ELECTRONIC HEALTH INFORMATION SHARING USING CLOUD COMPUTING

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Abstract— Electronic Health Record (EHR) systems are being widely used by various healthcare providers due to the benefits these systems offer. As the exchange of medical information among different healthcare providers has become a point of interest, it poses serious integration, security and privacy concerns. Previous work proposed to offer medical information exchange has been partially insecure simple and sometimes requires special hardware like smart cards. Health Information Exchange enables providers to share healthcare information electronically across different organizations to promote safer, more efficient, and less costly patient-centered care .Initial outcomes indicate a significant reduction in medication errors and duplication of tests.

Keywords- Electronic Health Record(EHR),Clinical Document Architecture(CDA), Health Information Exchange(HIE)

1 INTRODUCTION

The aim of this project is to improve the existing patient transferring process which is based on the paper work, by using electronic-based information transfer. This will make the patient transferring process easier and more effective. As the result, it will provide a continuous treatment for the patient when he is referred from original hospital to the destination hospital because the useful treatment and patient records can be transferred with him. The patient will not have to undergo the duplicated treatment while the destination hospital also does not have to waste the medical resources to perform the duplicated treatment or checkup on patient as have been done since in the original hospital before the referring process.

1.1 RELATED WORKS

The research includes When a patient is diagnosed at a clinic, a CDA document Recording the diagnosis is generated. The CDA document can be shared with other clinics if the patient agrees. The concept of family doctor does not exist in Korea; hence it is common for a patient to visit a number of different clinics. The exchange of CDA document is triggered in the when a physician needs to study a patient's medical history; when referral and reply letters are drafted for a patient cared by multiple clinics; when a patient is in emergency and the medical history needs to be reviewed [1].

This paper proposes a new method for electronic patient transfer in order to replace the traditional way of using paper work. When transferring a patient ,his information in the database of the host hospital will be exported into the CDA-based standard file which can be electronically transferred to the destination hospital [2].

This paper defines simple standard DTD that organizes health-checkups data such as anamnesis, physical examination laboratory examination summary findings, and judgment of total health status, etc. HDML also defines many attributions , for example ,item names methods, units ,device ,company name ,standard reference values [3].

Communication between diff healthcare systems and their component in complex and environment requirements: openness flexibility portability standard interoperability. The effect of interoperability in various industries, included in health care has been studied. Lack of interoperability in the health care has been studied. Lack of interoperability in healthcare domain addresses to increase costs and medical errors in hospitals. [4].

1.2 PROBLEM DEFINITION

The aim of the project is to develop web application to generate and integrate health report from different hospitals using cloud computing. System allows doctors, nurses, pharmacists, other health care providers, and patients to access and securely share essential medical information electronically. This has the potential to improve the speed, quality, safety, and cost of patient care.

1.3 PROPOSED SYSTEM

The aim of the project is to develop web application to generate and integrate health report from different hospitals using cloud computing. System allows doctors, nurses, pharmacists, other health care providers, and patients to access and securely share essential medical information electronically. This has the potential to improve the speed, quality, safety, and cost of patient care.

2.WORKFLOW

- Patient: every patient have unique login id .All records belongs to one patient are present in one login according to order of treatments.

- Hospital receptionist: receptionist stores information about patient e.g name , email , adhar card.

- Doctor: Doctor can view history of patient and add prescription

- Medicall: Medical can view prescription given by doctor from patient id .medical is allowed to perform only read operation.

- Lab: Lab can access list of tests for particular patient and add reports of test.
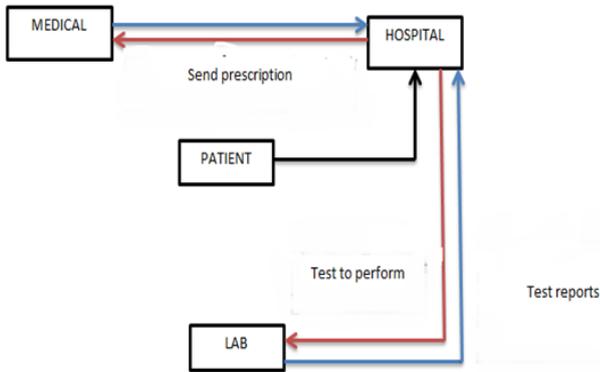

Fig -1: System Workflow

- When a patient is diagnosed at a clinic, a CDA document recording the diagnosis is generated.

- The CDA document can be shared with other clinics if the patient agrees.

- Doctor will send medical prescription for particular patient to medical to prevent manipulation by patient similarly for lab test .

- Lab send patients reports directly to hospital. For one patient there will be only one document to avoid confusion
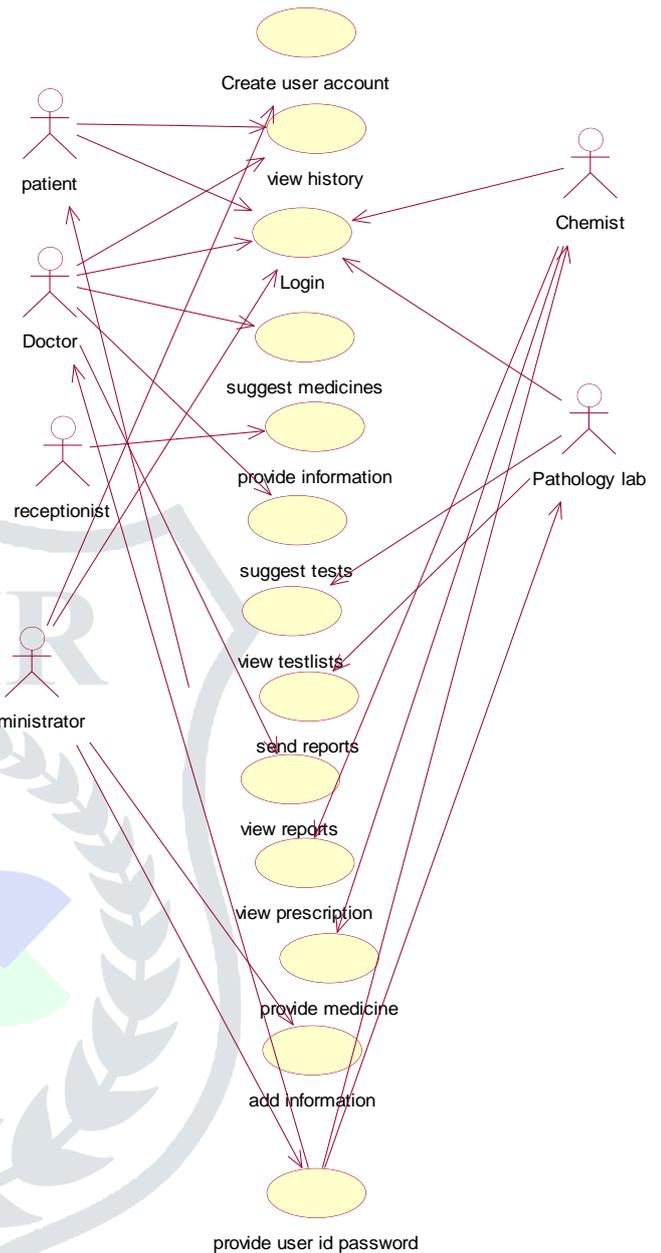
3.DESIGN

3.1 DATA DESIGN

Fig -2: Use Case diagram
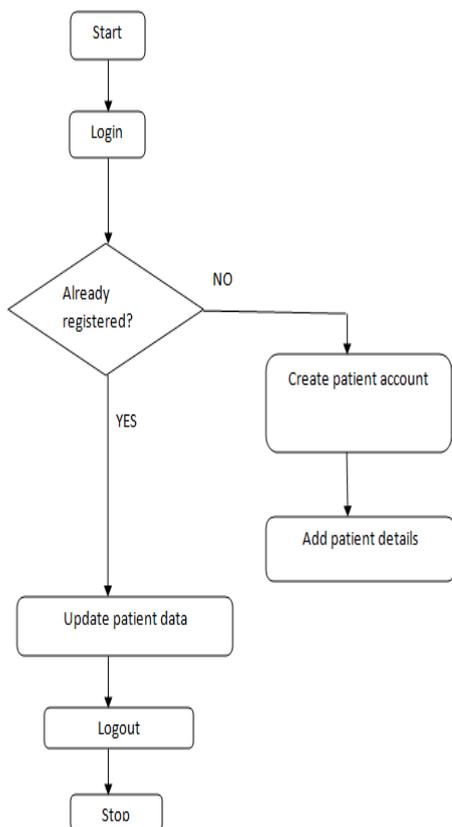
3.2 PROCEDURAL DIAGRAM

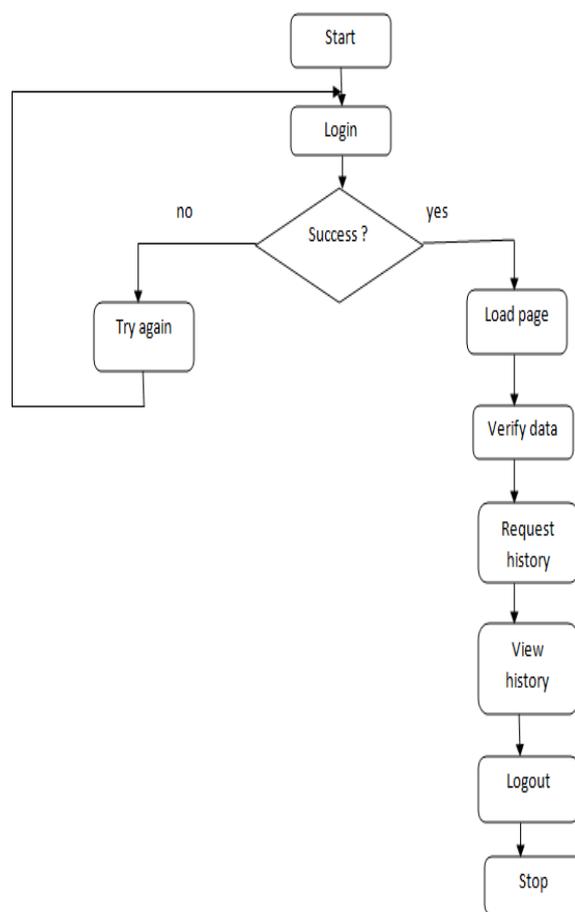**Fig -3**: Flowchart for admin operation

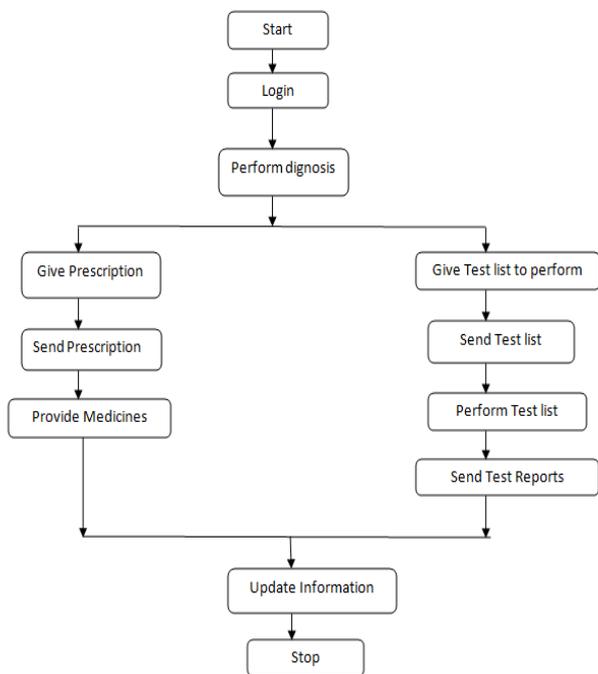**Fig -3**: Flowchart for patient login

Fig -3: Flowchart for sending prescription

4. CONCLUSION

This research efficient for patients. The patient will not have to undergo the duplicated treatment while the destination hospital also does not have to waste the medical resources to perform the duplicated treatment or checkup on patient as have been done since in the original hospital before the referring process. So it will be easy to handle the records of patient it also saves time and will work automatically for all patients and all purpose at hospitals.

With simple algorithm and program, our application will be able to add as well as update the information of the patient and all the things regarding treatment. For the efficient exchange of Electronic Health record we use Cloud computing and all the data of patient stored in a fixed or stable manner. So using this application health information exchange can be done easily.

5.REFERENCE

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