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Online Medical Booking System

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Abstract: ***Healthcare services play a crucial role in society, and efficient management of medical appointments is essential for providing timely medical care. Traditional appointment systems in hospitals and clinics often rely on manual processes such as phone calls or physical visits, which can lead to long waiting times, scheduling conflicts, and inefficient record management. To overcome these challenges, an Online Medical Booking System is proposed. The proposed system is a web-based platform that allows patients to book appointments with doctors online. The system enables users to view available doctors, check their schedules, and book appointments conveniently from anywhere. Administrators and medical staff can manage doctor information, patient details, and appointment schedules through the system. The application is developed using modern web technologies such as HTML, CSS, JavaScript, and Bootstrap for the user interface and server-side technologies for backend processing.***

The system ensures secure data management, reduces waiting time for patients, and improves overall hospital management efficiency. By providing a centralized platform for appointment scheduling, the system enhances accessibility, convenience, and communication between patients and healthcare providers.

Keywords: Online Medical Booking System, Healthcare Management System, Appointment Scheduling, Web Application, Hospital Management System

I. INTRODUCTION

Healthcare institutions such as hospitals and clinics manage a large number of patients daily. One of the most important aspects of healthcare management is appointment scheduling. In many hospitals, appointments are still managed manually through phone calls or by visiting the hospital reception desk. This traditional approach often results in long waiting times, miscommunication, and inefficient management of patient records. With the advancement of information technology, web-based applications have become widely used in various sectors including healthcare. An online medical booking system can simplify the process of scheduling appointments and managing patient information. The Online Medical Booking System provides a digital platform where patients can easily book appointments with doctors without visiting the hospital physically. The system allows patients to view doctor availability, choose preferred time slots, and confirm appointments online. For hospital administrators, the system provides tools to manage doctor schedules, monitor appointments, and maintain patient records. The system also helps reduce administrative workload and improves service efficiency. The main objective of the proposed system is to develop a user-friendly web application that enhances healthcare accessibility and ensures efficient management of medical appointments.

II. LITERATURE SURVEY

Several researchers have proposed web-based healthcare systems to improve appointment scheduling and hospital management efficiency. These systems aim to reduce patient waiting time and automate hospital operations.

Peng Zhao et al. (2017) conducted a systematic review of web-based medical appointment systems and analyzed their impact on healthcare services. The study concluded that online appointment systems reduce waiting time, decrease administrative workload, and improve patient satisfaction in hospitals.

Yumei Xiong (2023) designed a web-based outpatient appointment system that allows patients to register online and select doctors according to their department and availability. The research showed that the system improves hospital registration efficiency and reduces congestion in hospitals.

Akingbade and Onwuasoanya (2022) developed a web-based doctor appointment and medical database management system to replace manual hospital record systems. Their system enables patients to select doctors based on medical issues and schedule appointments digitally, reducing patient waiting time and improving clinic management.

A. Nageswari et al. (2025) proposed a Healthcare Appointment System that includes modules for patients, doctors, and administrators. The system manages appointment scheduling, patient records, and doctor availability, thereby improving healthcare service delivery and communication between patients and doctors.

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Deepika et al. (2025) introduced a hospital appointment and patient management system that integrates appointment scheduling, medical record management, and billing services. Their research demonstrates that web-based hospital management systems significantly reduce manual paperwork and enhance hospital workflow efficiency.

Sunil Kumar Yadav et al. (2022) developed an online patient appointment platform that allows patients to select doctors and book appointment slots through a web interface. The system reduces the need for physical hospital visits and improves the accessibility of healthcare services.

III. PROPOSED SYSTEM DESIGN

The proposed Online Medical Booking System is a web-based application designed to simplify the process of booking medical appointments and managing healthcare services.

The system consists of three main modules:

1) Patient Module: Patients can create accounts, view available doctors, check their schedules, and book appointments online. The system allows patients to select preferred doctors and time slots based on their availability.

2) Doctor Module: Doctors can view their appointment schedules and manage their availability. This module allows doctors to keep track of patient appointments and maintain their schedules efficiently.

3) Admin Module: The administrator manages the entire system including doctor information, patient records, and appointment schedules. The admin can also add or remove doctors and update system information.

The system architecture includes a web interface, application server, and database. The web interface allows users to interact with the system, while the server processes requests and manages the database.

The frontend of the system is developed using HTML, CSS, JavaScript, and Bootstrap to create a responsive and user-friendly interface. The backend handles data processing and stores information such as patient details, doctor schedules, and appointment records. The system ensures secure data storage and provides efficient access to medical appointment information.

IV. RESULT AND ANALYSIS

The Online Medical Booking System was implemented and tested to evaluate its functionality and performance. The system successfully allows patients to register, search for doctors, and book appointments online. Testing results show that the system significantly reduces the time required for booking medical appointments. Patients can easily check doctor availability and select convenient time slots without visiting the hospital physically. The application provides an intuitive interface that allows users to navigate through different features easily. The system also maintains a centralized database that stores patient information and appointment records securely. Hospital administrators can monitor appointments and manage doctor schedules efficiently through the admin dashboard. The system improves communication between patients and healthcare providers by providing accurate and updated appointment information. Overall, the system demonstrates improved efficiency, reduced waiting time, and better management of hospital appointments compared to traditional manual systems.

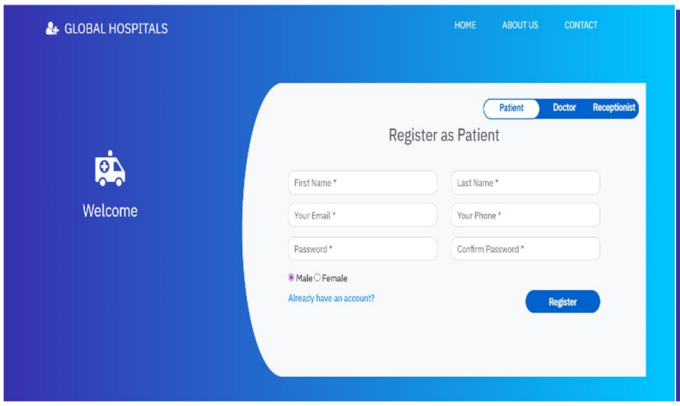


Fig:- Home Page

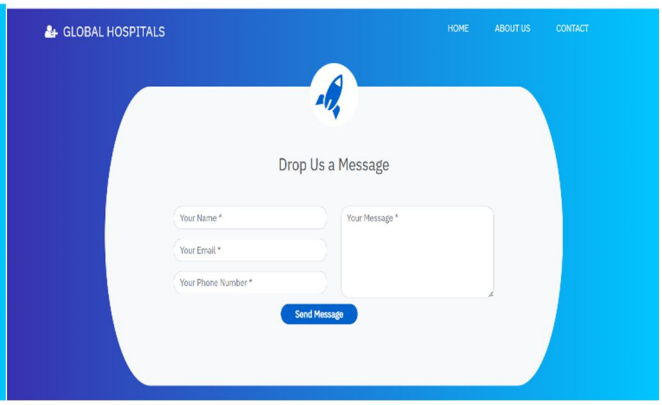


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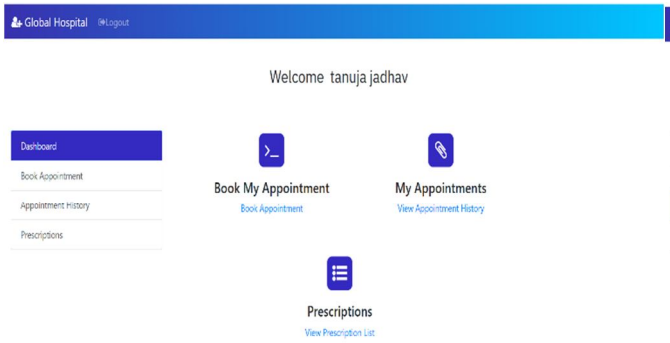


Fig:- Patient Dashboard

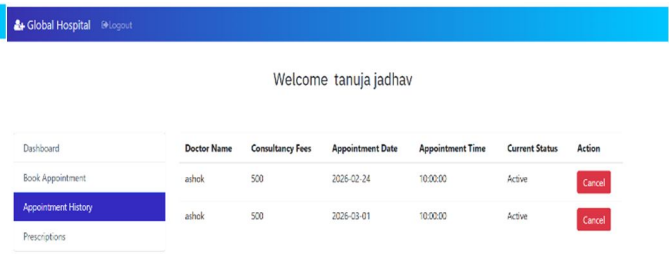


Fig:- Appointment History

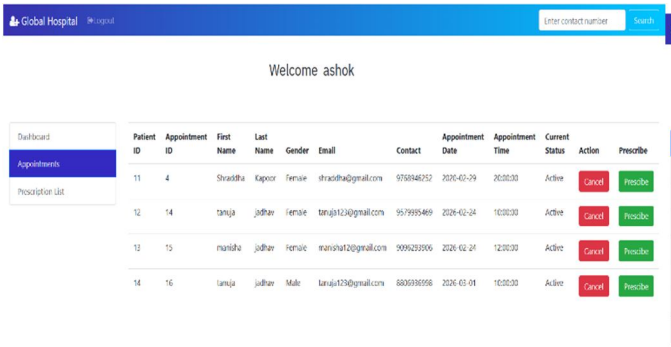


Fig:-Doctor History

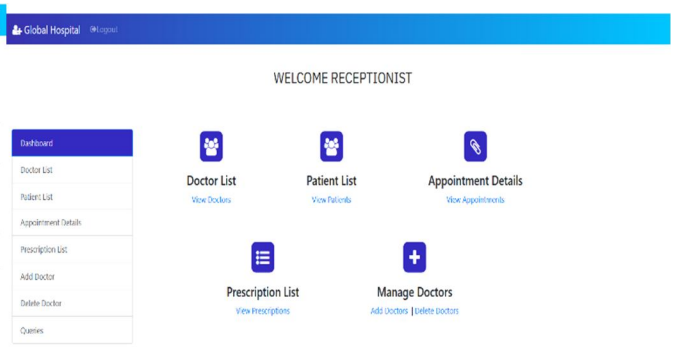


Fig:-Administrator Dashboard

V. CONCLUSION

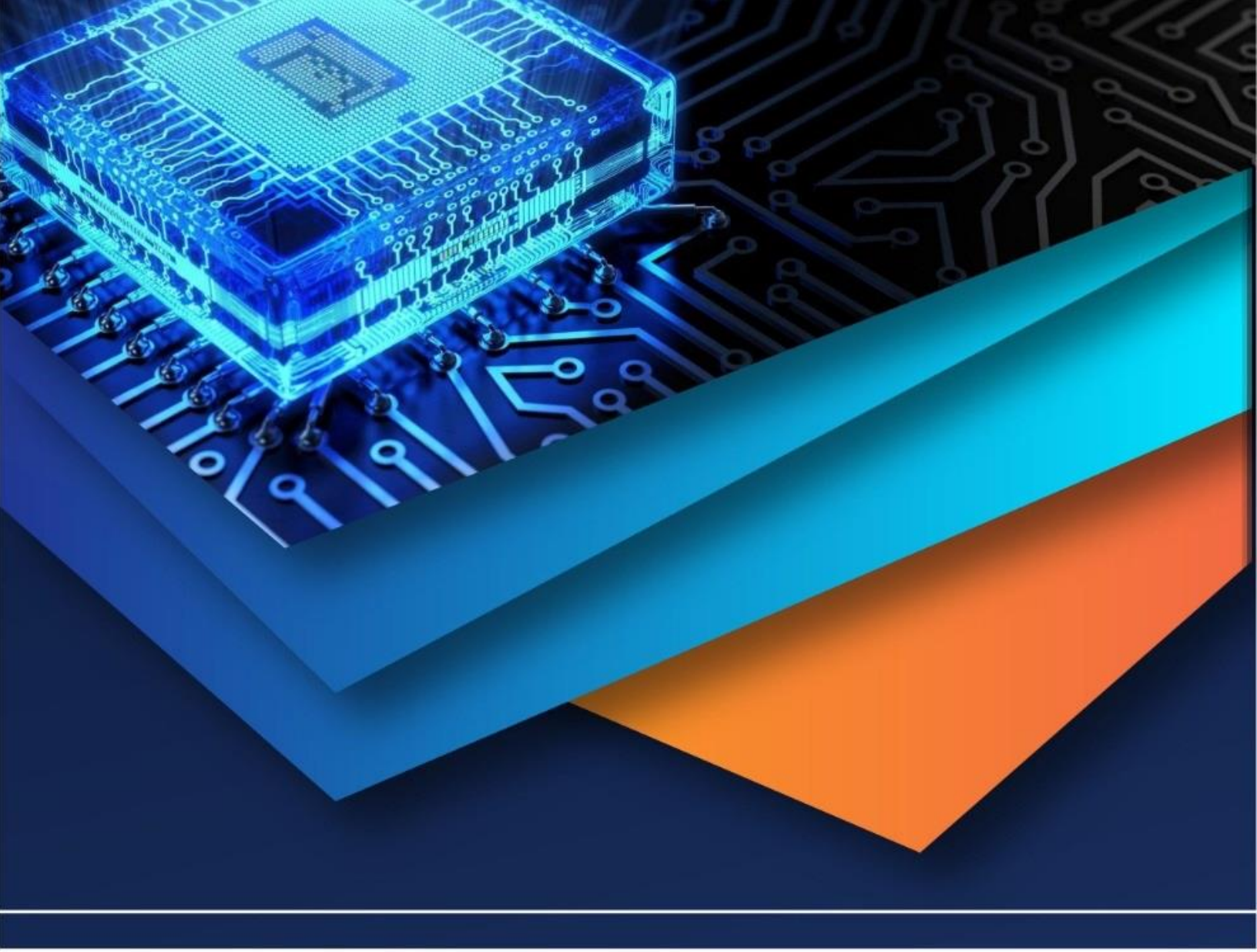
The Online Medical Booking System provides an effective solution for managing medical appointments in hospitals and clinics. The system replaces traditional manual booking methods with an automated web-based platform that simplifies appointment scheduling. The application allows patients to book appointments conveniently while enabling hospital administrators to manage doctor schedules and patient records efficiently. The use of modern web technologies ensures a responsive interface and easy accessibility. The system improves healthcare service efficiency, reduces waiting time, and enhances patient satisfaction. In the future, the system can be enhanced by integrating features such as online consultation, digital medical records, and mobile application support to further improve healthcare accessibility and convenience.

REFERENCES

[1] P. Zhao, I. Yoo, J. Lavoie, B. J. Lavoie, and E. Simoes, "Web-Based Medical Appointment Systems: A Systematic Review," *Journal of Medical Internet Research*, vol. 19, no. 4, pp. 1–14, 2017.
[2] Y. Xiong, "Research and Design of the Outpatient Appointment System Based on WEB," *Journal of Computing and Electronic Information Management*, vol. 11, no. 1, 2023.
[3] O. L. Akingbade and N. C. Onwuasoanya, "A Web-Based Online Doctor's Appointment and Medical Database Management System," *Iconic Research and Engineering Journals*, vol. 6, no. 5, pp. 18–22, 2022.
[4] A. Nageswari, N. Divya, G. Yashaswi Sri, B. Sarika Vishal, K. Spandana, and B. Banuka, "Healthcare Appointment System," *International Journal for Research in Applied Science and Engineering Technology*, 2025.
[5] Deepika, P. S. Jadimath, S. C. Yaligar, and P. S. Puranik, "Hospital Appointment and Patient Management System," *International Journal of Advance Research, Ideas and Innovations in Technology*, vol. 11, no. 6, 2025.
[6] S. K. Yadav, S. Prajapati, S. Yadav, and V. K. Yadav, "Online Patients Appointment Platform," *International Journal for Research in Applied Science and Engineering Technology*, 2022.
[7] R. Kumar, S. Shadheem, and S. Surya, "Web-Based Application for Doctor-Patient Appointment Management System," *Journal of IoT in Social, Mobile, Analytics and Cloud*, vol. 6, no. 3, pp. 261–270, 2024.
[8] R. Nanawati, Y. Basotia, R. Israni, and C. Kavadia, "App for Online OPD Appointment and Hospital Management System," *International Journal of Advanced Research in Computer Science*, 2020.

[9] V. Jogalekar, R. Pal, A. Yadav, and A. Ingle, "Development of Online Hospital Booking Portal for Patient," *VIVA Institute of Technology Journal*, vol. 1, no. 4, pp. 1–6, 2021.

[10] O. R. Shelke, J. S. Hardas, N. K. Mohite, and A. G. Rathod, "AI-Driven Doctor Scheduling for Efficient Patient Appointments," *International Research Journal on Advanced Engineering Hub*, vol. 3, no. 6, 2025.



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