

# Hospital Management System

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**Abstract** —The past couple of years have been very difficult for the mankind due to the corona virus outbreak. In the covid 19 pandemic, healthcare was the field which was affected the most. Social distancing and crowding at the hospitals were a major issue. Taking into consideration these difficulties, we created something that will be highly relevant to today's time to prevent unnecessary crowding at the hospitals. We have created a website which would help the patients book their appointment at the hospital to any doctor of their choice within a click. The patient can just login into the website by entering their details, then search for the desired doctor or expertise with the help of the search bar and book the appointment. We have used different tools like HTML, CSS, JavaScript, PHP and Bootstrap to create the website. The website will use all these tools to execute all the commands given to it by the users. The website also has a database wherein all the data from the users like their personal information like contact details, mail IDs and addresses can be stored. The database also stores information regarding the patient appointments

**Keywords** — Database, Hospital Management, HTML, Interface, PHP, Website.

## I. INTRODUCTION

Most of the hospitals in India still use old and traditional method of appointment booking in which they visit the hospital to book an appointment and wait there until their name is called. This method is highly inefficient and time consuming. Also, during the current covid scenario, this method does not make much sense as we need to avoid overcrowding as much as possible. To solve this problem we came up with an idea to design a website. The website will help us avoid crowding at hospital and save the patients' time. Overall, it will make the experience of a patient pleasurable and hassle-free.

The design of this project is influenced by many research papers. Their description is as follows:

- [1] Intelligent Hospital Management System by B.Koyuncu and H.Koyuncu : Helped to set the kind of tasks to be done and handled without increasing complexity of the particular task.
- [2] Integrated EIP for HealthCare by S.H.Hseih and J.L. Chen: The paper helped us to implement MySQL Databases efficiently and taught the importance of it.
- [3] Hospital Management System Using Web Technologies by REVA University: The paper helped us to decide the layout and element placements and their interconnections with each other via technologies and languages so as to boost the UI/UX experience.
- [4] Study of Advanced Hospital Management System by Anna University: The paper helped us the implementation of our project via different approach of operating systems.
- [5] Hospital Management System by Digvijay.H.Gadhari, Yadnesh.P.Kadama, Prof.Parineeta Suman: The paper helped us to secure login window and its operations.
- [6] RFID Based Smart Hospital System: The paper helped us to look upon a newer approach of Radio Frequency Identification technology to provide reliable services.

After researching deeply about the topic, we came to the conclusion that every other method involved complex user interactions and to solve that problem we focused to keep our user interface as simple as it can be and used simple but effective database integrations in the website.

## II. METHODOLOGY/EXPERIMENTAL

The hospital management system website consists of three models or three parts.

1. Patient module.
2. Doctor module.
3. Admin module.

In the patient section, the patient is requested to share some of their personal data to make their experience easy which is taken with help of HTML forms and is stored with the help of PHP and My SQL. Now, it redirects the user to its dashboard where in jQuery (A JavaScript Library) and its plugin DataTables are used to create responsive table which then helps the user to search either the respective doctor or the respective specialty by simply just typing it. This overall enriches the experience of the user.

In the admin section, the admin can also login in a similar manner as a doctor by giving the login ID and password. Similar to the doctor login, the authenticity is checked with the help of PHP by checking the previous data. After the login, the admin has control over the entire website. He/she can add doctors and remove them from the list. The admin also has the power to schedule or cancel the appointments of the patients after which all the data is updated in the database. Basically, application of CRUD is all we are doing here, i.e., Create, Read, Update and Delete. In this project, all the four technologies, that are HTML, CSS, JavaScript and PHP work simultaneously in unison to make the website work. Here, PHP acts as a middleman between database and website, where all the data exchange happens. HTML acts forms the basic structure of the website. CSS styles the website which boosts the UI/UX experience of this website and increases the aesthetics of the website. JavaScript supports the website by providing basic functionalities like buttons and more.

In the doctor's section, the user who will be a doctor in this case will login with the help of user ID and password. The authenticity of the user ID and password is checked with the PHP where the previous data is stored in the database. Now, after the login procedure is complete, the doctor will be able to see their dashboard where they will see the lined-up appointments as well as the appointments that are completed. The website fetches all data from database.

## III. RESULTS AND DISCUSSIONS

The hospital management system fetches data from the database and stores the data to the database taking from the user. Basically, it is an application of CRUD, i.e., Create, Read, Update and Delete. The user proceeds to book an appointment by clicking on the 'book an appointment' button where more data regarding the contact and address of the patient is taken. After this, the patient is then redirected to the slot booking page. The slot booking page shows the patient all the available slots of the given doctor. The patient can then choose the slot according to their convenience. This data is stored in the database with the help of PHP.

The JavaScript library jQuery and its plugin DataTables helps in creating responsive grid table which is shown to the user by fetching data from

the database created with the help of PHP and MySQL. User can book an appointment with just one click wherein the data is stored in the database and the doctors and admin can access the data with the help of PHP, which is an application of 'R' Of CRUD, which is read, i.e., reading the data.

The patient can even fill the responsive feedback forms like the one present in the 'contact us' page which helps the hospital management to make improvements in the concerned services.

#### IV. FUTURE SCOPE

We have many ideas regarding the improvement of the website and adding more features. Some of them are:

1. In future, addition of OTP feature is also possible where the user will get an OTP while registering for the website to verify the contact details.
2. Getting a PDF of appointment and prescription is also a feature that can be added. After the appointment with the doctor, the prescription will automatically be sent on the user's profile.

#### V. CONCLUSION

The project most importantly looks at bringing more ease and comfort to patients by providing appointment solutions in just one click. It also contributes to social distancing and efficient healthcare resource management which is need of today's hour. Overall our website helps to reduce inefficiencies in today's hospital management systems.

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