Doctor Availability and Booking appointment in Government Hospitals

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Abstract: *Government hospitals provide medicines for the treatment to the patients based on the diagnosis. In our system user can register with their details, which is stored to the admin's database. This system allows the user to view the hospital location and also helps the patient to book appointment with the doctor. Online Appointment System that provides patients or any user an easy way of booking a doctor's appointment online from anywhere, anytime. Online Registration System is a framework to link various hospitals across the country for User based online registration and appointment system, where counter-based registration and appointment system through Hospital Management Information System (HMIS) has been digitalized. This web app facilitates online appointments with various departments of different Hospitals using login information. New Patient will get appointment as well as Unique Registration number. If User is already registered with our Software, then appointment number will be given and Registration will remain same.*

Keywords: *Hospital management information system, Doctor, patient, hospitals, Online Appointment System.*

I. INTRODUCTION

Health care is one of the fastest growing industries in the world. A couple of years ago, medical appointments usually took place via smartphone calls or by visiting hospitals in person. This action wanted people to participate as well; The ability to make an appointment was limited to the availability of programmers, cell phone

effort, or someone's physical presence. With the passage of time, everyone demanded environmental and non-perishable hospital treatment delivery as the appointments of the guides and the long waiting lines created a stressful situation for the health institutions. Thus, it has created the need for an integrated healthcare machine that can provide seamless care for both outpatients and inpatients. The online programming device offers cost-effective services and many advantages to doctors and patients. It makes the patient appreciated by eliminating the problem of long cases. Online dating systems have also become popular due to their low cost availability. As web technology adapts and grows in popularity, the healthcare industry has to quickly adapt in an effort to meet the demands of today's impacted individuals and healthcare professionals. We have advanced internet applications without purchasing and using any other additional device and also at no cost to this operator. These applications will help patient and doctor to communicate differently about appointment and prescription at any time using cell phone with network. The aim of the studies: to introduce the system of appointments and medical prescriptions to people. Make it easy for humans in droves to contact a healthcare professional via a

browser for an appointment. To reduce the time and hassle of doctors and patients to file patent data.

If everyone is sick and wants to go to the doctor for a check-up, he or she wants to go to the sanatorium and wait until the doctor is available. The injured person also waits in a waiting list while receiving the appointment. If the doctor cancels the appointment for emergency reasons, the patient may almost never know about the cancellation unless or until he visits the sanatorium. Since the generation of cellular communications is developing unpredictably, accordingly, it is easy to use mobile software to overcome such problems and inconveniences to the victims. The graph proposed in this article is an online hospital management application that uses the Android platform that makes the task of making a doctor's appointment easy and reliable for the users. Android based online doctor appointment application that holds modules. The module is the application designed for those affected that contains the login screen. The patient must log in himself before logging into the tool. After logging in, the patient can choose the clinic and see the details of the medical institution. The patient has the option to choose a health professional from the list of doctors and

can view the doctor's information. The patient can request an appointment on the day/time he/she desires. The agreed day/time slot can be booked and the affected party will receive notification of the appointment actually held. The patient can see the location of the health facility on the map. Also, the patient can communicate with the medical institution and healthcare professional with the help of making a call or he can also send an email to the doctor. There are good sized online scheduling tools on the net, some of which are full of features, easy to set up and low cost for professionals, online appointment booking and scheduling offers a number of benefits and offers additional features such as patient attraction, patient authoring for the welcome experience, management and secure storage of patient information for future records. But the most impressive and useful option is that online appointment booking and scheduling is very expensive. Both doctors and patients can directly access the portal with their unique identifiers.

II. LITERATURE SURVEY

Here we present an interaction system for doctor and patient communication. It has an exceptional administration of several nodes through which doctors and patients interact with each other. The patients can easily access the hospital server nodes. Here the patients are allowed to interact with the doctors about their symptoms. The doctors can list and track their patients who are geographically dispersed and provide diagnosis on the needful. Proposing a new system from where the patients can easily book their appointments online and the doctors can view and manage them. Here the patients book their appointments online depending on the doctor's availability and their time feasibility. The doctors on the other hand can either extend or reduce their working hours depending on the number of patients arriving for that day. In addition, the approximate time of arrival for the patients is also approximately calculated and notified to the registered number. Any other information can also be fabricated at installation and hence removes the need for a technician install the software.

In this study [1] by Ravi Sekhar Yarabothu, developed an android application for receiving the medical parameters and displayed on android mobile with the help of Bluetooth module and at a time uploaded on to the android web server. After opening android app in mobile it shows the list of Bluetooth modules then connected to the required Bluetooth

module. At a time received data from android phone is upload on to android server then the doctor can easily access the patient's information.

In this study [2] by Rutherford A Patamia, the main objective is to create an android application that will help patients to book appointments with doctors of their choice at a hospital and also balance the load between patients and doctors. A patient can delete their unwanted appointments before confirmation. Doctors can also confirm the patient's appointments and also respond to messages sent by patients. This will give much satisfaction to the patient when visiting the hospital.

Design [3] by Manju Babu , In this research they show the patients vital parameters such as ECG, heart rate, pulse rate and temperature are measured using a patient monitoring system. It can be used to perform routine tests as well for continuous monitoring of a hospitalized patient. Lab View is a user friendly platform which supports GUI interface for experiments and analysis of various physiological parameters which is essential for the patient's wellness.

Patient Appointment Reservation System was introduced in 40 different health care institutions in Lithuania to improve the quality of health care services increasing the availability, expedition and the effectiveness of the information of physicians 'visits time. Since the beginning of this project in 2008 patients' appointment reservations via Internet have been increasing steadily. The system proved to be a great advantage for the patients and primary care physicians and its use have been steadily rising till date (Vilinius University Hospital, 2008).

The public health portal _Sundhed.dk'in Denmark integrates health-related data from disparate health care systems throughout Denmark. Patients can schedule a medical appointment using the portal's scheduling module. Patients experience more benefits like receiving appointment confirmation via e-mail, and sees as a quick relief of being tied to the phone. (Report of the Health ICT Industry Group, 2009).

Makerere University Hospital, Uganda, introduced an online appointment system to access doctors' schedules and book appointments. A study on this system by Atwine et.al. (2009) found that the administrators used the system to register new users, edit schedules and view pending results. A short messaging system has been interfaced through the system to

ensure communication between patients and doctors.

Extended waiting times for a medical appointment continued to be problematic in China. To address this issue, a web-based appointment system was developed for the Xijing hospital. Cao et al. (2011) studied the efficacy of the system and found that compared to the usual queuing method, the web-based appointment system could significantly increase patient's satisfaction. With online registration, total waiting time was effectively reduced. Lack of information about online appointments was the main reason for most of the patients not using the system.

III. PROPOSED METHODOLOGY

The proposed system consists of two panels: Doctor and Patient. The users will first have to download the application and install it in their mobile devices. Once installed, this application will remain into the device permanently until the user deletes it or uninstalls it. The patient will have to register into the application for the first time. On registering, the patient will receive a username and password. The patient can use this username and password for logging into the app each time he uses it. After logging in, the

patient will have to select a filtration type. The filtration is done on two bases: Area wise and Specialty wise. After selecting the filtration type, the doctors list will be displayed. The patient can select any particular doctor and view his profile. Also, the patient can view the doctor‟s schedule and look for an appointment according to his convenience. The patient will then send a request for appointment. The doctor can either accept the appointment or reject it. The database will get updated accordingly and the patient will get a confirmation message. The add-on to this system is that the patient will receive a notification 2 hours before the actual appointment. This will be very useful in case the patient tends to forget the appointment.

In the proposed system the doctors, patients are brought to one platform. It will allow the patients to be more flexible, they can register and search for the doctors based on the location and the list of doctors will be shown and patient can book by selecting the time slots and the admin will confirm the booking. So, everything is computerized and done very fast which will save time.

The duration a patient waits from the given time of their schedule to the time that they must actually receive the service is known as direct waiting time. The patients use this

technique and waste much waiting time just by standing in queue at the registration counter to make sure a successful registration of the appointment has been made with a certain doctor. The
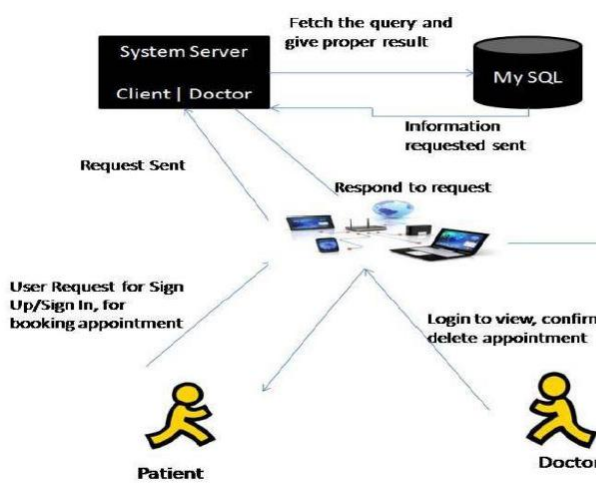
SYSTEM ARCHITECTURE

Fig.1 System architecture

Patient Module:

For your first visit to hospital, registration and appointment with doctor is made simpler. All you have to do is verify yourself Register with us, Select Hospital and Department, select date of Appointment and receive SMS for Appointment. t allows end users to find a doctor and schedule an appointment on their convenient time and reduce waiting time in hospital. This project offers where users can view various booking slots

available and select the preferred date and time. The already booked slot will be disabling and will not be available for anyone else for the specified time. Patients can also Cancellation, Rescheduling and finalizing appointment, SMS or Email confirmations and Reminders to patients. It allows patients to upload and download their health reports.

Doctor Module

Doctor desires to have some charge over the insanity in the count of patient appointments in a day and the mix of appointments on any given day. These aspects can change their income as well as their carrier comfort levels. The hospital desires to use its resources (staff and apparatus) in the maximum potent way. Therefore, the hospital doesn't desire for the doctor to have long cycle of "wasted time.

Hospital Module:

Hospitals can come on board this platform and provide their appointment slots for online booking by patients. The system facilitates Hospitals to easily manage their registration and appointment process and monitor the flow of patients.

The proposed project is a smart appointment booking system that provides patients or any user an easy way of

booking a doctor's appointment online. This is a web-based application that overcomes the issue of managing and booking appointments according to user's choice or demands. The task sometimes becomes very tedious for the compounder or doctor himself in manually allotting appointments for the users as per their availability. Hence this project offers an effective solution where users can view various booking slots available and select the preferred date and time. The already booked space will be marked yellow and will not be available for anyone else for the specified time. This system also allows users to cancel their booking anytime. The application uses Asp.net as a front-end and sql database as the back-end.

IV.   RESULTS

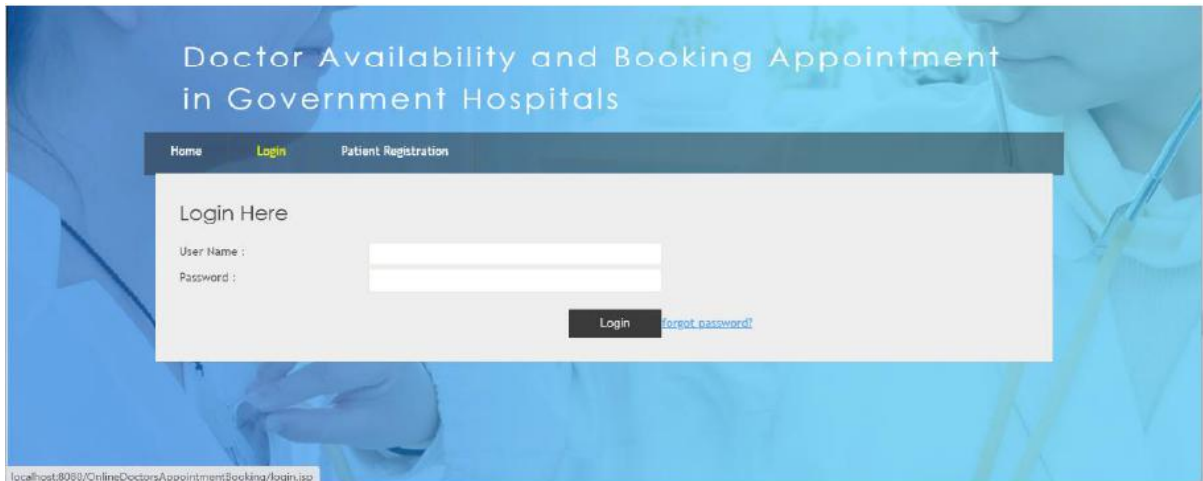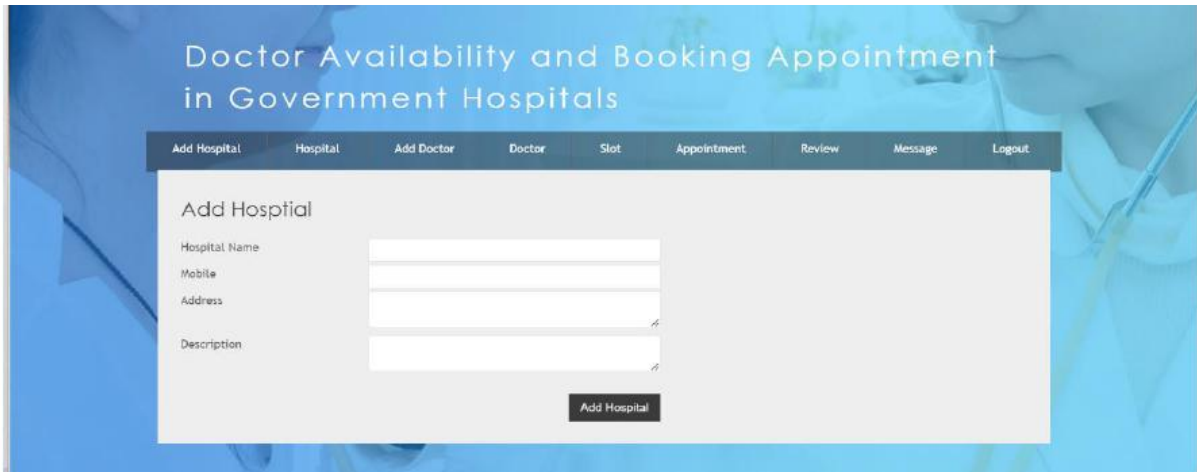
Fig.2 Home page

Fig.3 Admin login

Fig.4 Add hospital page

Fig.5 Add doctor page

Fig.6 Create a slot page

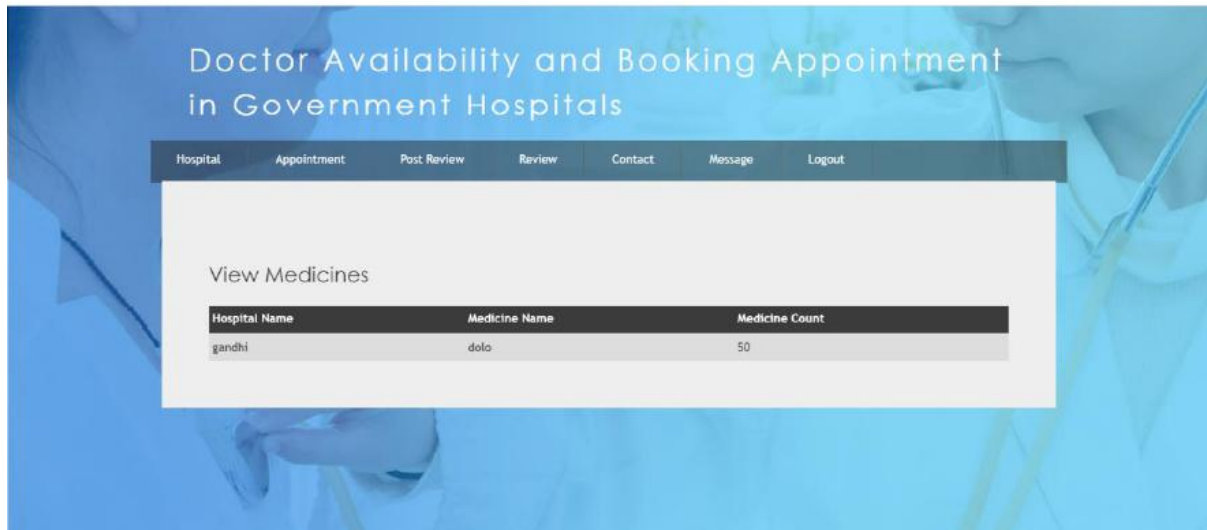Fig.7 view slot review page

Fig.8 View hospital page
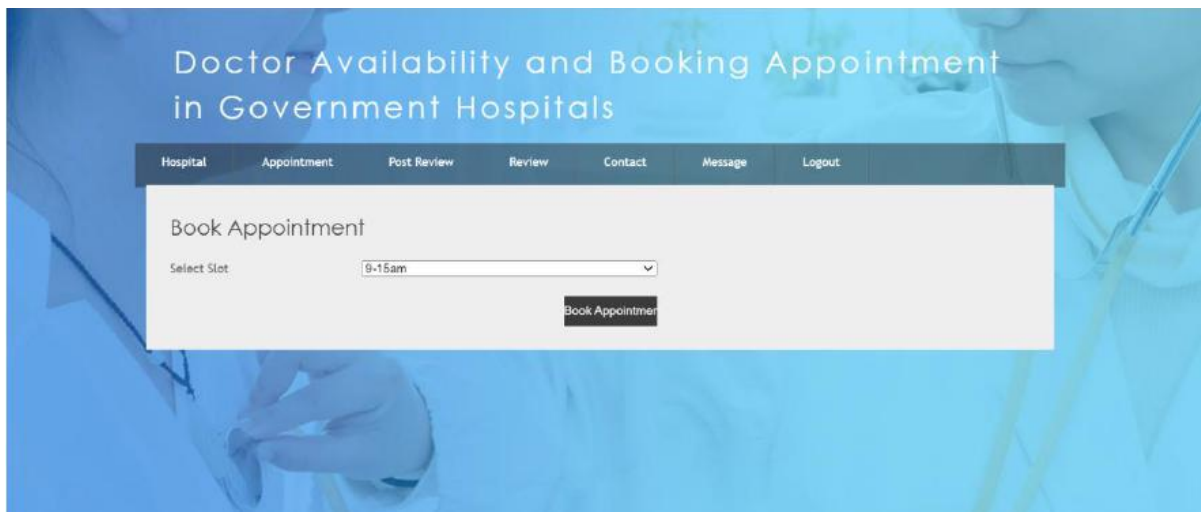

Fig.9 View Medicine page

Fig.10 view doctor page

Fig.11 Book Appointment page

V. CONCLUSION

The major goal of this application is to make an online interaction between doctors and patients. Smart Doctor's Appointment and Prescription system for web application meets most of the functionality to manage appointment and prescription for doctors and patients accordingly. Patient can use online appointment to save time and money. This application facilitates the interaction between patient and doctor. The developed system is efficient, effective and interface is very user friendly, Where the Doctor will get previous detail information about the Patient that stored permanently in the database so that if doctor get any problem, they can check easily previous prescription of particular patient.

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