



Emergency Health Transmission System via Internet

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Abstract:

Monitoring of health is a very important task in healthcare industry. Healthcare being a global issue more particularly India being a most populated nation where majority of which live in villages deprived of healthcare facilities on real time basis continuously and regularly. With the increasing use of technology, there is an urgent need to have such a smart health monitoring system that can communicate between network devices and application which will help the patients and doctors to monitor, track and record the patient's sensitive data containing medical information. This paper depicts the idea of solving health issues using the latest technology, Internet of Things (IoT). It presents the architectural review of smart healthcare system using Internet of Things (IoT) which is aimed to provide a Better Emergency Care to everyone. Using this system architecture, patient's body parameters can be measured in real time. Helper collect patients body parameters and transfers that data to receiver (hospital) which further transfer that data to the MySQL database server. This MySQL database server manages the data and provides accessibility the operator can check their medical record Hence, the system provides a Better HealthCare to everyone and error free and smooth communication to patients.

I. INTRODUCTION

Now a days, the internet has become a vital part of our daily life. It has changed how people live, work, play and learn. Internet serves for numerous ideas such as education, industries, entertainment, social networking, shopping, ecommerce etc. The next innovative mega trend of Internet is Internet of Things (IoT). The IoT connects smart objects to the Internet. It can facilitate an exchange of data and bring users processed data in a more reliable and secured way. The Internet of Things (IoT) is one of the most vital and transformative technologies ever invented. The Internet of Things (IoT) is a megatrend in next generation technologies that can culminate the complete business gamut and can be thought of as the interconnection of uniquely smart devices within today's internet infrastructure with extended benefits. These benefits basically include the advanced concatenation of the devices, systems, and services that go beyond machine-to-machine (M2M) scenarios. Therefore, initiating automation is feasible in nearly every domain. The Internet of Things (IoT) is changing much about the world we live in, the way how we drive, how we do purchases and even in healthcare solutions. Medical care and healthcare represent one of the most attractive application areas of the IoT. The Internet of Things (IoT) has the potential to give rise to many medical applications such as remote health monitoring, fitness programs, incurable diseases, and elderly care. Thus, various medical devices, sensors, diagnostic and imaging devices can be viewed as smart devices or smart objects constituting an interior component of the IoT. IoT-based healthcare services are foreseen to minimize costs, increase and provide a better quality of life, and enrich the users experience. In today's era, there are many cities which are working on transforming themselves into Smart Cities. If the city is going to be called as Smart City, then it should have all possible advancements in the sector of smart technology. Improving efficiency in healthcare sector if one of the difficult and most challenging jobs. That includes various aspects such as getting ambulance within minimum amount of time, providing proper treatment to

the patient so that the chances of surviving increases in critical condition. Traffic congestion is one of the major problems in urban areas, which have caused much hitches for the ambulance. Moreover road accidents in the city have been increased and to bar the loss of life due to the accidents is even more crucial. Life is valuable. People are losing their life due to heart attack and uneven body temperature. In India every minute a death occur due to of heart attack. So to detect heart attack a device must be made using the latest technologies, here we are using IOTs concept. In this paper we have proposed a device which will detect heart attack as well as body temperature with help of different sensors and microcontrollers. Last few Decades the traffic management it's the vital issues in a big cities. With the help of Internet of Things (IoT) we can improve the traffic efficiency. In this paper we describe the things using Internet of things technologies to provide the on time operation and fast data transfer. Many health-related processes stand to be reshaped by the Internet. In clinical settings, the Internet enables care providers to gain rapid access to information that can aid in the diagnosis of health conditions or the development of suitable treatment plans. It can make patient records, test results, and practice guidelines accessible from the examination room. It can also allow care providers to consult with each other electronically to discuss treatment plans or operative procedures. At the same time, the Internet supports a shift toward more patient-centered care, enabling consumers to gather health-related information themselves; to communicate with care providers, health plan administrators, and other consumers electronically; and even to receive care in the home. The Internet can also support numerous health-related activities beyond the direct provision of care. By supporting financial and administrative transactions, public health surveillance, professional education, and biomedical research, the Internet can streamline the administrative overhead associated with health care, improve the health of the nation's population, better train health care providers, and lead to new insights into the nature of disease. The capability of the Internet to support these applications depends on whether the

relevant technical needs are met and whether the operational aspects of the systems involved are understood and manageable. As with any information technology system, the technical requirements depend heavily on the specific characteristics of the individual systems—the number of anticipated users, degree of real-time interaction desired, number of simultaneous sessions that must be supported, and so on. Many of these factors, in turn, are influenced by considerations other than network performance. These include organizational competencies, changing preferences and expectations of consumers and care providers, reimbursement policies for different health services, availability of complementary technologies, and laws. The confluence of so many factors confounds attempts to predict viable future applications of the Internet in the health sector. The Internet can also be used to facilitate electronic communications between patients and care providers, typically in the form of electronic mail (e-mail). To date, e-mail has been used only sporadically between patients and providers, but it is of growing interest. It could prove to be an effective mechanism for improving care and lowering costs because more frequent communications might enable better tracking of a patient's progress or eliminate the need for an office visit. This premise has yet to be tested rigorously in clinical settings, and a number of technical and nontechnical issues need to be resolved. Bandwidth and availability are not issues in the near term because most messages currently consist of text only and are not used for time-critical communications. The most pressing technical issue is security. Most e-mail exchanges between patient and provider involve discussions of personal health information, which must be suitably protected from breaches of confidentiality and, to a lesser extent, alteration. Most e-mail is not encrypted during either transmission or storage, and its point of origin is not authenticated. It is therefore much easier to forge an email message than a clinician's note or telephone call. The Internet offers the opportunity for improved monitoring of consumer health and, potentially, provision of in-home care through video-based consultations with care providers (discussed in the Clinical Care section, below) and control of medical equipment (e.g., pacemakers and dosimeters) deployed in the home. The goals of such activities are to assist in the early detection of potential health problems, ranging from heart attacks to congestive heart failure and diabetes, and to reduce the need for clinical intervention and costly hospital stays. Remote consultations to the home may be most useful for monitoring patients with ailments such as congestive heart failure and end-stage liver disease. These applications do not require video imagery; the provider simply listens to heart and lungs, taking vital signs and pulse oximetry. In-home care is consistent with existing trends in the health care industry. Since 1975, the number of home health agencies has grown from 2,300 to almost 8,500, while the number of hospital beds per 1,000 enrollees has declined from 51 to 28. Similarly, the number of patients receiving home care nearly tripled between 1982 and 1994. These trends reflect, in part, attempts by health insurers and health management organizations to reduce the costs of care associated with long hospital stays. To date, few attempts have been made to monitor patients at home. Most efforts have focused on chronic conditions, such as diabetes, asthma, and congestive heart failure, for which well-established protocols exist for home care. The devices used for monitoring are minimally modified copies of devices used in hospitals. Little effort has been made to develop or distribute small devices that mimic the functionality of much larger hospital counterparts with automated quality control and calibration and remote

polling and configuration by authorized care providers. Almost none of these devices is as portable or easy to use as a standard pager. In part because of these limitations, home monitoring has not grown as much in popularity as have consumer information on the Web and patient/provider e-mail.

II. PROPOSED WORK

The proposed system aims to cover an end-to-end smart, efficient and innovative health application. The main function is to get the patient details in the prepared web page then it process and present the resulted information on the server where the doctors can access health reports following the case of the monitored patients.

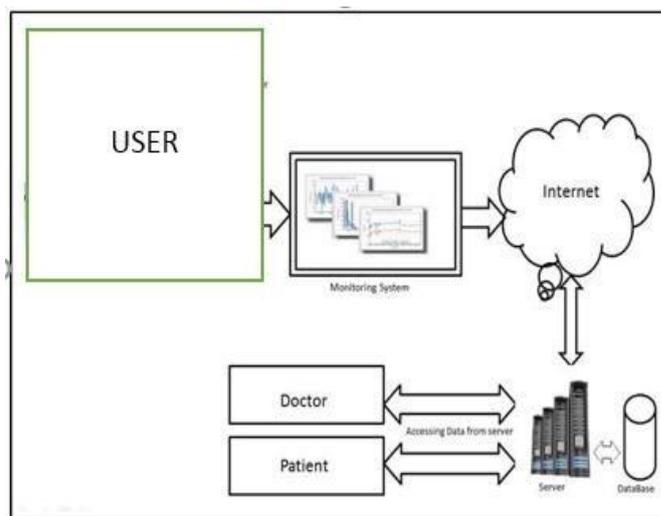


Figure.1. Proposed Block Diagram of IoT based Smart HealthCare System

The web page provided with additional features such as:

- Booking doctors appointment according to area and specialization.
- Emergency push button.
- Medical alert.
- Patient's feedback.
- Single and Family registration.
- Access health data from anywhere.

III EXPERIMENTAL RESULTS

The proposed smart health monitoring system is being deployed and tested over a patient whose personal details are entered into the web portal.



Figure.2. Administrator Login

Here in this administrator login we are going to give the hospital or managements username and password

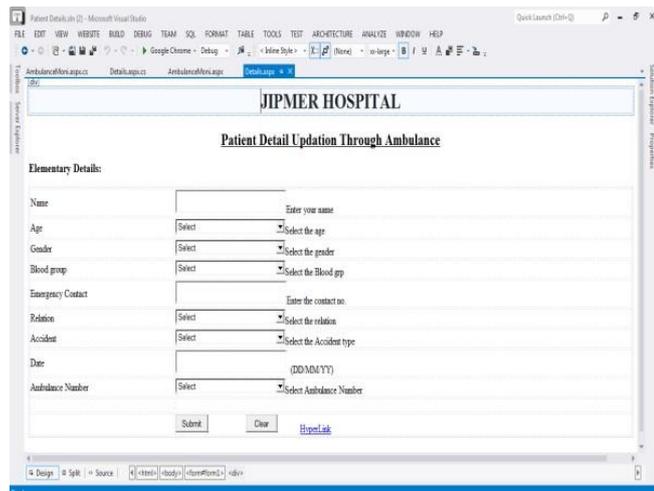


Figure.3. Home page in which patient details to be uploaded

After the administrator login process the management or hospitals home page will be opened by asking the patient details to be updated so the care taker will update the patient details in this particular page and proceeded All the updated information will stored in the database in which we had created by using sql server as shown in the following figures After this the patient details are stored in the data base which is provided by the caretaker to the particular hospital which will be used for the further emergency purposes



Figure.4. Ambulance monitoring system

Here the patient will comes in various ambulance to know the activity of the patients ambulance the ambulance monitoring page will be created here

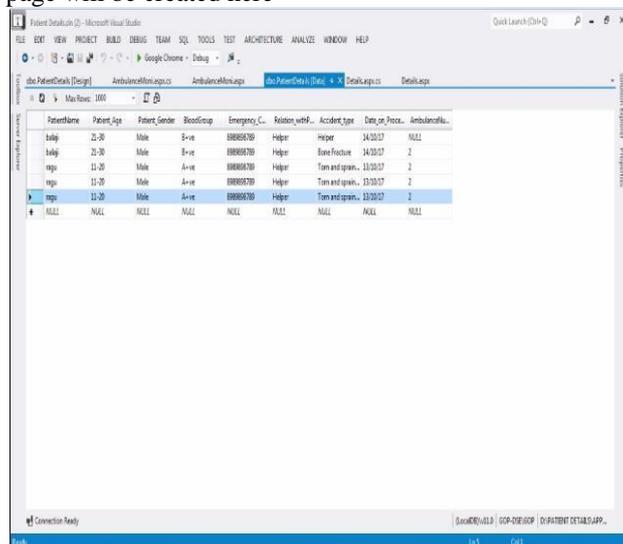


Figure.5. database storing

Finally this is the database which the patient details are updated to the hospital through the created home page by using the sql server

IV. CONCLUSION

The internet has immensely changed the way we live, intercommunicating between people at a virtual level in several contexts spanning from professional life to social relationships. The IoT has the potentiality to add a new dimension to this process by establishing communication among smart objects, leading to the vision of anytime, anywhere, any media, anything communication. Ingenious use of IoT technology in healthcare not only bring benefits to doctors and managers to access wide ranges of data sources but also challenges in accessing heterogeneous IoT data, especially in a mobile environment of realtime IoT application systems. Considering the population status and the majority of the people live in villages which are remote places and with the growing technology and more importantly healthcare being the predominant issue of the nation this smart healthcare system using IoT technology plays an important monitoring tool at levels in the larger interest of the global as a whole. The health monitoring system is beneficial to the patients as well as to the society where the implementation of such systems will save hospital bill, waiting time, and also reduce the long queues in the hospitals. This paper tries to emphasize on a healthcare system which is enabled with IoT technology that not only realizes the illustration and traceability of healthcare actors but guarantee the improved health care services. The key motive behind the proposed system is to provide better and efficient health services to the patients by implementing networked information so that experts and doctors can make use this data and could provide fast and efficient solution. Thus, this technology provides solutions to healthcare issues and connects the patients across the country and also doctors to monitor, track and record patients vital data and medical information on real time basis so that timely and effective solutions to the patients on regular basis.

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