

Doctor-Patient Portal for Consultation and Management

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ABSTRACT - Corona virus pandemic hit the whole world catastrophically. We are in need of “doctors & hospitals “more than ever. But while the Covid – 19 virus is spreading drastically, we can’t gather around or make any place crowded, especially hospitals which will spread the virus more and more. As many people are getting infected our health care system is experiencing a burden than never before. People are facing problems like unavailability of authentic information of medical resources and time to time treatment.

According to reports, many people are scared to visit hospitals amidst increase in corona virus. Thus, in this crucial time when everything is turning out to be online from Big Multinational Companies to small super market amidst COVID-19, so in this project we have tried to solve these problems by creating a website where user can see hospitals information like Number of beds availability, Number of operation theaters, Number of doctors and specialist doctors available in any hospital and many more. This website will also help to avoid unnecessary crowd in hospitals and will also help patients with minor problems get first aid at home. The website provides the facility to request and book an appointment for online consultations with doctors based on the need.

Keywords: doctor, patient, admin, registration, portal, appointment, login.

I. INTRODUCTION

"Doctor-Patient Portal" is one of the most important and crucial website in this pandemic.

Covid-19 pandemic has changed a way of everyone's life. It also taught us how hygiene plays an important role in our lives. During this, we understand the necessity of a clear and reliable health care platform. In such situations, visiting hospitals for basic illness can actually give invitation to a bigger problem. So, the main goal of this tool is to provide individuals a platform where they could seek medical help for non-critical problems without necessarily visiting hospitals in person resulting into decreasing the burden on healthcare systems and to increase healthcare capacity where it is most limited. It provides health advice by experts just by sitting at home and helps to avoid actual visits for normal illness. Our proposed system aims to build an environment where various patients needing doctor can get help at their home i.e. consult doctors, send their images and reports, chat with doctors, tell them their issues and discuss remedies. It also consists of doctors and patient login panel where both will login to the system and 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.

In addition to this, the web application it will be consisting of all the necessary information regarding the hospitals. Such as specialist doctors, timing for the visits, availability of resources and critical equipment's (such as beds, ventilators, ICU, Ambulances etc.) and provides a means for online appointment booking.

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. It will also be helpful for those who need regular check-ups. It enables patient to have a second opinion.

This helps to save clinical resources, prevents high number of patients grouped together in waiting rooms and divert the patients from serious emergency patients.

II. LITERATURE REVIEW

- I. A Literature Review on(2009): "Simulation Study of the Optimal Appointment Number for Outpatient Clinics" International Journal of Simulation Modelling, Volume 8, No. 3, ISSN 1726-4529.
- II. This paper study the appointment scheduling systems in outpatient clinics to determine the optimal number of appointments to be schedule in one session with criteria of different performance indicators and consult room configurations.
- III.
- IV. Abhijit Chakravarty (2011): "Evaluation of Service Quality of Hospital Outpatient Department Services", Medical Journal Armed Force India, Volume 67, issue 3, DOI: <http://dx>.
- V. This develops a framework to schedule the meeting between the patients and the relevant doctors meeting in an efficient way for routine and emergency services.
- VI. In this article study was conducted at a peripheral service hospital to ascertain any service gap between consumer expectations and perceptions in respect of the hospital outpatient department (OPD) services.
- VII.
- VIII. Manvi (2011): "Intelligent Scheduling in Health Care Domain", International Journal of Computer Science Issues, Volume 8, Issue 5, ISSN (online) 1694-0814. The paper work integrates accessing distributed health care services in multi-agent environment to achieve better Quality of service by using java

platform.

- IX. "Specification of a Reference Model for the Domain Layer of a Hospital Information System" Author(s): Gudrun Hübner-Blodera , Elske Ammenwertha , Birgit Brigl b , Alfred Winter b a Institute for Health Information Systems, UMIT " University for Health Sciences, Medical Informatics and Technology, Hall in Tyrol, Austria b Institute for Medical Informatics, Statistics and Epidemiology, University of Leipzig, Germany, ENMI, 2005 Many enterprise projects get scrapped due to high costs involved in initial planning requirement gathering and design phase.
- X. Internal influencer authors can obviously also be at play in terms of what services are provided by the hospital and how they are provided.
- XI. This paper aims at creating a reference data model that will serve as a generic starting point for any new HIS development projects so costs involved in studying and analyzing current state and coming up with gaps analysis and additional requirements can be significantly reduced.

III. METHODOLOGY

Modules:

A. Admin

The first module will be the Admin Module whose key responsibilities are as follows:

- Maintaining the Dashboard
- Viewing the Registration of both Doctor and Patient
- Add Doctor Information after verification of the documents uploaded.
- Add and update Hospital Details.
- View Contact and Application.
- View chats between the Doctor and Patient. Admin will be able to view from its respective Admin Panel.

Provide 24*7 assistance

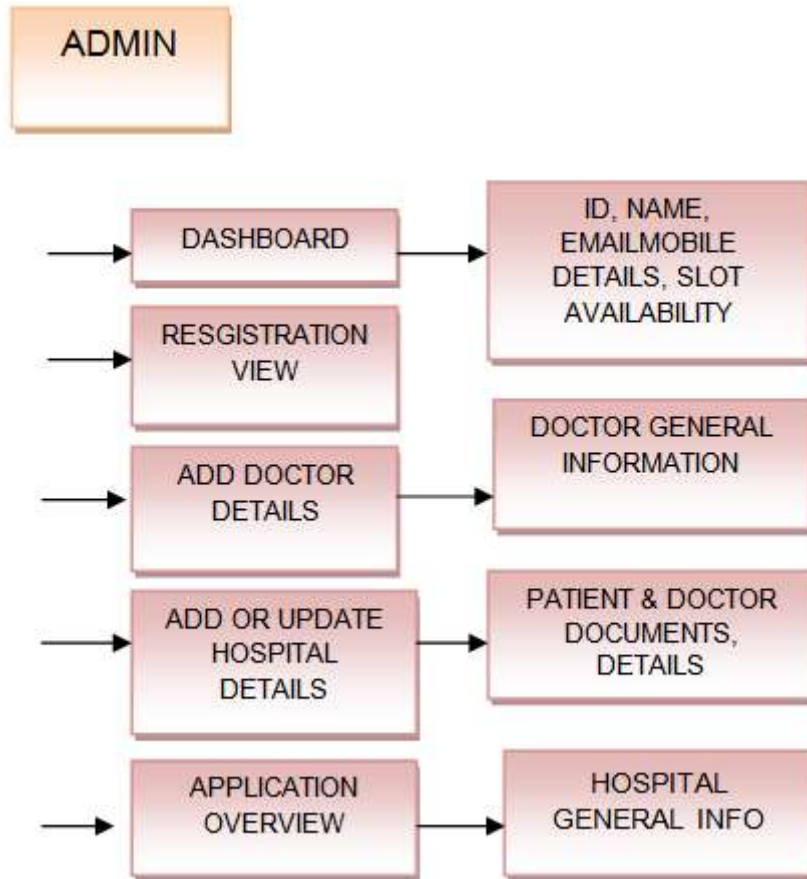


Fig 1. Flow Diagram of Admin Module

A. Patient

The second module will be the patient module where patient can login via username/password or sign up by filling upon the necessary credentials such as Enter Name, Email-id, Mobile no etc. Patient can view the availability of number of doctors, beds, OTs, emergency wards etc. He/she can view or edit his/her user profile at any given point of time. Patient can book

appointment in Book Appointment Section by selecting the necessary Appointment Date, Time Slot and filling up a reason at the end. They will have the facility to upload all the necessary documents such as images, MRIs and different reports. Patient will be able to chat with any chosen doctor after getting the appointment slot.

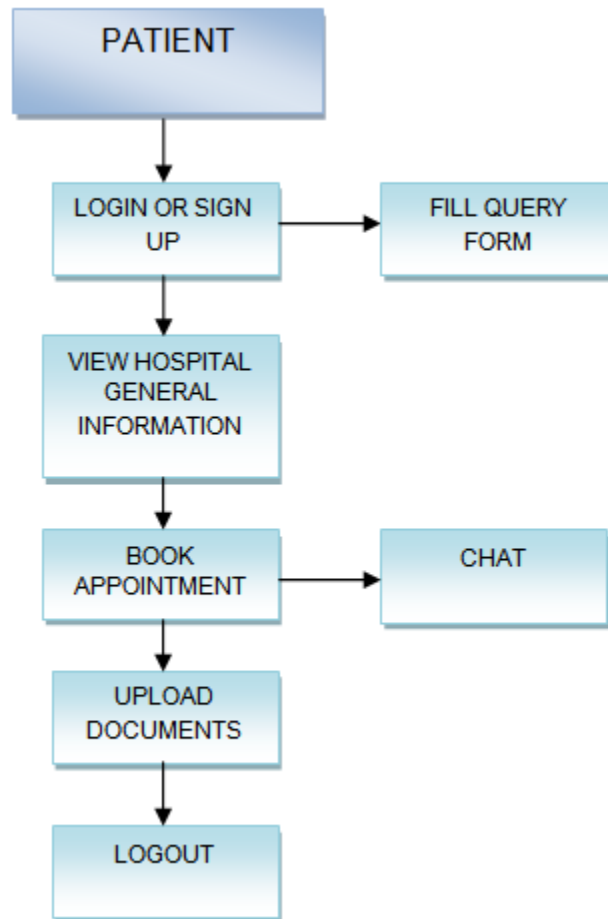


Fig 2. Flow Diagram of Patient Module

A. Doctor

The third and the final module is designed for the Doctors. The Doctor can upload his/her documents to register in Hello Doctor's Portal. He/She can do so by creating his/her profile in the doctor's portal and after verification of the required documents and qualifications, he/she will be

approved. The doctors can view their daily schedule and also be able to view the patient's uploaded documents and complaints which would be visible in their respective user profile. Doctor will communicate via chat box with the patient and upload the necessary prescription to be viewed by them.

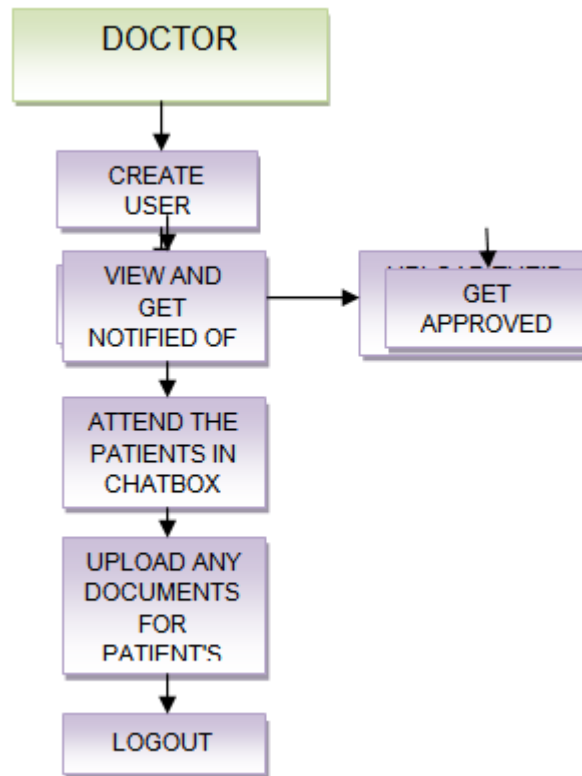


Fig 3. Flow Diagram of Doctor Module

SCREENSHOTS

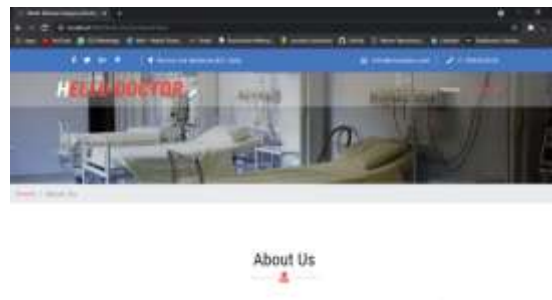


Fig. 1 Intro Screen

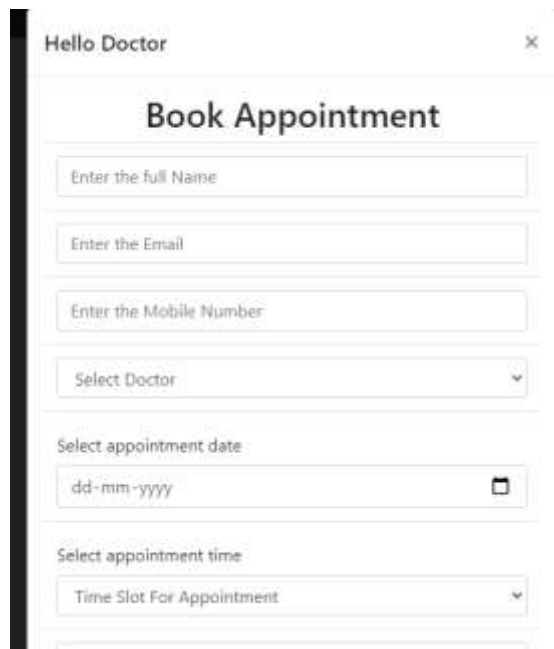


Fig. 2 Home Screen



A registration form titled "Register Now" with a background image of a doctor. The form includes input fields for "Your Name", "Email", "Mobile Number", and "Password", each with a placeholder text. A red "Register" button is at the bottom, followed by the text "By clicking Register, I agree to your terms".

Fig.3 Patient Login



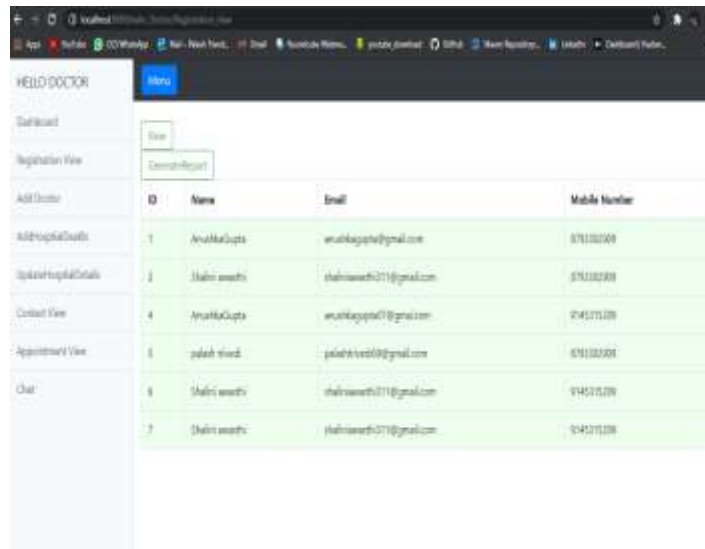
A form titled "Book Appointment" with a header "Hello Doctor". It includes input fields for "Enter the full Name", "Enter the Email", and "Enter the Mobile Number". There is a dropdown menu for "Select Doctor", a date picker for "Select appointment date" (format dd-mm-yyyy), and another dropdown menu for "Select appointment time" (Time Slot For Appointment).



Fig. 7 Doctor General Information

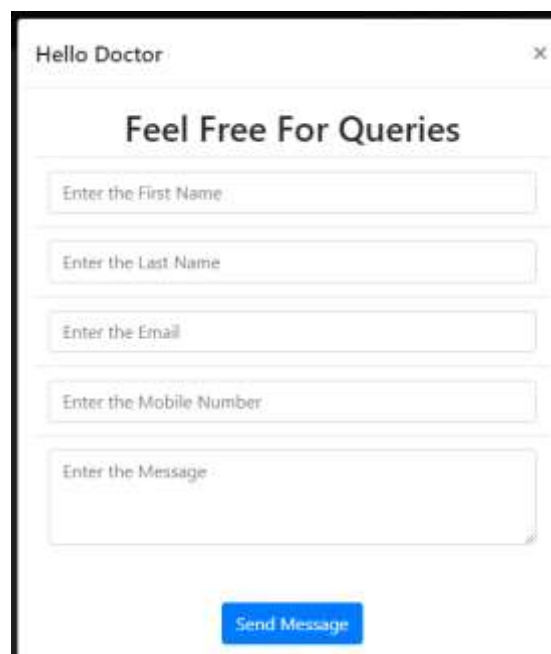


Fig. 8 Patient Information



ID	Name	Email	Mobile Number
1	Anushka Gupta	anushkagupta@gmail.com	971102000
2	Shalin Swathi	shalinswathi211@gmail.com	971102000
4	Anushka Gupta	anushkagupta@gmail.com	971102000
5	patish shind	patishshind@gmail.com	971102000
6	Shalin Swathi	shalinswathi211@gmail.com	971102000
7	Shalin Swathi	shalinswathi211@gmail.com	971102000

Fig. 9 Admin side



Hello Doctor ✕
Feel Free For Queries

Fig. 10 Query Form

IV. CONCLUSION

In this article, our main aim is to encourage the masses to adopt the online Doctor-Patient portal so as to avoid unnecessary risks of visiting hospitals and getting infected from Covid-19 pandemic which is surging rapidly in an exponential manner. People can avoid unnecessary visits and get their checkups and consultation from the comfort of their home. This website will not only help the patients and the doctors to follow the covid-19 protocols and stay protected but also ease

out the problems of government who are right now struggling to manage the healthcare system.

Government can have the centralized data of medical history of the patients that would be useful to sort out as to which one is in dire need of emergency or immediate attention. This will help the mild covid patients as well to consult with the doctor online and follow the necessary medications required for recovery without visiting the OPD and increasing the chance of spreading the infection. Patient can contact the doctor as per the given timeslots and availability, or as well also contact in

case of emergency. The future scope of this project is to create a mobile app which aim towards the comfort of usability and reliability.

It can also be developed in such a way that the patients can interact with the doctors via video conference in place of chat box.

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