Smart Medical System

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Abstract:- Smart Medical System" is entitled as the project. Patient, Doctor, Admin are the 3 modules included in it. Manually getting an appointment especially in 21st century has become very time-consuming task. Also, in the emergency case we have fill very long forms before the prior check-up, the preservation of data like prescription and doctor visits are mainly stored in the registers system which makes it difficult to preserve the data. Henceforth for this Smart Medical System has been introduced which helps the patients to book the appointments as fast as possible at one click, respective accounts are been created for patients to keep their prescriptions and receipts. They do not have to fill their details again and again also the doctors can schedule their appointment as they can manage as well get their payment of respective bills through the online payment method. All this application can be controlled by the admin. He can also change the required things as per the need of the system.

Keywords:- Smart Medical System, Health-care, Check-up, Monolog, Doctor, Patient.

I. INTRODUCTION

In India due to migration of many people from many abroad countries and within the states of our country the population growth has been incredibly increased which nearly leads in increase in the no of patients. Looking at the aspect of average patients in our country more than 1000 patients are served in each hospital per day. As our country is developing due to its increasing population the no of patients has been increased which had led to crowded hospitals. Many of patients just line up in a long queue and wait for their patient registration for a very devastating time which makes the hospital crowded every day. Mainly for a check-up of a patient, he/she has to get to the hospital do his registration process and then call a prior appointment with the concerned doctor but sometimes whenever in an emergency case the patients are aren't able to held for the treatment due to the long queue for the registration process as without the registration process the concerned patient can't be addressed by the doctors of the hospital and hence due to which it May also lead to damage of patient health. So as to get rid of this registration process our Smart Medical System has been initiated to do a cloud-based patient registration with the available hospitals. In our Smart Medical System the patients are helped by providing nearby hospital in their location with the concerned and available doctors and based on the specialty, ratings, and the availability the patients will also get to book the appointments. Here in this system the patients have the option to see the lab reports directly while they can also make future reservation for check-ups by scheduling the date and time. Prior to the Patients reports and other benefits this system will also help in keeping a track record of the health status of the patient.

II. LITERATURE SURVEY

For the improvement of performance and smoothing the functionality of your Smart Medical System we have introduced many of the surveys through which we are been developing the Smart Medical System.

(1) Zhou Fang, Cheng Fang, Wei Ki, Fang Zhiyuan are the authors who described about the Health Information eXchange (HIX) which is an integral part of the Happiness Cloud Service Platform based on the innovation of cloud-based business model. It illustrates the hospital health care and the major business functions of HIX which introduces the integrated mobile medical information services and the health information services.

(2) A Web based approach named E- Health Appointment Solution by Cristian College, Honoriu Valean2 which is an approach which discuss a video appointment solution using many web technologies. Due to the proposed solution the web technologies take advantages to handle the doctor appointment. if the doctor and the patient come to a point where they can handle their appointment through video conference instead of a normal visit.

(3) An online appointment booking system enhanced by Akshayt V, Alagappan RM, Anish Kumar S, Dr. Gnanavel S. named Bookazor. It is a web-based application of appointment booking and scheduling which is used for major appointment booking platform in numerous streams of art within a defined geographical area.

(4) An online health care software directed by Fayezah Anjum and Abu Saleh Mohammed Shoals is a software which prevents an efficient way of handling information through electronic means with a faster communication mechanism between the patient and doctors which enhances the security of the system for the users.

III. EXISTING SYSTEM

In the current aspect of many of the hospital management system, a lot of paper work has to go through which makes it a very time consuming process of maintaining the records of the services nurtured by the hospital management system. As we known there has been an increase in data day by day it has been became a difficult and devastatingly task for the management to handle and maintain such huge data as it acquires huge amounts of file cabinets, which are huge and needs a bit of space in the hospital for storing the records of previous details, also the retrieval of records of previously registered patients will be a tedious task. There is also a lack of security for the records as anyone can disarrange or tamper the records of the system which will lead for the unavailability of the details of those who want to see their records available with the prior manual system and hence the previous manual system does not enhance any necessary details of this type.

IV. PROPOSED SYSTEM

We have organized an application website from the solvent in Existing system, doctors and pathologies so that patients could be managed it in a easy way.

For Patient: Mainly the patient monolog comes under 3 aspects:-
a) Convenience: Nowadays in hospital it has been very difficult to get an appointment in traditional ways thereby our system has been developed to this problem which manages all the appointment to desired doctors by just a click.
b) Availability: Full control of managing the appointment time with doctors is given to the patient. Option are been provided to choose for the numerous time period that doctors had given before the registering our system.
c) Conversation: Data of the patient like the prescription of previous checkups are handled in their respective account of records so that doctors and patient both can know about the drugs they are possessed previously for a particular disease.

For Doctors: The doctors monolog is mainly made for the 2 aspects :-
a) Flexible Appointment: An option to confirm the appointment of a patient as per their schedule asa well as the disease which has to be diagnosed of the patient is provided to doctors for the flexibility of management.
b) Online Payment and Receipt Generation: Many online payments like UPI and other are been provided so that doctors can receive their fees. Online generation of receipt is also automated which generates the receipt automatically for the patient.

V. SYSTEM ARCHITECTURE

A System Architecture refers to a model which illustrates the structure, behaviour, modules and many more aspects of a system. For the Smart Medical System there are mainly 4 modules or aspects that are mainly referred:
1) Admin: Through this aspect of Admin the user can login through to the username and password. As the admin module opens up the admin can gradually add or remove or edit the information about the doctor username type. the admin can also keep a check on the appointment which are scheduled and also can edit the date through the calendar or selecting a of the hospital. The patients details can also be checked by the admin.
2) Patient: About the aspects the user or the patient can get the information about the hospitals and doctors. The user can select the category of the hospital and the doctor which they are in need of. They can also look for the detailed information of the physician like they can check the qualifications and work experience he/she has. The user of this aspect has a liberty to book an appointment. They can mainly select the category of the doctor, select the hospital which are needful for them. The user can also check the patient medical prescription.
3) Doctor: In this module of doctor the doctor has a main role of checking the appointment which are scheduled for them. they can also go and check for the emergency request allocated to them. An online prescription can also be generated by them which would help the patient to get rid of the paper prescription which are unmanageable to handle. The Doctors also have a special monolog where they can persuade their own profile about the qualifications, work experience and many more for the patient to refer.

VI. SCOPE OF SMART MEDICAL SYSTEM

Smart Medical System is a system which is not dependent on any software as it is Device Independent software. The major concern is about the Security and the privacy of the system of Smart Medical System. The main motive or the aim of your system is to design a cryptography based secure and efficient and effective authentication framework for the Smart Medical System.

Smart Medical System is a system where It is very easy to handle or easy to use and it also helps to eliminate the errors caused by the handwriting due to mankind. A perfect performance is given by the latest technology for improvising the information from the hosted or cloud. Due to its less paperwork, improved safety and reduction of duplication of testing it reduces the expenses of an organization. The enhancement of the overall health care experience in a health care facility is improved through the system. The system also enhances the information integrity by reducing transcription errors as well as the duplication of information entries. The System mainly focus on the improvement of the communication between the doctors with their patients for better treatment of the respective patient.

VII. SUMMARY

The outcome of this project was a Through connected users, it becomes easy for doctors and physicians to communicate with patients and manage their appointments Our system will the help the patient to book appointment as quickly as possible with available hospitals and doctors based on the illness, here patient will get their previous history of reports and prescriptions.

REFERENCES

[1]. Fayezah Anjum ; Abu Saleh Mohammed Shoaib ; Abdullah Ibne Hossain ; Mohammad Monirujjaman Khan," Online health care" 2018 IEEE 8th Annual Computing and Communication Workshop and Conference (CCWC)

[2]. Fang Zhou ; Fang Cheng ; Li Wei ; Zhiyuan Fang,"Cloud Service Platform - Hospital Information Exchange (HIX)", 2011 IEEE 8th International Conference on e-Business Engineering

[3]. Cristinel Costea ; Liviu Neamt ; Olivian Chiver ; Cristian Cola ; Vasile Sambor, "Distributed processing of data streams on the edge devices". 2016 International Conference and Exposition on Electrical and Power Engineering (EPE).

[4]. V. Akshay ; Anish Kumar S. ; R.M. Alagappan ; S. Gnanavel," BOOKAZOR - an Online Appointment Booking System", 2019 International Conference on Vision Towards Emerging Trends in Communication and Networking (VITECON).