



# DELEGATED AUTHORIZATION FRAMEWORK FOR EHR SERVICES USING QR CODE GENERATION

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## ABSTRACT

Many Medical organizations use the cloud-based Electronic Health Record(EHR) services due to the high risk of the data of a person that is accessed by the unauthorized user and the resulting compromise of patient data. To use EHR Management many organizations follow a patient- centric method so that the patient can authorize every access of their health records as the control is given to the patients. It is impractical as the patient may not always be available to provide authorization. To secure and to use cloud-based EHR services there is a need to develop a proper authorization delegation mechanism. The main objective of this project is to create a mobile application for patients through web-based management that provides secured access to patient's records through cloud storage services. Admin remotely stores the patient's data in the cloud safely and the patients can access easily their data that are stored in cloud-based EHR management. In some cloud storage systems, cloud files may contain some sensitive information. The sensitive information hiding can be found by encrypting the file but this makes the shared file unable to use by the other person. In this project we propose a document reference id that automatically converts to the QR code then just scan and then download the document, Signatures are used to verify the file.

**Keywords:** Attribute Based Encryption, Attribute Based Access Control, Electronic Health Record, Cloud Storage, Semantic Web, Access Broker, Cloud Computing.

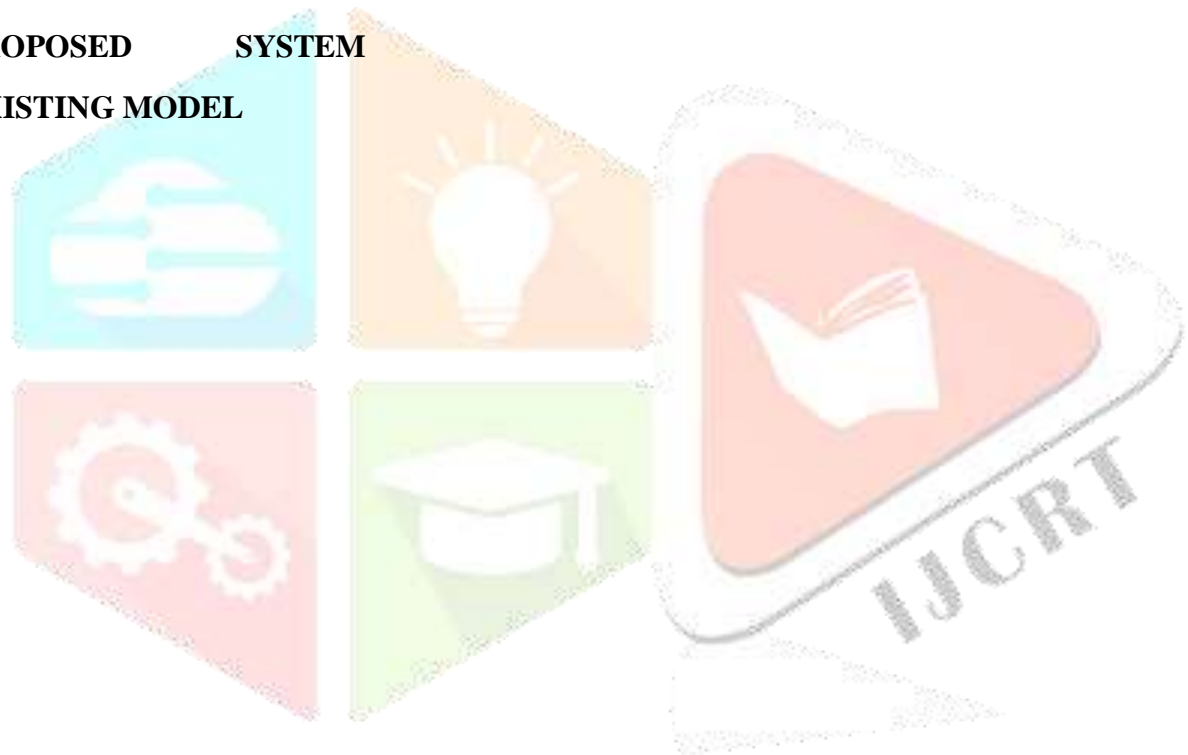
## INTRODUCTION

An EHR (Electronic Health Record) is a digital version of a patient's medical history maintained by the authorities of an organization over a period of time. It helps the medical organization by providing services that automatically access the patient's record. Many service providers are rapidly moved to cloud-based EHR to manage the patient's information and they are platform-independent, provide patients information with vigorous data searching,

easy retrieval, anywhere accessibility, cost- effective. Services are developed internally

or acquired from vendors like care cloud, Athena health, egocentricity, clinical works, etc... By maintaining the many digital copies of patient's records increase the possibility of attacks on patient's information, so they need high-security controls. EHR security requirement includes functionality, interoperability, password protection, audit trails, data encryption.

**EXISTING AND  
PROPOSED SYSTEM  
EXISTING MODEL**



The Existing concept is a proper authorization delegation mechanism to use cloud-based EHR service management using Attribute-Based Encryption in web technologies that involve the combination of using semantic web technic with attributes based schemes.

### Algorithm

Attribute-based encryption.

The user prepared the document in the manual.

### DRAWBACKS

Developed in Web technologies. The Network could be exploited.

### PROPOSED MODEL

In this paper, we propose a remote document reference id automatically converts to the QR code then just scan user module the download the particular document integrity that realizes data sharing with sensitive information hiding.

### Algorithm

QR code generate algorithm

As compared to other tracking and identification methods, such as the simple barcode it proves that to be expensive for many applications.

### ADVANTAGES

The advantage of using these tools is that you can develop the content once and then revise it as necessary.

Advanced security using QR code.

### FUTURE ENHANCEMENT

In the future, it will also enhance our framework to include the EHR data exchange and routing functionality that are essential for inter-organizational HER frameworks. There are numerous extra

security and protection issues that can be tended to that we leave for future work.

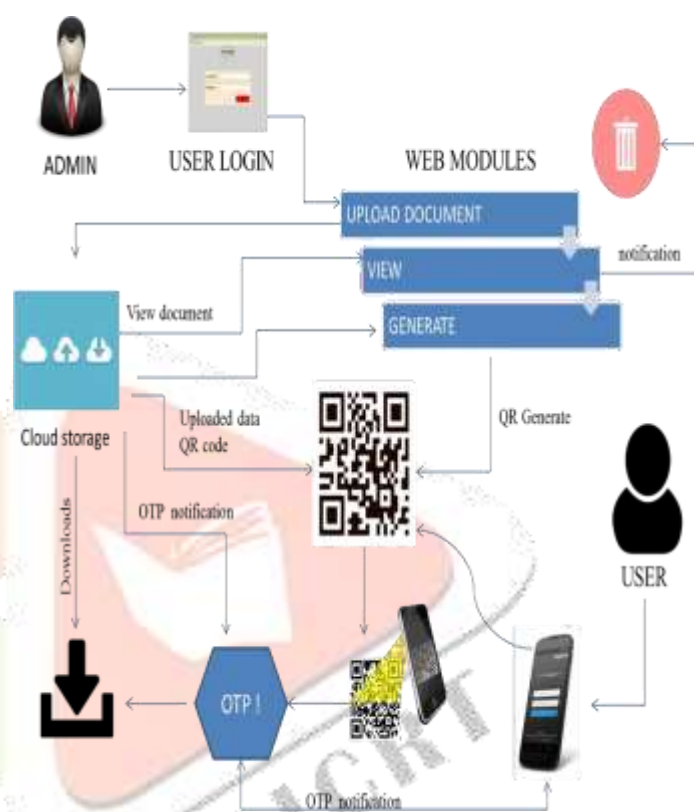
### EXTRAVAGANCE

Predictive Learning of auditing

Real-time business analysis summary

### WORKING PROCEDURE

### SYSTEM ARCHITECTURE



By default, each hospital will be given by one unique id. Based on the unique id the patient fills the registration form and gets the login details, all the details will be stored in the cloud database by cloud storage providers. The patient came to hospital and get treated by the doctor and the report of the patient will be stored by the head of the organization or the admin based on EHR management by using the hospital unique id. The admin or the one who stored the patient information, except the patients the others cannot view or download the

particular data. Whenever the patient wants to view or download his/her information a QR code is generated from the cloud and the patient scans the QR code using QR Scanner (scanner will be in the mobile of a patient), after scanning the OTP is generated from the cloud in the patients mobile. After entering it the fill is viewed and it can be downloaded. The whole access is given to patient only.

### SYSTEM REQUIREMENTS

#### HARDWARE

PROCESSOR : Intel core i3

RAM: 4 GB DDR2 RAM

MONITORS: 15'' COLOR

HARD DISK: 100 GB

#### SOFTWARE

Front End: ANDROID XML, JAVA

Back End: MYSQL, PHP

Operating System: Windows 07

IDE: Eclipse, Android Studio

#### MODULES

Login/Registration

Database Creation

Medical Data upload

QR Code Encrypted

Medical data View/Remove

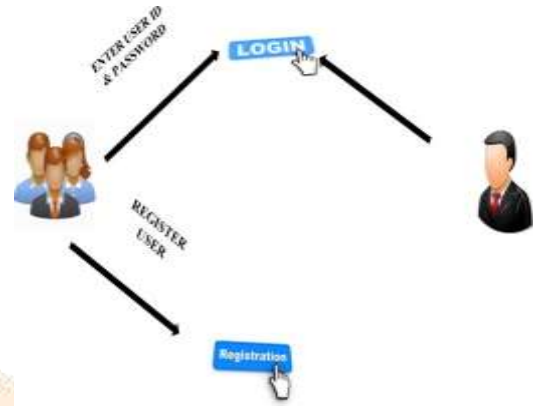
Security Scanner

Medical File Download

### LOGIN & REGISTRATION

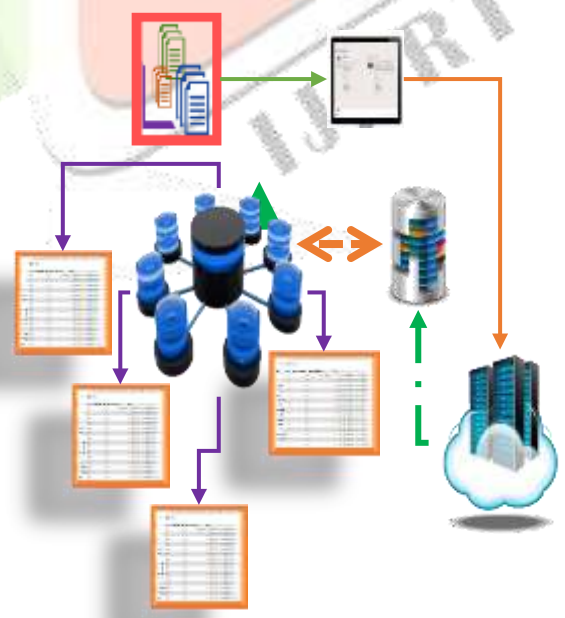
In this module, we design to develop a login and sign up screen. This module describes the signup page contains email id or username, password and confirms the password that kind of details should be

stored in a database. Login screen contains email id or username and password when the user logs in the app it should retrieve the data to the database and combine based in the user input if it match's user name and password to allow in the app otherwise alert and shows a message to the user. The Language used is XML.



### DATABASE CREATION

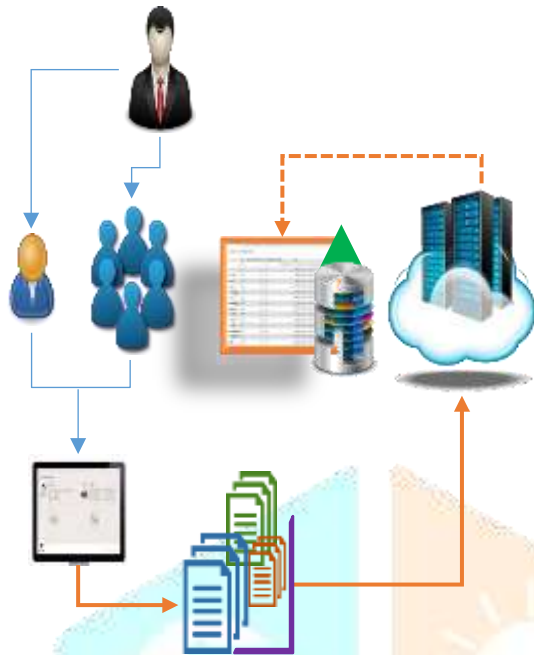
User email id or username and password have been stored after registration, Android used SQLite Database for storing and fetching user application details.



### MEDICAL DATA UPLOAD

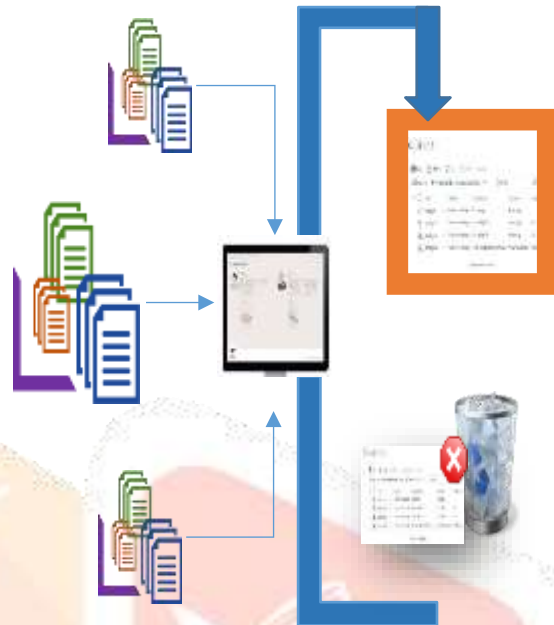
In this module, to upload the user information in storage cloud in secure data

are user information, Medical record information and patients details, etc...



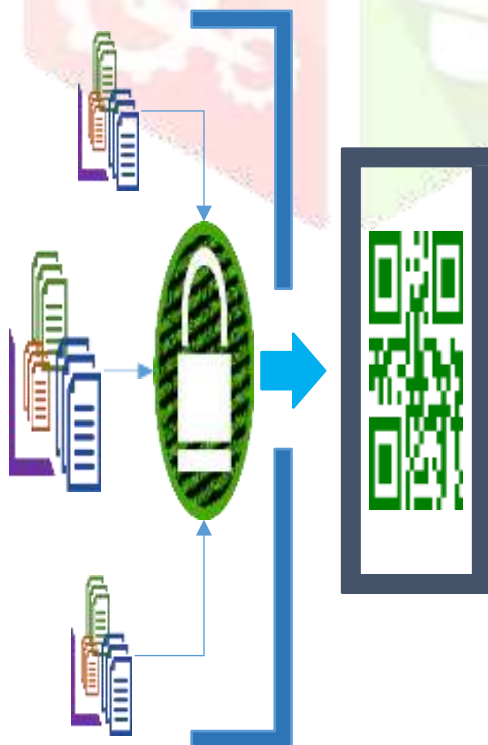
### MEDICAL DATA VIEW/REMOVE

In this module, medical data view/remove that process can be used in logged user view a medical data and in case that data can remove.



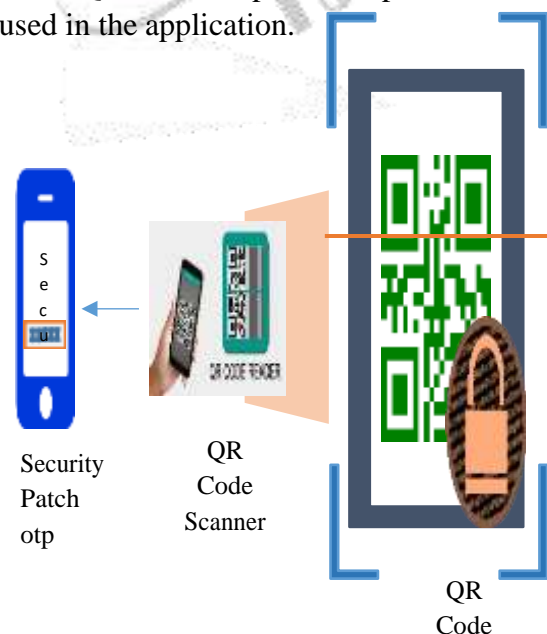
### QR CODE ENCRYPTOR

In this module, we have created a QR code that generates a using Encrypt the value link medical records data and patient details that can be created are login users.



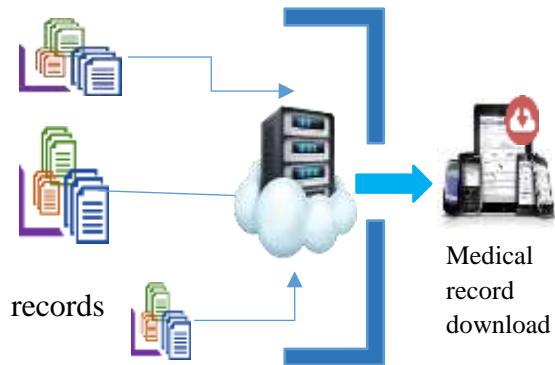
### SECURITY SCANNER

In this module are security scanner like the three security can be using the projects are security patch, unique QR code Reader and Make QR code that particular person can be used in the application.



## MEDICAL FILE DOWNLOAD

We have to create a medical file download are overall data stored in the cloud the specific user medical records find to view and download the particular user records.



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## CONCLUSION

EHR System helps to facilitate the use of e-health and are the most important and most complex type of health information system. EHR services improve the quality of health care by making healthcare data secure, providing anywhere easy access. However, providing the security to data the chances of data breaches are more. Therefore, identify and eliminate those breaches before implementing it.

## REFERENCES

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