Hospital Management System using Web Technology

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ABSTRACT

Today's web-based technology offers many online services in almost every field. Every major industry is converting and establishing a digital front for all their major operations to get closer to the booming digital market. In today's world the information flow is very fast and redundant means won't add to the betterment of the individual or the organisation that's using them. Online connectivity is now a must for all the well organised and well managed establishments. One such field is Healthcare where the digitisation of information should happen rapidly and efficiently. This paper addresses that particular region and paves a way for the creation of a software that helps to an easy transition from paperwork to e-papers. The paper describes an idea of such a web-based platform that eliminates the need of paper prescriptions in the Hospitals that proposes E-Medical Management which will increase the efficiency of patient management, schedule management of the doctors and give universal access to the patient data anywhere in the hospital.
Keywords: Hospital Management; Database; Webpage; Interface

1. INTRODUCTION

As we have many industries turning towards the digital front and it could be a very great move for the legacy and necessary industry such as Hospitals to move towards that direction. The current existing module is efficient but when the time is not a constraint. We cannot have this system when each and every second matters. This system should include many features in the online front that include the patients records including his disease history and reports. Above mentioned data can be accessed by the respective doctor from anywhere around the globe. The storage of all these details would be done by setting up a database server. If a patient is admitted to the hospital, all the vital details would be updated for the

doctors to check it online. They can even give online prescriptions directly to the pharmacy specific to a particular patient with their patient id. Every person who visits the website can register themselves as a patient and get an unique Patient ID that is referred to in all the future transactions. A patient can take the appointments online and know the availability of the doctor. Notifications regarding the regular health check-ups and medicine reorders. Tips on regular better lifestyle and good Health are provided. Now-a-days each and every individual is bound tohave a smart device that connects him to the world of the

Paper is organised as follows, in Section 2, literature survey is discussed. Section 3 presents the methodology, Section 4 presents the proposed system, Section 5 contains the methodology of the project and Section 6 discusses the Results and discussions of the project, Section 7 discusses the conclusions and finally the future enhancements for the project.

2. OBJECTIVES

The primary objective of this project is to define, implement and build a system which offers support for the hospital management, that can be fulfilled only thorough achieving the secondary objectives that will be presented next. One of the objectives of this project is to enhance the efficiency in usage, that is measured through the expressivity and the consistency of the graphical user interface. A user is considered to be efficient when using a system if the time necessary to execute a certain task decreases with each usage. Another objective is to create a system that allows further improvements, extensions of the current functionality. The system should be able to offer the opportunity to manage patient details, doctor's details, schedule appointments, view prescriptions, order medicines online and make online payments.

3. PROPOSED SYSTEM

The existing system is not completely digitised; most of the processes like registration of patients, sharing their reports, sharing the prescriptions are offline which involve a lot of paper and consume a lot of time.

This project has focused on reducing the amount of paperwork involved and also reducing the time involved in these processes. Also we have integrated a predictor module which can predict the disease of a patient. This project has been designed into two modules. A patient and a doctor module. In the patient module a web interface was designed which allows a user to register to the hospital website, schedule appointments, make payments and view reports online. The appointment with doctors is automated using the ID3 algorithm (i.e. when a patient requests for a doctor the available doctor is directly allotted by the system). There is a disease prediction section in the patient module that predicts the disease by analyzing the symptoms they enter. The doctor module is another web interface where a doctor can view the patients assigned to him, view their history and he can add his comments about the patients visit. There are two other sub modules for the pharmacy and lab staff where they can view payments made by patients and share the reports and bills. Also there is an admin module who can view all patient details, view all doctors details, add new staff details, update existing staff details.

4. METHODOLOGY

There are two modules that are identified, Patient and Doctor modules. The patient module is used to book appointments, make payments, view reports and see their medical as well as payment history. The patient module also contains a disease prediction section where the patients Whereas the doctor module has the User Interface (UI) for the employees to access the database. There are four types of users in the Doctor module. They are Admins, Doctor, Lab staff and Pharmacy staff. They all have hierarchical access to the database. Admin is responsible for adding the users to the database and giving access based on their designation. Users with Doctor access can view his patients details, give medicines and view the tests assigned to him. Lab staff are incharge of the payment section and reports. Pharmacy staff can add or remove the medicine details and dispatch the medicines based on the payment details. Following figure describes the doctor module that mainly focuses on confirming the appointments of patients and sharing reports. And the patient module focuses on registration, secured login, booking appointments, viewing reports.
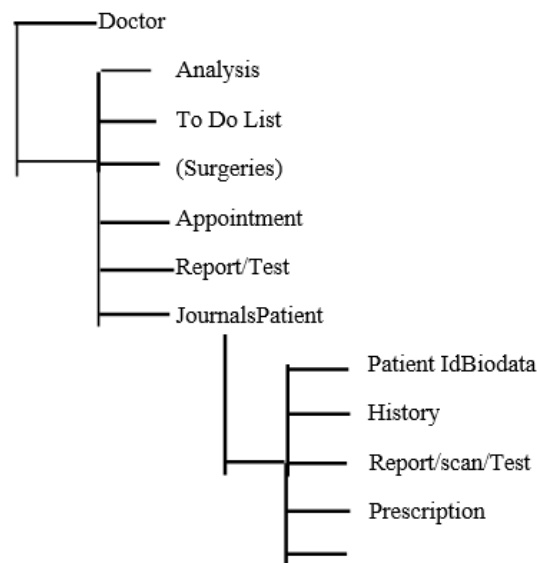

Figure.1 Doctor Module

5.RESULT AND DISCUSSION

Main page has the profile of the staff member.

5.1 Patient tab- allow price page allows the user to coelom he price and share the bill with the patient and dispatch page allows the user to confirm the dispatch of medicine Medicine tab allows the user to update prices and stock details of existing medicines and add new

5.2 Medicine tab- allows the user to update prices and stock details of existing medicines and add new medicines. main page displays the profile of the admin.

5.3 Add tab -allows admin to add new doctors and other staff also allows him to approve users.

5.4 View tab-allows admin to view the patients, doctors and staff details and also alter them. main page displaysthe profile of the doctor.

5.5 Patient page- allows the doctor to confirm the appointment, share reports to the patient and also view the history of the patient. main page shows the patient profile My orders tab shows all the medical or lab orders related to the patient. Patient tab allows patient to view other profiles and also book appointments. Payment page -allows the user to make additional) payments for other orders and also add money to online wallet

6. CONCLUSIONS

Since the Hospital Management System is essential for maintaining detail about the Doctor, Patient, Hospital staff etc. It is understood that on the introduction of the hospitals would be seamless and efficient. Transforming the patient data would take only seconds compared to the traditional way of sending the file manually. Usually boring and mundane accounts work will also be automated and simplified.

7. FUTURE ADDITIONS

Some basic algorithms like ID3 have been used for the allotment of Doctor and prediction of disease. Further some complex algorithms can be used to improve the performance of the system.

9. REFERENCE

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