Mediguide’s Cloud Based Service
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Abstract:
Mediguide is an appointment Booking Website which will allow patients to view real-time availability and book instant appointments with doctors. It will allow patients to find and select the right health care giver, digitise and take control of their healthcare records. Patients will be able to choose the doctor from his/her description (dentist, cardiologist, etc.) and decide whether the doctor is appropriate for the patient or not. Also he can consult the doctor online and if an appointment is required, it can be booked instantly. The patients will also be able to access the ambulance service of hospitals that will help them save time. There will be a Cloud that will maintain the information of all patients with a unique “id” number. This patient will be recognized at any hospital with his id number and his all past and present medical records can be retrieved from the cloud.

Keywords: Cloud, Hospitals, Internet, Medicine

I. INTRODUCTION

Healthcare consistently has been an important thoughtful concern the all-time for humankind. In the last decade, with the fast development in web and internet technologies, smart hospitals have developed manifest in our lives. Advancement in the technology has changed the world along with thinking of the world due to the development of smart phones and other handheld gadgets. We lack at monitoring, communication and tracking of assets and patients. And there is no common framework to manage the patients and others assets at one place. The main reason we use the cloud service instead of the local server is because the server might get crash due to many reasons which may lead to loss. But in case of cloud, it not only is safe but also easy to maintain and access in any circumstances. It is the collection of computers on Internet that are used by organizations to offer services. On cloud services that is being offered is a revolutionary storage method in which the data is stored in the logical pools. It is an alternative method to buy an external hard drive where we can delete old files so as to make room for new ones, cloud storage is effective and beneficial economically. It stores your files on server out somewhere in internet, rather than on local hard drive. The aim of the system is to achieve the best possible support of patient care and administration by electronic data processing. Mediguide handles receiving, processing and storing information generated by medical laboratory processes. It presents the patient with the right department, doctor name, appointment date and time, possible medication and laboratory tests subject to doctor’s confirmation. The Mediguide is a responsive website which allows a user to view real-time availability and book instant appointment with doctors. It will empower patients to find and select the correct health care, digitise records. Patients will be able to choose the doctor from his/her description (dentist, cardiologist, etc.) and decide whether the doctor is appropriate for the patient or not.

II. PROPOSED METHODOLOGY

The ultimate goal of proposed architectural framework is to provide better communication, monitoring of patients, tracking, early diagnosis and treatment, interoperability of data and so on. These features are directly related to better patient healthcare and easy and efficient management of overall hospital. The primary participants here are the doctors, hospital and the patients who will use system. The patients who visit the site for searching an appropriate hospital or for viewing frequently asked questions to doctors or get contact numbers of doctors need not register. They can save their time and search as much as required to them. The site also provides the functionality of booking an appointment with a doctor. But for booking an appointment the user/patient needs to get registered with mediguide. The registered user can login and book an appointment with the doctor. Once he registers himself he can avail our various services. If in case the doctor is not available for an appointment, the patient can have a live chat with the doctor for consultancy. The users can also book an ambulance at the time of emergencies. The ambulance service will also be advanced enough to provide the patient the optimum path by analysing the traffic in the route of hospital. The form filling if required can be filled while moving the patient from his place to hospital in the ambulance. The information about the appointments for ambulance and doctors are maintained in the hospital’s database for their future reference. The same information about hospitals as well as about the number of people visiting the site is maintained in the administrator’s database.

The cloud server is maintained by the administrator. The cloud maintains the exclusive patient’s information on the cloud. Starting from the patient’s unique id to its personal information, from his medical history to his laboratory test reports and from his previous doctors to his allergic details. The cloud maintains the entire history of patient. The cloud is accessed by the respective hospitals. The administrator sells the cloud storage to the hospitals paying for the same and provide them with unique login credentials. The patient who goes to the hospital is first searched in the cloud by the hospital. If the patient is not found registered on the cloud then he is registered first by the hospital and then the further information is entered about the patient. If the patient is found registered on the cloud then, his details are added to the existing data. That is each patient has only one unique id that maintains its medical details (dashboard). The hospitals who buy the cloud storage are given the login credentials by the system’s administrator. The hospital buying the product can update the patient’s information, insert a new patient and also retrieve the required details about a particular patient.
The access privileges of the hospitals are controlled and maintained by the administrator. The hospitals will be given ranking based on reviews from patients. The ranking parameter will be the basic cost i.e. the average charges of hospital, the user can look at whether he can afford a particular hospital based on these rankings. There will be a sensitivity script written so as to protect the data of the patient that needs to be confidential. The general information of the patient can be accessed like his blood group or some of the allergies to various medicines, etc. This sensitivity script helps the patient’s data to be confidential as well as secure from any misuse.

III. LITERATURE SURVEY

SURVEY RESULTS

a) Based on Miscommunication with doctors and ambulance delays

The eight year old girl suffered severe burns and was taken to the nearby primary health centre (PHC), where the doctor was absent. The hospital staff applied first aid and then was referred to the VSS Medical College and Hospital at Burla. However, there was no ambulance to take her to the referred hospital which was 72 km away. She finally reached there in a private vehicle nearly four hours after the accident. The same evening, she was again referred to the SCB Medical College and Hospital in Cuttack, nearly 300 km away. By next morning, Banita was declared dead at the hospital in Cuttack. Thirty five patients died after delays of up to six hours in an ambulance reaching the patients. The deaths include a 9 month old baby, 2 other children, a student nurse, a mother to be and an 87 year old woman. In 5 of the above cases the patient might have lived if either the ambulance had got there in time or had attended the crew with better treatment. Nearly about 27% of total deaths in India happen with no medical attention, all around 43% of the total deaths happen in healthcare and only 3.9% of the rest under the care of a doctor qualified in allopathy. Experts are saying that 3,000 more heart attack victims could be saved each year if 90 per cent of 999 calls were answered when it is called for ambulance. In 2010, many people die due to lack of surgeries provided in the hospital, estimated 16.9 million people have died due to lack of access to surgery and improper amount of anaesthesia provided to the patient, shockingly it was clearly mentioned that all the surgeries can be done here.

b) Doctors shifting to online treatments.

The doctor-patient relationship is moving online. With 68% of American adults now using the Internet to search for healthcare information, it’s no surprise that many also want
digital access to their doctor. Payment averages about $30 per e-visit, as compared with $75 to $100 for an in-office consultation.

This paper focuses on reducing the casualty which is observed during the natural disasters resulting in loss of many lives. Usually the crucial time is lost due to inability to find the most appropriate doctor for the victim. In today’s technology there is not much issue with finding the hospitals but the actual problem lies whether that particular hospital has sufficient resources along with the availability of doctors. Further, even if we find such information, it is often difficult to find out the current waiting times for these resources. AutoHS helps disaster victims locate nearby available hospitals that can meet victims medical requirements using data provided by a distributed network of volunteers. This system will also make ranking to the list of hospitals provided to the victim during the search so that they can choose the best fit to them.


This paper is trying to relate Internet of things (IoT) which is an emerging technology to Health Care Management System. They are trying to present IoT based framework with context awareness for hospital management system. They are going to provide better communication facilities between the patients and the Healthcare, early diagnosis, treatments. The users for the system are going to be Doctors, Nurses, Admins but not the patients. It will be deployed in the Healthcare as a Software which will automate the treatment process using the latest technologies. According to their survey, 80% of people agreed that their system will be of great use to the Healthcare and IoT will be best to provide better communication, better reduce cost, better monitoring, and better data management and so on.

IV. CONCLUSION

In last decade this technology through its excellence of pertinence is emerging in every zone of life from logistics to environment observing and trades to farming. Healthcare is one of those fields which request a motivational provision which may only be fulfilled in conservative and helpful way. Using this system would change the existing hospital architecture and give satisfied result and this methodology is for sure fit to tackle the issues of hospital. In future we can incorporate the ingredient comparator which can be used to find an alternative of a medicine if it is not available by comparing ingredients of the medicines.

V. REFERENCES


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