Infimary management system

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1 Introduction

The Infirmary Management System stands as a cutting-edge solution in the realm of healthcare technology, providing a robust and user-friendly platform for managing medical records and prescriptions. This web-based application offers unparalleled convenience and efficiency to users, facilitating seamless access to vital healthcare information. Through its intuitive interface, patients can effortlessly register, securely log in, and navigate their medical histories with ease. Whether it's reviewing past treatments or updating prescription details, the system empowers individuals to take control of their healthcare journey.

At its core, the Infirmary Management System prioritizes security and privacy, ensuring that sensitive medical data remains protected at all times. Advanced encryption protocols safeguard patient information, guaranteeing confidentiality and compliance with healthcare regulations. With stringent access controls and authentication measures in place, users can trust that their data is handled with the utmost care and confidentiality. This commitment to security instills confidence among patients and healthcare providers alike, fostering a culture of trust and reliability.

Moreover, the Infirmary Management System goes beyond mere record-keeping by offering comprehensive features to enhance healthcare management. From scheduling appointments to monitoring treatment progress, the system serves as a versatile tool for both patients and healthcare professionals. Real-time updates and notifications keep users informed about upcoming appointments and medication schedules, promoting adherence to treatment plans and improving overall health outcomes. With its multifaceted capabilities, the Infirmary Management System sets a new standard for medical record management, empowering individuals to make informed decisions about their health and well-being.

1.1 Purpose of the Project

The primary motivation for implementing this Infirmary Management System arises from the observed shortcomings in hospital management systems. Often, hospitals lack a systematic record- keeping mechanism, leading to the absence of past patient records.

The current reliance on paper reports also poses challenges, with reports being easily misplaced, contributing to unnecessary paperwork. Additionally, the system aims to address the inconvenience faced by patients who forget their prescriptions. By enabling patients to access their reports and prescriptions digitally through a secure login with their name, mobile number, and patient ID, we aim to streamline healthcare processes. This not only enhances patient convenience but also reduces the likelihood of oversight by healthcare professionals, ensuring a more comprehensive and efficient healthcare experience.
We were also inspired by our's college infirmary to make it more optimised.

1.2 Target Beneficiaries

- The target beneficiaries of the Infirmary Management System encompass a diverse range of stakeholders within the healthcare ecosystem. Primarily, patients stand to benefit significantly from the system's user-friendly interface and comprehensive features. Individuals seeking convenient access to their medical records, prescription details, and appointment scheduling find immense value in the platform. By empowering patients with greater control over their healthcare information, the system fosters proactive engagement and informed decision-making, ultimately enhancing the quality of care received.

- Healthcare providers also emerge as key beneficiaries of the Infirmary Management System. Doctors, nurses, and administrative staff benefit from streamlined workflows, improved efficiency, and enhanced communication facilitated by the platform. Access to centralized patient data, real-time updates, and secure messaging functionalities optimize

care coordination and ensure timely interventions. By equipping healthcare professionals with the tools they need to deliver personalized and efficient care, the system contributes to better patient outcomes and overall healthcare delivery.

1.3 Project Scope

The project scope for the Infirmary Management System encompasses the development, implementation, and ongoing support of a comprehensive web-based application tailored to meet the diverse needs of healthcare stakeholders. This includes the design and deployment of a user-friendly interface that allows patients to register, securely log in, and access their medical records, prescription details, and appointment schedules conveniently.

2 Project Description

2.1 Data/ Data structure

The data structures, including class instances, lists, dictionaries, strings, and SQL queries, are integral to the functionality of the code snippets, enabling effective organization, manipulation, and interaction with data in the context of the infirmary management system and CSV file operations.

2.2 Project Features

- **Appointment Booking:** Allow patients to book appointments with doctors. Provide a user-friendly interface for selecting appointment times and doctors.

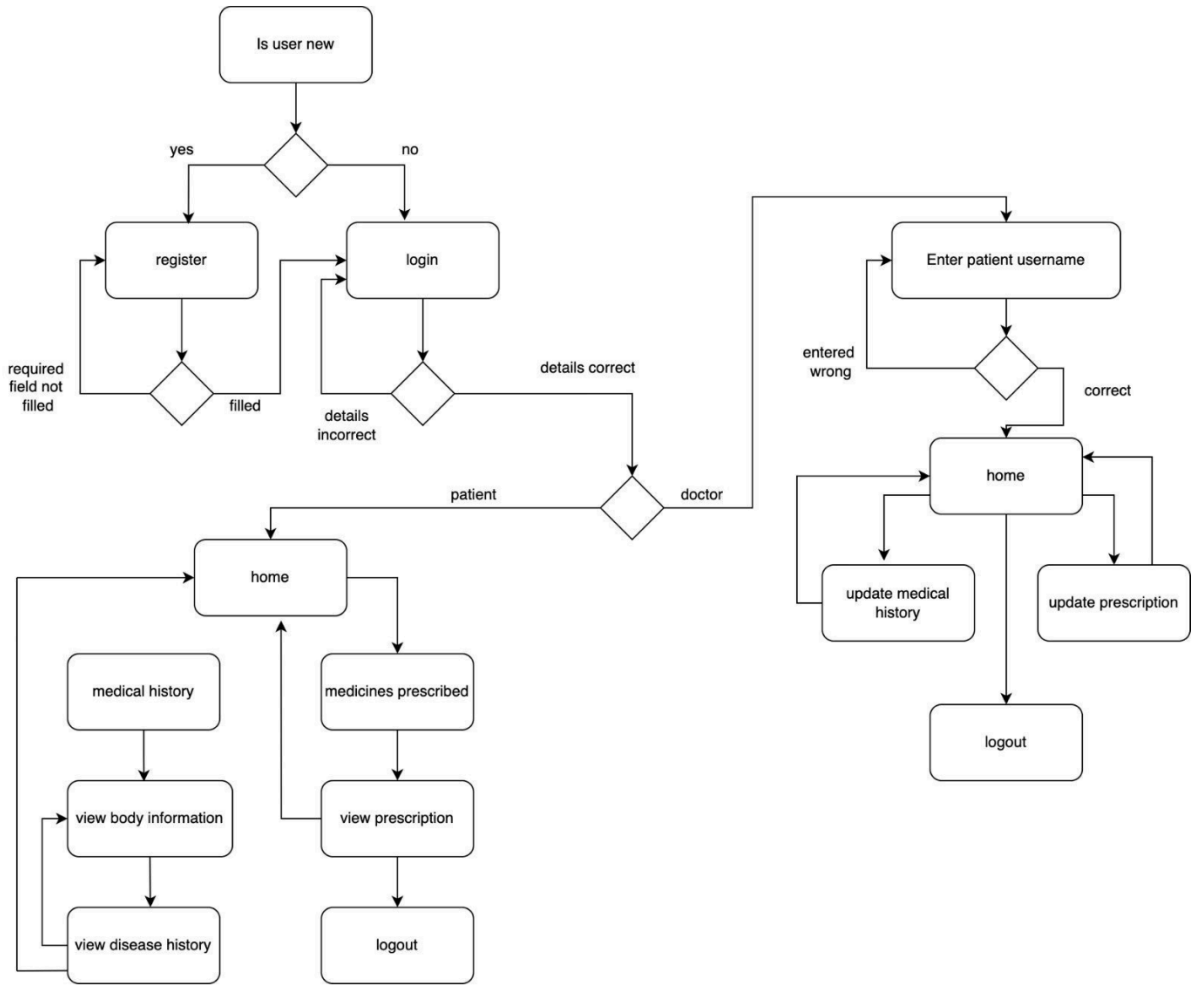
- **Doctor Dashboard:** Provide doctors with a dashboard to manage their appointments, view patient details, update medical records, and prescribe medications.

- **User-Friendly Interface:** Design a user-friendly interface with intuitive navigation and responsive layout to enhance user experience for both administrators and end-users.

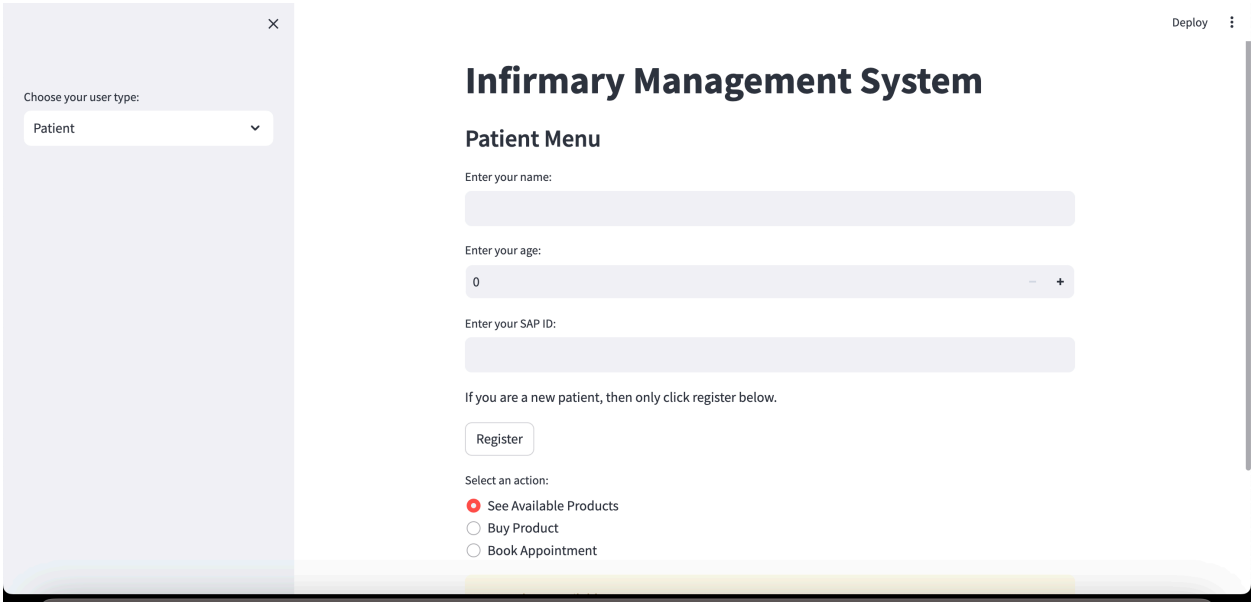
- **Inventory Management:** Allow managers to manage the inventory of medical products and supplies. Features may include adding new products, updating stock levels, and generating inventory reports.

- **Medication Prescription**: Enable doctors to prescribe medications to patients as part of their treatment plans. Maintain a record of prescribed medications and dosage instructions.

2.3. Data Flow Diagram



3. Example illustration



4.Methodology

The Infirmary Management System development follows a structured methodology:

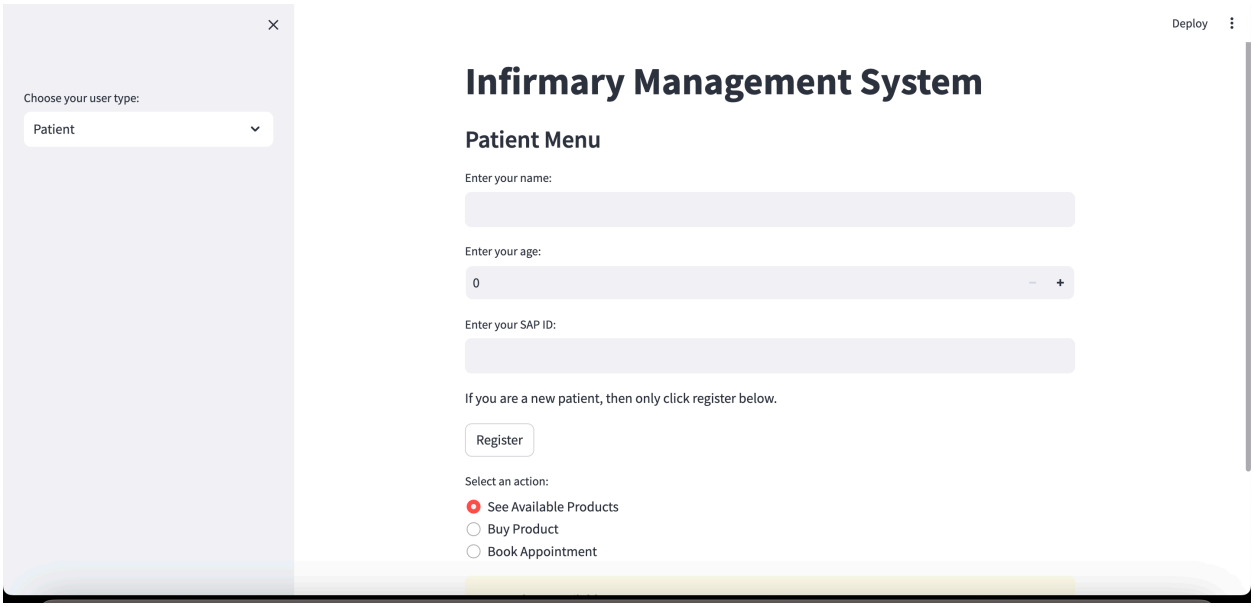
- **Project Planning:** Define scope, identify stakeholders, create a timeline, and allocate resources.
- **Requirement Analysis:** Gather requirements, identify functionalities, and document specifications.
- **System Design:** Design three-tier architecture, define the database schema, and create user-friendly interfaces.
- **Backend Development (Python):** Implement core functionalities, ensure error handling, and incorporate security features.
- **Frontend Development (Streamlit)**: Streamlit provides a straightforward way to build web applications directly from Python scripts, enabling rapid development and deployment.
- **Database Implementation:** Set up a robust database system and establish proper relationships between tables.
- **Integration Testing**: Test interaction between backend and frontend, verify module functionalities, and address issues.
- **User Acceptance Testing (UAT):** Gather stakeholder feedback and make adjustments.
- **Deployment:** Deploy in a controlled environment, monitor performance, and address issues.
- **Training and Documentation**: Provide user training, create manuals, and documentation for maintenance.

- **Maintenance and Updates:** Establish ongoing support, monitor performance, and implement updates based on feedback.

5. Work Done Till Now and Result

We have created a whole user interface.

- **Patient :-**



Infirmary Management System

Patient Menu

Enter your name:

Siddhant

Enter your age:

20

Enter your SAP ID:

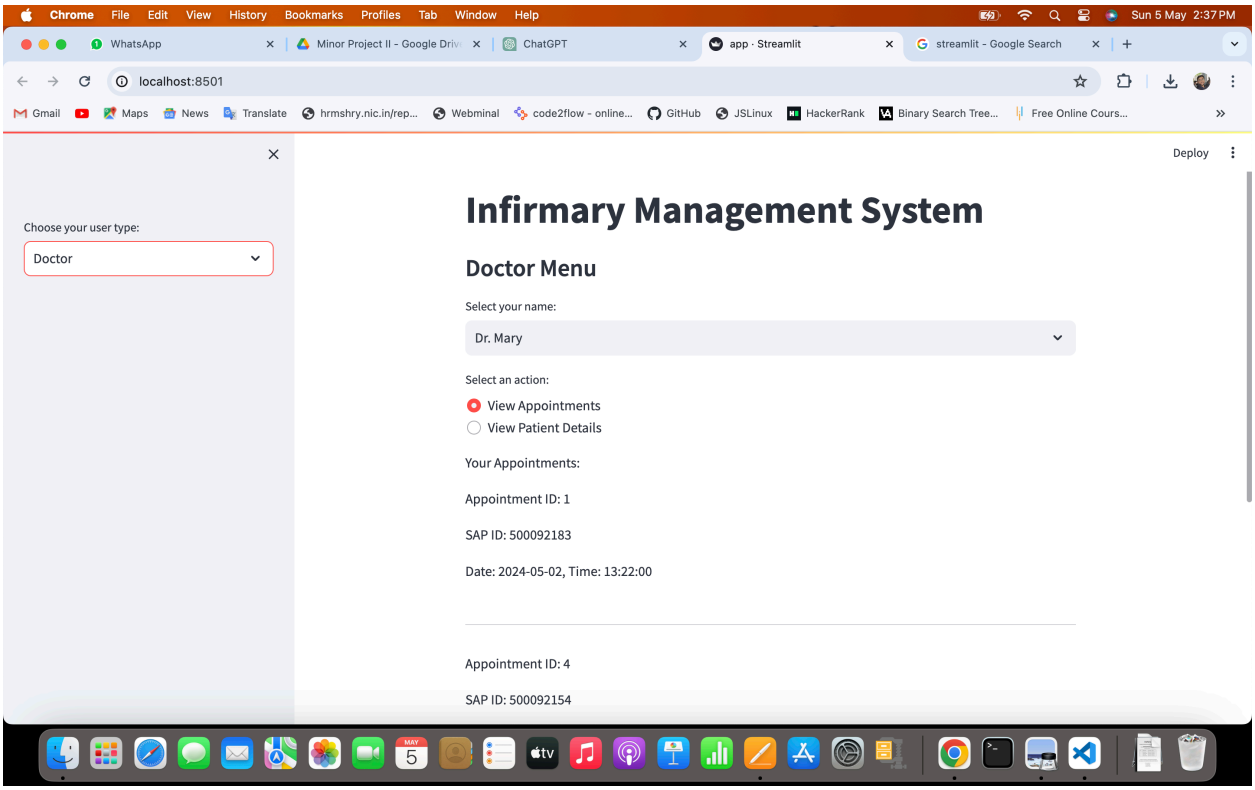
500093449

If you are a new patient, then only click register below.

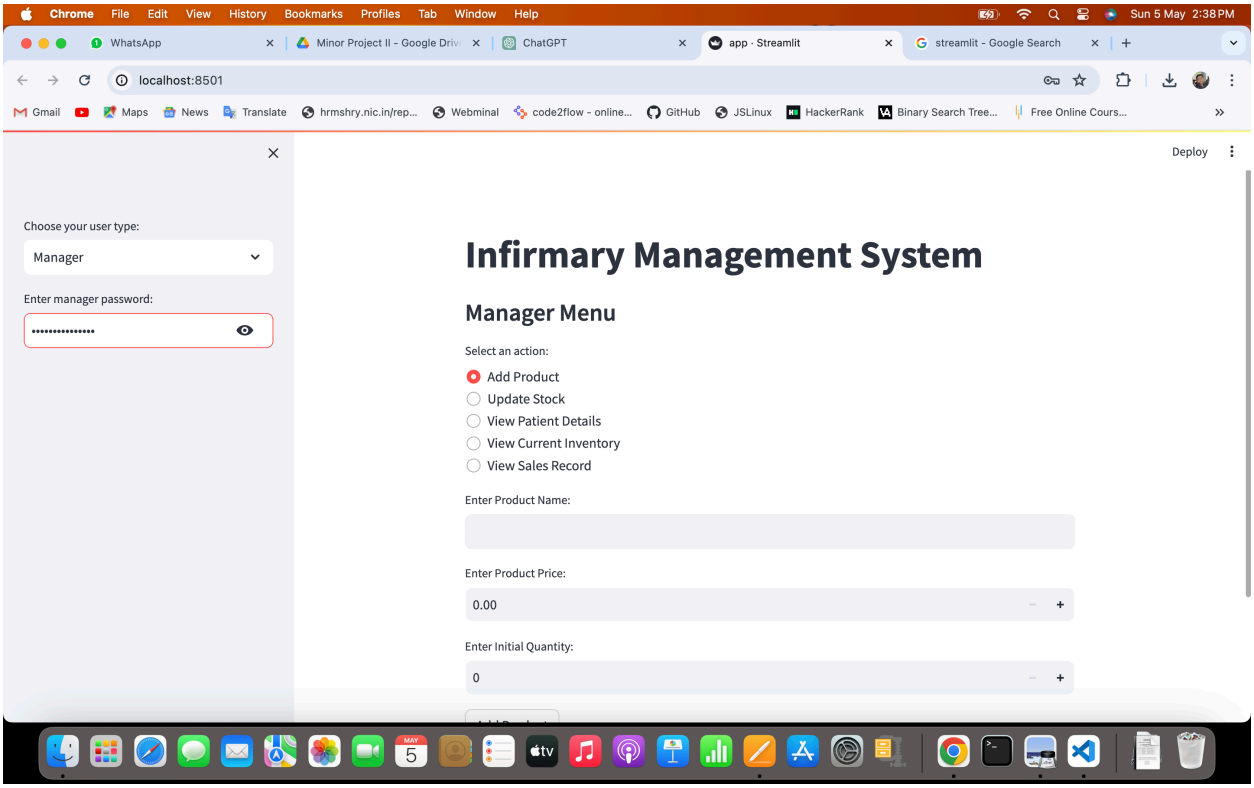
Register

Patient added successfully!

- **Doctor:-**



- **Manager:-**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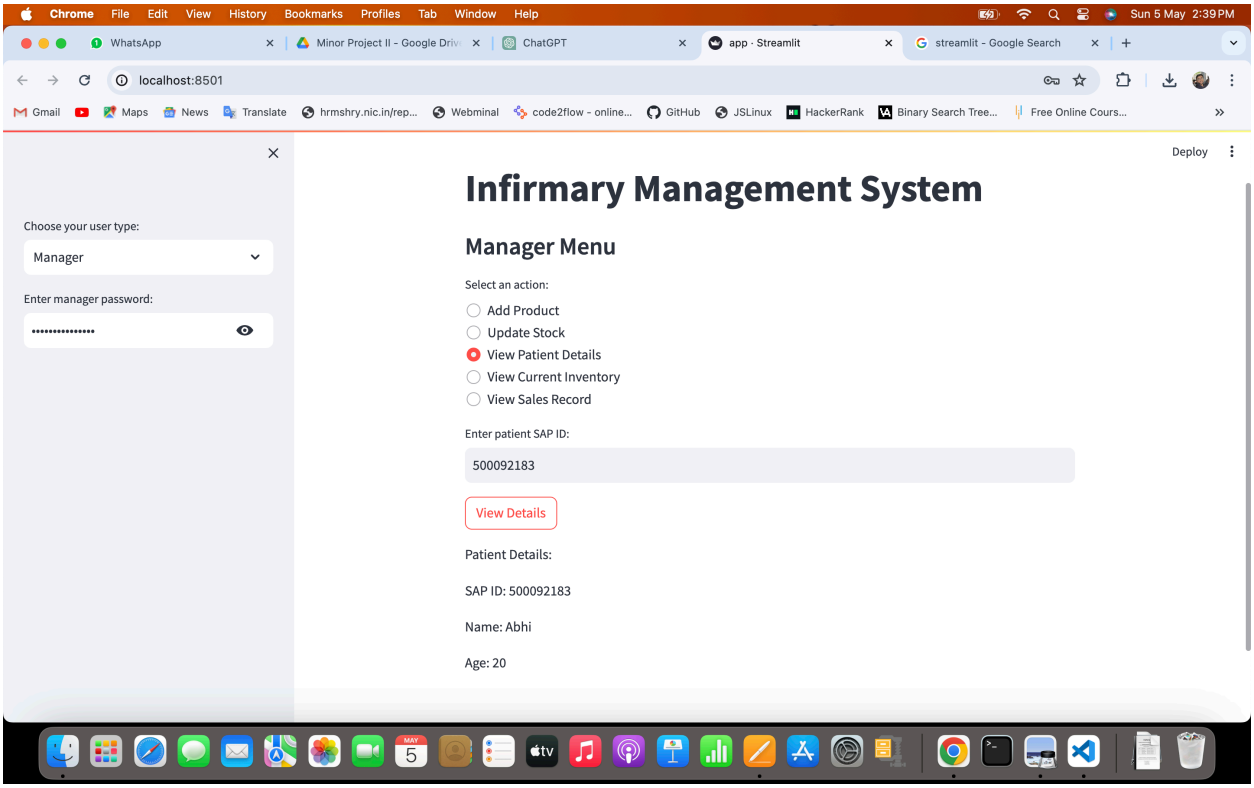
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Patient Details:
SAP ID: 500092183
Name: Abhi
Age: 20

6. Challenges

We face challenges in frontend while using “Streamlit”. I was not running in our system after installing it in our vscode but after updating the configuration on system it was working but main problem comes when we have to integrate our backend with frontend.
For running the streamline we have to create a virtual environment and after creating a virtual environment we have to copy our project files into that virtual environment. After doing this we have to activate the environment by command and the run the project.
This was little challenging for us but by doing team work we resolve the error.

7.Reference

1. "A Detailed View of Hospital Management System (HMS)," *Mocdoc Blog,* [Online].Available:https://mocdoc.in/blog/a-detailed-view-of-hospitalmanagement-system-hms.

2. The Hospital Management System," *ResearchGate,* [Online]. Available: https:// www.researchgate.net/publication/ 367460409_The_Hospital_Management_System.

3. "A Study of Advanced Hospital Management System", *Index Copernicus Journals,* [Online]. Available: https://journals.indexcopernicus.com/api/file/viewByFileId/651165.pdf.

4. MySQL. (n.d.). MySQL Connector/Python Developer Guide. [Online]. Available: https://dev.mysql.com/doc/connector-python/en/

5. A. H. Nigam, V. M. Patil, and B. V. Pathak, "Development of Hospital Management System using Cloud Computing," in 2017 International Conference on Inventive Computing and Informatics (ICICI), 2017.

6. [1] Ratté S. (2021). "Streamlit Basics." [Online]. Available: https://www.researchgate.net/publication/363018743_Streamlit_Basics.

7. David F. Rogers and J. Alan Adams, "Procedural Elements for Computer Graphics," Computer Graphics: Principles and Practice, 2nd ed., pp. 1-11, 1990. [Online]. Available: https://www.sciencedirect.com/science/article/pii/B9780443186387000013