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A Research Paper on Study of Performance of Online Appointment System with Respect to Traditional System from Patient's Perspective

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Abstract: ***Planning appointments has become a daunting task especially for health professionals in hospitals and clinics. Failure of appointment appointments can also result in dispersed appointments, increased number of shows, general patient dissatisfaction and financial losses for health organizations. Many day-to-day medical centers now use a combination of telephone-based planning and computer-based appointments but there is still a technical and human error gap. This online facility can add power to any hospital or clinic website. Reduces the hard work associated with managing a medical environment. More time to commit to patient care, better patient compliance and financial efficiency are other rewards. The integration of covid time, technology and rapid population growth has been strongly driven to introduce patient planning online. In this used project, you sometimes experience minor problems where you need to consult a doctor about your health problems or nearby and follow their meetings. The Online Doctor System will provide one authorized direct communication between the doctors of your choice if necessary for your minor problems. Using the web Online Healthcare System, patients will be able to complete online forms in seconds before entering the virtual office room. It will also allow you to upload your lab results such as x-ray copies, medical history etc which your doctors may refer you for.***

I. INTRODUCTION

Web applications have helped to simplify many of the daily activities that have made our lives easier. This type of program is widely used to help us overcome problems by arranging appointments. In the past, these appointments were made by hand and as a result, there were many reasons for over-booking or forgetting to cancel an appointment that could leave space to reschedule. To remove human error due to manual appointments manually, the web system will be upgraded to make the editing process easier.

Under the Online Healthcare System, you should first wait in line to take your doctor's appointment and then wait for your turn to meet them and discuss your health problems.

As you have to provide your details and other reports often in various places such as the pharmacy which is also responsible for the handling of documents. You should be physically present in the doctor's office. Patients should visit another day after a few hours to pick up their health reports which include the extra care of a patient with patients at any given time. Under the hands-on system, the only acceptable payment method is cash and if patients for some reason do not have the money at the time they may experience difficulties and may not be able to receive treatment.

To make the Online Healthcare Facilities program meet with doctors, the entire manual procedure is automatically done with this program. The patient must complete an online form in which the id and password were created and sent to their email and when they received the data, the automatic login to the patient panel. Through this panel, patients can select doctors and see them during their stay in their area. Patients will receive all of their treatment reports and instructions in their inbox at the notification point shortly after appointment. There is no need for money and a secure payment gateway is used to pay the required amount using their account or debit or credit card.

II. LITERATURE REVIEW

Lu and Ab Hamid (2007) have developed an appointment management system called WBAMS using Web Modeling Language (WEBML) and Net four tier architecture. According to them, their plan will allow them to schedule appointments to be more efficient and effective.

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III. MODULE

The authors have used six performance requirements to improve their online management system:

A. Patient Form and Login Module

For the first time guests, they should just enter their basic details and can access their dashboard. The system will handle the task of creating their new profile. For existing patients, they will have to enter their id and password sent to their email earlier. This module will prefer a virtual office where all the work can be done.

B. Online Appointment Module

At this stage, patients can choose doctors and discuss their health problems. Patients will be able to find the time of their diagnosis or choose from those available and begin their diagnosis immediately

C. Medicine Module

This module will provide details of the medications that patients should take after their appointment with the appropriate doctors. It will include the limits on which these medications should be included and the next date for a reunion.

D. Referral Module

The referral module will allow patients to change their doctors. In this procedure, patients should click on the name of the doctor who is being asked to find his or her request in a specific inbox and give their meeting time.

E. Payment Module

Patients will have to make their payments online to take services using this program. Each doctor will have certain fees that they have to pay before the start of their appointment session.

F. Online Report Module

Patients can obtain their lab results and health reports through this section located at the bottom of each patient's homepage. When the documents are available under this section, a special notification sign will appear to help inform their patients. Therefore, it provides relief for patients by carrying them here and there.

There are also ineffective requirements used:

1) *Usability:* The intuitive interface provided by the system.
2) *Performance:* Program response time offers.
3) *Preservation:* The ability to change an object without touching other objects.

The authors developed different perspectives for patients and managers using the system:

a) *Patient Viewing Location:* Contains Appointment, Patient Medication and Response.
b) *Administrative Site Management:* Appointment Views, Response Views, Physician Details, Patient Application Status.

IV. REQUIREMENTS AND DESIGN

A. Descriptions of Data Requirements

A lot of data needs to be stored in a database. This includes the details of each user, and their appointments. The data requirements provide a detailed description of the data model that the system should use to meet its operational requirements. In this section, we provide information about the required data, as well as any security issues surrounding access to that data. The system requires keeping records of patients, doctors and appointments. Patient details are recorded during registration. These are the ID and password. Each patient must fill out a mobile phone number that can serve as a unique ID. Each appointment can only be seen by the administrator and not the other patient. Patient-uploaded report cannot be seen by other patients. Each patient can select any doctor from the list provided. Medication given by a doctor can only be seen in that patient. Feedback provided by the patient can only be seen in the Admin.

The Online Health Center has allowed a patient to reschedule, cancel, and register. The recent online health facility system also allowed the patient to avoid possible complications and errors as a result of using paper registration. Because everything is done in real time, the registration process will be ready and done with the first arrival, which is the basis for initial registration. Allowing a patient to book their appointments with a doctor online has a few benefits.

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1) The program will be available 24 hours / seven days a week to allow for timely patient planning.
2) The patient will be able to monitor the doctor's appointment by appointment and plan accordingly.
3) The patient will be able to view a doctor's appointment by appointment. The doctor may prescribe medication after completing the appointment.
4) All procedures are performed in real time which greatly reduces errors and errors.
5) The doctor may prescribe medication after completing the appointment.

V. IMPLEMENTATION AND TESTING

In this section, used pages are displayed as can be seen during browsing in the Online Healthcare Facilities program.

A. *Implementation in General*

The implementation and implementation of an online health care system to manage appointments between physician and patient is the main objective of this study. The content of this application must be tailored to the needs of users. For example, slot bookings, administrator confirmation and patient cancellation should be used in this program.

In this procedure, the patient can register and have a meeting with the doctor in a given facility. They can also reserve appointments with doctors. In addition, they can manage appointments. For example, they can cancel or change an appointment.

Before concluding the meeting the patient can upload previous records that can be seen by the doctor on prescribed medication and after that the doctor can prescribe the medication. In the patient portal we can extract the prescribed medication and can provide feedback to the regulator regarding the request and the doctor. For that manager to be able to improve the app and be a very important part of the app so that we can make this app more patient.

B. *Description of Implemented Pages*

In this section, the main pages of the website will be explained.

1) Login Page
2) Nomination Page

The patient can book a doctor's appointment after considering the availability of space. They can choose the date and time of each appointment. By entering an Id and password they can enter the main portal for continuous conversion. However the supervisor may limit the patient from placing any appointment with a physician for any reason.

VI. SYSTEM TESTING

The system used was tested as follows:

1) Navigation between pages checked.
2) Patient registration is checked.
3) All users should be started by the administrator.
4) Patient registration is checked.
5) All patients should be supervised by a supervisor and allowed to access the Online Healthcare Facilities system.
6) Medical data submitted by the regulator regarding the medical examination.
7) Cancellation of booking and confirmation will need to be reviewed.
8) Emailing when a patient saves or cancels an appointment for an appointment.
9) Sending an email when the manager confirms that the appointment was checked.
10) The doctor's ability to prescribe the correct dose for the site was tested.
11) The patient can write down the medicine from the patient's website and get tested.
12) Limitation / unlimited patient by the administrator was assessed.
13) Patient feedback after completing an appointment has been assessed.
14) After the appointment of the patient we are required to pay an examination fee.
15) After the patient has completed the transaction logout is checked.
16) Data feed by admin regarding doctor on regular basis was tested.

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A. System Evaluation

The test occurs after the system has been in use for a few weeks. A field study was conducted to determine system features and user usage. In addition, the Online HealthCare Facility program has been compared to other static selection programs.

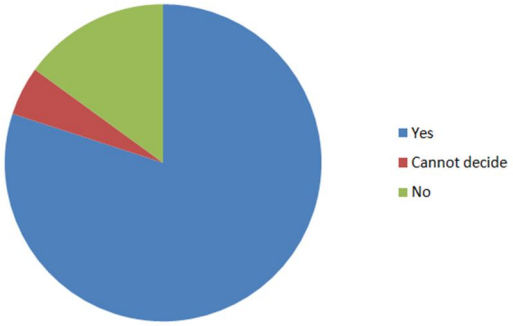
B. System Assessment

Some patients were individually asked to use the Online HealthCare Facility system and complete a questionnaire to get an answer and evaluate the entire system.

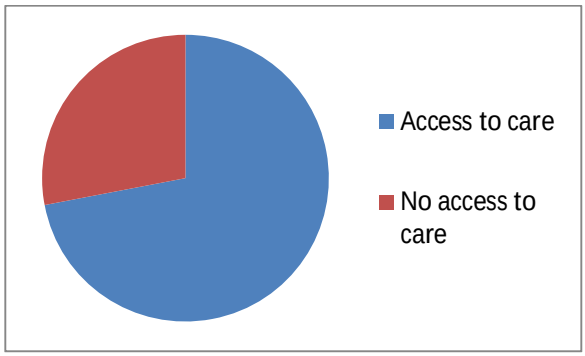
Each patient was asked to read the following situation and complete a list of questions:

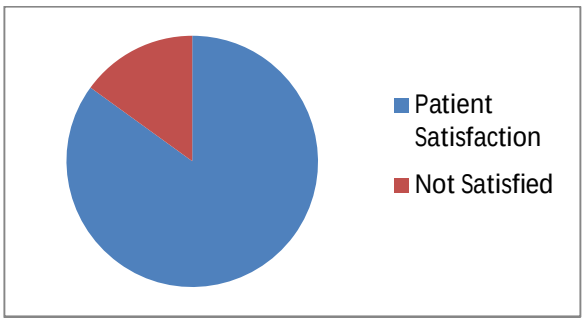
"Suppose you have to make an appointment with a doctor. You have visited our online health program. Please perform the following tasks:

1) Register
2) Log in to the website
3) Navigate the entire website.
4) Keep appointments
5) Cancel or change this appointment
6) Check your email
7) Provide feedback
8) Exit"



Top three benefits of virtual care relate to patient experience





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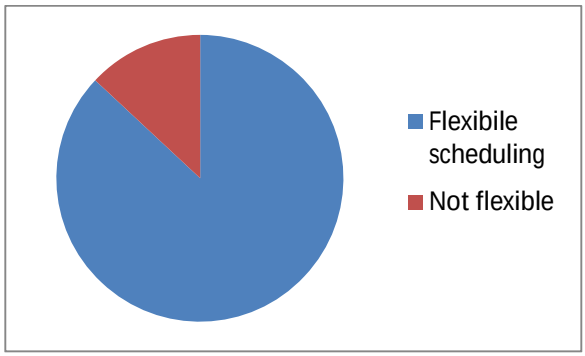

VII. CONCLUSION

Patient records are the primary data center in the comprehensive healthcare industry. Although clinical data is too powerful for a computer, the current, most important mode of recording patient care data remains a paper record. Paper records have the advantages of user familiarity and portability; if they are not very large, users can easily browse but if there are too many scripts it may be difficult to use. Paper records, however, have large, extreme limitations that often confuse users and perpetuate inefficiencies in the health care system. In addition, the impact of these restrictions is growing as the health care system becomes increasingly complex. Modern patient care needs have surpassed the paper record.

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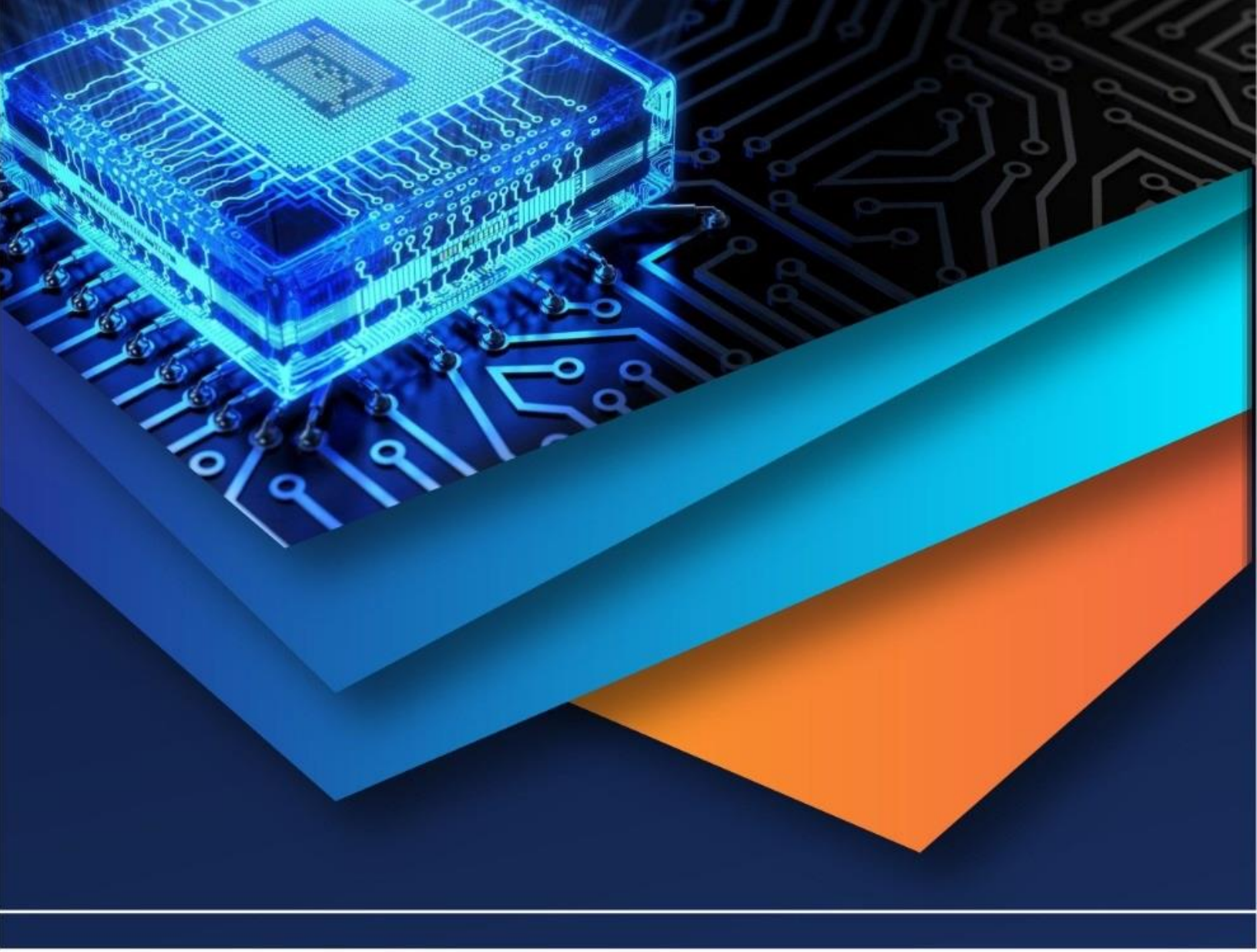

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