



DOCTORS APPOINTMENT WEB APP

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ABSTRACT

In the ever-evolving landscape of contemporary healthcare, effective management of appointments, outpatient services, and inpatient care stands as a critical element in delivering continuous and high-quality patient care. The "Doctors App" emerges as an advanced web application meticulously crafted to empower physicians with a comprehensive suite of tools for efficient appointment planning, oversight of outpatient and inpatient care, and seamless patient transitions. This summary outlines the primary functionalities of the application and its potential impact on optimizing medical workflows.

The Doctors App boasts an interface that is both intuitive and user-friendly, empowering administrators to schedule appointments, manage outpatient consultations, and supervise inpatient care—all through a unified platform. The application is enriched with features designed to facilitate a smooth handover of patient care, fostering collaboration among healthcare professionals and elevating the overall standard of patient services.

Key features of the application include:

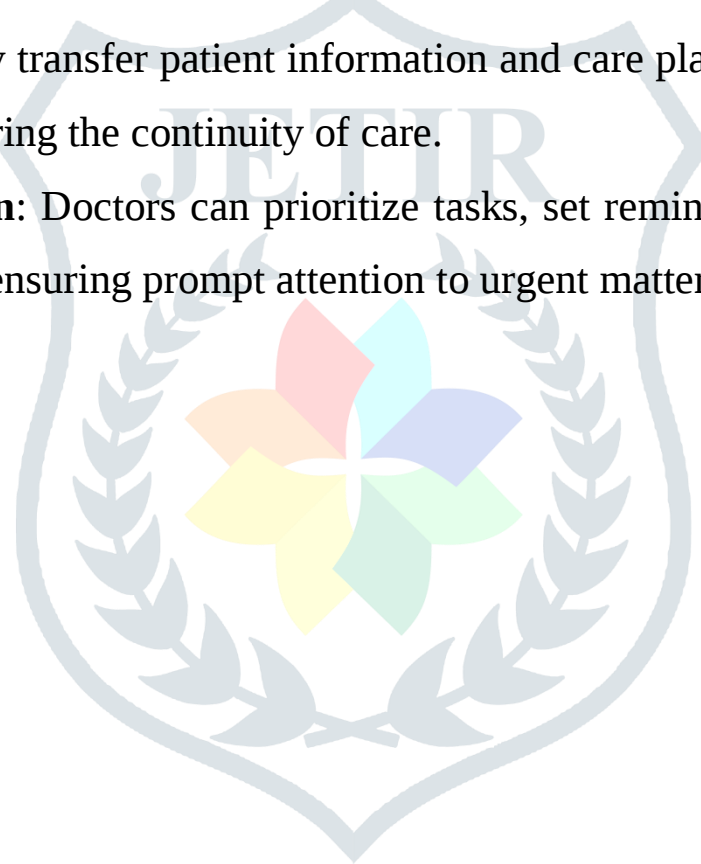
Appointment Scheduler: Administrators can efficiently plan and organize their schedules, mitigating the risk of overbooking and ensuring optimal time utilization.

Outpatient Care Management: The application offers a comprehensive view of outpatient appointments, enabling doctors to access patient records, treatment plans, and diagnostic results on-the-go.

Inpatient Care Overview: Doctors App facilitates real-time monitoring of inpatient care, providing doctors with timely information about the status and progress of hospitalized patients.

Seamless Patient Handover: A secure and structured handover module empowers doctors to smoothly transfer patient information and care plans to colleagues during shift changes, ensuring the continuity of care.

Task Prioritization: Doctors can prioritize tasks, set reminders, and receive alerts for critical events, ensuring prompt attention to urgent matters.



CHAPTER-1

INTRODUCTION

DOCTOR APPOINTMENT WEB APP

1.1 Overview

A straightforward project using PHP, HTML, and CSS aims to facilitate appointment requests for clients/patients in a medical establishment like a clinic or hospital. Additionally, it assists doctors in efficiently managing their appointment schedules. This doctor's appointment system encompasses three user roles: administrator, doctor, and patient.

The administrator is responsible for populating the list of doctors, including their specialties, details, and system credentials. Patients can explore the system's website to find a doctor matching their medical needs, view the doctor's weekly schedule, and submit appointment requests accordingly. Once submitted, these requests are organized within the system and forwarded as requests to the selected doctor.

The system also enables doctors to oversee their schedules by viewing all appointments and patient appointment requests. This seamless process enhances the overall efficiency of scheduling and managing appointments for both medical practitioners and patients.

CHAPTER-2

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.

[1] Waiting Time

Waiting time simply means a period of time which one must wait in order for a specific action to occur, after that action is requested or mandated (Fernandes et al., 1994). Patients' waiting time has been defined as "the length of time from when the patient entered the outpatient clinic to the time the patient actually received his or her prescription" (Jamaiah, 2003). It is defined as the total time from registration until consultation with a doctor. There were two waiting times, the first is time taken to see a physician and the second is time to obtain medicine (Suriani, 2003).

[2] Patients' Appointment System

A patient appointment system or appointment schedule for health care center started long time ago (Harper, 2003). Management of patients' appointments has earlier works and has developed simplified queuing models and fairly static scheduling conditions. Another attempt was made to calculate the waiting time between patient and doctor using the mathematical queuing models to minimize waiting time (Gamlin, 2003). However; traditionally the appointment system has considered that the doctor time is more important than patient time (Wijewickrama, 2005). So an appointment system was designed to minimize the doctor idle time but current designing of an appointment system is based on decisive factors with respect to both the patient and doctor (Takakuwa, 2005).

[3] Managing Patients' Appointment system

According to Dexter (1999), managing patient appointment system is a computer application used to manage and reduce the patient waiting time in the health care center. Some health care centers do not use any appointment system. So it has a longer average patients' waiting time than the health care center that adopts the patients' appointment system.

[4] Online Booking System

An online system is also known as a Web based system. A web is made up of page that is commonly known as web page or web site, and a web site is a computer program that runs a webserver that provides access to a group of related web pages (Alex, 2000). A system is a set of in dependent components working together to achieve a common objective.

[5] Existing Hospital Appointment Schemes

One application developed to manage patients' appointment scheduling has used exponential enter arrival times. This model assumes that the exponential enter arrival times could not be directly validated by date, and it is limited due to the nature of the appointment scheduling (Rohleder, 2002). Since appointments are scheduled in the future, the exact model of call arrivals will only have limited impact on measures related to the time between the call and the appointment time. For this reason, the challenge for making appointment system is designing a suitable system based on the health care procedure environment (Klassen, 2002). Hence, the appointment provider in the health care center can schedule a patient into an appropriate time slot on a given day.

CHAPTER-3

RESEARCH GAPS OF EXISTING METHODS

1.Enhancements in User-Centric Design:

Examining user feedback to identify specific elements in existing systems that deviate from user preferences or needs. The research focus could center on developing more user-friendly interfaces and elevating user engagement.

2.Customization and Empowerment of Patients:

Exploring approaches to further tailor patient experiences, providing increased flexibility in appointment scheduling, treatment plans, and access to healthcare information.

3.Efficiency and Streamlining Workflows:

Investigating strategies to enhance workflow efficiency for doctors, administrators, and patients. This may involve refining scheduling algorithms, reducing administrative burdens, or improving accessibility to data.

4.Integration of Emerging Technologies:

Delving into the seamless incorporation of emerging technologies (AI, IoT, telemedicine) into appointment booking systems to augment functionalities, enhance diagnostic processes, and streamline communication.

5.Augmented Security Measures:

Researching advanced security measures and protocols to bolster the protection of patient data, ensuring alignment with evolving healthcare regulations.

CHAPTER-4

PROPOSED MOTHODOLOGY

Login:

there will be three login portals followed by

- 1.admin
- 2.doctors
- 3.patients

Admin Section:

Dashboard:

Real-time Metrics: The dashboard provides instant insights into critical metrics such as appointment volumes, doctor availability, and patient flow. This real-time insight enables administrators at Manipal Enterprises to make informed decisions, optimize resource allocation, and enhance overall service delivery within their healthcare system.

Doctors:

Centralized Management: This feature empowers administrators to oversee and manage the roster of medical practitioners, simplifying the process of doctor onboarding and maintenance. It includes the addition, removal, or updating of doctor profiles, specialties, and contact information, streamlining control.

Schedule:

Efficient Time Management: The scheduling section offers a streamlined view of doctors' appointments and availability, facilitating efficient time management for medical staff. This leads to better patient care and optimized utilization of doctor's time.

Appointments:

Seamless Booking: Administrators can oversee and manage the appointment booking process, ensuring a balanced load for doctors and providing patients with a smooth booking experience. This enhances patient satisfaction and healthcare service quality.

Patients:

Comprehensive Management: The patient section grants access to essential patient information, aiding in maintaining a complete record of patients' medical data, past appointments, and treatments. Administrators can support personalized care and service delivery with comprehensive patient data.

Doctors Section:

Dashboard (Status):

Real-time Updates: The dashboard provides real-time status updates, giving doctors quick overviews of their current schedule, patient load, and any urgent notifications. This feature empowers doctors to manage their time efficiently and prioritize tasks.

My Appointments:

Efficient Management: This section enables doctors to view and manage their appointment schedules, reducing wait times for patients and ensuring a well-managed workflow. Doctors can make necessary adjustments and streamline patient interactions.

My Sessions:

Streamlined Handling: This feature allows doctors to manage their sessions effectively, providing a clear overview of the day's or week's engagements and enhancing the quality of patient care.

My Patients:

Comprehensive Information: This section offers access to detailed patient records, histories, and ongoing treatments, improving the quality of care by ensuring personalized treatment plans.

Settings:

Account Management: In the settings section, doctors can view and manage their account details, allowing for necessary modifications or updates to their profiles and personal information.

Patients Section:

Home (Status):

Personalized Updates: The home section provides patients with personalized status updates, ensuring they stay informed and engaged with their healthcare journey within Manipal Enterprises' system.

All Doctors:

Access to Practitioners: This section allows patients to explore all available doctors within the network, fostering a sense of empowerment and choice.

Scheduled Sessions:

Clear View: Patients can view their scheduled sessions, fostering a sense of preparedness and enabling better time management.

My Bookings:

Efficient Management: This section allows patients to manage their appointments efficiently, empowering them to take control of their healthcare schedule.

Settings:

Account Management: In the settings section, patients can view and manage their account details, providing autonomy over their account within the healthcare platform.

These tailored sections within the patient portal cater specifically to individuals seeking healthcare services, promoting an active role in their wellness journey.

CHAPTER-5

OBJECTIVES

1.Admin:

Doctor Management: Administrators have the capability to add, edit, and delete doctors from the system.

Session Scheduling: They can schedule new sessions for doctors and also cancel existing sessions.

Patient Details: Admins can view details of patients registered within the system.

Booking Overview: Access to viewing and managing patient bookings.

2.Doctors:

Appointment Viewing: Doctors can view details of their appointments.

Session Details: They have access to their scheduled sessions.

Patient Information: Doctors can view details of their patients.

Account Management: Capability to delete their account and modify account settings.

3.Patients:

Online Appointments: Patients can make appointments online.

Account Creation: They have the ability to create their own accounts.

Booking History: Patients can view details of their past bookings.

Account Management: Capability to delete their account and modify account settings.

4.User Interface and Design:

Interface Discussion: Analysis and discussion on the design and user interface, emphasizing ease of use.

responsiveness, and accessibility features.

Overview: Detailed insight into the technologies employed in development, including PHP, databases, frameworks, etc.

Security Measures:

Data Protection: Explanation of data encryption and protection measures.

User Authentication: Protocols for user authentication and authorization.

5.Integration and Scalability:

Scalability Discussion: Exploration of the application's scalability to handle a growing number of users.

Integration Capabilities: Discussion on the application's potential to integrate with other systems or platforms within Manipal Enterprises.

6.Testing and Quality Assurance:

Testing Procedures: Details on testing procedures, covering unit tests, integration tests, and user acceptance testing.

Quality Assurance Strategies: Strategies employed for quality assurance and bug fixing.

7.Maintenance and Support:

Ongoing Maintenance: Plans for continual maintenance, updates, and support.

User Support: Mechanisms for user support and troubleshooting guidelines

CHAPTER-6
SYSTEM DESIGN & IMPLEMENTATION

Project Name	Doctors Appointment web Application
Language Used	PHP language
Database	MySQL
User Interface Design	HTML, CSS
Web Browser	Google Chrome, Mozilla, OPERA
Software	XAMPP, Apache/2.4.39

CHAPTER-7

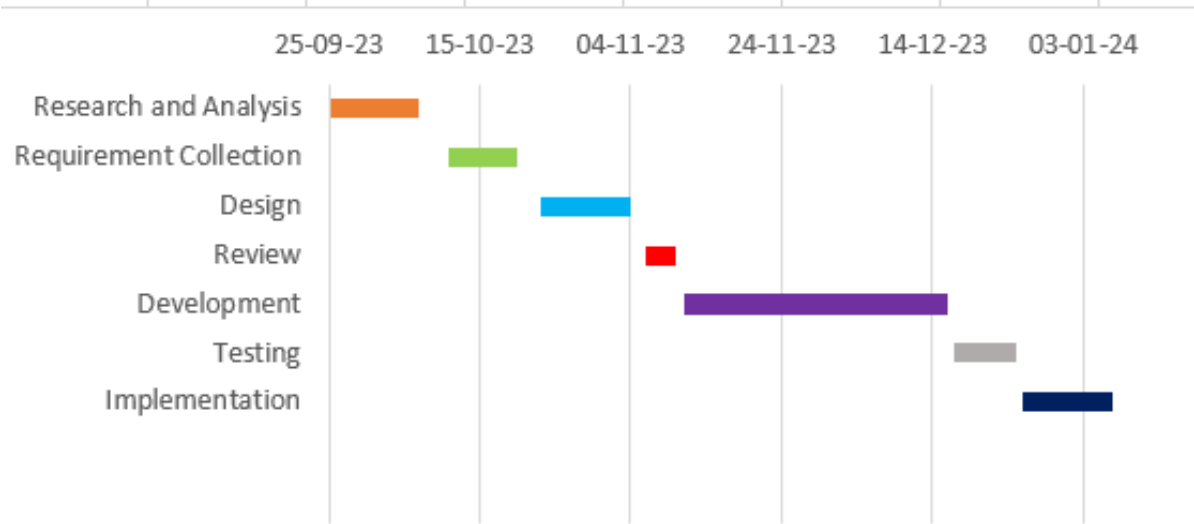
TIMELINE FOR EXECUTION OF PROJECT

(GANTT CHART)

Fig.1.0

Name	Start Date	End Date	Duration(Days)
Research and Analysis	25-09-23	07-10-23	12
Requirement Collection	11-10-23	20-10-23	9
Design	23-10-23	04-11-23	12
Review	06-11-23	10-11-23	4
Development	11-11-23	16-12-23	35
Testing	17-12-23	25-12-23	8
Implementation	26-12-23	07-01-24	12

Fig.1.1



CHAPTER-8

OUTCOMES

Enhanced Operational Efficiency:

- **Streamlined Appointment Management:** The application automates the appointment scheduling process, optimizing doctors' time slots for smoother operations.
- **Centralized Data Access:** The centralized system enables administrators, doctors, and patients to access relevant information from one platform, reducing time spent searching for records or schedules.
- **Real-time Updates and Notifications:** Providing real-time updates on appointments ensures everyone involved remains informed, reducing confusion.
- **Improved Resource Allocation:** Insights into appointment volumes and doctor availability enable better resource allocation and avoid overbooking.

Improved Patient Experience:

- **Effortless Appointment Booking:** Patients can easily schedule, reschedule, or cancel appointments through a user-friendly interface, offering convenience and flexibility.
- **Personalized Status Updates:** Patients receive personalized updates, reminders, and notifications about appointments, ensuring informed and engaged healthcare management.
- **Access to Diverse Doctors:** Patients can explore various doctors' profiles, specialties, availability, and ratings, making informed decisions about their preferred healthcare provider.
- **Reduced Wait Times:** Streamlined scheduling and optimized doctor availability minimize wait times, ensuring prompt access to medical care and reducing patient frustration.

Optimized Doctor Productivity:

- **Efficient Schedule Management:** The app provides doctors with a centralized platform to manage schedules, appointments, and sessions, optimizing time allocation.
- **Real-time Updates and Notifications:** Doctors receive real-time updates on schedules, appointment changes, or patient arrivals, staying updated and organized.
- **Quick Access to Patient Information:** Comprehensive patient records facilitate informed decisions and personalized care during consultations.
- **Streamlined Patient Flow:** Optimized scheduling reduces wait times and ensures an

organized flow of patients, allowing doctors to see more patients efficiently.

- **Enhanced Communication Channels:** The app fosters seamless communication between doctors and patients, minimizing misunderstandings and improving compliance.

Positive Impact on Healthcare Services:

- **Improved Access to Healthcare:** The application facilitates easier access to doctors, appointments, and medical services, reducing waiting times for timely care.
- **Enhanced Patient Engagement:** Features like personalized updates and easy appointment scheduling increase patient engagement, leading to better adherence to treatments and improved health outcomes.
- **Efficient Resource Utilization:** Optimized scheduling and streamlined administrative processes enable better utilization of doctors' time and healthcare facilities.
- **Enhanced Continuity of Care:** The app provides doctors with comprehensive patient information, ensuring continuity in treatments and reducing the likelihood of missed information.
- **Reduction in No-show Appointments:** Features like appointment reminders and easy rescheduling help reduce missed appointments, minimizing disruptions to healthcare services.
- **Future Scalability and Adaptability:**
- **Increased User Load:** The system should handle a growing number of users, accommodating a growing patient base, additional doctors, or administrative staff.
- **Expanded Services:** Adaptability to include new specialties, treatments, or facilities as Manipal Enterprises diversifies its healthcare services.
- **Advances:** Ensure the architecture allows easy integration with new technologies or updates.
- **Scalable Infrastructure:** Plan for scalability in terms of server resources, databases, and network infrastructure to support increased data volumes and user interactions.
- **Flexible Framework and Design:** Utilize a modular design approach, allowing for easy modification or addition of features without compromising system stability.

CHAPTER-9

RESULTS AND DISCUSSIONS

System Functionality and Features:

1.Admin Portal Functionality:

Dashboard: Real-time insights, appointment summaries, and system status.

Doctor Management: Profile creation, modification, and access control.

Appointment Management: Scheduling, rescheduling, and cancellation functionalities.

Patient Information: Access to patient profiles, medical history, and appointment details.

System Settings: Control panel for configurations, security settings, and user management.

2.Doctor Portal Features:

Personal Dashboard: Real-time schedule overview, appointment alerts, and patient notifications.

Appointment Management: Access to scheduled sessions, patient details, and treatment plans.

Patient Information: Comprehensive patient records, medical histories, and ongoing treatments.

Communication Tools: Secure messaging system for patient interaction and updates.

Settings: Account management, schedule adjustments, and profile updates.

3.Patient Portal Functionalities:

Home Screen: Personalized status updates, appointment reminders, and upcoming sessions.

Doctor Search and Selection: Access to a database of doctors, specialties, availability, and ratings.

Appointment Booking: User-friendly interface for scheduling, rescheduling, and canceling appointments.

Personal Health Records: Access to medical history, prescriptions, and treatment plans.

Settings: Account management, preferences, and notifications.

4.Testing Methodology:

User Testing:

Conduct usability testing, interviews, surveys, or focus groups.

Clearly define criteria for selecting participants among administrators, doctors, and patients.

Testing Scenarios:

Outline scenarios or tasks for users during testing, such as scheduling an appointment or navigating app functionalities.

Feedback Collection:

Gather feedback on ease of navigation, useful features, and appreciated functionalities.

5.Areas for Improvement:

Identify areas for improvement based on user feedback, addressing interface enhancements, workflow streamlining, or usability concerns.

Performance Metrics:

System Uptime: Measure system availability and uptime for reliability.

Response Times: Discuss application response times, server response, page load, and transaction processing.

Server Load and Scalability: Highlight server load during peak times and the system's scalability.

Error Rates: Detail the frequency and resolution efficiency of reported bugs or issues.

Data Processing Speed: Evaluate data processing speed during critical functionalities.

6. User Experience and Satisfaction:

Ease of Use and Navigation: Describe the user interface design and elements contributing to intuitive navigation.

User-Friendly Features: Discuss features with positive feedback for usability and adoption.

Accessibility and Responsiveness: Address how the app accommodates different devices and screen sizes.

Personalization and Customization: Highlight personalization options enhancing user control.

User Feedback on Design: Include qualitative feedback on design aesthetics and layout.

Satisfaction Metrics: Present quantitative metrics related to user satisfaction.

Impact on User Behavior: Discuss observed changes in user behavior or engagement patterns.

Improvements Based on User Input: Describe modifications based on user suggestions, emphasizing a commitment to user feedback.

CHAPTER-10

CONCLUSION

The development of the doctor appointment booking web application tailored for Manipal Enterprises represents a holistic solution aimed at streamlining healthcare management for administrators, doctors, and patients. This initiative underscores a dedicated effort to address the diverse needs within the healthcare system effectively.

Through the segmentation of the application into distinct Admin, Doctor, and Patient portals, a comprehensive system has been crafted to deliver personalized, efficient, and user-friendly experiences. The Admin portal facilitates seamless oversight and management of doctors' profiles, patient appointments, and overall system performance. Doctors benefit from streamlined scheduling, effective patient management, and personalized access to their sessions, thereby enhancing their ability to deliver top-tier medical care.

Patients, on the other hand, gain control over their healthcare journey, enjoying easy appointment scheduling, access to a diverse pool of medical professionals, and a personalized status overview.

The methodology employed in creating this web application followed a strategic approach, covering initial requirements gathering, meticulous planning, development, integration, and thorough testing. The selection of appropriate technologies, robust security measures, and a user-centered design ensured a reliable platform.

As a result, this project aligns with Manipal Enterprises' vision of an efficient and patient-centric healthcare system. The application's features, including real-time insights, efficient appointment management, comprehensive patient information access, and robust security measures, are positioned to make a significant impact on healthcare management within the organization.

In conclusion, the doctor appointment booking web app serves as an instrumental tool for improved efficiency, enhanced user experiences, and ultimately, better patient care within the healthcare ecosystem of Manipal Enterprises. This project stands as a testament to dedication to innovation, user-centric design, and efficiency in the realm of healthcare technology.

REFERENCES

1. [Top 10 Reasons to Use Online Appointment System For Doctors](https://booking-wp-plugin.com) (booking-wp-plugin.com)
2. [Doctor Appointment App Development | Doctor Appointment Solution](https://fullestop.com) (fullestop.com)
3. [Doctor Appointment Booking Project](https://nevonprojects.com) (nevonprojects.com)
4. [Online doctor appointment system | Thesis Computer Science | Docsity](#)

APPENDIX-A

PSUEDOCODE

Index.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="../css/animations.css">
    <link rel="stylesheet" href="../css/main.css">
    <link rel="stylesheet" href="../css/admin.css">

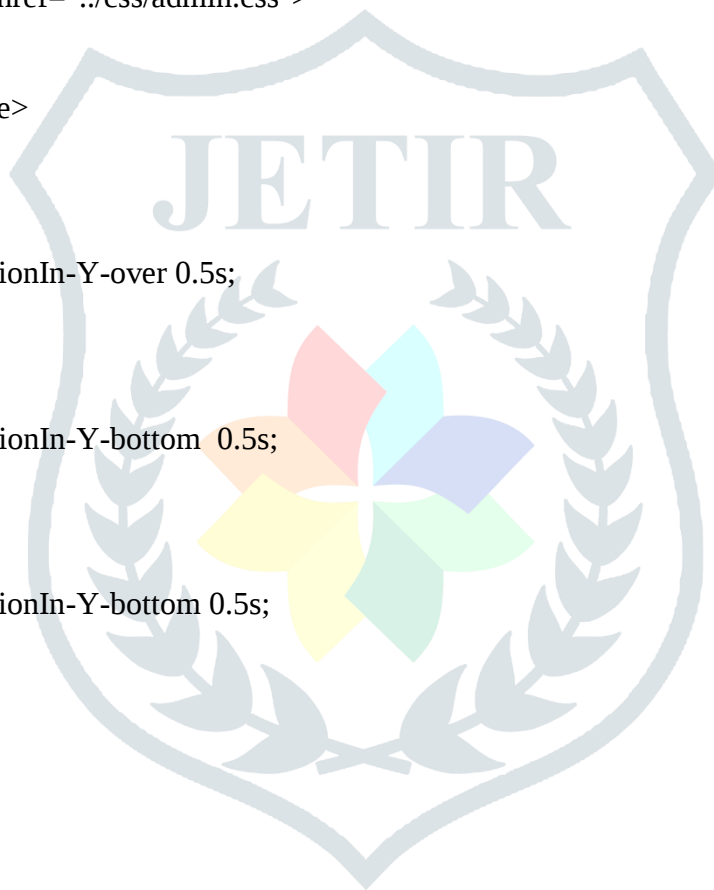
    <title>Dashboard</title>
    <style>
        .dashbord-tables{
            animation: transitionIn-Y-over 0.5s;
        }
        .filter-container{
            animation: transitionIn-Y-bottom 0.5s;
        }
        .sub-table,.anime{
            animation: transitionIn-Y-bottom 0.5s;
        }
    </style>

</head>
<body>
    <?php

//learn from w3schools.com

session_start();

if(isset($_SESSION["user"])){
```



```

if(($_SESSION["user"]==" or $_SESSION['usertype']!='p'){
    header("location: ../login.php");
}else{
    $useremail=$_SESSION["user"];
}

}else{
    header("location: ../login.php");
}

//import database
include("../connection.php");
$userrow = $database->query("select * from patient where pemail='$useremail'");
$userfetch=$userrow->fetch_assoc();
$userid= $userfetch["pid"];
$username=$userfetch["pname"];

//echo $userid;
//echo $username;

?>
<div class="container">
    <div class="menu">
        <table class="menu-container" border="0">
            <tr>
                <td style="padding:10px" colspan="2">
                    <table border="0" class="profile-container">
                        <tr>
                            <td width="30%" style="padding-left:20px" >
                                
                            </td>
                            <td style="padding:0px;margin:0px;">
                                <p class="profile-title"><?php echo substr($username,0,13) ?>..</p>
                                <p class="profile-subtitle"><?php echo substr($useremail,0,22) ?></p>
                            </td>
                        </tr>
                    </table>
                </td>
            </tr>
        </table>
    </div>

```

```
<tr>
  <td colspan="2">
    <a href="../logout.php" ><input type="button" value="Log out" class="logout-btn btn-
primary-soft btn"></a>
  </td>
</tr>
</table>
</td>
</tr>
```

APPENDIX-B

SCREENSHOTS

Fig.1.3

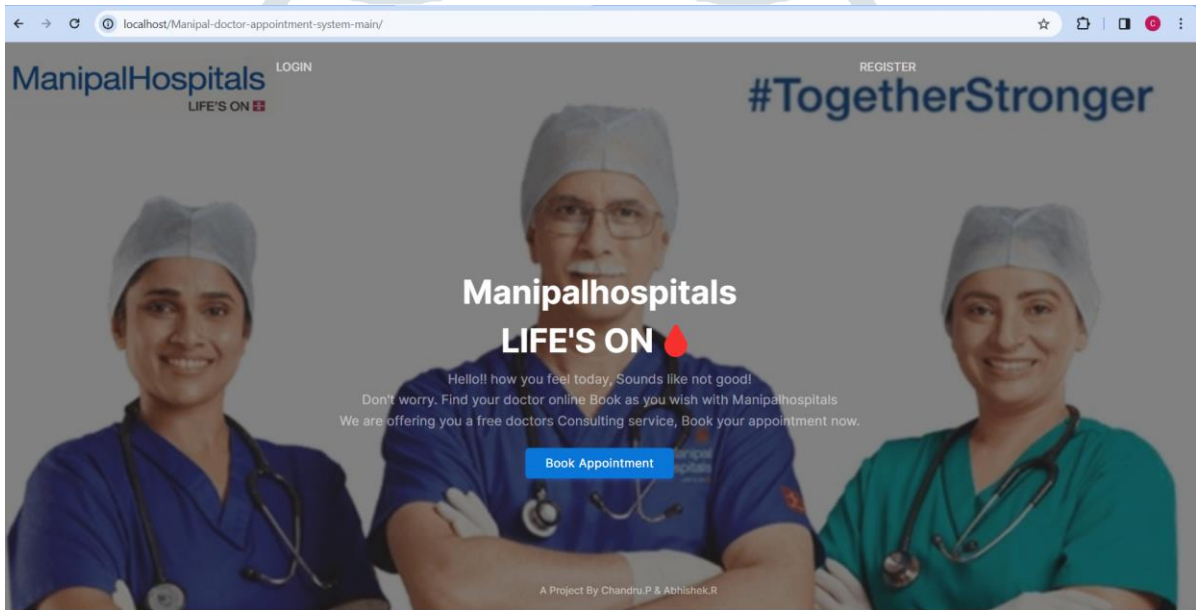


Fig.1.4

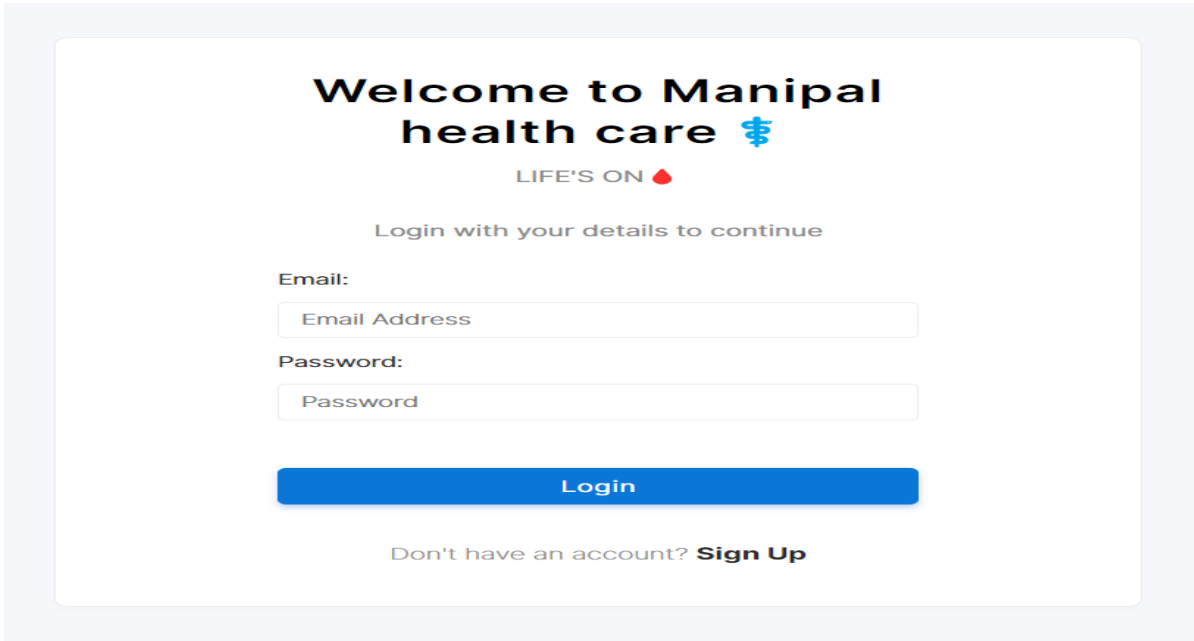


Fig.1.5

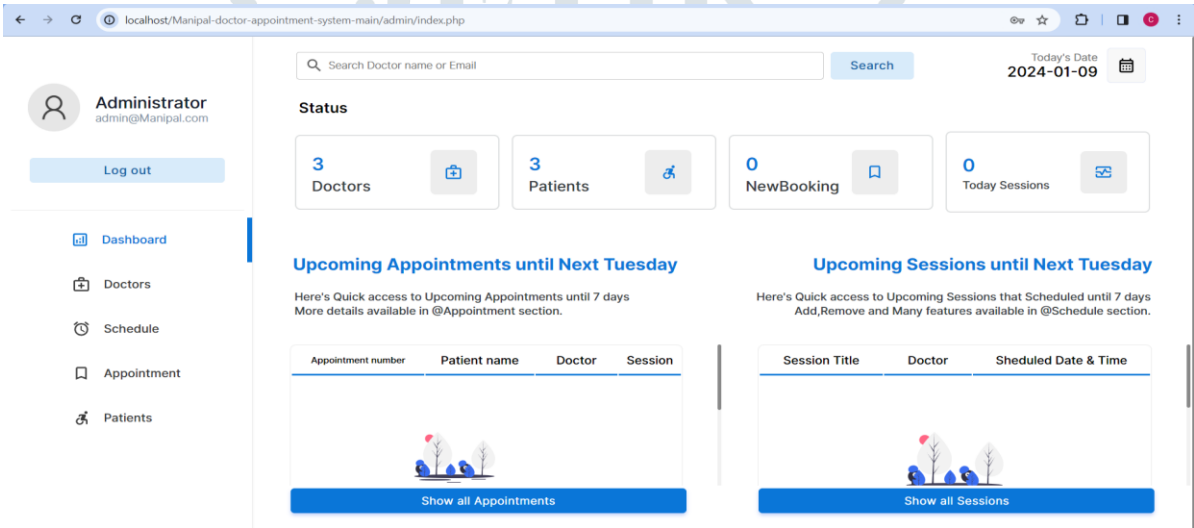


Fig.1.6

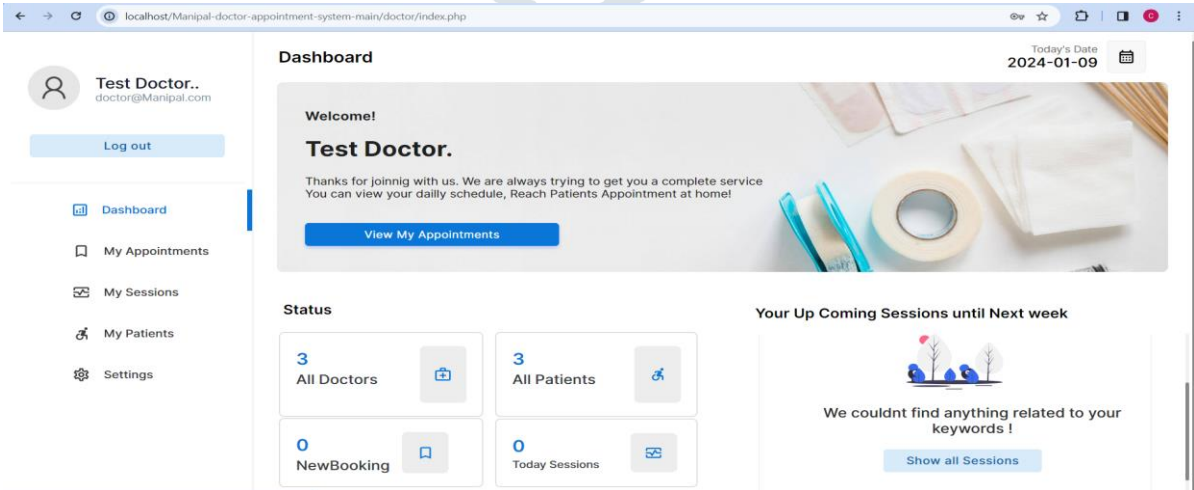
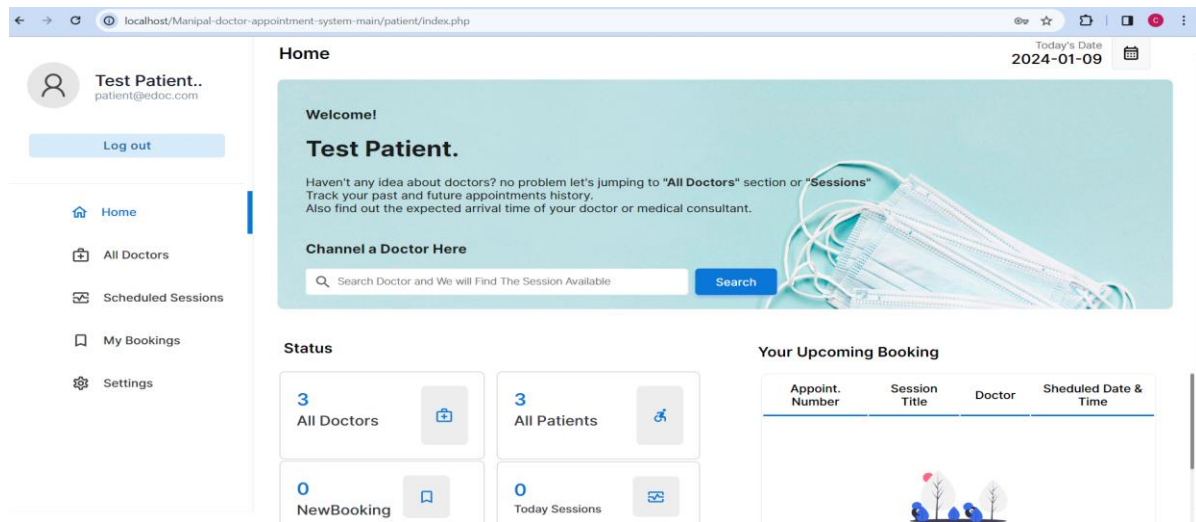


Fig.1.7



APPENDIX-C ENCLOSURES

1. Conference Paper Presented Certificates of all students.
2. Include certificate(s) of any Achievement/Award won in any project related event.
3. Similarity Index / Plagiarism Check report clearly showing the Percentage (%). No need of page-wise explanation.