for example, can be accomplished by comparing message digests calculated before, and after, transmission (or any other event). For this reason, most digital signature algorithms only confirm the authenticity of a hashed digest of the message to be ”signed.” Verifying the authenticity of a hashed digest of the message is considered proof that the message itself is authentic.

1.2.2 Password verification. A related application is password verification. Passwords are usually not stored Journals are governed by an Intellectual body and they select the most suitable paper for publishing after a thorough analysis of submitted paper. elected paper get published (online and printed) in their periodicals and get indexed by number of sources.

1.3) Bluetooth Attendance

The current student attendance tracking systems require a lot of human intervention consuming, a lot of paper work and time. Existing methodology requires manual tracking and then duplicating it to SQL databases. This can be replaced by automating the process. A wireless tracking system to monitor individual student present[3] inside the campus will save a lot of time. Any students can keep track of their individual attendance and take actions accordingly. The professors can track his class attendance or individual students record with very less time[3].

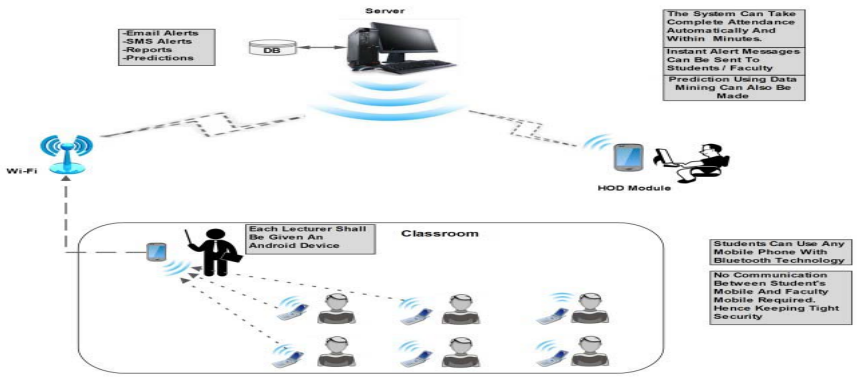

Fig. 1.3 Basic Infrastructure of Bluetooth Attendance [4]

II. LITERATURE SURVEY

The traditional communication uses the internet facility for communication. User can communicate using Personal computers and laptops. Availability of internet connection is the most important factor for the users. For eg two people chatting on gmail require to be having internet connection. The cost of using internet is pretty high and not affordable for every user. Due to high network traffic performance can degrade. Security is major concern. Hackers and illicit users can obtain password and other important information.

Cloud based intra college information communication system using mobile clients : To overcome the disadvantages of the current system we have proposed the CICCMC. The system uses wi-fi technology which is the major advantage. The system provides high availability. Any user can use the services by turning on the wi-fi of its system. The users need not be login at the same time for communication. a user can send mail to his friend. The friend can see the mail when he logins. Incase of chat session one user logs off then the messages sent by the other person will be automatically stored in messages.

We are find all papers related to this intra system and check and find what drawbacks or what problems that system face and finally collect all problems which are presented in following tables.

Previous System	Produced Year	Advantages	Disadvantages
The Design Method of network chat system based on socket and Cloud computing	2012	In this application is develop only for chatting application.	This application is totally based on the socket programming and is s very complex.
Cloud Computing for mobile World	2013	This application can be introdeced the better mobile world application.	This applicetion is develpb only for mobile application. In this application secutity is not better provide.

Previous System	Produced Year	Advantages	Disadvantages
MITSAT–An Automatted Student Attendance Tracking System using Bluetooth and EyeOS	2013	In this application we can save the time by taking automatic	In this application range is main problem. And Proxy attendence .
Design of cloud based Instant Messaging System on Android Smartphone using Internet	2014	This Application is for sending and receaving message and data through internet	This Application is Only for The Smart Phone.

III. BLOCK DIAGRAM

This paper proposes the IND-OCPA-P model to analyze the security of the proposed EOB and the encryption schemes supporting an efficient range query over encrypted data.

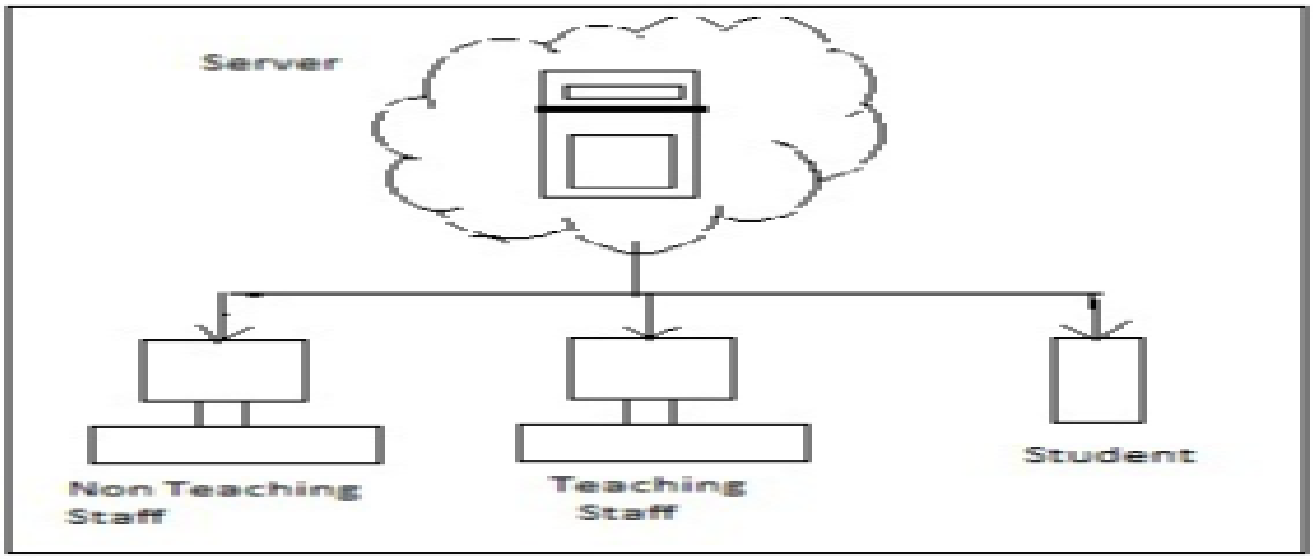

Fig. 3. Sketch of Cloud Based Intra College Information Communication System Using Mobile Client.

IV. FEATURES

After the development, analyzes the efficiency of a range query over the data that is encrypted by EOB where the proposed OB is used. The main focus was to analyze the searching efficiency in terms of the false positive rate. To do this, the probability distribution of the rate of the width of a bucket to the size of the plaintext space was first analyzed to show that the width of a bucket is not skewed to be extremely large or small. This even-bucket-width property gives the proposed scheme a good querying performance on average. In the proposed OB, the p _ 1 points are randomly uniformly sampled in the plaintext space [0,|M|-1].The width of the *i*th bucket was determined by the selected points of $(i\text{-}1)^{th}$ order and i^{th} order because the width is the difference of these two points. Therefore, to analyze the width of a bucket, it is important to analyze the probability distribution of the position of the selected points.

» ***Manage notes:***

- The staff members can upload notes of their respective subjects for the students.
- Students can upload their own notes to circulate them among their classmates.
- The user can modify, add, and delete motes according to their requirements.
- This service has medium priority as it will be used on average basis by the users.

» ***Assign task:***

- The HOD can assign the daily task to its department staff and manage it.
- Similarly teachers can assign their project task and subject assignments to students.

» ***Message/SMS:***

- For communication in real time the system provides SMS service.
- The devices within wi-fi range can use the service free of cost as compared to the service provider SMS services which are charged.

» ***Email:***

- Email service can be used by the users to mail and transfer information.

- The service is used free of cost.

» ***Manage notifications:***

- Notifications would appear on mobile devices of students when a message or email is received.
- The users can be alerted with these notifications about important information

» ***Manage Student Attendance:***

- Track the attendance.
- Give the default list.
- Bluetooth transmitter which transmits a unique registration ID.

V. Conclusion And Future Scope

In this paper the author has discussed various aspects and models related to cloud based communication. This system provides a brand new application which makes communication in daily life easy. The author has implemented software as a service (SaaS) architecture in the system. The system provides facilities of sms, notifications, email, to-do-list, and various other features which gives the user an user friendly interactive communication. The system provides data storage, high security and authentication using hash algorithms. Theft of misusage and information of user's account is not possible in this system. This system creates a feeling of secured and safe communication in the users mind. The cloud based communication system can be implemented in various departments such as corporate world, healthcare, political and social world. It plays as an important role in educational institutions by providing a platform for the students and staff for efficient and effective interaction. It is very cost effective as communication is done using Wi-Fi technology. The availability of low cost cell phones embedded with latest technologies, almost every other human can possess a cell phone. This makes the application widely and globally useful for future research and development.

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References

1. Cloud Computing for Mobile World Chetan S., Gautam Kumar, K. Dinesh, Mathew K. and Abhimanyu M.A.,Department of Computer, Science Engineering,National Institute of Technology,Calicut.
2. Aida Ghazizadeh, "Cloud Computing Benefits and Architecture in E-Learning," wmute, pp.199-201, 2012 IEEE Seventh International Conference on Wireless, Mobile and Ubiquitous Technology in Education, 2012
3. E. A. Brewer, Towards robust distributed systems, Symposium on Principles of Distributed Computing, 2000.
4. International Conference on Information, Electronic and Computer Science (ICIECS 2010 E-BOOK)(pp 1542-1545).
5. Doc88.com,Cloud Computing of New Techniques of Computer Network.pp1-4, September,2010.
6. "Cryptographic Hash Function Basics: Definitions,Implications, and Separations for Preimage Resistance, Second-Preimage Resistance, and, Collision Resistance by P. Rogaway, T. Shrimpton,2004

