ONLINE DIGITAL HEALTHCARE SYSTEM

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ABSTRACT

Healthcare is a big industry with outdated systems that can lead to inefficiencies. While governments and medical organisations have traditionally been the leading investors in digital health, large technology corporations such as Google and Microsoft have begun to boost their involvement in the field. Furthermore, as a result of the global COVID-19 outbreak, concerns regarding digital healthcare are emerging. As new technologies emerge and regulations adapt, there has been a considerable movement in areas of focus within digital health as a result of the combined expertise. In this study, we will look at the digital healthcare sector, policies, and technologies.

1. INTRODUCATION

Digital transformation (DT) refers to “a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies” (1). DT affects many aspects of companies, such as the acquisition of digital resources, the design of digital growth strategies, the change of internal organizational structure, and the definition of proper metrics and goals (2). This phenomenon has become a very popular topic within various streams of business research (e.g. information systems, strategy, marketing) and is revolutionizing the business sector writ large. For many years, healthcare (HC), which refers to all services that medical professionals deliver to preserve people’s physical and mental well-being, has been one of the main industries in which DT has occurred (3). The digital revolution in HC creates new business opportunities and yields new business models to address issues in medical practice, value creation and other problems related to, among others, the ageing society (4).

The rising relevance of DT in this industry became evident to both scholars and practitioners (5). A recent systematic literature review about DT in HC (6) shows how much research on this topic has increased over the last 20 years and highlights the most common technology-related research themes within this domain. However, due to the strict focus on technology, it does not adequately highlight the various management applications and business impacts of DT on the multiple stakeholders of this industry (7). A multi-stakeholder’s perspective is

critical to understanding properly how, in practice, the various players of a HC ecosystem (patients, pharmaceutical companies, hospitals, public agencies, and many more) exploit DT technologies and means to quality of care, value creation, and many more managerial issues. Mainstream literature about DT scarcely analyzes the stakeholder perspective, in which it is generically reported that a heterogeneous set of network stakeholders is a crucial condition for the organization of value creation, growth, digitalization and DT (8).

Drawing on these assumptions, the research question of the present article is: how should the industry's multiple stakeholders implement DT technologies for management and business purposes? To answer this question, we perform a systematic literature review (SLR) about the state of the art of DT in HC. This article contributes, first, to the general stream of literature about DT (9) by illustrating clearly the roles and activities of more and heterogeneous (employees, customers, services providers and so on…) stakeholders during this process. Second, our findings contribute to the rising body of knowledge about DT in HC (10) by showing, via a stakeholder-based perspective, how health service providers should gain operational efficiency and strategize via digitalization. The findings of our SLR show prior research about DT in HC falls into five clusters: operational efficiency by HC providers; patient-centered approaches; organizational factors and managerial implications; workforce practices; and socio-economic aspects.

Recently, as it became known that Canada's artificial intelligence platform BlueDot was the first to recognize the risk of a new Coronavirus disease (hereinafter referred to as COVID-19), the convergence of ICT technology in the medical field is drawing attention once again.In addition, some types of telehealth were temporarily allowed on the occasion of the global pandemic of COVID19, confirming domestic demand for telemedicine. 'Telehealthcare' was selected as the most necessary non-faceto-face technology after COVID-19 to improve medical accessibility of the vulnerable. Even prior to COVID-19, the demand for the digital healthcare industry was expected to continue to increase as the trend to manage one's own health in daily life spread through aging, rising income levels, and the development of smart devices and sensor technology. As COVID-19 is expected to increase the demand for non-face-to-face medical care, the need to revitalize related industries is becoming more prominent. Therefore, in this paper, we will look at the digital healthcare industry, policies, and technologies.

2. LITERATURE SURVEY

Literature survey is the most important step in software development process. Before developing the tool it is necessary to determine the time factor, economy and company Traffic Redundancy Elimination, once these things are satisfied, then next steps are to

determine which operating system and language can be used for developing the tool. Once the programmers start building the tool the programmers need lot of external support.

This support can be obtained from senior programmers, from book or from websites. Before building the system we have to knownthe below concepts for developing the proposed system.

S.H. Kim and D.Y. Jeong, ICT convergence-based non-face-to-face healthcare technology trend, The Journal of The Korean Institute of Communication Sciences, vol. 37, pp. 77-84, Aug. 2020

In a social environment where population aging is rapidly progressing, the healthcare service market is growing fast with the increasing interest in health and quality of life based on rising income levels and the evolution of technology. In this study, after keywords were extracted from Korean and US patent data published on KIPRIS from 2000 to October 2019, frequency analysis, time series analysis, and keyword network analysis were performed. Through this, the change of technology trends were identified, which keywords related to healthcare was shifted from traditional medical words to ICT words. In addition, although the keywords in Korean patents are 55% similar to those in the US, they show an absolute gap in patent production volume. In the next study, we will analyze various data such as domestic and international research and can obtain meaningful implications in the global market on the identified keywords.

Alison Hagan, Casey Graves, Dan Kinsella, Wendy Gerhardt, "Health systems have a growing strategic focus on analytics today for the future", Deloitte Insights, Mar. 2019HAVE the adoption and application of analytics lived up to the hype? Over the past severalyears, the health care industry has often amplified analytics as the missing key to unlock value during a time of shrinking margins, smaller budgets, and shifting payment models. In addition, emerging technologies such as artificial intelligence (AI) now hold promise to finally leverage electronic health records (EHR) and other health and health care data sources with predictive analytics to improve clinical care and costs. Have health systems invested in and stepped up their game with analytics?

Arum Park, Jaemin Song, Sae Bom Lee, "Healthcare service analysis using big data, Journal of the Korea Society of Computer and Information", vol. 25, pp. 149-156, Apr.2020

In the Fourth Industrial Revolution, successful cases using big data in various industries are reported. This paper examines cases that successfully use big data in the medical industry to develop the service and draws implications in value that big data create. The related work introduces big data technology in the medical field and cases of eight innovative service in the big data service are explained. In the introduction, the overall structure of the study is mentioned by describing the background and direction of this study. In the literature study, we explain the definition and concept of big data, and the use of big data in the medical

industry. Next, this study describes the several cases, such as technologies using national health information and personal genetic information for the study of diseases, personal health services using personal biometric information, use of medical data for efficiency of business processes, and medical big data for the development of new medicines. In the conclusion, we intend to provide direction for the academic and business implications of thisstudy, as well as how the results of the study can help the domestic medical industry.

3. EXISTING SYSTEM

In our previous everything manually that means patient has to come hospital should meet doctor directly. i.e time taken process . in covid-19 situations it was very difficult to directly and take admissions and meet doctors.

DISADVANTAGES:

- Less Accuracy
- Work done though offline

4. PROPSED SYSTEM:

With the development of the information age, a new era of medical information is opening, and the direction of the development of healthcare services from telemedicine to digital health is rapidly changing. In addition, various technologies are being developed together, and the term collectively referring to the age of healthcare is constantly changing [3]. In a report on the digital health industry prepared by Deloitte, a global consulting firm, for the Office of Life Sciences in the UK.

ADVANTAGES:

- Accuracy is Very high.

5. IMPLEMENTATION

Doctor Module: Doctors will register with the application and then login to application and then can view all request from patients and can generate prescriptionfor each patient. This application will save prescription in user database as well as send to patient mail id. So patients has to give valid EMAIL id.

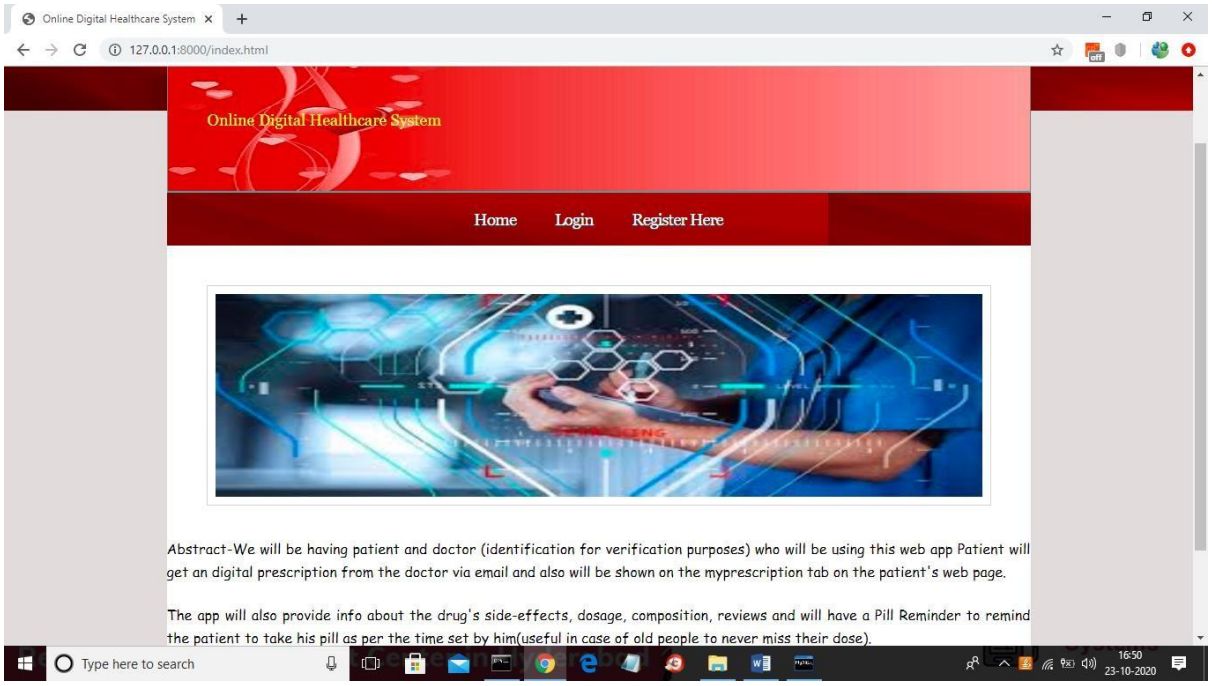
Medical Services Module: Using this module medical peoples will signup with the application and then login and then add medicines details such as medicine name, formula, recommended dosage and side effects etc. Patients can view all thismedicine details.

Patients Module: Patients can register with the application and then login and can send query to doctors and can view prescription from doctor. Patients can set reminders for medicines

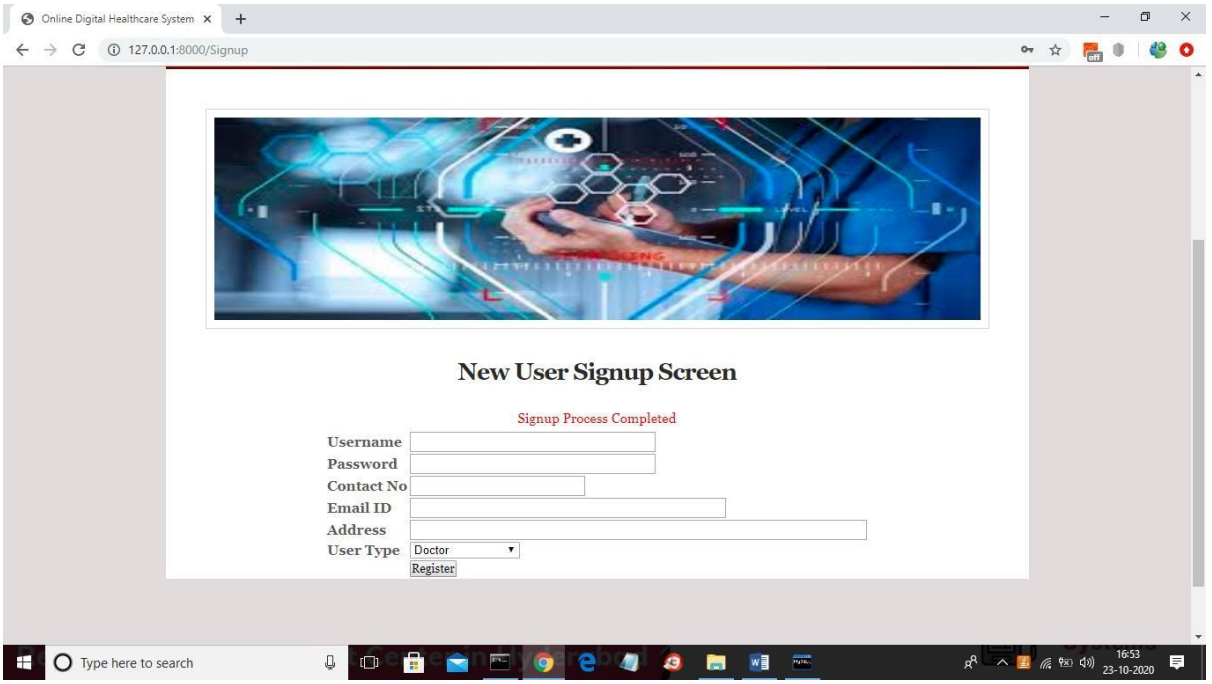
and can view those reminders anytime by login to application. Patients can view all medicines details by entering its names.

6. RESULTS

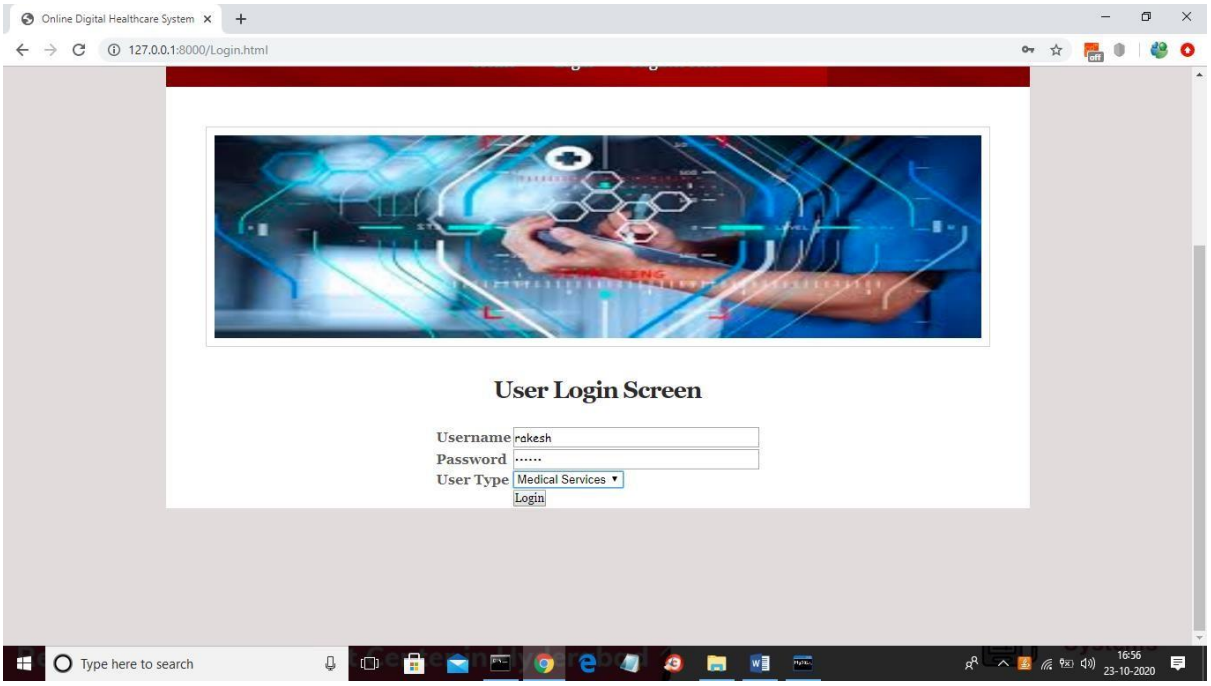
Below is the index page of this project



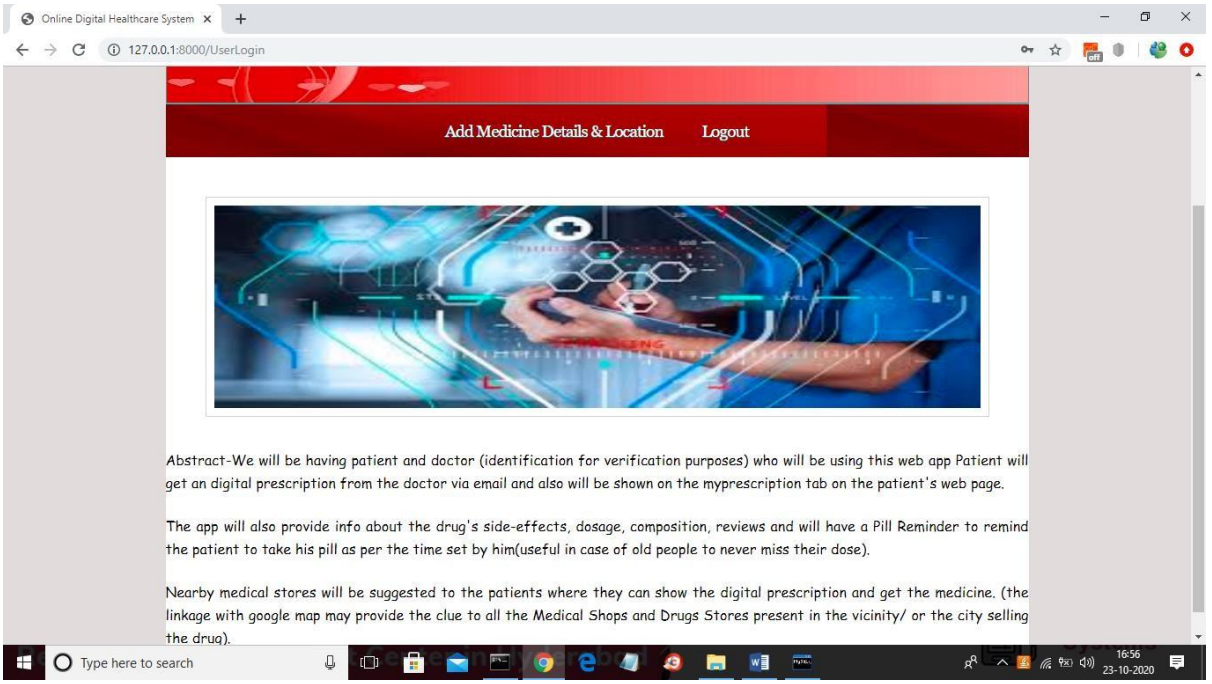
In above screen click on ‘Register Here’ link to get below screen



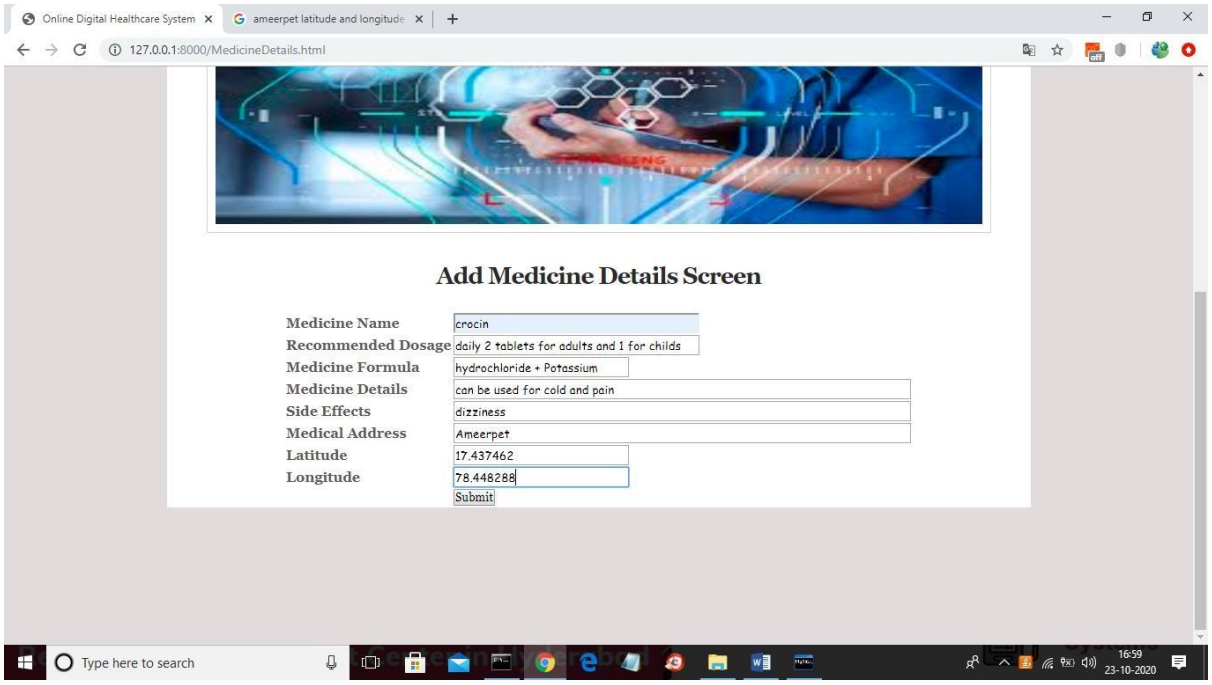
Similarly we can add patients and doctors also



In above screen login as medical service and after login will get below screen

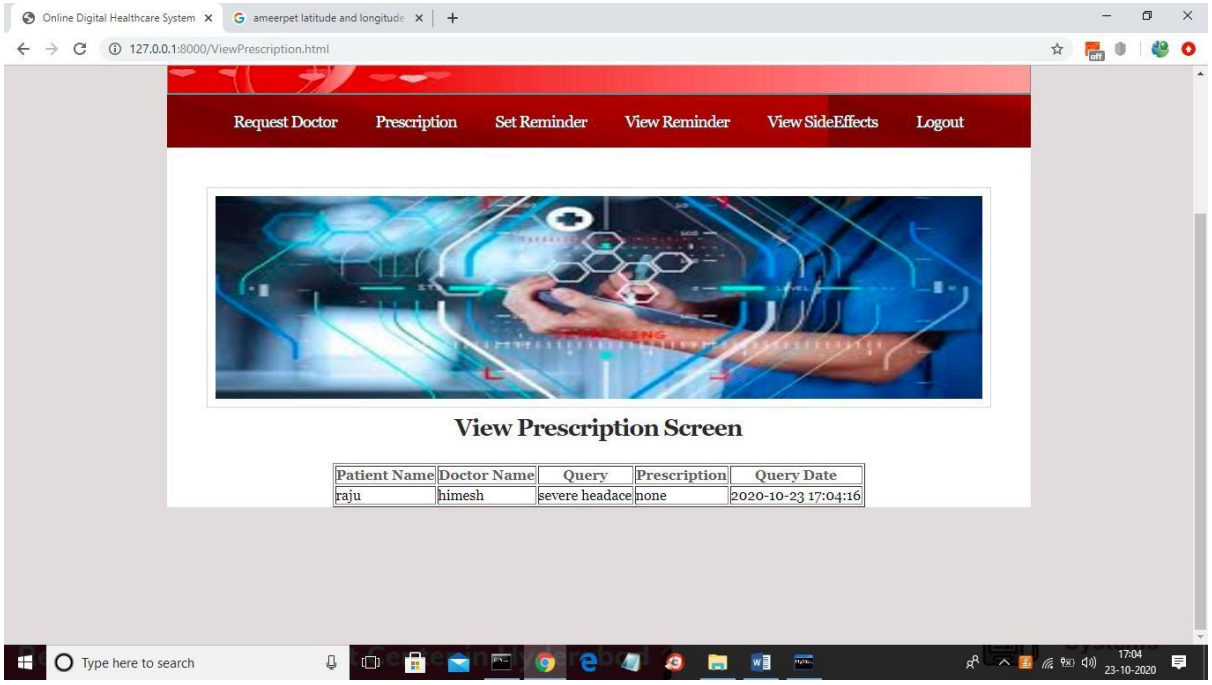


In above screen click on 'Add Medicine Details & Location' link to add medicine detailsso patients can view

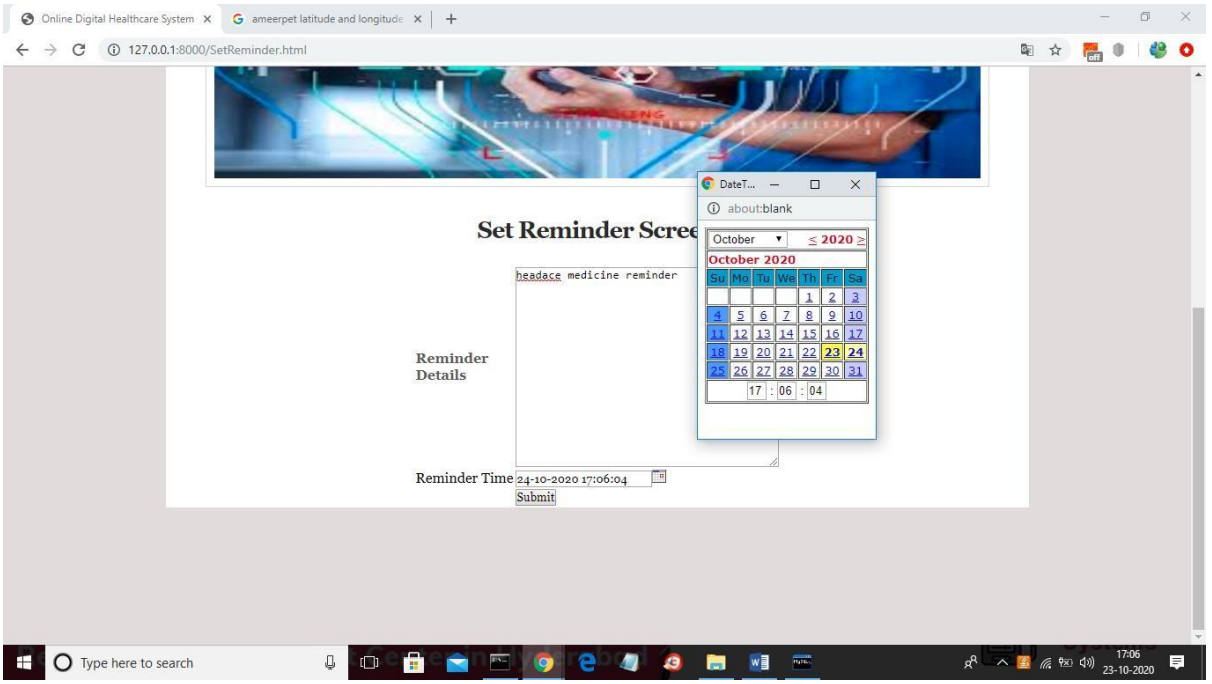


In above screen medical representative will add medicine details with address and latitude and longitude he can obtained from internet so patients can view address on Google mapsand

now click on ‘Submit’ button to save details



In above prescription screen doctor has not given any prescription so ‘none’ value is displaying and once doctor give prescription then it will replaced with none and now clickon ‘Set Reminder’ link to set reminder in below screen



7. CONCLUSION

The aims of this article were to provide an integrative view of the state of the art of digitalization in HC literature, find the key management and business applications of DT technologies by HC stakeholders and identify a potential future research agenda. With the aim to identify potential benefits of previously introduced digital technologies for HC providing organizations and other stakeholders, the analysis produced five broad clusters; (1) patient-centeredness in HC management with an emphasis on the two sub-streams of patient empowerment and the impact of multi-channel behavior on consumers' health and well-being; (2) impact of the adoption of innovative HIT on operational efficiencies and resilience of hospitals; (3) organizational key attributes and managerial implications; (4) consequences on workforce practices; (5) socio-economic factors.

In conclusion, this article shows that the comprehension of DT in HC for the most part encompasses the digitization of information and adoption of HIT in traditional HC structures. To build a more holistic view of the DT in HC, there is a great need to conduct research on business model transformation and implications for the management of different interest groups. Finally, the combination of patient empowerment, a purposeful use of digital technologies, as well as data-driven and predictive care will allow the shift toward digital HC models, redefining experience and improving outcomes for patients, providers and insurers.

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