HOSPITAL MANAGEMENT SYSTEM

TEAM MEMBERS:

1. Mokshith Kolla 20MIS0276

2.Marella Gnananvesh Reddy-20MIS0299

3. Dan Joshua J 20BCI0307

4. O. Sri Krishna Saran-20MIS0147

INTRODUCTION:

Overview:

Hospital management system is a computer system that helps manage the information related to health care and aids in the job completion of health care providers effectively.

HMS was introduced to solve the complications coming from managing all the paper works of every patient associated with the various departments of hospitalization with confidentiality. HMS provides the ability to manage all the paperwork in one place, reducing the work of staff in arranging and analyzing the paperwork of the patients.

Purpose:

The purpose of a Hospital Management System is to streamline and automate various administrative, medical, and operational tasks within a hospital or healthcare facility. It aims to improve the overall efficiency, accuracy, and effectiveness of managing patient information, medical records, appointments, billing processes, inventory management, staff scheduling, reporting systems, and other essential functions.

LITERATURE SURVEY:

1.Hospital Management Maturity Models-
https://www.researchgate.net/publication/355690329_Hospital_Management_Maturity_Models_Literature_Review

Description:

The present study aimed to analyze researches related to maturity model in hospital management. The literature analysis showed that most publications present maturity models oriented towards the development or management of information systems. Few are concerned about the development of a general maturity model in the hospital sector, and most of them lack specific maturity models for this.

2. HOSPITAL MANAGEMENT SYSTEM 1Digvijay H. Gadhari, 2Yadnyesh P. Kadam, 3Prof. Parineeta Suman - https://www.ijream.org/papers/INJRV01I11006.pdf

Description:

Since the Hospital Management System is essential for maintaining detail about the Doctor, Patient, Hospital staff etc. we understand that by using of Hospital Management System project the work became very easy and we save lot of time. Hospital administrators would be able to significantly improve the operational control and thus streamline operations. This would enable to improve the response time to the demands of patient care because it automates the process of collecting, collating and retrieving patient information. Accounting sometimes becomes awfully pathetic and complex. This product will eliminate any such complexity.

3. Survey paper on hospital management system Saylee Dongre Shivani Choudhary Saurabh Sonwane- https://www.ijariit.com/manuscripts/v7i6/V7I6-1316.pdf

Description:

The project Hospital Management System (HMS) is for computerizing the working in a hospital. It is a great improvement over the manual system. The computerization of the system has speed up the process. In the current system, the front office managing is very slow and time consuming. The hospital management system was thoroughly checked and tested with dummy data and thus is found to be very reliable. The software takes care of all 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. This project achieves the main thing by allowing to give facilities like creating patient's profile, allowing appointments, etc. When a patient reaches medical, he/she gets his medicines without papered prescription since prescription is already stored in the database. Hence, patients need not to worry about carrying a prescription

4. Hospital Management System Reyaz Ansari Raj Singh2, Ali Shoiab,Hemant Kumar- https://ijirt.org/master/publishedpaper/IJIRT152488_PAPER.pdf Description:

Well-tuned hospital management system involves lots of important decisions that should be made in the most efficient and quick way. Nowadays it is hard to implement it without the distinct hospital management system. In this article, we'll explore what is HMS software, what functions it performs and how it helps the healthcare industry be more effective and patient centric.

5. Literature Review on Appointment Scheduling in Hospitals Management Sarita Priyadarshini Nayak1, Bharat Bhushan- https://www.primescholars.com/articles/literature-review-on-appointment-schedulinginhospitalsmanagement-103724.html Description:

A summary of hospital appointment was presented in this pap er. In these method the patient need not to go hospital for booking. The patient only need internet for booking purposes and hospital individual doesn't have direct contact while booking. Both of them can adjust their schedule time through online. The system get rid of the issues appeared during traditional booking system. This paper provides a clear understanding of online schedule of patients coming to the hospital. The various paper published in this area is listed with their advantages and drawback. This review is helpful for the researcher working in this field.

6. REVIEW ON HOSPITAL MANAGEMENT SYSTEMDars hana Shah, Aditya Bakshi- https://silo.tips/download/review-on-hospital-management-system Description:

This study embarked on the hospital management system which substitutes the current method of sorting, handling, searching, and keeping of hospital records. This conclude the importance and indispensable nature of the computer and its application in the hospital. The database aimed at reducing paper work in the

reception area to reduce the time wasted by patients in the course of waiting for their files to be retrieved. This also reduced the spaced occupied by the files and provide adequate security for patient s medical record. Based on the finding of this study, the design of hospital patient database record will be a solution to the problem being experienced by the current manual method of keeping patient medical records

7. A Web-Based Hospital Management System For Iganga District Hospital, Uganda Mwase Ali1, Twinamatsiko Jerald, Mukuuma Kassim- http://ijariie.com/AdminUploadPdf/A_Web_Based_Hospital_Management_System_For_Iganga_District_Referral_Hospital_Uganda_ijariie12645.pdf Description:

The developed web-based hospital management system solves the challenges of data redundancy, time wastage in records retrieval, billing management, and drug management at Iganga district hospital in eastern Uganda. Additionally, there is enhanced security as access to the system entails authentication with a valid system username and password. The system does not keep track and alert of the expired drugs. Therefore future studies may focus on developing a webbased hospital management system that can track the expiry dates and expired drugs and alert the system users. The pharmacy module needs some more coding to accommodate the functionality of a barcoding facility to make the delivery simplified.

8. Hospital Management Information Systems In Increasing Efficiency: Mini Literature Review dr. Nadifa Maulani Fadilla- https://jurnal.mdp.ac.id/index.php/jatisi/article/view/555 Description:

Healthcare services are the main topic because of the high complexity challenges in the health sector. The purpose of this study is to determine the implementation of Hospital Information System (HIS) in increasing the efficency of healthcare services. The method used in this article is literature searches related to Hospital Information System. The writing arrangement based on the mind map that is structured to answer scientific questions according to the purpose of this article. The results showed that Hospital Information System can minimize the complexity of healthcare services by increasing organizational efficiency through innovation in developing information system based on business process management, service automation, reducing costs, improving hospital performance, which aims to develop human resources, organizational

development, and technological quality improvement to achieve efficency in healthcare services.

9. REVIEW ON SMART HOSPITAL MANAGEMENT SYSTEM TECHNOLOGIES Najeh LAKHOUA- https://www.rstjournal.com/?mdocs-file=2173

Description:

The hospital is a center of healthcare services that, nowadays, can be considered as a very technological corporation. Then, the integration of information and communication technology (ICT) in the healthcare sector has been one of the important areas of research since last two decades. HOSPITAL MANAGEMENT INFORMATION SYSTEM Arundhati mallick1, Jaypriya Rajwade, Sonia Wadhwa This is why the need for a system approach has been presented.Starting from this study of smart hospital systems discussed in this paper, work is in progress to extend general strategy for analysis and modeling of a smart hospital system based on structured methods.

10. HOSPITAL MANAGEMENT INFORMATION SYSTEM Arundhati mallick1, Jaypriya Rajwade, Sonia Wadhwa-

https://ijarcce.com/wpcontent/uploads/2021/05/IJARCCE.2021.10430.pdf Description:

The Hospital Management System is crucial for keeping element about the Doctor, Patient, Hospital staff, etc. we recognize that by using of Hospital Management System task the work grew to be very effortless and we retailed a lot of time. This would allow enhancing the response time to the demands of affected person care due to the fact it automates the manner of collection, gathering, and recovering patient information. There are many software program applicationsfor Hospital Information Management Systems in the world.

THEORITICAL ANALYSIS

BLOCK DIAGRAM:

SOFTWARES & TECHNOLOGIES USED:

1.HTML

2.CSS

3.JAVA SCRIPT

4.SPRING BOOT

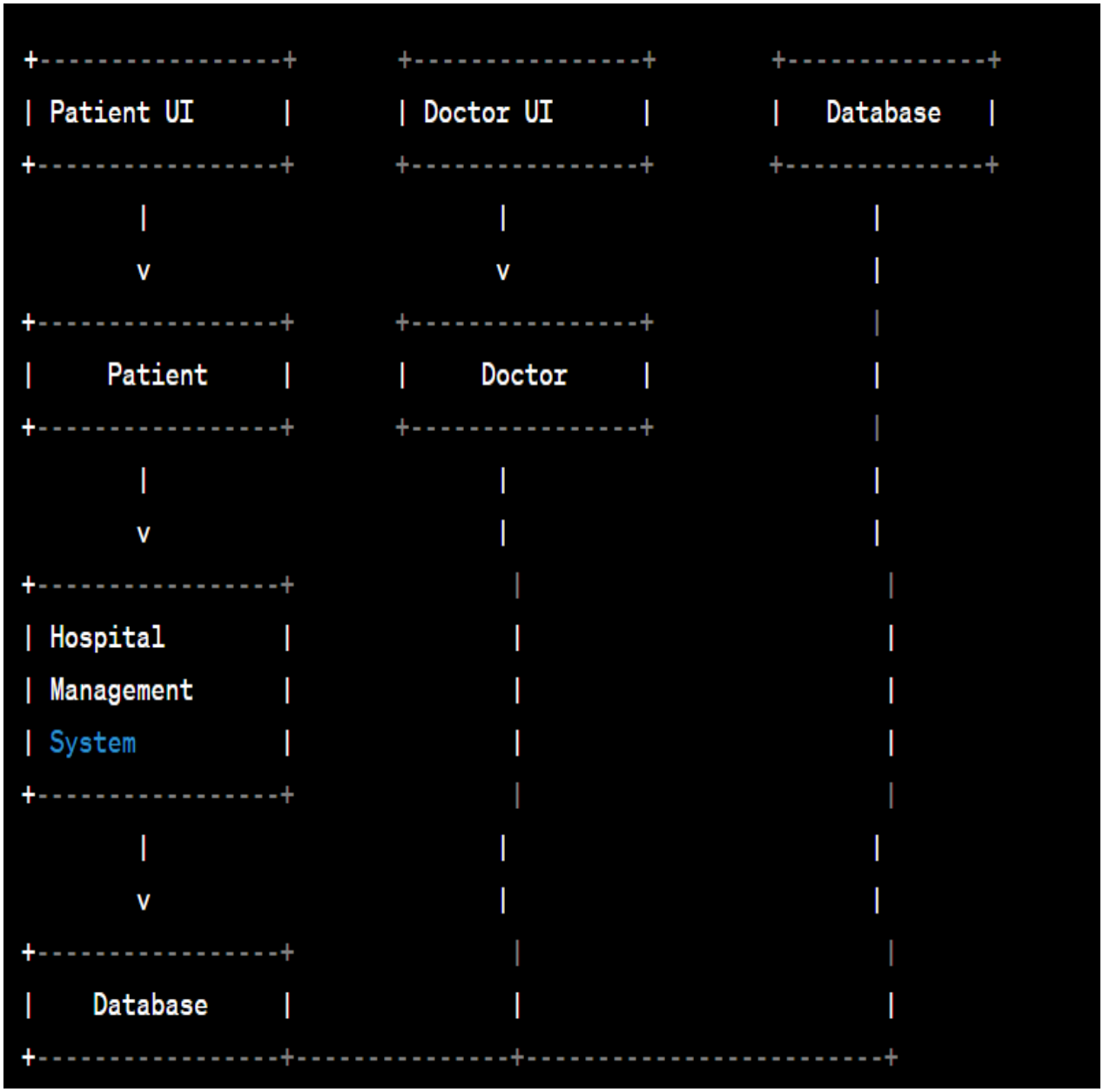
5.MYSQL

Experimental investigation

This experimental investigation aims to assess the impact of the Hospital Management System solution on operational efficiency and user satisfaction in a healthcare setting. The investigation will involve implementing the proposed solution, comprising a Patient UI, Doctor UI, Hospital Management System, and Database, and evaluating its effectiveness through quantitative and qualitative measures.

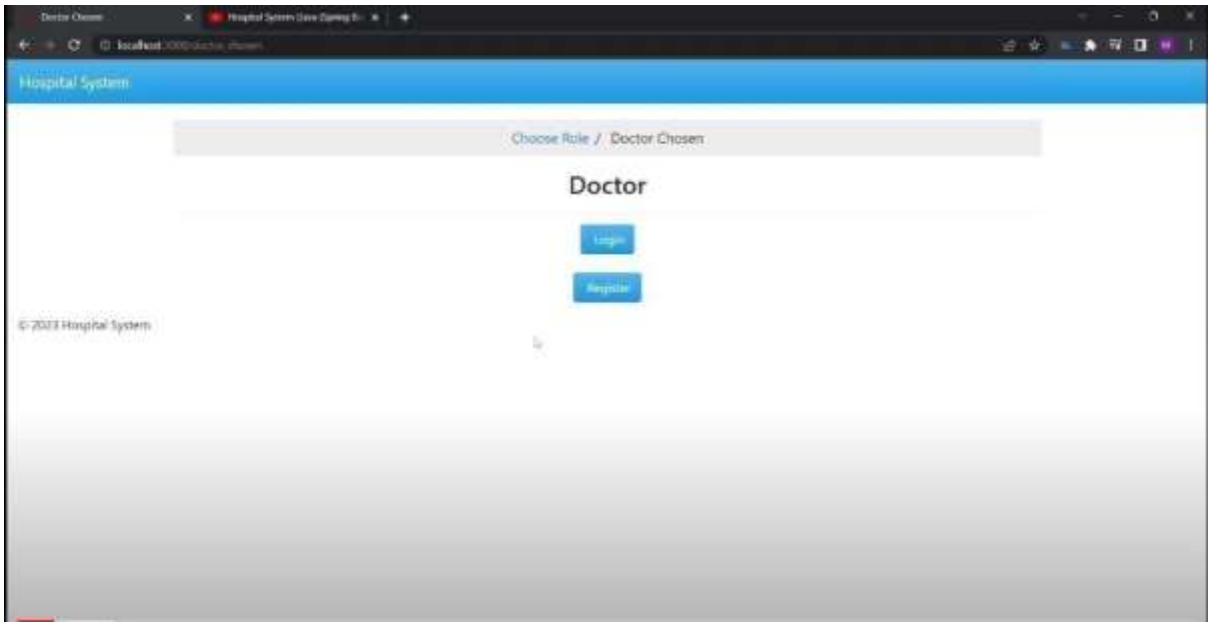
System Implementation: The Hospital Management System solution will be developed and implemented based on the proposed architecture. The system will be designed to capture patient and doctor information, facilitate communication between the interfaces, and ensure seamless integration with the underlying database.

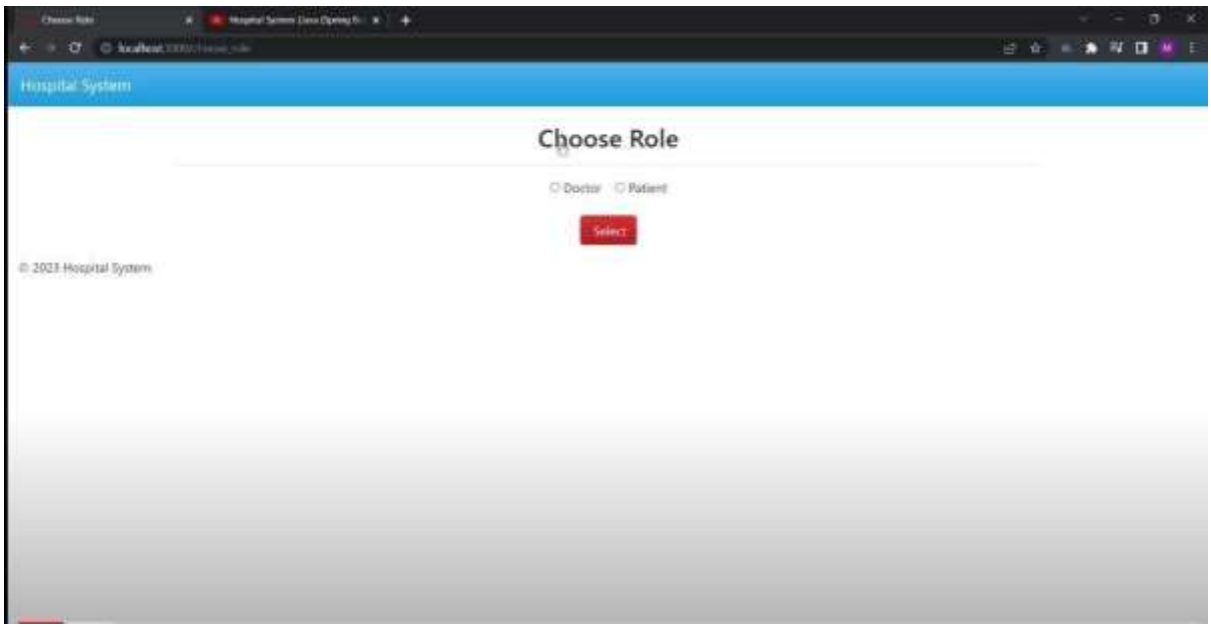
Flow chart

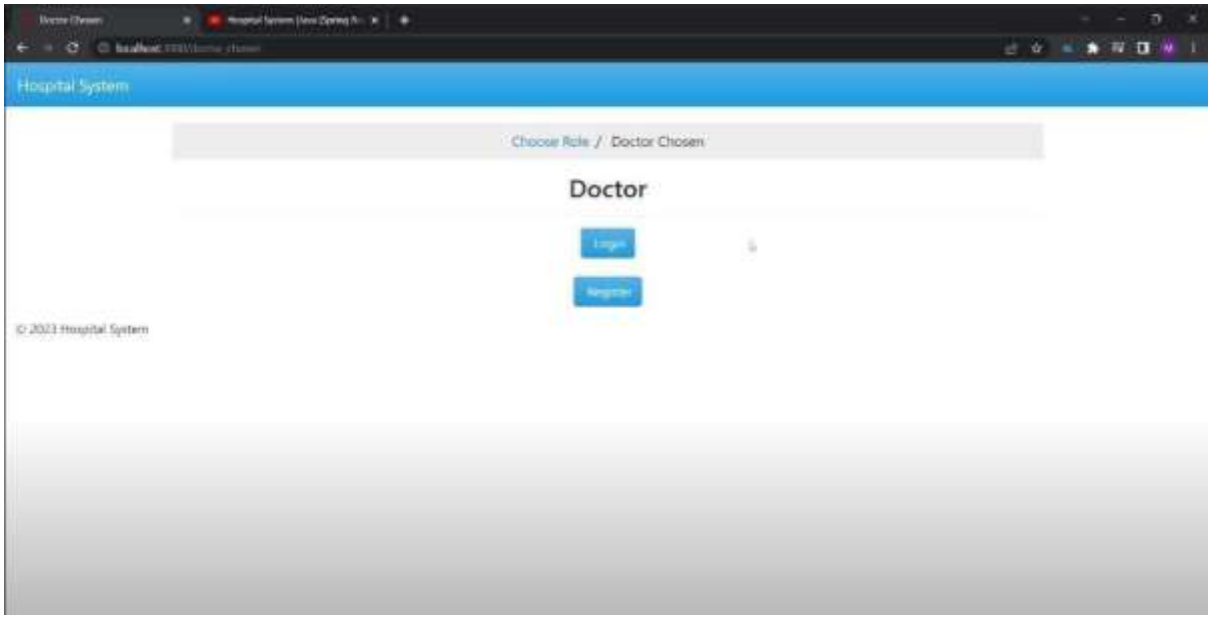

Patient UI
Doctor UI
Database
Patient
Doctor
Hospital Management System
Database

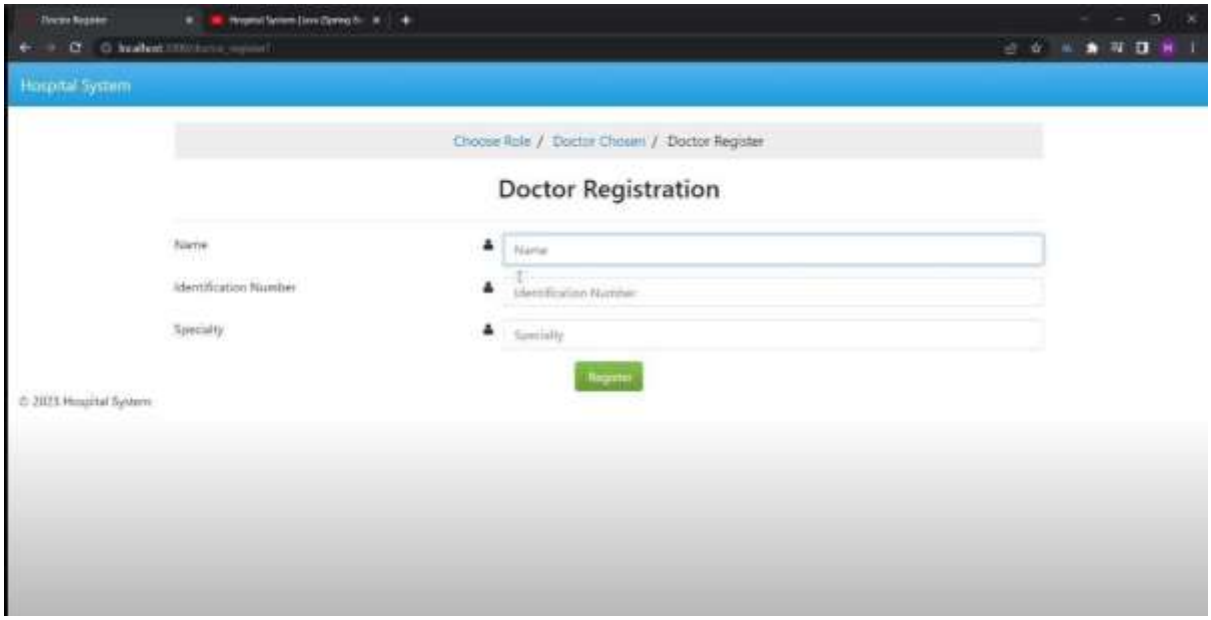
RESULT:

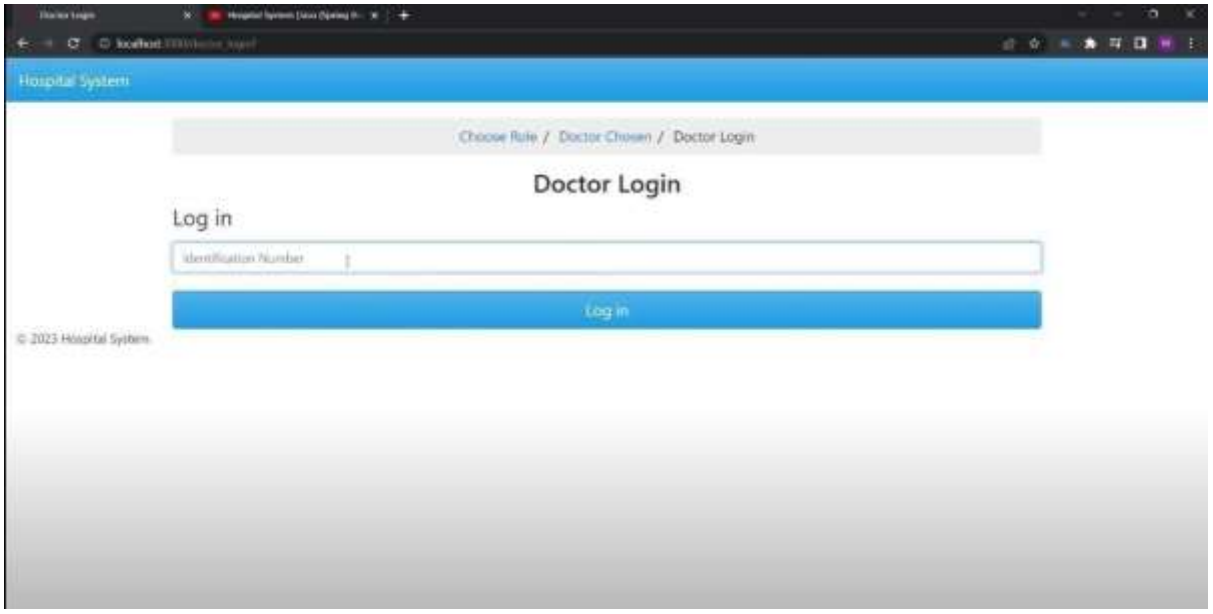
IMPLMENTATION:

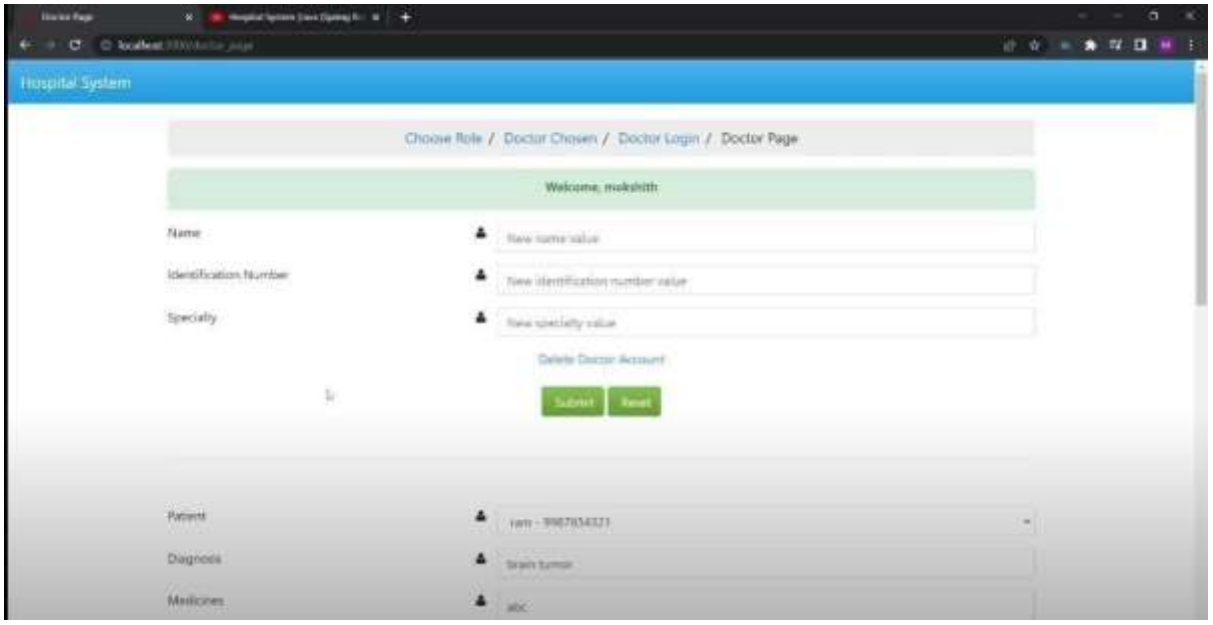


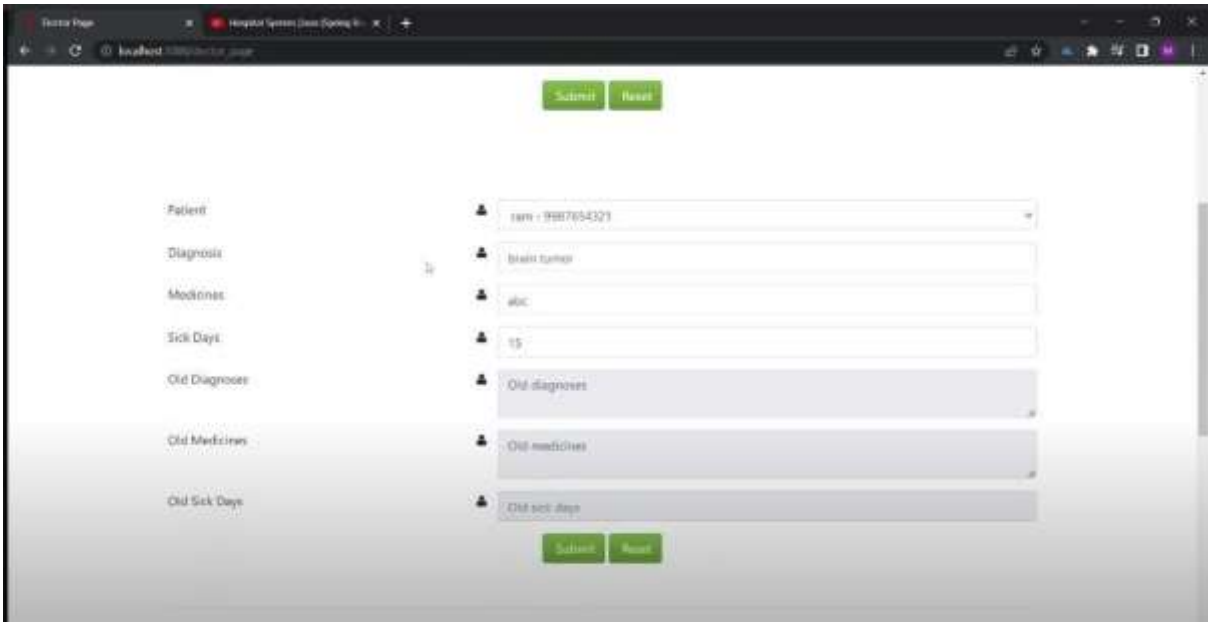


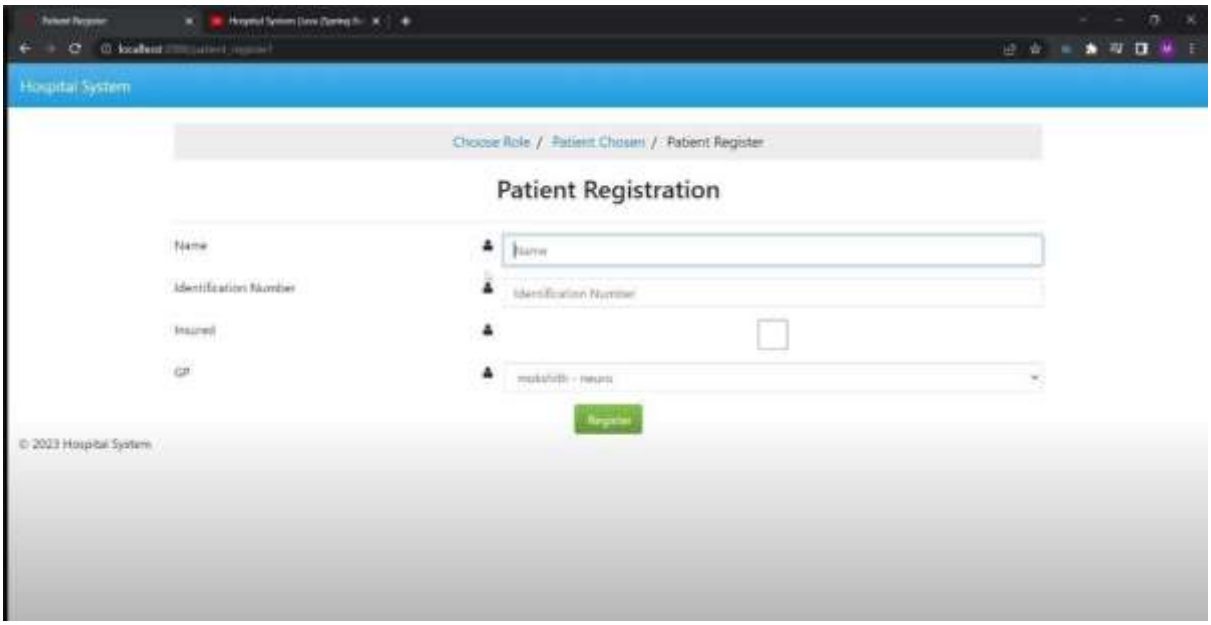

Hospital System
Choose Role / Doctor Chosen
Doctor
Login
Register
© 2023 Hospital System


Hospital System
Choose Role / Doctor Chosen / Doctor Register
Doctor Registration
Name
Identification Number
Specialty
Register
© 2023 Hospital System


Hospital System
Choose Role / Doctor Chosen / Doctor Login
Doctor Login
Log in
Identification Number
Log in
© 2023 Hospital System


Hospital System
Choose Role / Doctor Chosen / Doctor Login / Doctor Page
Welcome, mukeshth
Name
Identification Number
Specialty
Delete Doctor Account
Submit
Reset
Patient
Diagnosis
Medicines


Submit
Reset
Patient
Diagnosis
Medicines
Sick Days
Old Diagnoses
Old Medicines
Old Sick Days
Submit
Reset


Hospital System
Choose Role / Patient Chosen / Patient Register
Patient Registration
Name
Identification Number
Insured
GP
Register
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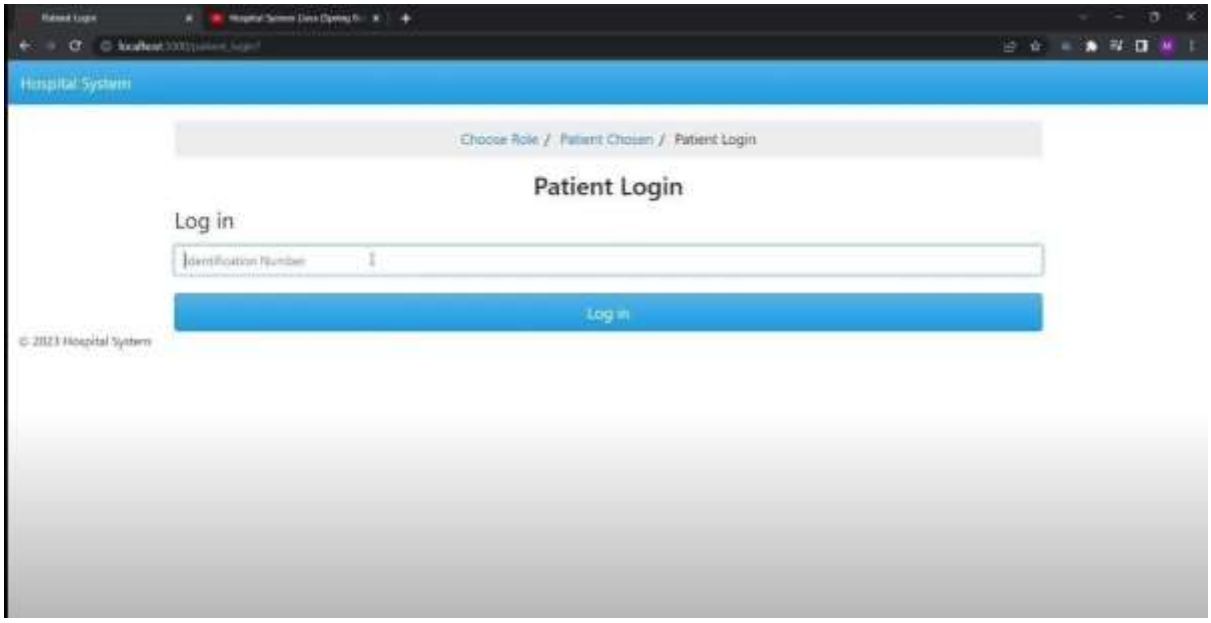
Hospital System
Choose Role / Patient Chosen / Patient Login
Patient Login
Log in
Identification Number
Log in
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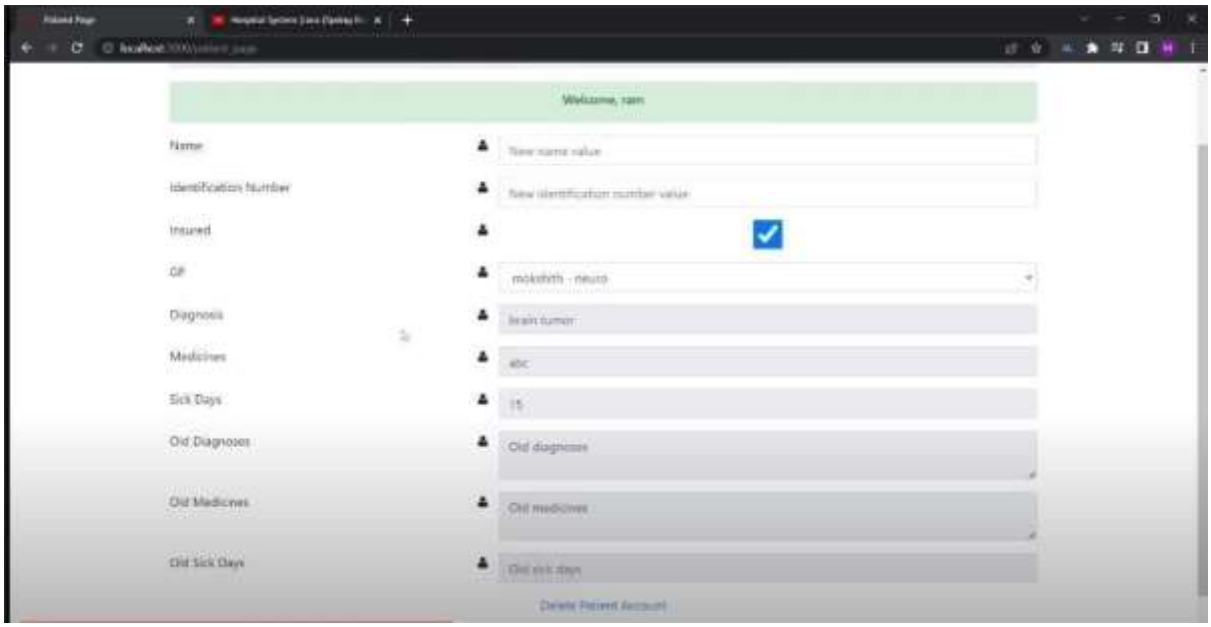
Welcome, ram
Name
Identification Number
Insured
OP
mokhith - neuro
Diagnosis
brain tumor
Medicines
abc
Sick Days
15
Old Diagnoses
Old diagnoses
Old Medicines
Old medicines
Old Sick Days
Old sick days
Delete Patient Account

ADVANTAGES:

1. Better revenue management

A hospital or medical center serves humanity, but profitability is an equally important aspect because it is a business also. Revenue management is a key element because it requires a fortune to run a hospital, and it is impossible to track the same using age-old manual systems.
An automated hospital management system that is tailored as per the business requirements can solve the purpose effectively.

2. Avoid errors and track every single detail

As stated earlier, managing a hospital is a crucial thing where there is no scope for errors. A manual system can't assure foolproof and 100% accurate processing. There are possibilities of errors and mistakes. Installing an automated management system removes the chance of error completely, and you avoid compliance issues and lawsuits, the two biggest hassles for medical centres and hospitals.

3. Improved clinical decision-making

A good quality management system makes sure that the operational and clinical decision-making process is fast, accurate, and efficient. With an easy, single view availability of data points, doctors and medical support staff gets facilitated.

4. Improve data security

Experts have highlighted and reinforced that hospitals that rely on manual systems are more vulnerable to data theft and leakage than automated ones. A full-fledged hospital management system keeps every bit of information secure from unauthorized access.

DISADVANTAGES:

1.The high cost of software development and deployment.

2. Complex design in terms of User Interface and User Experience (UI/UX Design).

3. Fear of data security breach.

4. Difficulty in migrating from manual processes, because both staff and patients are used to the manual processes and so are unable to speedily cope with the new system.

5. Lack of IT-friendly medical personnel is also presenting several challenges.

APPLICATIONS:

1. Electronic Medical Record (EMR) systems
2. Practice management (PM) systems
3. Hospital information system (HIS)
4. Patient management systems (PMS)
5. Telemedicine systems
6. Medical imaging systems
7. Pharmacy management systems
8. Laboratory information systems
9. Radiology information systems

CONCLUSION:

In conclusion, a Hospital Management System plays a crucial role in streamlining and automating various administrative, medical, and operational tasks within healthcare facilities. It offers numerous benefits such as efficient patient information management, improved appointment scheduling, enhanced medical records management, streamlined billing and financial processes, optimized inventory control, effective staff management, advanced reporting and analytics capabilities.

FUTURE SCOPE:

he future scope of Hospital Management Systems is promising, with advancements in technology and healthcare practices. Here are some potential areas where these systems can evolve: 1. Integration with Emerging Technologies

2. Telemedicine and Remote Patient Monitoring
3. Predictive Analytics for Healthcare Planning

4. Mobile Applications & Patient Engagement

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