Android Based E-Healthcare System

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ABSTRACT: Here we propose a system that connects patients to available doctors for online consultation and also allows doctors to email subscriptions in printable format. Our proposed system aims to build an environment where various patients needing doctor help at their home can consult doctors, send their images(for skin diseases/beauty related issues), chat with doctors, tell then their issues. It also consists of a doctor's login panel where doctor may login to the system and then see patient requests for consultations. The system then schedules those requests and serves them to doctor one after another. This allows doctors to chat with patients and discuss their problems. At the end of consultation the doctor may send them an online subscription in a printable word format so that they may directly print it and get medicines based on that prescription. The system will prove helpful to urgent cases that do not reach hospital, for emergency cases that do not have doctors in area, during late night emergencies and also for preliminary examination of patients.

INTRODUCTION:

The main objective of this project is to implement a mobile based Healthcare Information System. This system will help the users to identify certain information. This application is more effective, quick in providing medical help especially to people in villages where very few doctors are present. This helps the patients to maintain a neat health record and to lead a healthy life. There are 3 basic users - Patient, Admin, Doctors .All users have their own profiles. Patients can search for doctor and make online appointments. They also can view their health record, lab reports, doctor's prescription and medical expenses. Doctor's can give appointments, e-prescription and can view patient's health record. Admin has the authority to add/delete users, grant permission to doctors, to generate and view reports. Admin is an Administrator. He/

She have the authority to manage the overall Application and maintain the information about doctor and patients. In this application E-Healthcare System includes registration of patient, storing their details into the system.

LITERATURE REVIEW:

Literature survey is almost significant step in any kind of investigation. Already start developing we need to start the study the previous papers of our domain which we are working and on the basis of study we can predict or generate the drawback and start working with the reference of previous papers. Hospitals are targets and most complex organizations where health care is provided. Safe and effective patient care services in hospitals depend on the efficient decisions made by hospital executives. The main task of hospital executives is to ensure the hospital can provide high quality patient care and services. "Android Mobile Application for Hospital Executives" is an Android application used for displaying hospital performance metrics on a daily basis. This application allows hospital executives to review and monitor hospital operational data with ease of access and in a portable manner. Thus, reducing the effort of the hospital executives to perform their tasks. Android Mobile Application for Hospital Executive [1]. The mobile application allows hospital executives to review the hospital performance metrics with ease of access. The mobile app will contain hospital operations data, including daily census, average length of hospital stay, patients admitted and discharged for a given day, patient insurance and diagnosis details and patient demographic distribution. The establishment and improvement of doctor-patient interaction system is a very important requirement, especially when the communication technology is developing rapidly. The advantages of the web can be l useful to make up the time and distance between doctors and patients and to provide fast and adequate medical services.

Through the connection between user terminals and specific service, both doctors and patients are able to obtain required data to achieve a better interaction. The platform, Web services, and database technology are all gradually maturing so that we can develop a doctor- patient interaction system for Android to meet the needs of the patient and to provide Communication with patients by the doctor's more efficient and convenient means of communication with patients. Doctor Patient Interaction System for Android [2]. The rapid growth in Information & Communication Technology (ICT), and the power of Internet has strongly impacted the business and service delivery models of today's global environment. E-Hospital Management Systems provide the benefits of streamlined operations, enhanced administration control, superior patient care, strict cost control and improved profitability. Globally accepted health care systems need to comply with Healthcare Insurance Portability and Accountability Act (HIPAA) standards of the US and that has become the norm of the Healthcare industry when it comes to medical records management and patient information privacy. The study is focused on understanding the performance indicators of Hospital information systems (HIS), summarizing the latest commonly agreed standards and protocols like Health Level Seven (HL7) standards for mutual message exchange, HIS components, etc… The study is qualitative and descriptive in nature and most of the data is based on secondary sources of survey data. To arrive at a conclusive idea of the larger picture on E- Hospital Management and Hospital information systems, existing survey data and specific successful case studies of HIS are considered in the study. Hospital Management and Hospital Information System [3]. This paper is to computerize the Front Office Management of Hospital to develop software which is user friendly simple, fast, and cost – effective. It deals with the collection of patient's information, diagnosis details, etc. Traditionally, it was done manually. The main function of the system is register and store patient details and doctor details and retrieves these details as and when required, and also to manipulate these details meaningfully. System input contains patient details, diagnosis details, while system output is to get these details on to the screen. The Hospital Management

System can be entered using a username and password. It is accessible either by an administrator or receptionist. Only they can add data into the database. The data can be retrieved easily. The data are well protected for personal use and makes the data processing very fast. Hospital Management System [4]. The main aim of this project is to improve medical services. Our project hospital management system and nearest domain search is a web application which is develop for secure storage of patients medical history and also search for nearest blood bank, medicals and hospitals. This project is developed by three perspective i.e. doctor, patient, and nearest domain We have provided security for authenticated user as new user have to register according to their type of perspective and existing user have to login, unique OTP will given to every patient while login so proper authentication is maintain This project requires internet connection as it runs dynamically. This application stores user account information in the database server and for nearest domain search we are providing GPS. We are also providing search option of doctors as per there specialization so that patients can take appointment. This web application merges many applications like nearest search, user login, doctor login, appointment etc.so it becomes more convenient to user. Healthcare Management System and Domain Search for Nearest Medical Service [5].

EXISTING SYSTEM:

Hospitals currently use a manual system for the management and the current system requires numerous paper forms, with data stores spread throughout the hospital management infrastructure. Often information is incomplete or does not follow management standards.

Multiple copies of the same information exist in the hospital and may lead to inconsistencies in data in various data stores.

It is less user-friendly.

User must go to Hospital and take appointment.

It is a time-consuming process.

Drawbacks:

- Manual Work.
- Paper Forms for Data Storage.
- Delay for Lab Reports.

- Availability of the Doctors doesn't understand.

- Contact with Doctor is not possible before Approve Appointment.

**Survey was conducted at three Hospitals:**

- Devdikar Hospital Akluj.

- Naik Hospital Velapur.

- Aklai Hospital Akluj.

Issues:

- Long Queues for Appointments.

- Waiting for Doctor's to fulfill appointments.

- Also Waiting for Lab Reports.

- Patient doesn't understand the doctor is available or not before going to Hospital

PROPOSED SYSTEM:

The Hospital Management System (HMS) is designed for

Any Hospital to replace their existing manual, paper Based system. The new system is to control the information of patients. The services are to be provided in an efficient, cost effective manner, with the goal of reducing the time and resources currently required for such tasks.
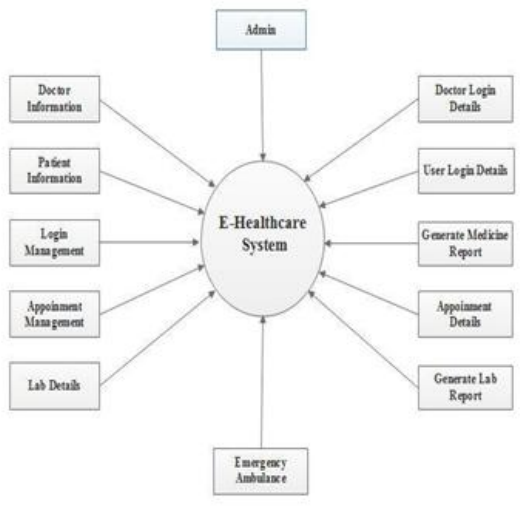
Fig: System Architecture

Sign-In: The patient has to Sign-In in order to.

1. **View profile:** Every registered patient has his/her own profile containing personal details.

2. **Update profile:** The patient has the option to update his/her own profile.

3. **Create health record:** The patient can create his/her own health record.

4. **Update health record:** The patient can update his/her health record.

5. **Select doctor:** The patient can select doctor based on various criteria

6. **Take an appointment:** The patient can request for an appointment to a particular doctor.

7. **Interact with doctor:** The patient can interact with doctor.

8. **Send Message:** The patient can send private message to doctors and admin.

9. **Receive Message:** The patient can receive message.

10. **Search:** The patient can search for a particular doctor in application.

Important Modules:

1. Patient:

The patient is the mainly focused user in this system. The application is designed targeting the patients.

The Patient can perform the following:

Search for Doctor.

Make Online Appointments.

View Health Record.

View Lab Records.

Get Doctor's Prescription.

Doctor

Doctor's can give appointments, e-prescription and can update and view patient's health record.

Doctors' can perform following operations:

Login

View profile

Approve/Cancel Patient Appointments.

Send Notifications.

Upload Prescription.

Logout

Admin

Admin can manage Appointments and Display information.

Login

View profile

Add Departments.

Add New Doctor.

Update/Display Doctor List.
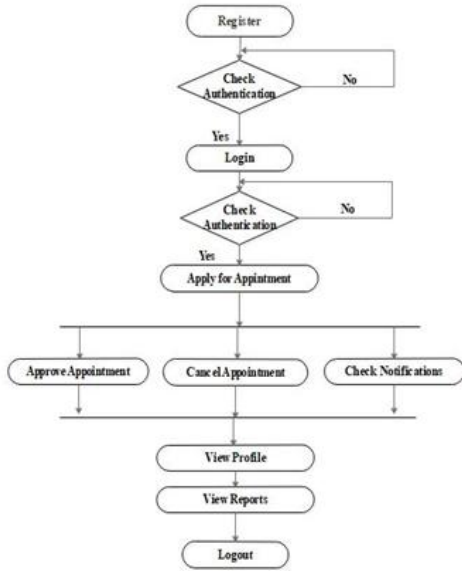
Display Patients and Upcoming Appointments.

Logout

Home Page **Home Page with Navigation Bar**

ADVANTAGES:

- Reduces Staff Stress.
- Time Saving
- User friendly.
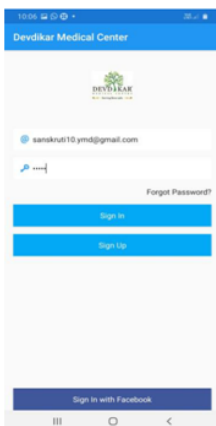- Fast and Portable.
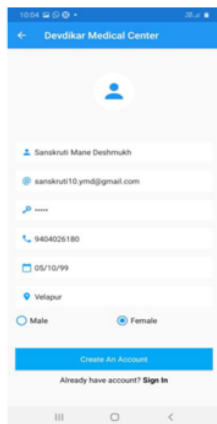- Cost efficient.
- It is feasible to use.

FLOWCHART:

Firstly Patient done Registration, After Registration Successfully Patient done Login. Then Patient gives appointment and after completes the appointment He/She get Online Prescription and Online Reports from doctor. Also Patient View the His/her Profile and See the Notifications.
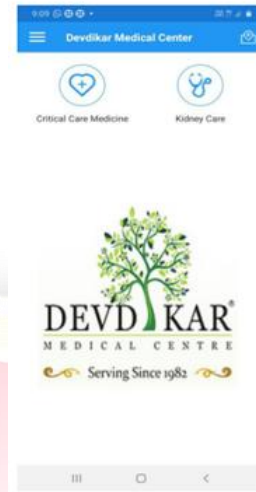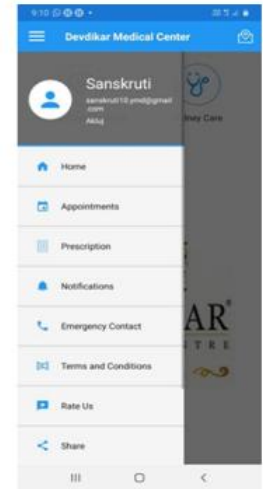
RESULTS:

Login Page **Registration Page**

OBJECTIVE:

The objective of this project is.

1. Reduces the hospitals paper work.
2. Better co-ordinate among the different departments.
3. To provide a top management with doctor and patient.
4. To increase the efficiency and quality in health management.
5. The E-Healthcare System is to improve patient services to better management and efficient use of available resources.

FUTURE SCOPE:

In future Enhancement doctor and patient directly communicate with each other with help of this application. And also Specialists and doctor got the chance to communicate on any case. Now a days, COVID-19 is very big pandemic, everyone fight with this pandemic with help of this application patient safely connect with hospital. And the take count of COVID-19 patients on this application.

CONCLUSION:

The Project E-Healthcare System is for computerizing the working in Hospital. This Software is Capable to provide easy and effective storage of information related to patients that come up to the hospital. It generates the Lab Reports, edicine Reports also it supports to store details of Users and Doctors. The present system is worked manually that means patient needed to visit hospitals for appointments. It was time consuming and money consuming as well .But due to

Proposed System they can effortlessly manage their health issues through online appointment with doctor.

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