**DEVELOPMENT OF A WEB-BASED SYSTEM FOR SCHEDULING STUDENT MEDICAL TESTS AND MANAGING TEST RESULTS**

**PREPARED BY:**

**ISAH NASIRU**

**(CST21HND0351)**

**SUPERVISED BY:**

**MR. BALA DANAZUMI HARUNA**

**SEPTEMBER 2023**

**1.1 BACKGROUND OF THE STUDY**

Different Nigerian Polytechnic Institutions admit thousands of students every session and a major criteria of these students’ registration is to undergo medical tests. The importance of this initial medical test cannot be over emphasized, from providing health status to creating a baseline health database which can be consulted during emergencies, this test also ensures these prospective students do not pose any health challenge to other pupils of the institution but as the intake every year increases there is need for a convenient method of conducting these tests for the newly admitted students. The implementation of the web based medical test scheduler and result issuing system is to speed up the process of registration at these institutions of higher learning while solving the need to automate the most processes and move away from manually having to visit the medical centers only to book appointments for their said medical tests. Over the years this has shown to be time consuming students and wastage of money as they travel sometimes to set these appointments only to fail to meet the stipulated time.

**1.2 STATEMENT OF THE PROBLEM**

In past years this medical tests have been shown to be very tedious on both the students and the medical team performing the tests and because of the huge student’ information in the health care, it is not practical to keep using the paper documents for tracking and managing the student medical test schedules and because these tests are paramount for student registration, it creates a situation with long queues and no sense of order or control with some students missing lectures or classes just to have their medical test done. All these difficulties in the system prompted for a more convenient procedure that would not only help the students but provide a sense of order for the medical staff as well. The traditional way of handling the medical tests of these students have shown not to be so convenient anymore, this project undertakes the challenge to produce a more innovative measure to tackle this problem.

**1.3 AIM AND OBJECTIVES**

**The aim of the research work is to develop a Web-Based System for Scheduling Student Medical Tests and Managing Test Results to eliminate student waiting time during registration.**

**Objectives:**

**The objectives are stated below:**

1. **To design a web based medical test scheduler that enables admitted students schedule online for their medical tests conveniently.**
2. **To implement this system that also serves as a result issuer.**
3. **To evaluate the benefit and the advantages this system will have over the pre-existing traditional way of scheduling these medical tests.**

**1.4 SCOPE OF THE STUDY**

This research work is centered on the development of a favourable algorithm for scheduling medical tests for admitted students while allowing the students use the system online, book and confirm their own appointment by themselves, this system also provides a dependable medical database as well as provide results for the medical tests conducted, printable online, it also focused on the development of a user-friendly, web-based interface to serve its purpose

**1.5 SIGNIFICANCE OF THE STUDY**

This web-based student medical scheduler and result issuer system ensures that a convenient and an easy means of scheduling appointments. Students can then be batched into groups that are served conveniently based on appointment. This scheduler system provides an electronic document instead of using the traditional method (paper document) which made it uneasy to document and retrieve student information. On this note, the importance of a medical test scheduler and result issuing system cannot be over emphasized as it not provides the flexibility, and supports remote access for these students but also provides a well-managed medical database for these students.

Scheduling is an essential task in any medical line. This system organizes student appointments in flexible schedules.

**2.1 LITERATURE REVIEW**

**Sanjeevani et al. (2018). Doctor Appointment Online Booking System**

If a person becomes unwell and wishes to see a doctor for a check-up, he or she must go to the hospital and wait until the doctor becomes available. While waiting for an appointment, the patient simultaneously waits in line. If the doctor cancels the appointment due to an emergency, the patient will not be aware of the cancellation until he or she enquires about the delay. Because mobile communication technology is continuously evolving, one may employ mobile applications to address such challenges and discomfort for patients.

In conclusion, the presented work in this article is an Online Hospital Management Application that employs an Android platform to make scheduling a doctor's appointment simple and dependable for users. The architecture is designed to allow users to access the booking system via a portable computer system, a desktop computer system, or a mobile phone as a web browser. We employed client-server architecture and thin client-server. The application's front end is Asp.net, while the back end is a SQL database.

**Ele et al. (2020). A Web-Based Medical Appointment Scheduling with SMS Alert Notification System**.

Ele et al. (2020). A Web-Based Medical Appointment Scheduling with SMS Alert Notification System. Long wait periods for registering and arranging appointments with doctors are common in Nigeria, particularly at government institutions. The inability to make appointments remotely, as well as the lack of a clearly-defined alert notification system to remind patients and physicians of their appointments, inadequate and permeable security mechanisms for protecting patient personal information, long waits in lines and waiting rooms to see a doctor, as well as the inefficiency and high expense of health care delivery and services. In addition, missed healthcare visits are the leading source of avoidable incompetence that affects a patient's well-being and medication outcomes because there is no apparatus in place to notify patients when appointments are postponed or canceled. To address these concerns, a web-based medical appointment scheduling system with SMS alert notification is proposed, with the University of Calabar Teaching Hospital (UCTH) serving as a case study.

**Noorsyahira et al. (2017). Medical Appointment Application.**

Noorsyahira et al. (2017). Medical Appointment Application. The main issue addressed in this paper is how to overcome the limitations of the current manual medical appointment system, such as an increase in the number of calls for an appointment and a morning rush for an urgent appointment, as well as an increase in the need for extra reception staff due to the long queue in the Parit Raja and Batu Pahat areas.

Furthermore, the prototype model was employed in the application process. The hardware and software utilized to construct this system are MySQL Database and PHP and JavaScript programming languages. Although phpMyadmin software is used to manage the database, the application's interface is designed using Bootstrap.

1. **PROPOSAL METHODOLOGY**

The research approach is a rigorous investigation like this to uncover new facts or information about the existing system. The study’s research technique comprises firsthand information from the department and the internet

**3.1.1 INTERVIEW**

The primary goal of utilizing interviews as a data-gathering strategy is to collect data in a comprehensive and intensive manner. The researcher met with the project coordinators from the department and obtained trustworthy information based on the questions provided by the researcher.

**3.1.2 DIRECT OBSERVATION**

This approach was used to collect information/data for this study by examining how the manual system was carried out on business, art, and artifact vendors and online vendors that are actively involved in trading, the method provides varying degrees of control over the context in which they are used, and the careful inspection revealed the obvious flaws in the present system.

**3.1.3 INTERNET**

Internet as a method of data collection will be employed, the internet will be used in sourcing information from different events, and journals on regions that appear tough or perplexing in order to attain a workable result.

**3.2 CHOICE OF PROGRAMMING LANGUAGE**

This research work will be a web-based application and will be implemented on a relational database system (SQLite). HTML (hypertext markup language), CSS (cascading style sheet), and Django (python) will be employed in the back-end development. The above are the modern languages used in implementing this system.

**3.4 CHOICE OF PROGRAMMING LANGUAGE**

This research work will be a mobile-based application and will be implemented on a relational database system (SQLite). HTML, CSS, and JavaScript will be employed in the front end while Django (python) will be employed for the backend programming. The above are the modern languages used in implementing this system.

**REFERENCES**

Ele, B., Odey, A. J., Frank, E. N., & Ekinya, M. I. (2020). A Web-Based Medical Appointment Scheduling with SMS Alert Notification System. Transactions on Machine Learning and Artificial Intelligence, 8(6), 28–38. https://doi.org/10.14738/tmlai.86.9098

Noorsyahira, I., Shahreen K., Yusmadi Y. J., Rohayanti H., Ayu A. (2017). Medical Appointment Application. Creative Commons Attribution License https://doi.org/10.26480/aem.02.2017.05.09

Sanjeevani P. A., Wrushali R. A., Pallavi A. C., Puja T. C., Bhil, N. K. (2018). Doctor Appointment Online Booking System: The International Journal of Creative Research Thoughts (IJCRT) 6(2). https://ijcrt.org/papers/IJCRT1812133.pdf