

Patient Smart Card

Ayan Patel¹, Parth Kansara², Mayank Maravania³, Prof. Ajaykumar T. Shah⁴

Department of Computer Engineering

^{1,2,3} Alpha College of Engineering & Technology, Gujarat, India

⁴H.O.D, Alpha College of Engineering & Technology, Gujarat, India

Abstract- Medicinal services framework is one of the imperative segments in any nation. Developing utilization of Information and Communication Technology (ICT) encourages numerous nations to build up their ICT based e-wellbeing card framework. We think at present there is no current electronic health care systems in India. This project is mainly designed to furnish patients with better versatility of their human card data and give doctors better access to that information. Numerous hospitals in India still deal with the patient's records manually. Hospitals will be able to save both time and money if there is good and reliable software program for managing patient's data. Patient also save their time by using some smart solutions like patient smart card. The thought is to create card based on patient record management system which utilizes some software that can be utilized to monitor the patient records in hospitals or clinics. The patient smart card takes your personal health record and store it on secure card. The patient smart card contains patient identity (photograph, ID/Password and QR Code) drives access to the card. The patient smart card has ability of being used to watch full health record at any time. It requires only user's identification to access data. Only authenticated person can insert, update and retrieve medial history with user's permission. The analysis presents research, structure and usage of e-Health card-based solution that can be utilized to incorporate and to coordinate with heterogeneous IT condition.

Keywords- Smart Health-Card, Health-Card, digital-record, smart patient, health-care.

I. INTRODUCTION

The main aim of this system is to provide patients with better portability of their health care information and give doctors better access to that data.

Effective health care facility through card that gives a lot higher standard of patient care compared to which was already available.

A patient can visit the hospital any number of times without carrying any documents such as history files etc.

The patient smart card is being used to retrieve full health record of patient at any time it is also used for updating

the patient data, e-prescription, patient bed allocation, doctors related with patient etc.

Doctors available in a hospital for can manage patient's medical record using this Smart Card system.

Only Authenticated person can update, store and retrieve medial history with user's permission.

This smart card can be utilized to store valuable information such as medical, administrative, pharmaceutical and biological records.

This is e-Health care framework utilizing smart card which would be secured and highly efficient to give health care service.

II. LITERATURE REVIEW

Benefits of a smart card include quicker patient registration, mobility of therapeutic records and support of potential information for existing electronic health records. The most thorough utilization of smart cards as portable medical health records is in Taiwan. In the year 2003, cards were issued to all individuals from the national medical coverage program to more than 22 million individuals.

In country like France, the utilization of smart cards goes back to handle testing in 1982. This makes it the country with the longest history of smart card use. France currently has around 50,000 clients.

Germany is the biggest European client of smart cards, bragging just about 80 million card clients. German health care framework is a standout amongst the costliest of other European Union nations. The German Federal Ministry for medicinal services and social security propelled the "biT4health" (better IT for better well-being) project in 2003. The project sorted out the patient's information cards as token in organized applications. The application gives better administrations to patient's security and others potential outcomes of health care securities by introducing a health telemedicine and telemetric stage. Sooner or later, in 2007 an across the nation telematics project called "Gematik" was set up to present the electronic

health card in Germany for building up health card inside a telemetric stage.

Austria develop an online portal with health information for the Austrian citizens will also be developed in the future, which gives citizens' access to their individual patient data after e- Health card identification. Finally, a national medical document registry will be required to enable doctors to view the medical history of a patient and to access patient data, which will also be followed by international standard. The key uses of this E-card framework will be across the nation by 2012, which incorporate 4 noteworthy parts (eHealth Europe, 2009):

- An electronic medication history.
- An electronic radiology.
- An electronic laboratory data.
- An electronic release letter.

India is a huge populated country in Asia. Recently in India new health care system introduced for rural peoples named as ma amrutam yojana. The main fields of e-Health rapidly developing in India which includes electronic medical records, internet connectivity-based hospitals and electronic learning. Mostly the private and few of public sector hospitals have implemented electronic medical records and hospital computerization which is helpful to handle many patients within short time.

III. METHODOLOGY

Patient Smart Card is a card which comprises of a unique QR Code of the patient. The main purpose of this framework is to furnish patients with better versatility of their health care information and give doctors better access to that information.

While doing the research we found that there is no existing system which can manage the patient's medical record as this one. Thus, we are interested in developing a system which would definitely make a difference in everyday life.

The working if the whole system is as follows:

- I. The user has to scan the QR code on the smart which is allotted to the patient.
- II. After scanning, the user will be redirected to the record website on the web browser.
- III. User has to enter his/her login details on the login page

IV. If the user is a valid or authenticated, then he/she is allowed to access the patient's records.

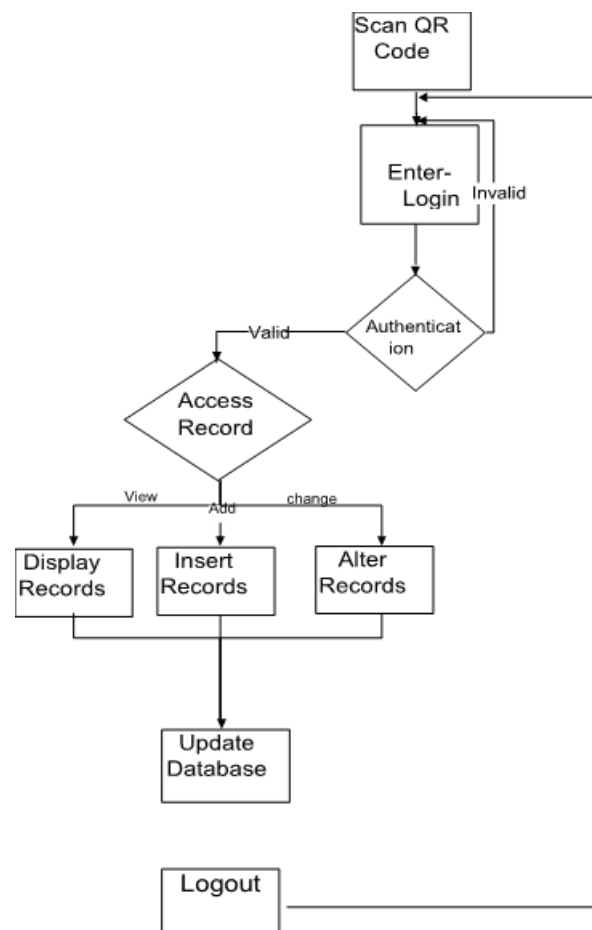
V. If the user is invalid or unauthenticated then the user is not granted the access to the records.

VI. After the successful login, if the user is Doctor then he/she is given the access to display, Insert or Alter the records and update the database.

VII. If the user is patient, then he/she is only allowed to see the records.

VIII. At last the user logs out of the system and the login screen is called back.

Flowchart of the whole system is as follows:



IV. CONCLUSION

The service will ensure the health insurance for the potential card holding patient. Through this model, it will be possible to differentiate the patient's healthcare information that can only be accessed by the Government health care services and by the other registered private organizations as well. It will also protect the corruption from different bodies of health care sectors. But implementation of this proposed project needs huge efforts. Our research result shows that successful

implementation of this project depends on several issues such as financial arrangement, mass awareness, voluntary participation of the healthcare related people, etc. In return, benefit of this project is long term and wide on the national health care system. Implementation of the system as well as identifying its pros-cons has been left as an open research for future work.

[5] Book about patient Management
<https://www.sciencedirect.com/book/9781416023852>

V. FUTURE WORK

- This System being online and an endeavour of Cyber Security Division, should be completely tested to discover any security requirements.
- A comfort for the data centre might be made accessible to enable the staff to monitor on the locations which were cleared for hosting amid a specific period.
- Furthermore, it is only a starting; further the framework might be used in different types of examining task viz. Network.
- QR CODE is scanned by any accessible camera so any one can gain admittance to patient private.

ACKNOWLEDGEMENT

We express our sincere thanks to Prof. Ajaykumar T. Shah, H.O.D Computer Engineering department, Alpha College of Engineering and Technology for his support and guidance for this project and care taken by him in helping us to complete the project work successfully. This is to put on record our gratefulness and profound appreciation to the people without whose help this project would never been seen the light of the day.

REFERENCES

- [1] For creating the QR code in .NET <https://www.c-sharpcorner.com/blogs/how-to-generateqr-code-using-asp-net>
- [2] Book about patient MANAGEMENT
<https://www.sciencedirect.com/book/9781416023852>
- [3] How healthcare system works in USA
https://www.youtube.com/results?search_query=how+health+care+system+works+in+usa
- [4] How to connect smart card with database
https://www.youtube.com/results?search_query=how+to+connect+smart+card+to+database