



# Private and secure medical data transmission for wireless network using QR code.

<sup>1</sup>Shrutika S. Doiphode, <sup>2</sup>Sanket Kalchide, <sup>3</sup>Megha kharat, <sup>4</sup>Sharayu H. Salunke

<sup>5</sup>Prof. Eknath Raut

Universal College of Engineering and Research, Sasewadi, Pune 411041, Maharashtra, India.

**Abstract:** Health records maintaining has become the most important part in today's medical field. While the time of emergency, it would be difficult for the doctor to know the previous health history of the patient to continue with further treatments. This project presents a health record system where a doctor can enter patients health and emergency information into our servers and it can be accessed by the doctor during the time of emergency. The main aim of this paper is to distribute patient's data securely in data servers and performing the Quick Response Code with cryptosystems to perform statistical analysis on the patient data without compromising the patient's privacy & give quick access to user.

## 1. INTRODUCTION-

The rapid technological convergence of the Internet of Things (IoT), Wireless Body Area Networks (WBAN) and cloud computing has made e-health (electronic health care) a promising industrial application. information-intensive occupying important areas Improving potential for quality of care. Most of today's e-/m health systems require physicians (or system administrators) to be involved in processing medical information, which creates two problems: inefficiencies caused by manual operations and knowledge users by physicians. data. A medical expert system that can automatically analyze the messy private data of users and reduce the involvement of doctors can solve these two problems, especially the application of a general physical examination.

A. Problem Definition To overcome the problem of patients, we have implemented the system where a user/patient hides their information in QR code and the system will provide the patient with a unique ID to access when that patient/user is in the processing case. Doctors identify symptoms and assign treatment options to patients. The pharmacist will scan the hat's QR code and administer the medicine to the patient/user. Finally, there is the insurance service. Develop specific plans based on the patient's perspective. The proposed system's attention to the safety of the user's patient is an extreme requirement for healthcare applications and their insurance plans, especially in the case of patient privacy, if the patient is inconvenienced.

B. Model Architecture In the proposed research work to design and implement a system which work with healthcare services. This research work aims to propose a unified trust computing scheme for giving most relevant, efficient and trustworthy healthcare service provider to the requesting patent. Trustworthiness of the healthcare service/provider will be evaluated based on various attributes like QR Code, unique patient id to secure patients record in healthcare environment

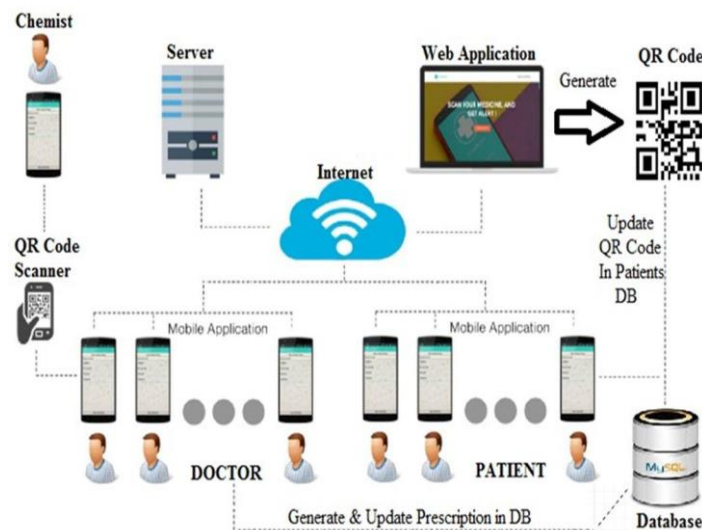


Fig 1: Model Architecture



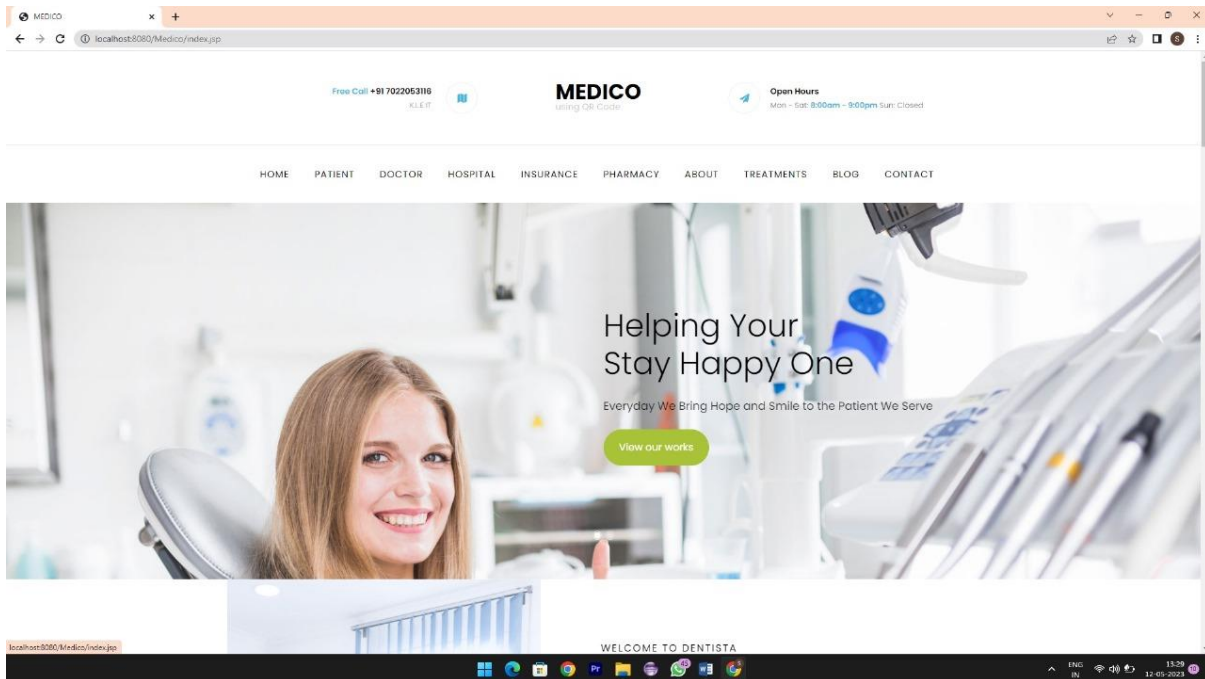
## 2. ALGORITHM USED

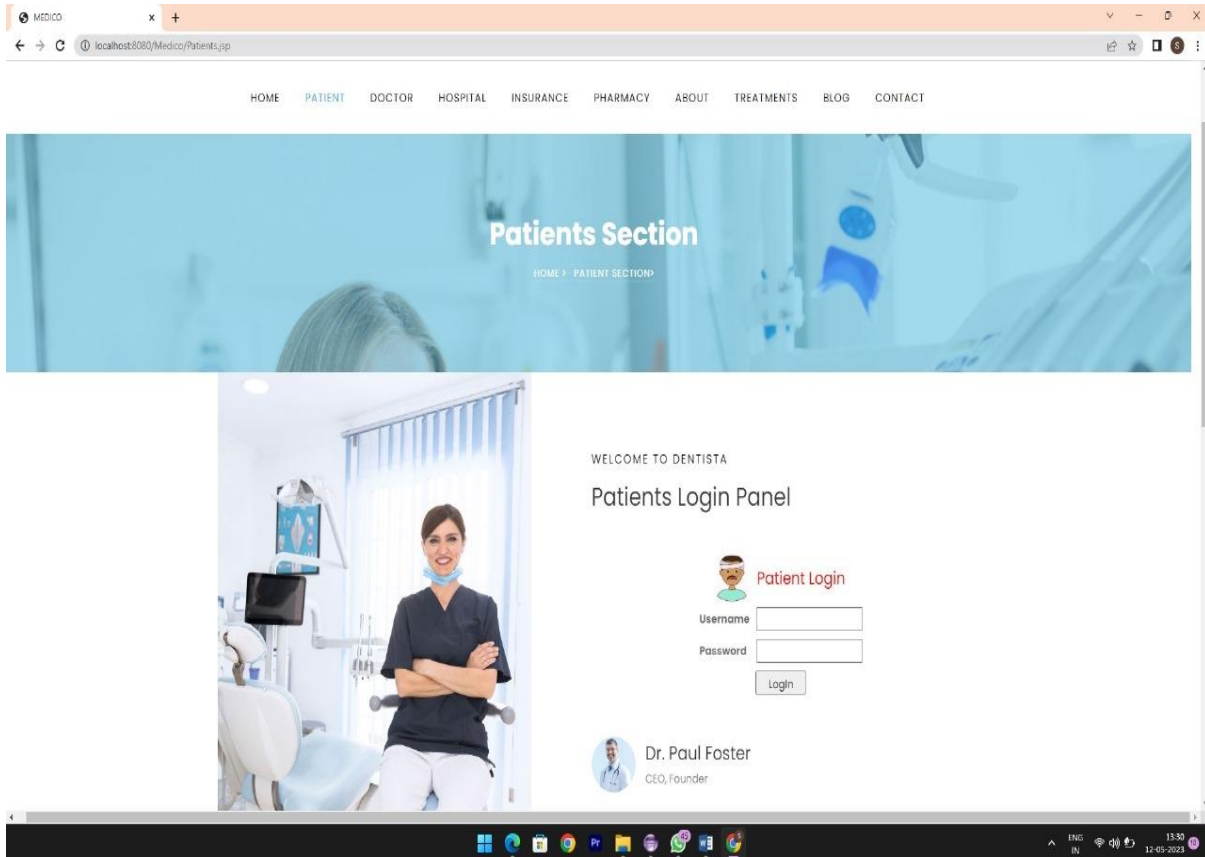
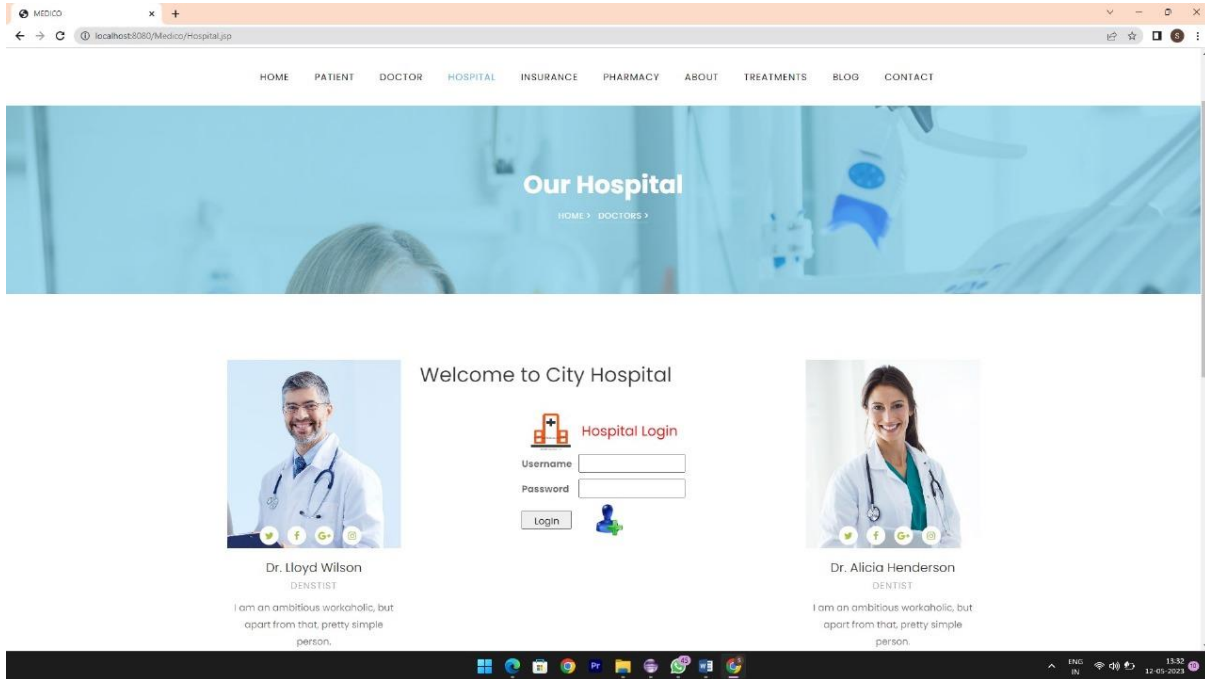
1) **AES Algorithm** AES is an encryption algorithm which is a symmetric block cipher with a block size of 128 bits. It transforms these individual blocks using 128, 192 and 256 bit keys. Once it encrypts the blocks, it concatenates them to form the cipher text. AES operates on bytes of data rather than bits. Since the block size is 128 bits the cipher processes 128 bit input data (or 16 bytes) at a time.

2) **MD5 (Message-Digest Algorithm)** MD5 (Message Digest Algorithm) The MD5 hash algorithm is a one-way cryptographic function that accepts an arbitrary length message as input and returns as output a fixed length digest value that authenticates the original message. Basically, MD5 is used to store passwords and one-way hashes of passwords, but is not among the recommended hashes for this purpose. The MD5 hash function was originally designed for use as a secure cryptographic hash algorithm for authentication.

3) **Quick Response Code QR** is a two-dimensional barcode. It is commonly used to add web links to printed pages. When you scan such a QR barcode with your webcam or phone camera, the QR reader app will take you to a website or other web content. QR codes are an easy way to send people to a website without entering a URL. It also provides different types of QR code symbols such as logo QR code, encrypted QR code, iQR code, etc. Users can choose between them according to their needs. Nowadays, QR codes are applied in different streams of applications related to marketing, security, academics, etc.

## 3. RESULT







WELCOME TO DENTISTA

New Patients Registration Panel

New Patient Registration Form

First Name	<input type="text" value="Amaan"/>	Middle Name	<input type="text"/>
Last Name	<input type="text" value="Ansari"/>	Date of Birth	<input type="text" value="05-07-2000"/>
Age	<input type="text" value="22"/>	Gender	Male <input checked="" type="radio"/> Female <input type="radio"/>
Blood Group	<input type="text" value="O"/>	Reference Doctor Name	<input type="text" value="Dr.Dipak"/>
Address	<input type="text" value="Bhumkar chourk"/>	City	<input type="text" value="Pune"/>
Email Id	<input type="text" value="amaan9@gmail.com"/>	Mobile no	<input type="text" value="8021625869"/>
UserName	<input type="text" value="amaan"/>	Password	<input type="password" value="*****"/>
<input type="button" value="Submit"/>		<input type="button" value="Reset"/>	

Dr. Paul Foster  
CEO, Founder

#### 4. CONCLUSION

- In this system we implemented In medical management, more and information technologies are applied to boost work efficiency.
- In this proposed system, based on the analyses of the security lacking of medical management technology, we exploit the idea of applying Quick Response (QR) code to secure medical management and boost many medical management security through make use of information security technology.

#### REFERENCES

- [1]. A. Sawand, S. Djahel, Z. Zhang, and F. Naït-Abdesselam, "Toward Energy-Efficient and Trustworthy eHealth Monitoring System," *China Commun.*, vol.12, no. 1, pp. 46-65, Jan. 2015.
- [2]. M. S. Shin, H. S. Jeon, Y. W. Ju, B. J. Lee, and S. P. Jeong, "Constructing RBAC Based Security Model in u-Healthcare Service Platform," *The Scientific World J.*, vol. 2015, Article ID 937914, 13 pages, <http://dx.doi.org/10.1155/2015/937914>, 2015.
- [3]. C. Wang, B. Zhang, K. Ren, J. M. Roveda, C. W. Chen, and Z. Xu. "A Privacy-aware Cloud-assisted Healthcare Monitoring System via Compressive Sensing," in *Proc. of 33rd IEEE INFOCOM*, 2014, pp. 2130-2138.