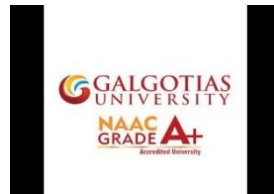# A Project Report

On

E-HEALTH CARE MANAGEMENT SYSTEM

Submitted in partial fulfillment of the

requirement for the award of the degree of

BACHELOR OF COMPUTER APPLICATION

Department of Computer Application And Technology

Session 2023-24

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SCHOOL OF COMPUTER APPLICATION AND TECHNOLOGY

GALGOTIAS UNIVERSITY, GREATER NOIDA

CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the project, entitled **"E-Health Care Management System"** in partial fulfillment of the requirements for the award of the BCA (Bachelor of Computer Application) submitted in the School of Computer Application and Technology of Galgotias University, Greater Noida, is an original work carried out during the period of August, 2023 to Jan and 2024, under the supervision of …Preeti Mam ., Department of Computer Science and Engineering/School of Computer Application and Technology , Galgotias University, Greater Noida.

The matter presented in the thesis/project/dissertation has not been submitted by me/us for the award of any other degree of this or any other places.

Hariom Singh 21SCSE1040110

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This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Guide Name:

Preeti Mam

CERTIFICATE

This is to certify that Project Report entitled "..E-Health Care Management System...." which is submitted by Naushad Khan, Hariom Singh, Arindam Rajpoot .. in partial fulfillment of the requirement for the award of degree BCA. in Department of   ...Computer Application And Technology.... of School of Computer Application and Technology Galgotias University, Greater Noida, India is a record of the candidate own work carried out by him/them under my supervision. The matter embodied in this thesis is original and has not been submitted for the award of any other degree

Signature of Examiner(s)   **Signature of Supervisor(s)**

Date: 27 April, 2024

Place: Greater Noida

Abstract

Hospital Management System provides the benefits of streamlined operations, enhanced administration & control, superior patient care, strict cost control and improved profitability. HMS is powerful, flexible, and easy to use and is designed and developed to deliver real conceivable benefits to hospitals. More importantly it is backed by reliable and dependable support.

The project 'Hospital Management System' is based on the database, object oriented and networking techniques. As there are many areas where we keep the records in database for which we are using MY SQL software which is one of the best and the easiest software to keep our information. This project uses JAVA as the front-end software which is an Object Oriented Programming and has connectivity with MY SQL.

Hospital Management System is custom built to meet the specific requirement of the mid and large size hospitals across the globe. All the required modules and features have been particularly built to just fit in to your requirement. This package has been widely accepted by the clients in India and overseas. Not stopping only to this but they are highly satisfied and appreciating. Entire application is web based and built on 3 tier architecture using the latest technologies. The sound database of the application makes it more users friendly and expandable. The package is highly customizable and can be modified as per the needs and requirements of our clients. Prolonged study of the functionalities of the hospital and its specific requirement has given it a wonderful shape both technically and usability wise. It covers all the required modules right from Patient Registration, Medicine details, Doctor, Wards, , Admin, Store, Patient appointment, bill payment, record modification, discharge details etc.

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Acronyms

B.Tech.	Bachelor of Technology
M.Tech.	Master of Technology
BCA	Bachelor of Computer Applications
MCA	Master of Computer Applications
B.Sc. (CS)	Bachelor of Science in Computer Science
M.Sc. (CS)	Master of Science in Computer Science
SCSE	School of Computing Science and Engineering

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTON

Hospital Management System or Online Hospital Management System is developed using **JavaScript, Spring Boot and MySql** by using this application, Patients can take appointments and doctors can handle patient appointments which will be assigned to them by the admin, and Patients can register and take appointments at any time just by sitting at home or from anywhere. The project Hospital Management system includes registration of patients, storing their details into the system, and also computerized billing in the pharmacy, and labs. The software has the facility to give a unique id for every patient and stores the details of every patient and the staff automatically. It includes a search facility to know the current status of each room. User can search availability of a doctor and the details of a patient using the id. The Hospital Management System can be entered using a username and password. It is accessible either by an administrator or receptionist. Only they can add data into the database. The data can be retrieved easily. The interface is very user-friendly. The data are well protected for personal use and makes the data processing very fast. Hospital Management System is powerful, flexible, and easy to use and is designed and developed to deliver real conceivable benefits to hospitals. Hospital Management System is designed for multispeciality hospitals, to cover a wide range of hospital administration and management processes. It is an integrated end-toend Hospital Management System that provides relevant information across the hospital to support effective decision making for patient care, hospital administration and critical financial accounting, in a seamless flow. Hospital Management System is a software product suite

designed to improve the quality and management of hospital management in the areas of clinical process analysis and activity-based costing. Hospital Management System enables you to develop your organization and improve its effectiveness and quality of work. Managing the key processes efficiently is critical to the success of the hospital helps you manage your processes

1.3 Problem Introduction:

Lack of immediate retrievals: - The information is very difficult to retrieve and to find particular information like- E.g. - To find out about the patient's history, the user has to go through various registers. This results in in convenienceand wastage of time.

Lack of immediate information storage: - The information generated by various transactions takes time and efforts to be stored at right place.

Lack of prompt updating: - Various changes to information like patient details or immunization details of child are difficult to make as paper work is involved.

Error prone manual calculation: - Manual calculations are error prone and take a lot of time this may result in incorrect information. For example calculation of patient's bill based on various treatments.

Preparation of accurate and prompt reports: - This becomes a difficult task as information is difficult to collect from various register.

1.4 Goals

1-User friendly

2-Simple fast

3-Low cost and effective

4-It deals with the collection of patient's information

5- Diagnosis

1.5 Objective:-

1) Define hospital

2) Recording information about the Patients that come.

3) Generating bills.

4) Recording information related to diagnosis given to Patients.

5) Keeping record of the Immunization provided to children/patients.

6) Keeping information about various diseases and medicines available to cure them.

These are the various jobs that need to be done in a Hospital by the operational staff and Doctors. All these works are done on papers.

CHAPTER 2

ANALYSIS

2.1 System Requirement Analysis:

After analyzing the requirement of the task to be performed, the next step is to

analyse the problem and understood its constant. The first activity in the faith is

restarting the existing system and other is to understand the requirement and domain

of the new system. Both the activity are equally important, but the first activity serves

is a basis of giving the functionality specifications and then successful design of the

proposed system. Understanding the properties and requirement of a new system is

more difficult and require creative thinking and understanding of editing on the

system is also difficult, improper understanding of bridges system can lead

diveegionfrom solution.

2.2 System Feasibility:
 Since whenever a system is created we have to take all the experts our minor

involved in creation of system.

2.2.1 Techinal Feasibility:

Are you study of research and only that may affect the availability to achieve an

acceptable system fully stop this evolution determines the weather the technology

needed for the program system is available or not fully stop this is concerned with

this customer equipment and software will successfully satisfy the user requirement

for list of the technical needs of the system may include:

Front end and backend selection:

An important issue for the deployment of a project with the selection of suitable

fronting and backing. When you decide to take out the project we went through an

extensive study to determine the most suitable platform that suits that Needs of the

organizations as well as help in development of project.

The aspects of our study included the following factors:

Front-end selection:
- It must have a graphical user interface that assets employee data not from it background
- Scalability
- Flexibility
- robustness

- platform independent.

Backend -selection:

Multiple user support.

- Operating system compatible.

- effective data maintenance.

- effective data handling.

- Stored procedure.

2.3 Platform Specification:

2.3.1 Hardware Interface

- Intel core I5 processor.

- 1.5 Ghz processor

- 4 GB RAM

2.3.2 Software interface

- Frontend: HTML,CSS, Javascript

- Backend: MYSQL

- Server: Tomcat

Module Description:

○ **ADMIN MODULE**

Admin can add hospital employees, add patients, add doctors and physicians. Admin can modify the info and remove too. Will also take care of billing. Admin will also take care of scheduling appointments for doctors via appointments module. Also, assign roles to different employees like a front desk executive can book appointments or schedule appointments. Admin can also assign doctors to patients or front desk can assign the same while booking appointments. A patient can also be provided with an appointment as walk-in or be provided with prior appointment booking.

○ **DOCTOR MODULE**

The doctor will check his schedule and meet the patients as well. He or she can save data related to patient illness, history of the patient and his or her family, vitals can be noted down too. Separate options will be provided for saving these data. The doctor can also view the patient related visit data in the form of a report. The doctor will also prescribe medications and option will be provided with same meds. The doctor can also order scans or X-Rays as lab tests (a separate option will be provided to enter the same). The doctor will be provided with the option to save diet plan if any.

○ **PATIENT MODULE**

The patient module will have the option to view the patient history report, family history etc.
Details of illness, any diagnostics ordered. The report will also consist of medications prescribed. Visit wise report can also be viewed by a doctor just before checking any

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patient. This module will be accessible to doctor and admin only. The option will be provided to print reports like visit reports, medication history report etc.

○ **APPOINTMENTS MODULE**

This module will be for viewing the appointments for a doctor login, can be accessed by admin, front desk and nurses. It will allow booking of appointments in advance and also like walk-in appointments. The option will be provided to select the doctor for whom appointment need to be booked or assigned for walk-in appointments. The option will be provided to cancel booked appointments or modify appointments like updating the assigned doctor or changing the appointment date**.**
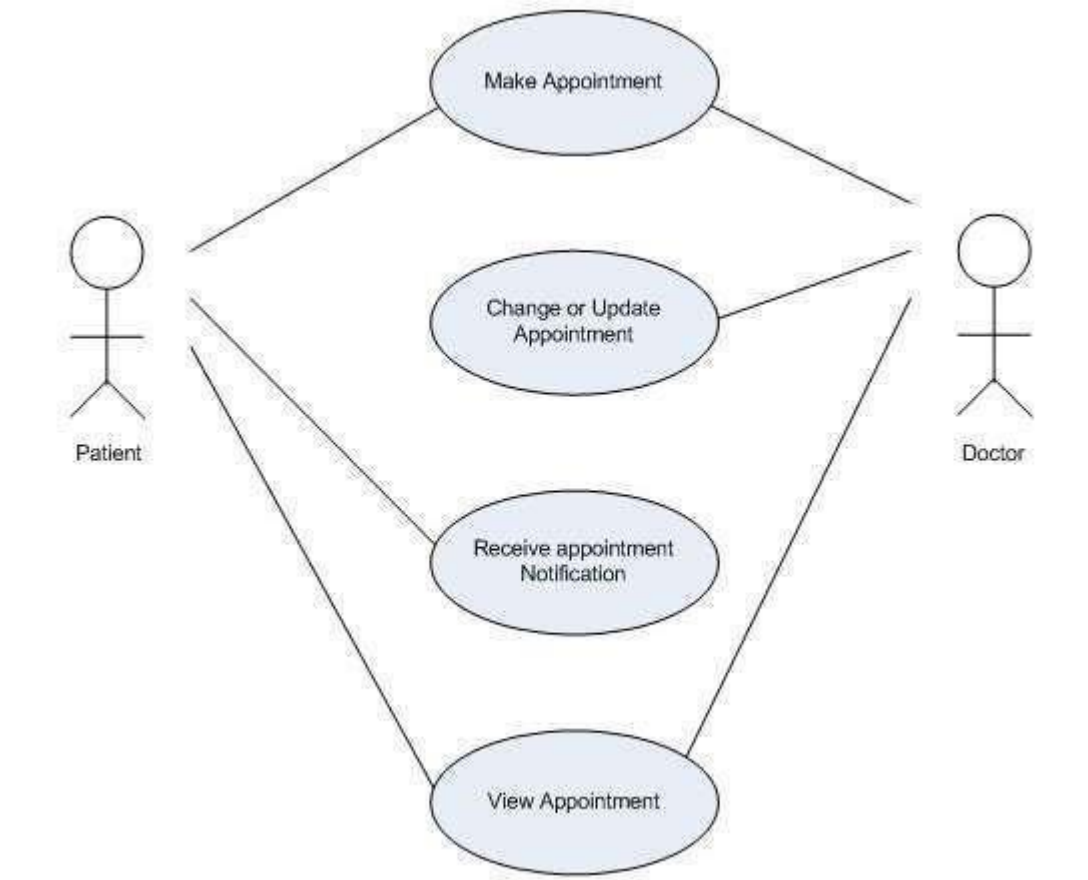
2.3.4 Doctor Use case:

Fig: DOCTOR USE CASE – E- HEALTH CARE
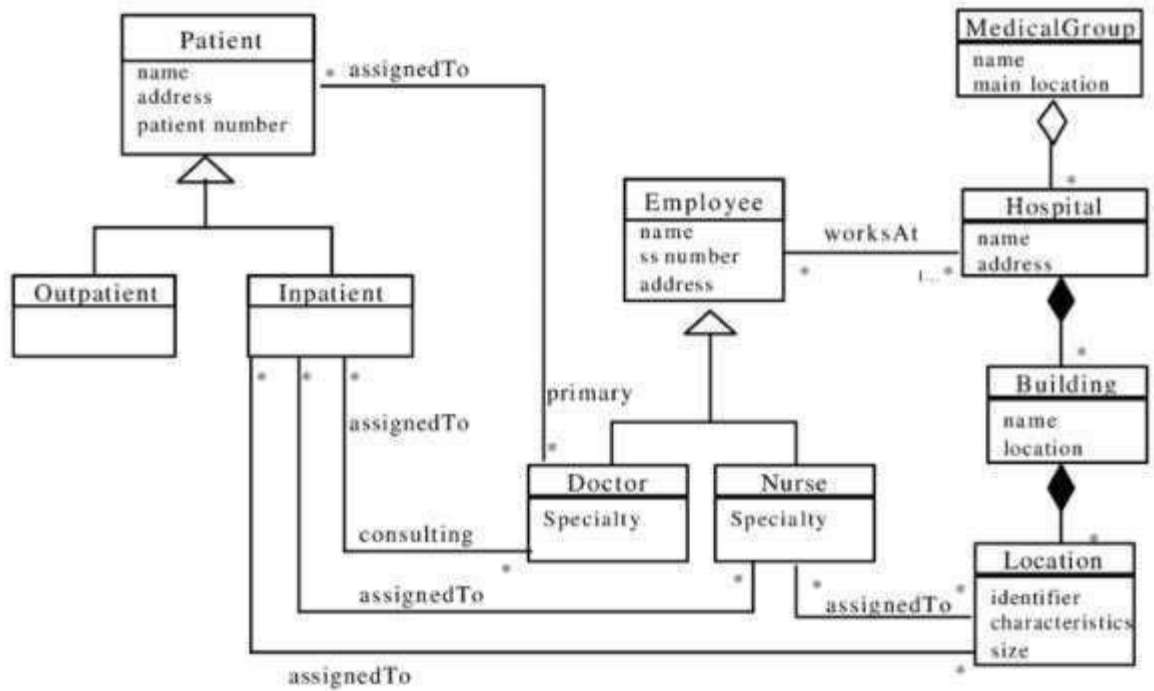
2.3.5 Patient Use-Case:

Fig: PATIENT USE CASE DIAGRAM

2.4   Class Diagram:

A Class is a category or group of things that has similar attributes and common

behavior. A Rectangle is the icon that represents the class it is divided into three

areas. The upper most area contains the name, the middle; area contains the

attributes and the lowest areas show the operations. Class diagrams provides the

representation that developers work from. Class diagrams help on the analysis side,

too.

CHAPTER -3

RESULTS AND DISCUSSIONS

Certainly! E-healthcare management systems have revolutionized the healthcare industry by integrating technology into various aspects of healthcare delivery. Here are some potential results and discussions on e-healthcare management systems:

Improved Efficiency: E-healthcare management systems streamline administrative tasks such as appointment scheduling, patient registration, and billing processes. By automating these processes, healthcare providers can allocate more time and resources to patient care, leading to improved efficiency in healthcare delivery.

Enhanced Patient Experience: Patients benefit from e-healthcare management systems through convenient online appointment scheduling, access to electronic health records (EHRs), and telemedicine services. These systems empower patients to take control of their healthcare journey, leading to increased satisfaction and engagement.

Better Coordination of Care: E-healthcare management systems facilitate seamless communication and collaboration among healthcare providers. Through secure messaging platforms and EHR systems, care teams can easily share patient information, coordinate treatment plans, and track patient progress, resulting in better-coordinated care and improved health outcomes.

Reduced Medical Errors: EHR systems in e-healthcare management platforms help reduce medical errors by providing healthcare providers with accurate and up-to-date patient information. Electronic prescribing tools also help minimize medication errors by ensuring prescriptions are legible, accurate, and comply with patient health records and allergies.

Cost Savings: Implementing e-healthcare management systems can lead to cost savings for healthcare organizations. By streamlining administrative processes, reducing paperwork, and improving resource allocation, healthcare providers can lower operational costs and optimize revenue cycles.

Data-Driven Insights: E-healthcare management systems generate vast amounts of data that can be leveraged to gain insights into patient populations, treatment effectiveness, and healthcare trends. By analyzing this data, healthcare organizations can make informed decisions, identify areas for improvement, and implement targeted interventions to enhance patient care and outcomes.

CHAPTER 4

CONCLUSION

The proposed healthcare portal will pave the way for easy and quick access to better healthcare. It will be beneficial for all those people located in small towns and the patients who have to take regular treatment, travel a lot where there is a lack of medical facilities. In situation like COVID this will prove prove most surface mode for the old citizens, kids don't fully stop currently in healthcare doctors are serving in their free hours which means especially valuable for a specific duration. Or motive will be to aid is more his doctors or will we will try to manage your doctors which will available for full time, emergency cases. So that more cases should be benefited.

In this chain of improvement we'll try to enhance our website in such a way that we can collaborate with more number of hospitals, also with effective management.

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