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Globalization of Hospital Management System

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Abstract: *The project is to make the hospital system globalize which provides the privilege to the patients to access the hospital service globally through computerized method of services. To personally consult doctor visiting their clinic is quite hard for some category of people due their busy schedule. People who are the part of some organization or industries find it difficult to manage time from their busy schedule to save their leave which they got from their companies. Thus sometimes they ignore to go to doctor for checkups to the minor problems which can leads to major if not treated well and on time. As we are moving towards digital India, it is an essential need to make hospital system also digital to make people available with the computerized hospital system which can save their time and money too by providing hospital services digitally and globally in addition with the services of online pharmaceuticals and home delivery of medicine using cash on delivery system. Digitalization has realized high efficiency and space saving in a clinics and hospitals. Most importantly the project focuses on the emergency situation to manage them and handle them efficiently by providing ambulance services.*

I. INTRODUCTION

The project GLOBAL HOSPITAL is a portal in which all the hospitals are connected together globally forming hospital management system. It provide certain services in which patients, doctors, pharmaceutical manufactures will register themselves using unique ID containing their record right from the beginning. The main aim of our portal is to provide more service in less time. Thus we can say that it is a one step forward towards digital India.

II. RESEARCH METHEDODOLOGY

With continuous developments in science and technology, especially in the technology revolution of cloud computing, internet, and mobile internet, the mass of data grows at an incredible rate.

Humanity has quietly entered the era of “Big Data,” which refers to Compared to the original decision support system, data mining technology is more convenient for integrating data. It can be said that big data and data mining technologies open the door to success. In this paper, relevant concepts of big data and data mining, the classification and characteristics of data mining technologies, and the application of data mining in medical and health fields are discussed. Large-scale data sets that cannot be captured, managed, or processed by common software tools. Big data mining has a brilliant future in medical management. It can help to analyze medical operation indicators of hospitals for a period of time, including medical information management, medical quality management, medical supplies management, financial management, medical dispute management, doctors work performance, hospital management, decision-making management.

Thus we have explained patients profile, doctors profile and linking of hospital with ambulance as per requirement during emergency conditions as specified in our project.

III. BASIC CONCEPTS OF HOW THE PROJECT ACTUALLY WORKS

A. Data Mining

It can be said that big data and data mining technologies open the door to success. In this paper, relevant concepts of big data and data mining, the classification and characteristics of data mining technologies, and the application of data mining in medical and health fields are discussed. Large-scale data sets that cannot be captured, managed, or processed by common software tools. Big data mining has a brilliant future in medical management. It can help to analyse medical operation indicators of hospitals for a period of time, including medical information management, medical quality management, medical supplies management, financial management, medical dispute management, doctors work performance, hospital management, decision-making management.

B. PHP

PHP (recursive acronym for PHP: Hypertext Preprocessor) is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. What distinguishes PHP from something like client-side JavaScript is that the code is executed on the server, generating HTML which is then sent to the client. The client would receive

the results of running that script, but would not know what the underlying code was. You can even configure your web server to process all your HTML files with PHP, and then there's really no way that users can tell what you have up your sleeve.

The best things in using PHP are that it is extremely simple for a newcomer, but offers many advanced features for a professional programmer. Don't be afraid reading the long list of PHP's features. You can jump in, in a short time, and start writing simple scripts in a few hours.

MySQL is the most popular Open Source Relational SQL Database Management System. MySQL is one of the best RDBMS being used for developing various web-based software applications. MySQL is developed, marketed and supported by MySQL AB, which is a Swedish company. This tutorial will give you a quick start to MySQL and make you comfortable with MySQL programming.

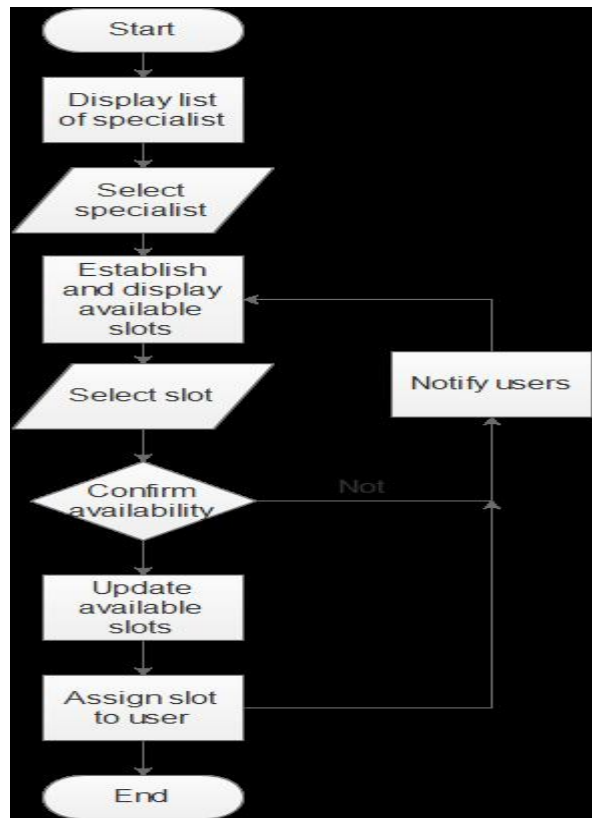
C. Figures and Tables



Fig:How doctors module actually works



Fig:Flow according to selection of doctors



IV. GLOBAL HOSPITAL MANAGEMENT TASKS AND FEATURES

In this section, we review the literature on the use of the mobile technology in appointment scheduling by hospitals. The primary objective is to find out exactly areas where improvement can be made to support the health landscape in Tanzania.

Appointment scheduling via paper-based system requires patients to be at the hospital, fill in registration forms and return them to the registration desk, and patients are then assigned to the desired doctor. Sometimes, patients place hospital identification cards or appointment cards in the dedicated box near the doctor's room, and then wait in the queue to be called by the nurse. Cards are placed in the order of first come, first serve (FCFS), whereby the patient who came early is the first to be served and the last to show up waits on the queue. Patient information in the paper-based appointment system cannot be easily corrected when changes need to be made: another form will need to be filled in, and the data entry registration desk staff experience problems in reading information written in the paper appointment forms, and it is difficult to retrieve patient details when required as you need the entire appointment application form ([8]). This type of appointment scheduling system has a range of constraints, such as patients being required to fill in appointment forms upon arrival at the hospital, and there is no possibility to register while at home or any place as a result, patients spend a lot of time waiting in queues, are required to follow dates of appointment assigned by the registration desk, and there is no mechanism for patients notification when appointments are postponed. Additional, managing paper-based hospital appointment system is difficult to manage, hence the need for a new method. The use of mobile appointment scheduling can enhance hospital appointments as it will allow patients to make appointments before going to the hospital. Patients can be reminded of the appointment as well. The clinic can monitor patient's performance while on the provided treatment, and the patient can select desired date of appointment based on his/her wishes.

Near field communication technology is a wireless communication that is used to transmit data at a short range of distance, approximately 10cm ([9]). The intelligent agent system was developed for appointment scheduling where patients can register and make appointments through mobile devices and eliminate the registration desk staff ([10]). Smart technologies for mobile appointment have been developed where patients use mobile and Near Field Communication Technology (NFC) ([11]). Patients need to tap their NFC cards into NFC readers at the main entrance gate of the hospital, and once there is an information match, the other scheduling procedures follows.

Engagepatient.com is an online appointment scheduling system where patients need to register or sign up online in order to make appointments. New patients are required to have email accounts at the initial stage of registration. Once registered, patients are required to fill appointment forms at their own pace without queuing.

To facilitate effective service delivery in hospitals in Tanzania, a mobile system for patient appointment is proposed where patients need to download and install the application in their mobile phones, and then they can register on the application and receive username and password which can be used for login in the application. After login, patients need to select filtration type, and a list of doctors is displayed based on the selected filter. Then, the patient is required to select a desired doctor and his/her schedule is displayed, and finally the patient can make an appointment based on the doctor's free time slot.

V. FUTURE WORK AND OPTIONAL MODULES

Laboratory Information System - The Laboratory module automates the investigation request and the process involved in delivering the results to the concerned department/doctor of the hospital. Laboratory module starts with receiving the online request from doctors and also allows laboratory personnel to generate requests. The Laboratory module supports to perform various tests under the following disciplines: Biochemistry, Cytology, Hematology, Microbiology, Serology, Neurology and Radiology.

VI. PROBLEM STATEMENT

Multi-agent systems are widely used to address largescale

distributed combinatorial real world problems. One such problem is meeting scheduling (MS) in health care domain that is characterized essentially by two features defined from both its inherently distributed and dynamic nature i.e. the presence of patient's preferences that turn it into a search for an optimal rather than a feasible solution. In this connection at least the following questions arise:

- ? When should the meeting take place?
- ? How to reach an appropriate hospital?
- ? What are the services available within hospital?
- ? How fast the doctor is available?
- ? Which Doctor is free to fix an appointment?

VII. CONCLUSION

The efficiency of any system designed to suit an organization depends cooperation during the implementation stage and also flexibility of the system to adopt itself to the organization. Globalization of hospital system takes care of the activities related to the



scheme provided by the government. The major responsibility is to take care of the proper utilization of different schemes in a transparent way.

Reduction in the time spent by the staff to gather the information & to store it in an organized manner. Also reduction in the time for generating reports related to various activity like diagnosis report, death certificates, fitness certificates etc.,. Making the appointment system easy which was early really very time consuming and also make the grow towards digitalization

VIII. ACKNOWLEDGEMENT

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