THE DEVELOPMENT OF WEB-BASED DENTAL CLINIC

MANAGEMENT SYSTEM

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INTRODUCTION

The Dental Clinic Management System is a web-based platform that helps dental clinics manage patient records and data, manage dentists? data and availability, schedule appointments, and assist patients in scheduling appointments for walk-ins. The system also includes a dental assistant module where users can ask questions through a rule-based chatbot inside the system. The study aims to provide a reliable, convenient, and effective modern web- based system that benefits both patients and dental clinics. It also aims to enhance the usability and capability of existing systems by incorporating Progressive Web App technology. Technology has greatly benefited almost every sector, field, and industry. Design a web-based dental clinic management system with the following features. Automation improves not only health outcomes but also patient experiences by providing personalized care. The system includes notification reminders and alerts for appointment reminders and other important information users need to be aware of Dentist and Dental Service Review and Ratings; and. The password reset for a user account will only be successful if the user's email is valid and is an existing email address.

METHOD

Use AJAX to store the data in the database using PHP and MySQL. The system is designed to cater to two types of users, the admin and the patient. The user will be presented with his/her own user page containing personal account management, dental chart, and prescription for users need to take. Users can submit reviews and ratings for dental services and dentists. The users can close the web application by simply exiting or closing the tab or the browser window. Users will be able to log in as admin or patient. The Dental Clinic Management System uses the Progressive Web App technology. The patient can book and manage his/her appointments. The administrator can manage services. The dentist can rate the service(s) and the patient can rate his/hers dentist. The system uses HTML and HTML and CSS for the front-end front page in front of the front page for dentist. It includes ID for the codes, and email of the user, generated code, and date of the generated code. The Development of Web-Based Dental Clinic Management System, created by the team at the University of Groningen. The main focus is on booking appointments and developing a mealtime date and time tracker, as well as tracking dentist availability. Figure 3 provides a comprehensive system model of the study. The diagram showcases the various external entities that are expected to interact with the software, including the users of the web application. The web app should be installed on the home page or any device, and it should be opened through Windows. The steps conducted to assess the produced Dental Clinic Management System Web-based Application's acceptability with ISO 25010 are listed below. The steps were carried out to make the web-based dental clinic PWA PWA. The user should access the web application by using the address bar on any browser and any device with, that at least, meets the minimum requirements. The system features alerts and notifications that serve as reminders for upcoming appointments and other announcements. The user can now access the various sections of the web application when their account has been validated. The admin should be able to view, add, and set unavailability of dentists. Print all the records available for a specific user and use if else to show all records if there are no records to show, or show a no history message. The user can search desired dental service

and able to read more about it. The Entity Relationship Diagram (ERD) serves as a graphical representation of the data entities, their attributes, and the relationships. The system is designed to enhance and enhance the overall patient experience and clinic management. It illustrates the various components and their corresponding input and output. It also highlights the essential elements necessary for the smooth operation of the system. The chatbot is intended to be used to provide information on dental care. It will also be used as a tool to test and evaluate dental procedures. The system is intended for use in a web-based dental clinic management system. It can be used for a variety of purposes, including testing and evaluation. The study utilized modern web technology, Progressive Web Application (PWA) which offers advanced features that enhance user experience. The system offers personalized services, expands user capabilities, and provides innovative solutions through the implementation of new modules and Progressive Web App technology. Instead of dates, it displays 10-digit numbers since it provides a more practical processing method. The diagram serves as a visual representation of the operations within the system. It includes ID of Dentists, picture of dentists, name of dentist, the date of Dentist?s availability, and other dentist?S information. This section provides detailed procedures involved in operating and testing the system. The PWA offers a comprehensive overview of the software's desired functionality, requirements, and behavior. The software can be downloaded from the PWA's website or from a web app. The system can be installed using any browser or a device. It can be used to manage account details, manage billing, and change passwords. It is possible to add screenshots or a preview of the system to manifest.json to the system's manifest.

RESULTS

The developed web-based Dental Clinic management system has the following capabilities and limitations. The DCMS received its lowest rating in the "Performance Efficiency" criterion, with an all-weighted mean rating of 3.55. While DCMS performs well, some areas need improvement, such as using email-libraries and a faster hosting service. The development of DCMS prioritizes the Progressive App, providing all users with access to the system at any time, from anywhere, and any device. The developed system uses progressive web app technology. The system is designed to be highly efficient and user-friendly. The DCMS received its highest rating in the ?Portability? criterion with an overallweighted mean of 3.80, described as ?Highly Acceptable? The system will send an email notification to users after booking an appointment. It can also be used to log in to an account using the Gmail API and log in using the Google Play service. The limitations of the system include a lack of real-time notification. The main focus of the study was to revolutionize the management of dental clinics by developing an innovative web-based Dental Clinic Management System (DCMS) The system offers faster performance and cross-platform compatibility, which means it can be easily accessed from different devices and operating systems. The system was evaluated by a total of 30 respondents. The researchers have successfully developed the system, and have implemented progressive web app technology. The chatbot is not an AI that can answer all the user's questions. The PWA can be installed on any   a browser or device. The web app was able to view, add, and set unavailability of dentist(s) The offline functionalities of the system cannot be used to book appointments as it   requires an internet connection to complete transactions. The PWA was installed to enhance the patient experience, simplify clinic management, and provide users with expanded capabilities. It can manage their appointments and view dental charts and patient records. The system was tested on one dentist, one pharmacist, and one staff member. The system is divided into two parts: for users and for admins. Users can search for the desired service and read more details. The admin can edit, delete, and create invoices. The system has a rule-based chatbot where users can ask questions. It does not have features for tracking or managing dental supplies

and equipment inventory. It allows patients to manage profile, book, and cancel appointments online. It also shows the date and time Looked for the wanted service.

DISCUSSION

The Dental Clinic Management System (DCMS) is an online platform for managing patient records, and scheduling appointments, including walk-ins. The system is designed to improve the correctness and completeness of the dental clinic management system. It also aims to improve existing systems by using Progressive Web App (PWA) technology. The DCMS can be easily accessed on smartphones, tablets, laptops, or PCs. It can also be accessed on the user's home screen for quick access to patients and administrators. The DCMS offline functionality loaded and worked seamlessly even without an internet connection. The user interface was accurate and free from graphical errors or layout issues. Inventory Management for Dental Supplies and Equipment. create accounts. create an account. create a new account. transfer money from a bank account to a DCMS account. Transfer money from an account to another. transfer funds from an accounts to another account. Create an account and transfer money to another DCMS user. transfer cash to another user.