Secure Optimum Medical Practitioner Spotter

[1] A.Arun kumar, [2]C.Shanthi, [3]T.S.Poonguzhali

[1] PG Research Scholar , Dept. of Information Technology, School of Computing Sciences,VELS University Chennai.
[2] Asst Professor, Dept. of Information Technology, School of Computing Sciences,VELS University, Chennai.
[3] Asst Professor, Dept. of Information Technology, School of Computing Sciences,VELS University, Chennai

*Abstract: **Paperless hospital service is system which is to register and store patient details automatically. Using this software, patient can get the appointment for a particular doctor for check-up or lookup for specialists in and around that area. So that patient will not need to look for the doctor in a locality. And also using this software, doctor can also get the details of the patients who is about to meet him on that day. More over doctor can upload the patient medical records as well as the medical prescription in a web page. After uploading medical records in the web page medical shop will get the notification about the medicine they need to deliver to patients. After that patents can go to the registered medical shop and make the payment in the shop and get the medicine prescribed my doctor.***

Keywords *: web using Doctor–patient communication, online Doctor Appointment.*

I.   INTRODUCTION

Secure Optimum Medical Practitioner Spotter is a website that provides online interaction between patients, doctors and the all other users. The main objective is to provide essential medical services online to everyone hardly matters whether the people live in metro or a remotely located village. Users can connect through their home internet to get these services. The system design is motivated by factors like very few doctors or no doctors at remote locations, limited hour services and lack of sophisticated medical equipments and there are no patients' or the lab data management.   It can be used by the patients to take online appointments of doctors, view their previous health records, lab reports etc. The doctors can give online appointments, e-prescriptions and view the patient's history.. This system can be entered using a username and password. It is accessible either by admin, doctors or patients manager. The data can be retrieved easily. The interface is very user-friendly. The data is well protected for personal use and makes the data processing very fast

Waiting Time:

Waiting time simply means a period of time which one must wait in order for a specific action to occur, after that action is requested or mandated .Patients' waiting time has been defined as "the length of time from when the patient entered the outpatient clinic to the time the patient actually received his or her prescription". It is defined as the total time from registration until consultation with a doctor. There were two waiting times, the first is time taken to see a physician and the second is time to obtain medicine. This paper deals with the waiting time to see physicians. Long waiting times are a serious problem for patients using urban health centre's in developing countries. A block appointment system was introduced and evaluated in a large South African health centre. Waiting times of all patients were measured over one-week period before and after the implementation of appointments. Focus groups and individual interviews were conducted with staff and patients. After introducing appointments, patients with acute and chronic illnesses and having appointments had significantly shorter waits time than similar patients without appointments. Appointments had no benefits for patients not seeing doctors or collecting repeat medication. There was, however, an overall increase in patients' waiting times after introducing the system, mainly due to one typical day in the follow-up study. Focus groups and interviews revealed that staff were skeptical at baseline but at follow-up were positive about the system. Patients were enthusiastic about the appointment system at all stages. The study shows that block appointments can reduce patients' waiting times for acute patients, but may not be suitable for all patients. Staff and patients had different views, which converged with experience of the new system

II.   Patients' Appointment

A patient appointment system or appointment schedule for health care center started long time ago Management of patients' appointments has earlier works and has developed simplified queuing models and fairly static scheduling conditions. Another attempt was made to calculate the ¬¬¬waiting time between patient and doctor using the mathematical queuing models to

minimize waiting time . However; traditionally the appointment system has considered that the doctor time is more important than patient time. So an appointment system was designed to minimize the doctor idle time but current designing of an appointment system is based on decisive factors with respect to both the patient and doctor . The patient appointment system has complex structures because it represents the patient appointment time in the healthcare center and controls the patient waiting time based on the type and the period of patient appointment.

Appointment Delay

Past research shows that the longer the appointment delay which is defined as the time between the day a patient requests an appointment and her actual appointment date, the higher the chances that he/she will cancel or not show up. This suggests an obvious way of minimizing no-shows and cancellations: this is done by asking the patients to come right away or make appointment requests on the day they want to be seen.

Managing Patients Using Appointments

Appointment system is a computer application used to manage and reduce the patient waiting time in the health care center. Some health care centers do not use any appointment system. So it has a longer average patients' waiting time than the health care center that adopts the patients' appointment system. While patients can wait for more than one hour to be attended to by a physician in a health care center, they also can feel that they are being disregarded and treated unfairly. So when patients are given the time of appointment in a health care centre, they can evaluate the quality of service in the centre. Hence, developing patients' appointment process for health care centres necessitates the use of a sophisticated queuing model that captures much of the real system's features (saving time, reducing idle time, etc).

Booking System

An online system is also known as a web based system. A web is made up of page that is commonly known as web page or web site, and a web site is a computer program that runs a web server that provides access to a group of related web pages. A system is a set of independent components working together to achieve a common objective. Therefore a web based system is a system that is accessible over the internet by a user in order to achieve a particular task for a given purpose. The Internet is a system that is use to connect computers and computer networks. It helps to link millions of computer networks all over the world and it allows the users to get information stored on other computers from a long distance . But with the growing internet penetration, healthcare industry is moving towards the use of an online appointment booking system. A web-based appointment system . A person can either go to the hospital directly for consultation day by day or make an appointment from home through phone call or online booking if his condition is not emergent . The Internet provides a wide range of technologies that enable hospitals to communicate with their patients. Recently, as the prevalence of Internet increasing, many hospitals initiated the website appointment system.

Existing Hospital Appointment

Under manual system, you have to first wait in line to take appointment for the doctors and wait for your time to have meet with them and discuss on your health problems. As you have to provide your information and other reports many times at different places such as the medicine store which is again a burden of carrying documents. You have to be present physically at the doctor's cabin. Patients have to visit on another day of after some hours to take their health reports which involves extra care person with patients anytime. Under manual system, the only accepted payment method is by cash and if patients due to some reasons are not having cash on time may face difficulties and not able to get treatment.

Problems with existing system

   All records may not be handled or written by the same person, so the format will be different resulting in loss.

   The lifetime of paper record is very less that it easily get damaged, thus resulting in loss of data.

   It is quite difficult for generating the reports and is time consuming for any updation.

   The great limitation to the existing system is that, service to the customer is limited

Manual system needs more manpower for its functioning than computer system. Expenditure is high in terms of salary and time.

The other limitation of the existing system is that there is no communication between doctor and patient when they are away from the hospital

III. PROPOSED SYSTEM:

The proposed system overcomes the difficulties faced within the existing system. The new system is a user-friendly computerized system. Paperless hospital service is system To make a system to have meet with online doctors, all manual process has been automated through this system. Patient have to fill online form by which id and password created and send to their reports and upon accepting data, automatic login to patient panel. Through this panel, patients can select the doctors and have appointment with them on their time from their own place. Patients will get all their reports and medicine prescriptions in their inbox by notification indication just after appointment session. There is no need of cash and a secure payment gateway has been used to pay the required fees using their account or debit or credit card.

ADVANTAGES

Provides an easy department and doctor detail adding section. Provides provision for updating the details regarding the doctors and department. Make the advance registration process fast and efficient.

Provides the enquiry section fast and integrated. Make the selection of a doctor from a department easier. Fast and efficient reports about the doctors. Provide an easy way to see the details of patient every day.

Provides an easy communication that is chatting facility between the doctor and patient when they are away from the hospital.

Provide an offline messaging

IV. METHOD USED FOR DEVELOPMENT

Our study employed qualitative methods complemented by analysis of census data.

Database was developed using MySQL for the system. In the process of developing medical appointment booking system for patients, records were stored in the database. MySQL in xampp server was used to create and populate the database. The medical appointment booking system for patients. The application was implemented using Notepad++, and PHP. Apache was used as the server to provide basic functionality of the web Server Apaxhe. PHP was used as a scripting language to program the server side that manipulates the knowledge in the database.

### V. SYSTEM ARCHITECTURE AND USE CASE DIAGRAM

System Architecture

The architecture is structured to allow users to make use of portable computer system, desktop computer system, and mobile phone as web browser to access the booking system. Client-server architecture was used and we used thin client-server. The medical appointment booking system has two components namely: the server-side and client-side that run on the browser. In the client approach almost all the processing work was done on demand at the server end and the client task was to display data and information on the screen. While in thin client-server architecture, the web browser is the client. This architecture was used because with it users will not be required to install any software on their PCs expect a standard web browser, which often come, with most PC operating system and almost all the current standard mobile phone. Clients would also not require any powerful PC; users can use any PC with a web browser such as laptop/notebook, mobile phone, and desktop PC. The servers would require higher configuration (in terms of hardware) because it would be regularly subjected to heavy load.

Use Case Diagram

The use case diagram is used in presenting the system requirements of any proposed system. A use case is a realistic description of the workflow of the system and it is used to explicitly describe the intentions and actions of users. The use case diagram, which present the system requirements are used to show how the proposed system work in practice. The interaction between actor and use cases are also described using use case diagram. The use case diagram of the medical appointment booking system
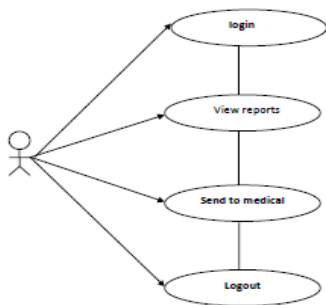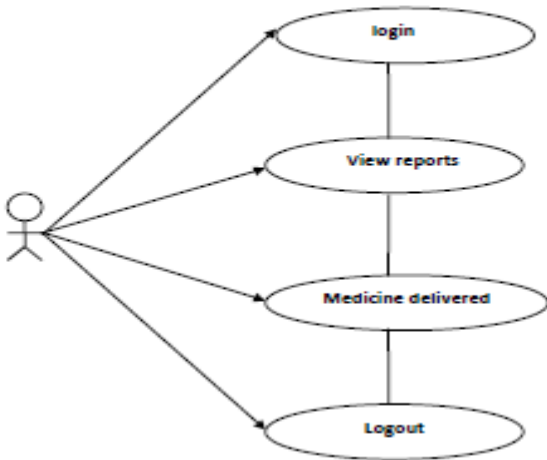
doctor login
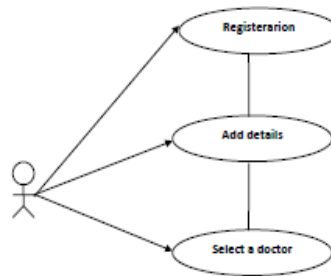
Medical login

VI. CONCLUSION

The system of processing can be used by the people in rural areas can also use, who are far away from hospitals. The system also provides computerized self test to the users and suggesting the appropriate medicines / suggestions to their problems.

Reference

[1] H. F. Zhang, "Software Engineering," Tsinghua University

[2]Press, Beijing, 2007, pp. 10-15. Stewart D, Sullivan T. Illness behavior and the sick role in chronic disease. The case of multiple sclerosis. Soc Sci Med. 1982;16:1397– 1404.

[3] Cotten S, Gupta SS. Characteristics of online and offline health information seekers and factors that discriminate between them. Soc Sci Med. 2004;59:1795–1806.

[4] Adesina, D. (2009). The National Health Insurance Scheme. Retrieved October 3, from http://www.nigeriandoctor.Com/news.php?extend.85D.

[5] Arodiogbu I.L. (2005). Introducing Social Health Insurance to solve problems of poor health Sector in Nigeria. MA Thesis. University of Leeds.

[6] Bailey, N. (1954). Queuing for medical care. Applied Statistics 3, 137-145.

[7] Cayirli, T, E. Veral, and H. Rosen. (2004). Assessment of patient classification in appointment

[8] Denton, B., and D. Gupta. 2003. Sequential bounding approach for optimal appointment scheduling,

IIE Transactions, 35, 1003—1016.

[9] Johnson, J. A. & Stoskopt, C. (2009). Comparative Health Systems: Global Perspectives.

[10] Pernice R. & Brook J. (1996) Refugees' and immigrants' mental health: association of demographic and post-immigration factors. Journal of Social Psychology 136 (4), 511–519.

[11] primary health care. In: K. Dew & P. Davis (Eds) Health and Society in Aotearoa/New Zealand (2nd edn), pp. 194–210.