# E-Health Record

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*Abstract*: **As the new technologies are replacing the older methods of operations, therefore, the world is getting compacted. From different engineering application fields, the medical field is the critical one as it deals with the life of human beings, so more attention is needed in this field. Whenever a patient visits any doctor or hospital, the doctor asks for previous medical reports for further treatments. But sometimes, patients were unable to produce these records on time to the doctor due to some reasons like poor memory, unavailability of records and some mishaps. The above reasons may create a problem for the doctor for proper check-up and treatment of the patient. Paper-based records are the most common method used for recording patient's medical history but these are not immune to parameters like aging, wear, and tear, fire humidity, etc. Handwritten records can be associated with poor legibility, which contributes to errors. The work is proposed to track and extract the medical history of a patient and hence a Finger Biometric Module is used for tracking the medical history of the patient. The medical records are to be stored in the database present in the hospital, organization or anywhere in the world. It is connected with the terminal of a physician, whenever the Finger of the patient is read by a Fingerprint sensor connected to the database, the complete information of the patient will be displayed on the computer screen of the doctor. So the doctor will get instant access to the previous records of a patient on his computer.**

*Keywords*: **Doctor, Patient, Medical History, Fingerprint.**

## 1. Introduction

The medical records are very much important for the patients suffering from severe diseases as they have to take care of each and every prescription and test results for future reference and treatment [5]. This problem is also observed in the case of huge organizations or hospitals where these records are to be preserved [5]. The work was developed to avail the medical history of the patient anytime and anywhere in the hospital for the reference of doctors. The previous information of the patient like when the patient visited for the last check-up, information about his medicinal course etc., will be made available on a computer screen. Here the medical history tracking of the patient was done using the Fingerprint sensor and the record was stored in the database. It was continuously updated after every visit of the patient to the hospital [5]. It has the ability to exchange records between different organizations or hospitals (interoperability) that would facilitate the coordination of healthcare delivery in non-affiliated healthcare facilities [5]. In addition, data from an electronic medical record system can be used anonymously for statistical reporting in matters such as quality improvement, resource management and public health communicable disease surveillance [5].

## 2. Aim and objective

The main aim of the project is to create the database of a patient's health and access it to cure the problems by using his/her medical history which many times patients forget. The fingerprint-based system will improve error in medication and prescription provided by Medical Practitioner. Only authorized users and the nominee registered users can get the prescription and medicines from medicals shops, so due to this security related to medicine misuse will be decreased.

## 3. Literature survey

### A. Intelligent E-health inbox

"International Journal of Scientific Engineering and Applied Science (IJSEAS) - Volume-1, Issue-9, December 2015 "S.Niranjana proposed the step by step development methodology concept in prototyping the Intelligent E-health gateway with intelligent medical box method using data compression, data fusion, and security features.The simulation results prove that our proposed Intelligent e-health gateway imedbox method improves the reliability and energy efficiency of the network compared to the existing system.

### B. The smartphone-based health monitoring system

"International Journal of Computer Networks & Communications (IJCNC) Vol.7, No.3, May 2015". Amna Abdullah has proposed a smartphone based health monitoring system in this work. By using the system the healthcare professionals can monitor, diagnose, and advise their patients all the time. The physiological data are stored and published online. Hence, the healthcare professional can monitor their patients from a remote location at any time. Their system is simple. It is just a few wires connected to a small kit with a smartphone.

### C. U-healthcare system

"International Journal of Smart Home Vol. 9, No. 11,(2015),pp.323-330, Yvette E. Gelogo has presented in this paper the studies of the u-healthcare system with respect to the Internet of Things (IoT) perspective. Mainly, the mover of IoT for u-healthcare is the integration of different technologies and computing systems. These include sensor devices to gather

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patient's physiological data, u- healthcare cloud server and wireless technologies. To address the interoperability limitations of different devices the mobile gateway architecture for u- healthcare and the tiers of the u-healthcare system IoT was presented.

### D. E-Healthcare monitoring system

"Institute of Electrical and Electronics Engineers)" Anass Rghioui has discussed E-Healthcare monitoring system where the patient carries a set of WBAN devices and can move from one place to another, but still always on the reach of the gateway that binds the sensors with the medical central unit. These devices communicate remotely through the internet with a monitoring medical central unit installed in a hospital or clinic responsible for monitoring the patient's health status. Caregivers can connect through the internet via computers or mobile devices to the medical central unit to supervise patient data processed and analyzed by dedicated applications. The object is to address the data privacy of the mobile WBAN sensors exchanged with the remote medical central unit.

### 4. Proposed system

In this project, we are going to propose and develop a wireless system by using which patients can get their prescriptions through an android phone. The history of patients will be stored in a database that can be accessed by different doctors in case of emergency or any other changes. Due to fingerprint-based medicine distribution patients will only get the medicine specifically prescribed to him by doctors. Whenever the patient will check up firstly he/she has to select the Doctor place through the switch and scan the fingerprint. (If the patient is coming the first time then they have to first register themselves). When a fingerprint is scanned, Arduino will give the signal to the VB application to open the form. The patient will fill the basic information and after a check, up Doctor will fill the details regarding the prescription. To give a prescription, the doctor will have one android application which will take speech input and convert it into a text and send this to the VB application. Prescribed medicine will get entered into the prescription box. After that, the doctor will enter the details about the dosage timing and days and submit the form.

After this patient has to select the chemist shop through the switch. As to buy the medicine patient will scan the fingerprint and Arduino will give this data to VB application. Matched fingerprints user's form will open with the prescribed medicine, doctor information and dosage information. The patient will receive the medicine reminder SMS on the mobile phone. If an emergency condition, if the patient is not able to go to the chemist shop then instead of patient their nominee can scan the fingerprint and take the medicine. LCD is used for user interface, a user can see the location selected and patient id etc. All the database is stored in an excel sheet.

### 5. Scope

Real Time Health Monitoring System provides constant analysis and tracking of the health parameters of a patient. In recent years healthcare monitoring systems have gained significant attraction in the medical sector. The prime objective was to create a reliable patient monitoring system so the patients can be monitored by healthcare professionals, who are either hospitalized or executing their daily life activities. Patients are sharing their issues and their healthcare data with their specialists with the assistance of these devices for easy and flexible monitoring and treatments.
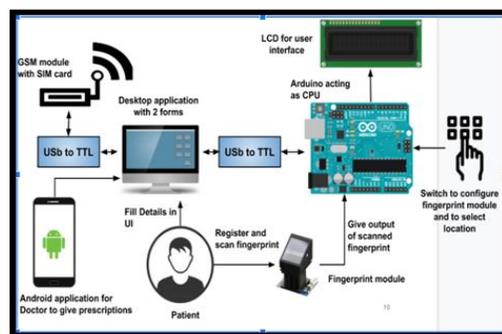
### 6. Design

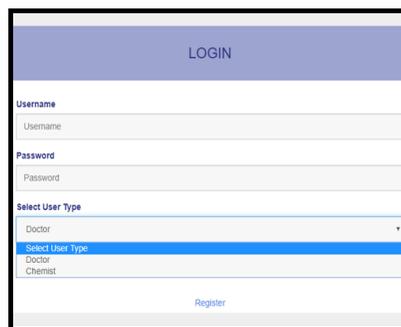*A. Architecture*



Fig. 1. Architecture of E-health record

### 7. Result



Fig. 2. Login page



Fig. 3. Registration Page

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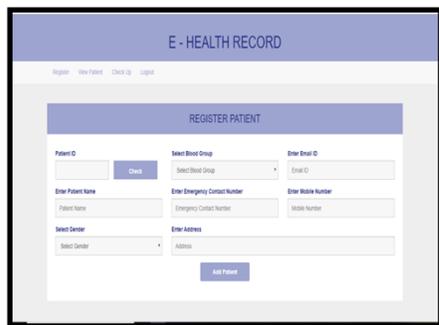**www.ijresm.com | ISSN (Online): 2581-5792**

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Fig. 4. Patient Registration Page
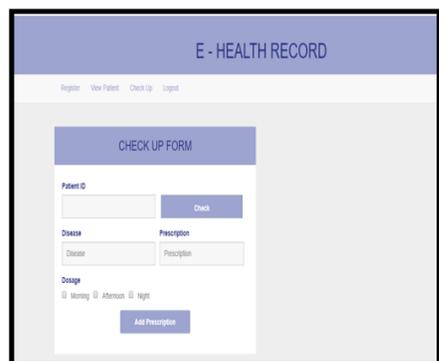

Fig. 5. Checkup Page
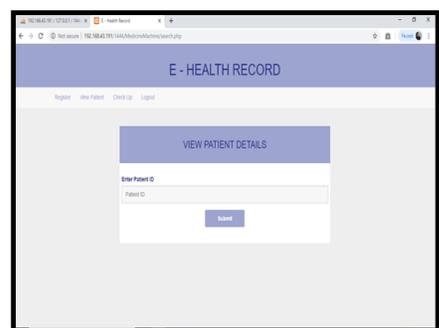

Fig. 6. View patient details
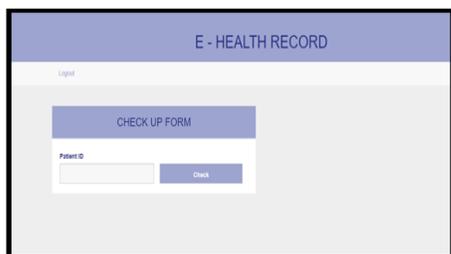

Fig. 7. Chemist Side Page

## 8. Conclusion

This paper presented an implementation on e-health record.

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