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Survey on Global Access of User's Information Stored on the Cloud with the Help of Fingerprint

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ABSTRACT*:* Fingerprint is a unique identification method. With the help of fingerprint we can have many data available easily such Driving License, Health Details and Passport services easily when the data is stored on the cloud. Cloud is a virtual storage device, It has become one of the most common storage system. The data stored on the cloud can be accessed with the help of active internet connection. When travelling without license we just need to scan fingerprint with the scanner available with the policeman. All the details will be shown on the screen which is stored on the cloud. In case of an accident when the person becomes unconscious the treatment can begin after scanning the fingerprint as it will show the medical history and health problem the person is suffering from which was uploaded by the user on the system. The emergency numbers can be contacted as they are stored into the system. All this happens when the person registers for the service. This will work even without registering as it will show the Aadhaar card details necessary for the emergency communications. History will be updated whenever patient visits the hospital as OPD patients can also use it. With the help of this service we can get police record on the cloud database and hence the passport generation becomes easy and hassle free.

KEYWORDS*:* Fingerprint; Data Stored On Cloud; Virtual Storage

I. INTRODUCTION

Fingerprint is a unique identification method. No two persons in the world can have the same fingerprints. It becomes very difficult to clone a fingerprint, So we can use this for securing the data of the user which is to be stored on the cloud. So to use fingerprint as the key to access the information we will be need a finger print scanner. With the help of scanner the user will be able to access the data stored on the cloud.

Cloud is a virtual storage. To use cloud we need an active internet connection. The data is first uploaded by the user on the cloud, then and then only we can use that information for later use. The cloud gives us an option to store large amount of data which is difficult to store on the disk. With the help of cloud the data can have a global reach. It can be accessed anywhere anytime, provided an active internet connection. The security of the data on the cloud is more as compared to the data on the disk.

With the help of fingerprint we can have many data available easily such Driving License, Health Details and Passport services easily when the data is stored on the cloud. With the help of this service it will become easy for the user to travel when in hurry. The user just need to scan the fingerprint on the scanner available with the traffic policeman. When the user scans the fingerprint the search will begin in the database with the similar pattern. When the similar pattern is found the Driving License of the user will be shown, and if any penalty is imposed then it will be updated on the user's account, If the user has no Driving License the basic aadhar card details will be shown.

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In case of an accident when the person becomes unconscious the treatment can begin after scanning the fingerprint of the user with the scanner available in the hospital, as it will show the medical history and health problem the person is suffering from which was uploaded by the user on the system at the time of registration. The emergency numbers can be contacted as they are stored into the system. All this happens when the person registers for the service. This will be helpful even when the user is not registered as it will show the Aadhaar card details necessary for the emergency communications. History will be updated whenever patient visits the hospital as OPD patients can also use it.
With the help of this service we can get police record on the cloud database as this will increase the reach of the critical data and hence the passport generation becomes easy and hassle free because of this service will not requiring the physical police presence for the clearance. Thus it will save a lot of time and thus be an ease to the user. This can even help catch the criminals who are trying to abscond the country with the scanner made available at the airports and other places from which International travel can be made and scanning made mandatory.

II. RELATED WORK

In 1] Finger Print Authentication:-The finger print authentication module, an user must upload the finger image for the further entry process after completion of the electronic key validation. Once the finger image was uploaded by the user it will compare with previous finger image when it a time of the registration purposes along with during login period..In 2] Cloud Computing:-Cloud computing is internet based computing, whereby shared resources, software, and information are provided to computers and other devices on demand. In cloud computing communications, information security entails the protection of information elements, only authorized users are allowed to access the available contents. In 3] Issues with fingerprint systems:-The tip of the finger is a small area from which to take measurements, and ridge patterns can be affected by cuts, dirt, or even wear and tear. Acquiring high-quality images of distinctive fingerprint ridges and minutiae is complicated task. People with no or few minutia points (surgeons as they often wash their hands with strong detergents, builders, people with special skin conditions) cannot enrol or use the system. The number of minutia points can be a limiting factor for security of the algorithm. Results can also be confused by false minutia points (areas of obfuscation that appear due to low-quality enrolment , imaging, or fingerprint ridge detail).In4] Backup data:-Sensitive enterprise data should be backed up for recovery in case of disasters. Using strong encryption techniques to protect backup data Lack of Trust management and privacy in cloud: As it is seen in the cloud environment do not have adequate trust and privacy management facilities established well in place to mitigate the fear of cloud users in moving their critical IT business and data to cloud. Consumers and cloud service providers are forced to trust among themselves without much knowledge about the vendor's availability, back up, job service efficiency, security controls and so on. In 5] Fingerprint Recognition:-Fingerprint recognition has been utilized generally as a part of both civilian and forensic applications. When contrasted to features of biometrics, biometric which is based on fingerprint is the most mark based biometrics and has the largest shares of market. As far as applications, there are mainly two kinds of systems of fingerprint recognition: verification and identification. A fingerprint is the pattern of valleys and ridges on the surface of the tip of finger. The crossing points and end points of ridges are known as minutiae. A ridge ending is characterized as the point of ridge where a ridge ends unexpectedly. A bifurcation is characterized as the point of ridge in which ridge bifurcates into two ridges. It is an assumption which is accepted widely that the pattern of minutiae of every finger is unique and does not change during one's life. At the point when experts of human fingerprint figure out whether two fingerprints are from the same finger, the degree of matching between two patterns of minutiae is standout amongst the most essential features. In 6] Cloud computing can provide an in finite amount of computing, storage, and network resources which suits big data challenges. The data could also be stored entirely in a local infrastructure and only transferred to public infrastructure for more computation power while the trade-o_ between data transfer and computation power need to be considered. In 7] Secure data access in cloud using biometrical recognition is done by using batch homomorphic encryption technique. In this, privacy of data has become increasingly important in the cloud environment. A new approach for protecting the data from attackers who retroactively obtain, through legal or other means, a user's stored data and private decryption keys is implemented. It causes sensitive information, such as account numbers, passwords and notes to irreversibly self-destruct, without any action on the user's part.

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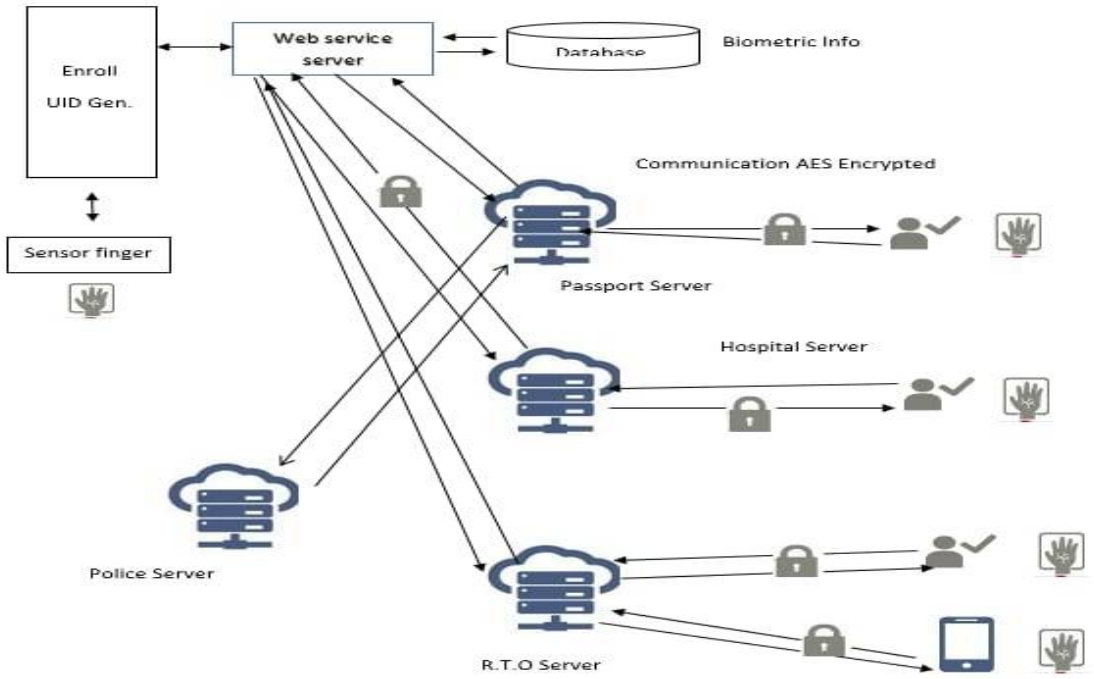
III. SYSTEM ARCHITECTURE



The UID has all the basic information of the user, It is basically the Aadhar card. It is connected with the help of web services with the different services' servers and the database. If the user scans the fingerprint at the passport server it will gain information from the police server and the UID of the user. Same happens when the user scans the fingerprint at the Hospital and the R.T.O. The communication between the servers are secured and safe. The communication has client server architecture.

IV. PROCEEDING METHODOLOGY

A. *Design Considerations:*

- MD5 Algorithm
- Advanced Encryption Standard (AES) Algorithm

B. *Description of the Proposed Algorithm:*

A) MD5 Algorithm Description

In the MD5 begin by supposing that we have a c-bit message as input, and we wish to find its message digest. Here c is an arbitrary nonnegative integer; c may be zero, it need not be a multiple of eight, and it may be arbitrarily large. Now imagine the bits of the message written down as follows:

m_0 m_1 ... m_{c-1}

The following five steps are performed to compute the message digest **(**MD) of the message.

Step 1. Append Padding Bits

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Step 2. Append Length
Step 3. Initialize MD Buffer
Step 4. Process Message in 16-Word Blocks
Step 5. Output

B) AES algorithm

The very popular and widely adopted symmetric encryption algorithm likely to be encountered nowadays is the Advanced Encryption Standard (AES). It is found at least six time faster than triple DES.

A replacement for DES was needed as its key size was too small. With increasing computing power, it was considered vulnerable against exhaustive key search attack. Triple DES was designed to overcome this drawback but it was found slow.

Now ,
The features of AES are as follows −

- Symmetric key symmetric block cipher
- 128-bit data, 128/192/256-bit keys
- Stronger and faster than Triple-DES
- Provide full specification and design details
- Software implementable in C and Java

AES Analysis :-
In present day cryptography, AES is widely adopted and supported in both hardware and software. Till date, no practical cryptanalytic attacks against AES has been discovered. Additionally, AES has built-in flexibility of key length, which allows a degree of 'future-proofing' against progress in the ability to perform exhaustive key searches.
However, just as for DES, the AES security is assured only if it is correctly implemented and good key management is employed.

V. CONCLUSION AND FUTURE WORK

The simulation results showed that the service being developed will help the user carry less document anywhere they go. With the help of this service the biometric way of storing the information and accessing it anywhere will increase, thus India will contribute in developing smart India and Digital India. The future scope of this service will be payment with the help of fingerprint, with the enhancement of the service we will be able to use this service for transferring money with the help of only fingerprint.

REFERENCES

1] E. Sasi , R. Saranyapriyadharshini Secured Biometric Authentication in Cloud sharing system International Journal of Computer Science and Mobile Computing, Vol.4 Issue.3, March- 2015, pg. 572-577.
2] Rathi. G, Meenakshi. L, Saranya. C & Sindhu. M , Credit Card Endorsement using Biometrics in Cloud Computing International Journal of Advanced Electrical and Electronics Engineering (IJAEEE) ISSN (Print) : 2278-8948, Volume-2, Issue-2, 2013
3] Sravya. V, Radha Krishna Murthy,Ravindra Babu Kallam, Srujana B ,A Survey on Fingerprint Biometric System 2012, IJARCSSE All Rights Reserved Volume 2, Issue 4, April 2012
4] Mahesh S. Darak Dr. V.P. Pawar Empowering E-Governance through Cloud & BiometricsInternational Journal of Scientific & Engineering Research, Volume 5, Issue 5, May-2014
5] Sukhjit Singh Sehra, Harneet Kaur and Sumeet Kaur Sehra Deployment and analysis of Fingerprint Data using cloud services International Journal of Applied Engineering Research ISSN 0973-4562 Volume 10, Number 18 (2015)

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6] Ehsan Nadjaran Toosi, Adel Nadjaran Toosi, Reza Godaz, and Rajkumar Buyya Integrated IoT and Cloud Environment forFingerprint Recognition Cloud Computing and Distributed Systems (CLOUDS) LaboratorySchool of Computing and Information SystemsThe University of Melbourne, Australia.

7] P.Nivetha , V.Sarala ,SECURE DATA ACCESS USING BIOMETRIC RECOGNITION IN CLOUD COMPUTING *International Journal of Advanced Research in Computer Engineering & Technology (IJARCET) Volume 3 Issue 3, March 2014*