Mini Project Synopsis on

E- Healthcare Management System

S.E. - I.T Engineering

Submitted By

Miheer More 21104108

Sameer Mishra 21104137

Shubham Gupta 211040

Under The Guidance Of

Prof. Sonal Jain

DEPARTMENT OF INFORMATION TECHNOLOGY

A.P. SHAH INSTITUTE OF TECHNOLOGY

G.B. Road, Kasarvadavali, Thane (W), Mumbai-400615 UNIVERSITY

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CERTIFICATE

This to certify that the Mini Project report on Learning System Management has been submitted by Miheer More[21104108], Sameer Mishra[21104137], Shubham Gupta[21104043]who are a Bonafede students of A. P. Shah Institute of Technology, Thane, Mumbai, as a partial fulfilment of the requirement for the degree in **Information Technology**, during the academic year **2022-2023** in the satisfactory manner as per the curriculum laid down by University of Mumbai.

Ms. Sonal Jain
Guide

Dr. Kiran Deshpande Dr. Uttam D. Kolekar Head
Department of Information Technology Principal

External Examiner(s)
1.
2.

Place: A.P. Shah Institute of Technology, Thane Date:

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References

1. Introduction

- The **E HealthCare Management System** is a computer system that helps keep track of health care information and helps health care providers do their jobs better.

- An e-healthcare management system is a digital platform that provides comprehensive management and coordination of healthcare services. It is a system that combines healthcare technology, information management, and business management to improve the efficiency, quality, and effectiveness of healthcare delivery.

- The benefits of an e-healthcare management system include improved patient care and outcomes, reduced healthcare costs, enhanced communication between healthcare providers and patients, increased efficiency in managing healthcare services, and the ability to analyze healthcare data to improve decision-making.

- Overall, an e-healthcare management system is a valuable tool for healthcare providers and patients alike, as it streamlines healthcare delivery and enhances the overall quality of care.

1.1 Purpose

The purpose of an e-healthcare management system is to improve the quality and efficiency of healthcare services through the use of technology. It involves the use of electronic tools and platforms to manage patient records, appointments, prescriptions, and other healthcare-related data.

Some of the benefits of an e-healthcare management system include:

1. Improved patient care: Electronic health records can provide healthcare providers with a comprehensive view of a patient's medical history, which can help in making better-informed decisions and delivering more personalized care**.**

2. Increased efficiency: Electronic records can be accessed quickly and easily, reducing the need for manual record-keeping and allowing healthcare providers to spend more time with patients.

3. Enhanced communication: Electronic records can be shared easily between healthcare providers, allowing for better collaboration and coordination of care.

4. Improved patient safety: Electronic records can reduce the risk of medical errors by providing accurate and up-to-date information about patients.

5. Cost savings: Electronic records can reduce the need for paper-based records, which can result in cost savings for healthcare providers.

1.2 Objectives

The objectives of an e-Healthcare Management System are typically to improve the quality and efficiency of healthcare services, reduce costs, and enhance patient outcomes. Here are some specific objectives that it may aim to achieve:

1. Improve access to healthcare services: An e-HMS can help patients access healthcare services more easily by allowing them to book appointments, access medical records, and communicate with healthcare providers remotely.

2. Enhance patient safety: e-HMS can help improve patient safety by ensuring accurate and up-to-date medical records, reducing errors in medication management, and providing timely alerts for potential health risks.

3. Increase efficiency and productivity: e-HMS can streamline healthcare processes, reduce administrative burdens, and free up healthcare providers to focus on patient care.

4. Improve healthcare quality: e-HMS can help standardize healthcare practices, improve clinical decision-making, and promote evidence-based care.

5. Reduce healthcare costs: e-HMS can help reduce healthcare costs by minimizing unnecessary procedures, reducing readmissions, and optimizing healthcare resource allocation.

1.3 Scope

The scope of an e-healthcare management system is vast and covers many aspects of healthcare management. Here are some of the key areas that an e-healthcare management system can address:

1. Electronic health records (EHRs): An e-healthcare management system can store and manage patient health information in electronic form, including medical history, diagnosis, treatment plans, and medications.

2. Patient scheduling and appointments: The system can enable patients to schedule appointments with healthcare providers and manage their appointments online.

3. Telemedicine: The system can facilitate remote consultations between patients and healthcare providers through video conferencing or other digital channels.

4. Medical billing and payments: The system can manage medical billing and payments, including insurance claims processing and online payment options.

5. Inventory management: The system can track medical inventory, such as drugs and medical equipment, and generate alerts when supplies run low.

6. Analytics and reporting: The system can generate reports and analyze data to provide insights into patient health outcomes, healthcare provider performance, and other key metrics.

2. Problem Definition

1. An e healthcare management system is a digital platform that enables healthcare providers to manage patient data, appointments, and medical records in an efficient and effective way. The problem that this system aims to solve is the cumbersome and time-consuming process of managing patient records and appointments manually.

2. In a traditional healthcare setting, patients' records are stored in paper form, making it difficult to manage and track them. This leads to delays in accessing patient data, which can affect the quality of care provided. Additionally, scheduling appointments and managing patient flow can be challenging, especially in a busy healthcare environment.

3. An e healthcare management system seeks to solve these problems by providing a digital platform that allows healthcare providers to manage patient records, appointments, and medical information efficiently. The system should be user-friendly and intuitive to use, allowing healthcare providers to quickly access patient information and update records in real-time.

4. Some key features of an e healthcare management system include electronic medical records (EMR), appointment scheduling, prescription management, billing and invoicing, and communication tools to enable healthcare providers to communicate with patients in a secure and efficient way.

5. In summary, the problem that an e healthcare management system aims to solve is to improve the efficiency of healthcare providers by reducing the time and resources needed to manage patient data and appointments, leading to better quality care for patients.

3.Proposed system

An e healthcare management system is a digital platform that allows healthcare providers and patients to manage healthcare-related activities online. Here are some key features that could be included in a proposed system:

1. Electronic Health Records (EHR): The system should provide a secure platform for healthcare providers to store and manage patient medical records electronically. This would include information such as patient history, test results, medications, allergies, and treatment plans.

2. Appointment Scheduling: The system should allow patients to book appointments online with healthcare providers based on their availability. This can help reduce wait times and improve the efficiency of the healthcare system.

3. Telemedicine: The system should allow healthcare providers to conduct virtual consultations with patients through video or audio calls. This would be particularly useful for patients who have difficulty accessing healthcare in person, or for follow-up appointments.

4. Prescription Management: The system should allow healthcare providers to send electronic prescriptions directly to pharmacies, reducing the risk of errors and making it easier for patients to obtain medications.

5. Billing and Insurance: The system should provide a way for patients to pay for healthcare services online and allow healthcare providers to process insurance claims electronically.

6. Health Tracking: The system could include features that allow patients to track their health status, such as tracking their weight, blood pressure, and other vital signs. This information can then be shared with their healthcare provider to help monitor their condition.

3.1 Features and Functionalities

An e-healthcare management system is a digital platform that helps healthcare providers manage patient information, track medical records, monitor patient health, and provide online consultation and treatment. Here are some of the key features and functionalities of an e-healthcare management system:

1. Electronic Medical Records (EMR): The EMR is a digital record of patient medical history, diagnosis, treatment, and other medical data. It allows healthcare providers to access and share patient information securely and efficiently.

2. Online Appointment Scheduling: Patients can schedule appointments online through the e-healthcare management system, reducing wait times and improving patient satisfaction.

3. Telemedicine: E-healthcare management systems enable healthcare providers to conduct consultations and diagnose patients remotely, allowing patients to receive treatment from anywhere.

4. Prescription Management: Providers can use the system to manage patient prescriptions, including refills and renewals.

5. Patient Monitoring: E-healthcare management systems allow providers to monitor patient health remotely, collecting data on vital signs, symptoms, and medication adherence.

6. Billing and Insurance Management: Providers can use the system to manage billing and insurance claims, reducing administrative costs and streamlining financial processes.

7. Electronic Referrals: Providers can use the system to refer patients to specialists, labs, and other healthcare providers electronically.

4. Project outcomes

The outcomes of an e-healthcare management system can be numerous and far-reaching. Here are some potential benefits:

E-healthcare management systems can help healthcare providers deliver better care by giving them quick access to patients' medical records, test results, and other critical information. This can lead to more accurate diagnoses, better treatment plans, and ultimately, better patient outcomes. By automating many of the administrative tasks involved in healthcare management, e-healthcare systems can help healthcare providers save time and reduce the risk of errors. This can free up more time for doctors and nurses to focus on patient care.

E-healthcare systems can also help reduce costs by streamlining processes and reducing the need for paper-based records. This can lead to lower administrative expenses and fewer errors, which can ultimately result in lower healthcare costs for patients.

E-healthcare systems can improve communication among healthcare providers, patients, and other stakeholders in the healthcare system. This can help ensure that everyone is on the same page and that important information is shared in a timely and accurate manner.

E-healthcare systems can help public health officials track and respond to outbreaks of infectious diseases more quickly and effectively. This can help prevent the spread of disease and improve public health outcomes overall.

Overall, the outcomes of an e-healthcare management system can be highly beneficial for both healthcare providers and patients, leading to improved quality of care, increased efficiency, and lower costs.

5. Software Requirements

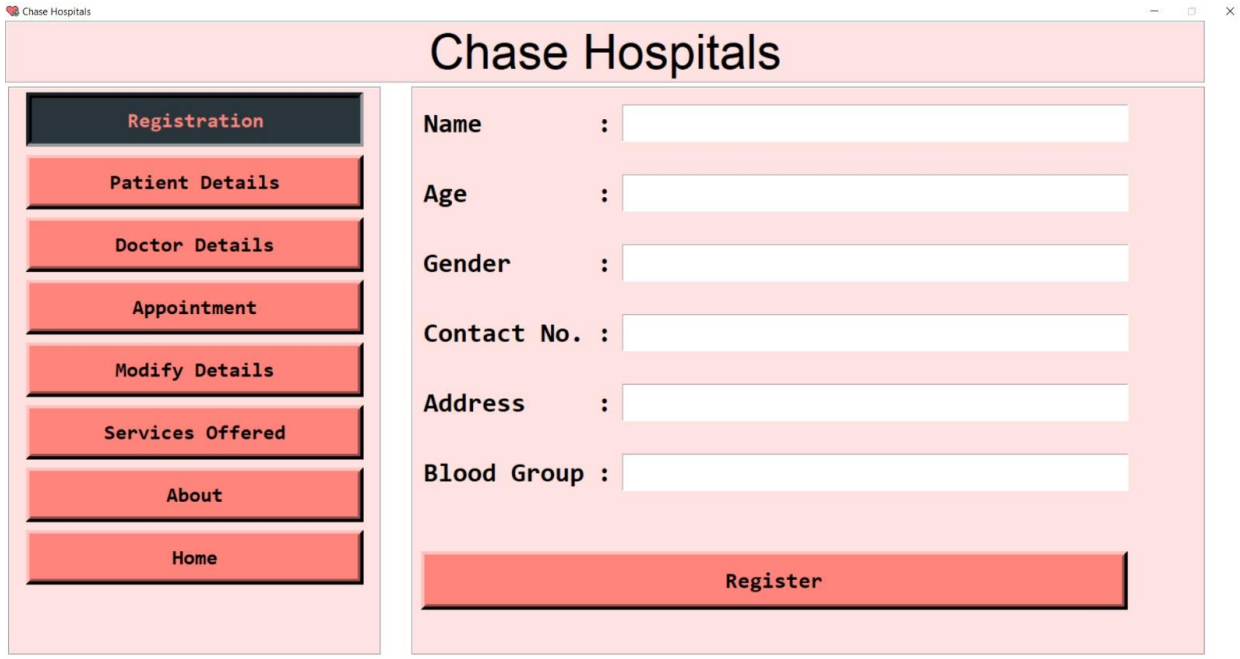
Language Used: -Python

Front End: - A user interface framework/library such as Tkinter.

Back End: -A database access layer such as AST for communicating with the database. For Database purpose we have used sqlite3.

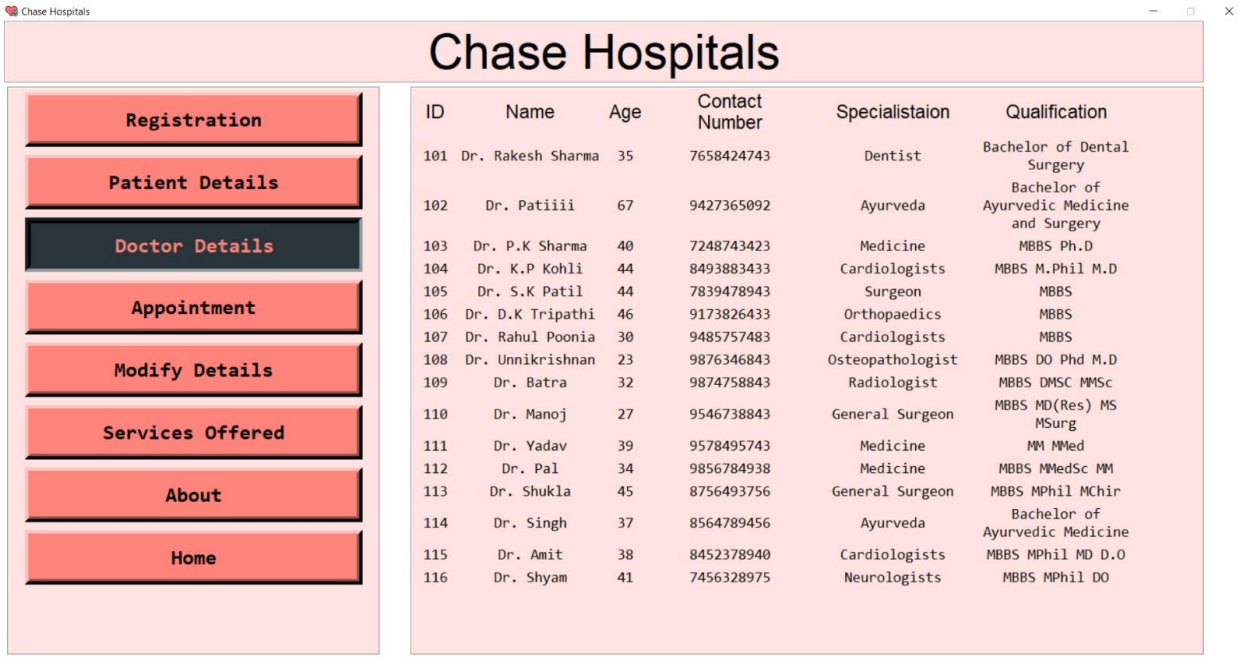
6. Project Design

i. Login Page



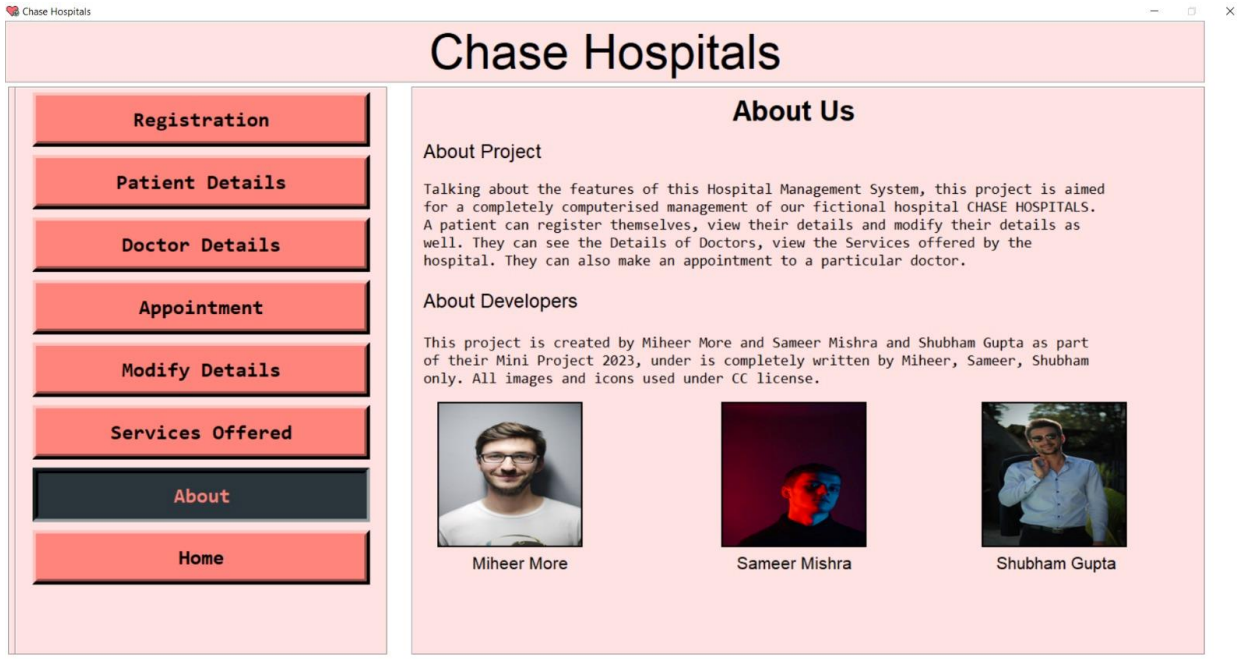
ii. Home Page

Available Doctors page:



Patient ID detail:

About:


Chase Hospitals
Chase Hospitals
Registration
Patient Details
Doctor Details
Appointment
Modify Details
Services Offered
About
Home
About Us
About Project
Talking about the features of this Hospital Management System, this project is aimed for a completely computerised management of our fictional hospital CHASE HOSPITALS. A patient can register themselves, view their details and modify their details as well. They can see the Details of Doctors, view the Services offered by the hospital. They can also make an appointment to a particular doctor.
About Developers
This project is created by Miheer More and Sameer Mishra and Shubham Gupta as part of their Mini Project 2023, under is completely written by Miheer, Sameer, Shubham only. All images and icons used under CC license.
Miheer More
Sameer Mishra
Shubham Gupta

7.Project Scheduling

Group member	Time duration	Work to be done
Miheer More Sameer Mishra Shubham Gupta	Week 1 - Week 3	Implementing 1st module Implemented GUI using Tkinter
	Week 3- Week 4	Testing 1st Module Added some features after the feedback
	Week 4 - Week 6	Implementing 2nd module Implementation of database connectivity using Sqlite3
	By End Of The Week	Implementing 3rd module Learnt basics of connectivity and Report making

7. Conclusion

The e healthcare management system is an innovative solution that has the potential to revolutionize the healthcare industry. With the help of technology, healthcare providers can improve the quality of patient care and streamline their operations, resulting in better outcomes and more efficient use of resources. One of the key advantages of e healthcare management systems is that they enable healthcare providers to share patient information securely and quickly, regardless of their location. This allows for better collaboration between healthcare professionals, resulting in faster diagnosis and treatment, reduced errors, and improved patient outcomes.

Another benefit of e healthcare management systems is that they allow patients to access their medical records and communicate with their healthcare providers online, providing a more convenient and efficient way of managing their health. Patients can schedule appointments, request prescription refills, and receive test results online, reducing the need for in-person visits.

However, the implementation of e healthcare management systems also presents several challenges, such as ensuring data privacy and security, training healthcare providers on how to use the technology effectively, and addressing the digital divide that may prevent some patients from accessing the system.

Overall, the e healthcare management system has the potential to transform the healthcare industry and improve the quality of patient care. However, it is important to address the challenges associated with its implementation to ensure that it is used effectively and safely.

8. References

a. Python module of the week by Doung Hellman

b. https://docs.python.org/3/library/tkinter.html

c. https://youtu.be/byHcYRpMgI4