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Implementation of Hospital Management System for Real Life Problem

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Abstract: Hospital Management System includes registration of patients, storing the details into the system and appointing doctors online. Our software has the facility to give a unique id for every patient and stores the details of every patient and list of all the doctors which work in the hospital. It includes asearch availability of a doctor and the details of a patient using the id. Our system gives each doctor a unique code due to which patients can book their appointments online. The Hospital Management System can be entered using a username and a password. It is accessible by an administrator, doctor and the patient as well.Each doctor has their unique username and password which can be logged inby their correspond email-id , like the doctor patient also have their unique username and pass. But the admin has access to both the doctors and patientsdetails and everything which would help the admin to keep an eye over its hospital management. The interface is simple and user-friendly. The data arewell protected for personal use and makes the data processing very fast.

Keywords: Hospital Management System, Patient, Doctor, Admin, entity

I. INTRODUCTION

The proposed software product is Hospital Management System. The system will be used in any hospital, clinics or pathology labs to get the information from the patients and then storing the data for future use. This software will help the patient to communicate with the doctors and need not to go to any clinics to appoint a datefor any doctor. This software will show the doctor list and will update you with thebest doctors and timings of any doctor. The current system in use is a paper-based system. It is too slow and cannot provideupdated lists of patients within a reasonable timeframe. The intensions of the system are to reduce over-time pay and increase the number of patients that can be treated accurately. This software is online which is must now a days as now the world is updating constant. In this software the patient will also have their privacy which will not be accessed by any other. The researchers in a study have identified three main human challenges that are being a barrier in adopting the HMS in healthcare industries namely.

- Shortage of professional healthcare faculty who have in-depth knowledge of HMS and other similar technologies.
- Poor acceptance of HMS Software.
- Shortage of health informatics professionals who are well capable of establishing and implementing the techniques.

A. System Analysis

The world is complex and full of problems to solve. System analysis is a Problem-solving method that involves looking at a wider system, breaking apart theparts, and figuring out how it works in order to achieve a particular goal. System analysis is a process of studying the processes and procedures, to see how they can operate and weather improvement is needed or not. In this data analysis there involves data flow or data movement is perfect as well as the storage database. This may also include the machines and technologies used in the system, codes that control the machines, people after giving their input and afterprocessing the data they will receive their correct output [1-3]. After analyzing the system, it is found that database of different types of persons such as administrator, doctors and patients are required on which various types of operations will be performed. At the first the patient/doctor will login in with their username and pass. The patient has to update his/her profile then the doctor list would be shown where they can select/book an appointment with the doctor. The software will generate a time and date of their appointment whereas the doctor cansee all the appointments he has to do and he can cancel any appointment if they have any issues [4-6].

II. PROBLEM IDENTIFICATION

1) *Easy Access of Data:* The admin can easily access the data of a patient as he/she can search the data easily whereas in hard copy it's a lot of work to find aparticular patient's data which thereby all saves a lot of time.
2) *Cost Effective:* As the software can automatically input and stores the data,there is less use of man power which will reduce the cost comparatively.

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3) *Improved Efficiency:* Processes automated using software would mean that the processes will be taken care of mechanically without any human interventionand this will instantly ensure improved efficiency. The software will not face human problems like fatigue, miscommunication or lack of focus; it will perform every task assigned to it with the same accuracy day in and day out.
4) *Increased Data Security and Retrieve Data:* As the hospital have to keep all the data about its past and present patients so it has to store all its data and saveit from natural calamities and pest control. The software will keep all its data safe in a cloud storage which can be accessed by the permissible people only. The proposed software product is *Hospital Management System*. The system will be used in any hospital, clinics or pathology labs to get the information from the patients and then storing the data for future use. Thissoftware will help the patient to communicate with the doctors and need not to go to any clinics to appoint a date for any doctor. This software willshow the doctor list and will update you with the best doctors and timings of any doctor. The current system in use is a paper-based system. It is too slow and cannot provide updated lists of patients within a reasonable timeframe. The intensions of the system are to reduce overtime pay and increase the number of patients that can be treated accurately. This software is online which is must nowadays as now the world is updating constantly. In thissoftware, the patient will also have their privacy which will not be accessed by any other.

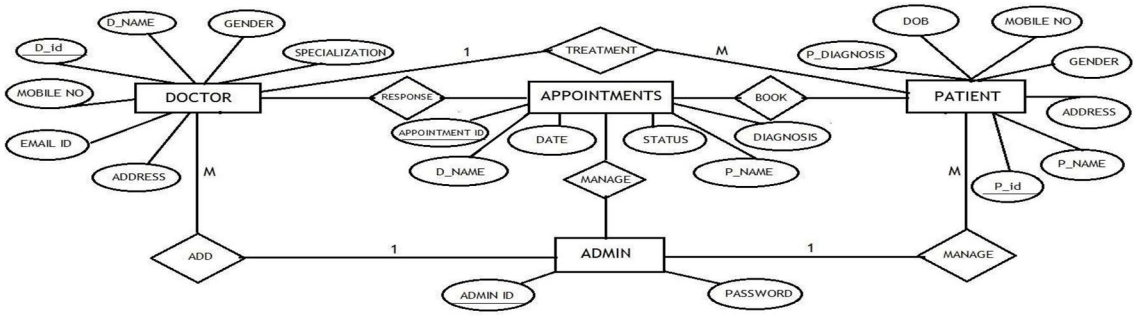
III. OBJECTIVES

1) *Easy Access of Data:* The admin can easily access the data of a patient ashe/she can search the data easily whereas in hard copy it's a lot of work tofind a particular patient's data which thereby all saves a lot of time.
2) *Cost Effective:* As the software can automatically input and stores the data,there is less use of man power which will reduce the cost comparatively.
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IV. SYSTEM REQUIREMENTS

The basic system requirements for running this project are listed below:

1) XAMPP
2) MySQL
3) Microsoft Windows 2007/08/10 professional, Microsoft WindowsXPHome editions, Microsoft Windows XP Professional edition
4) Google chrome or any other windows browser
5) Pentium or equivalent microprocessor(400 MHz or faster)
6) At least 256 MB of RAM
7) At least 10MB of free hard disk space



ENTITY RELATIONSHIP DIAGRAM

Fig. 1. Entity Relationship Diagram

V. FEATURES

A. Patient

1) Patients can log in to the site and make a visit or appointment with a doctorwhile making a conversation directly with the doctor.
2) Patients can access all the appointments at ease.
3) The patient can check the replies or advice directly from the doctor
4) Patients can download or print prescriptions within a few clicks.

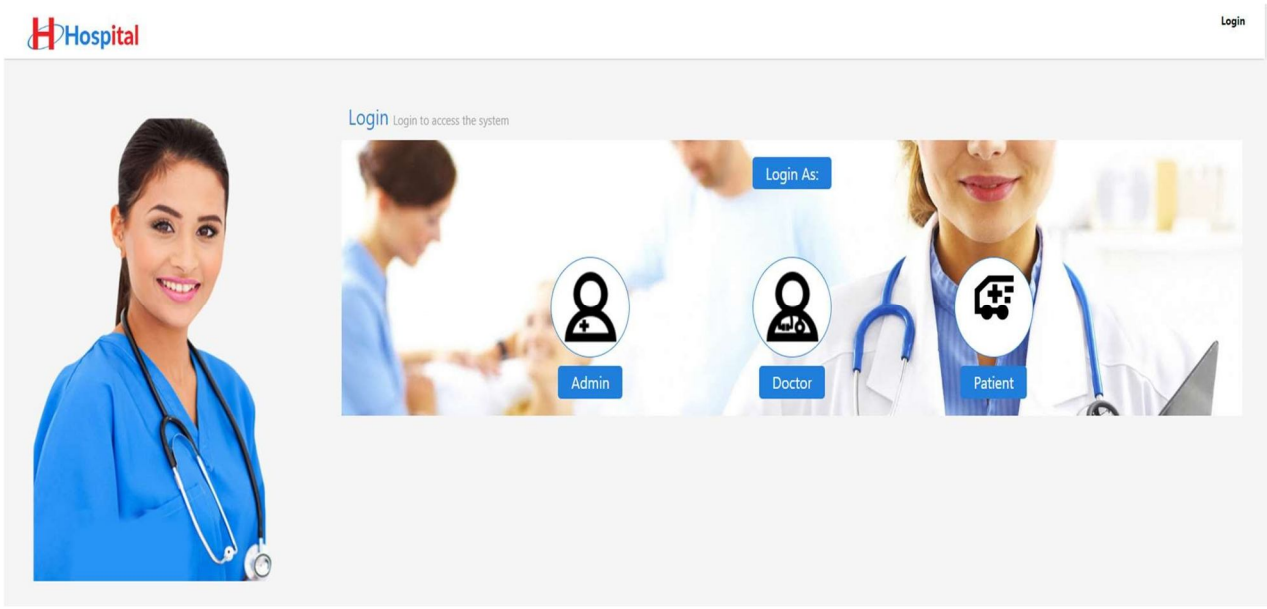
B. Doctor

1) A doctor can log in to see the patient's appointments.
2) A doctor can prescribe the patients and advice the directly.
3) A doctor can add patients.
4) A doctor can manage the information about the outbreaks.

C. Admin

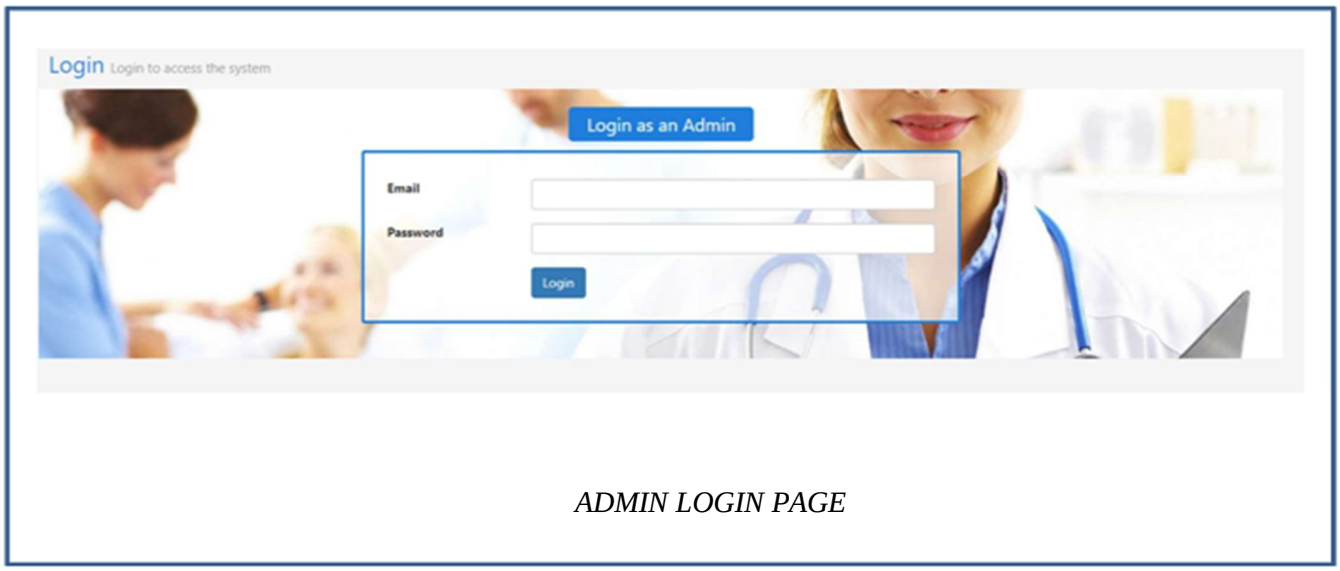
1) Admin can add doctors.
2) Admin can delete or edit doctors.
3) Admin can check patient list.
4) Admin can add likely outbreaks in a specific location for awareness.

VI. SCREENSHOTS



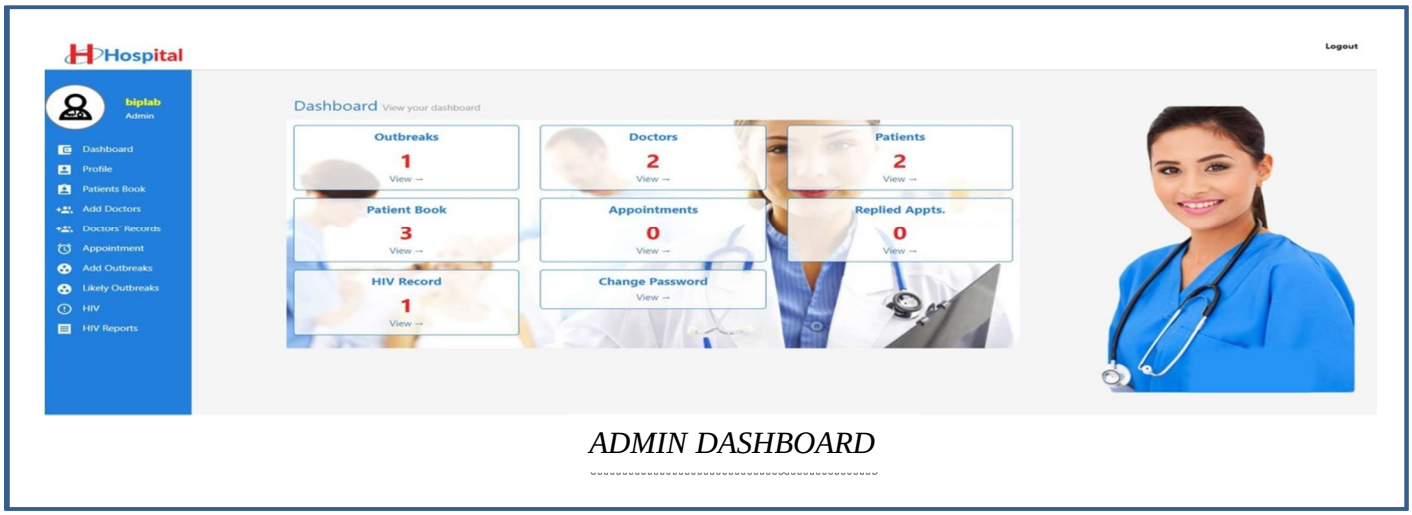
HOMEPAGE

Fig 2



ADMIN LOGIN PAGE

Fig. 3



ADMIN DASHBOARD

VII. WORKING PROCEDURE

A. Patient Management System

1) Patients can log in to the site and make a visit or appointment with a doctorwhile making a conversation directly with the doctor

2) Patients can access all the appointments at ease.

3) The patient can check the replies or advice directly from the doctor

4) Patients can download or print prescriptions within a few clicks.

B. Doctor Management System

1) A doctor can log in to see the patient's appointments.

2) A doctor can prescribe the patients and advice the directly.

3) A doctor can add patients.

4) A doctor can manage the information about the outbreaks.

C. Admin Management System

1) Admin can add doctors.
2) Admin can delete or edit doctors.
3) Admin can check patient list.
4) Admin can add likely outbreaks in a specific location for awareness.

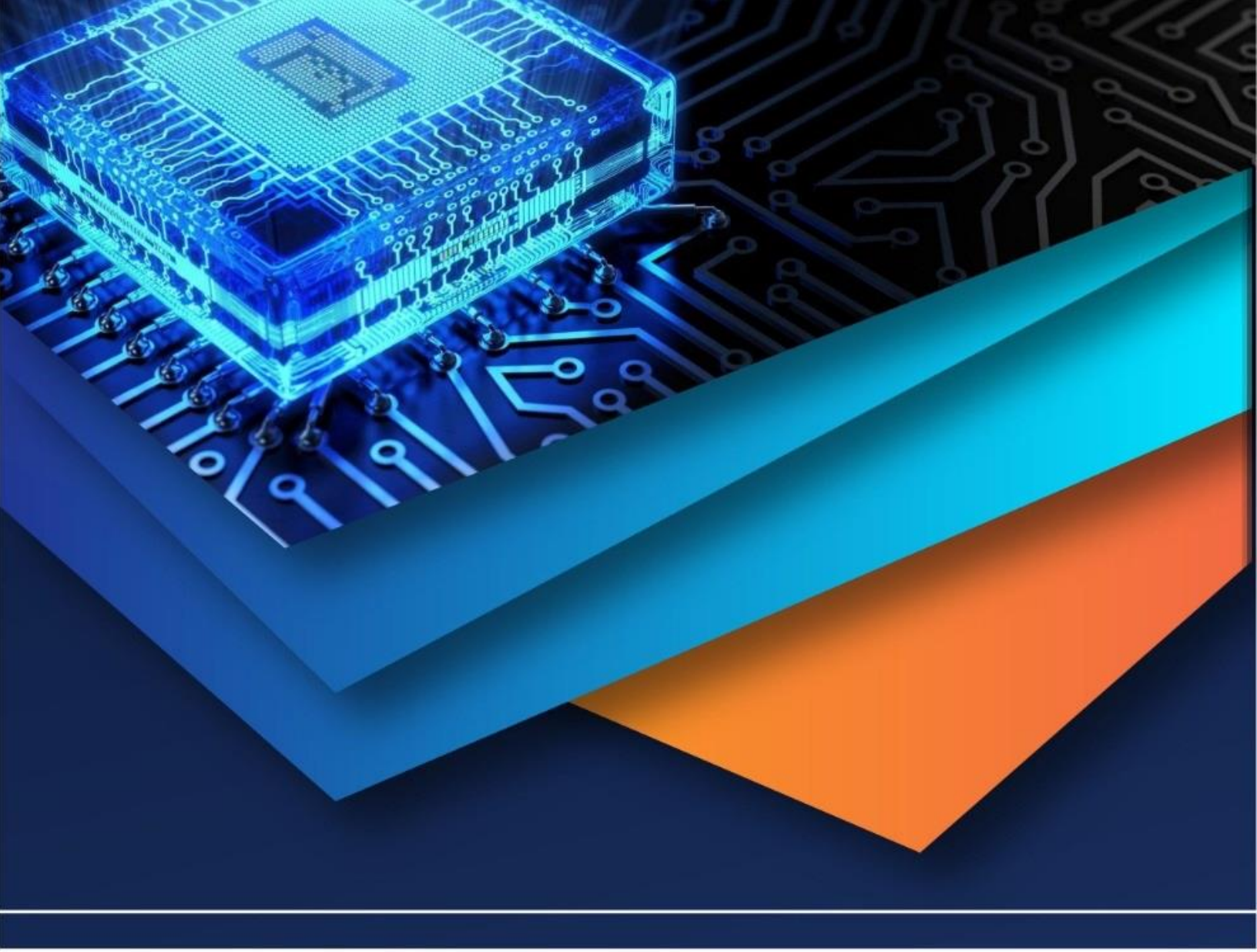
VIII. CONCLUSION

We have many further plans for our project. We are thinking of developing a mobile app as the current software is only for desktop site. We will also add online billing for pharmacy and laboratory on the software. We are thinking of a new innovation which is adding skype account of doctors on the site, this will help the customers to get better level of communication with the doctors. In this process there will bedefinite fees for each doctor which the customer has to first appoint an appointment with the doctor and first appointment would be online with the doctor, where if the problem is not big, they can give the name of the medicines to them online by which the patients can directly get health care tips from the doctor while staying in home. We are also thinking of adding an instant chat room with the doctors on the site with the help of talk. Where the patients can also communicate with them and the work would be 24 x 7 as the doctors can also chat while staying in their home. This would bring a huge change in the online health care facilities. We would also add the pharmacy and labs where they can buy medicines online. By using this software, the sales of the hospital would be much higher as well the patients would also get a better treatment. The project Hospital Management System (HMS) is for computerizing the working in a hospital. The software takes care of the requirements of an average hospital and is capable to provide easy and effective storage of information related to patients that come up to the hospital.
It generates test reports, provide prescription details including varioustest, check-up and medicines prescribed to patient and doctors. It alsoprovides injection details and billing facility. The system also provides the facility of backup as per the requirement.

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