SWASTHYA TRACK

YOUR HEALTH, OUR MISSION

TEAM HEALTH HACKERS

By

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CONTENT

INTRODUCTION

ABOUT THE PROBLEM STATEMENT

The challenge before us is to envision and create an innovative Healthcare Ecosystem that sets new standards in patient data management, accessibility, and collaboration. This ecosystem should not merely integrate data but should introduce groundbreaking features and capabilities, empowering patients and enabling healthcare providers to deliver more personalized, timely, and well-informed care.

OVERVIEW OF THE TOPIC

AIM

Transforming healthcare by enhancing data exchange and accessibility among providers, clinics, and patients. Also, to guide patients regarding to different available health policies and public health initiatives.

VISION

Revolutionize healthcare through technology-driven patient-centric care. Empowering individuals with knowledge and resources to make informed decisions about their health.

KEY FEATURES

Enhanced Patient Engagement

AI Driven Clinical excellence

Interoperability & Data Exchange

Support for Health care Providers

OVERVIEW OF THE FEATURES

Enhanced Patient Engagement: Introducing the platform to the patient where all the records of different hospitals are present in his / her unique ID. The patient will decide whether to share the data of hospital A with hospital B. Self- testing methods are also implemented (skin cancer detection, diabetes detection, thyroid detection, etc.)

AI driven clinical experience: With the help of AI, the prediction of diseases in a particular region can be achieved. Also, introducing AI attendance for doctors in hospitals and letting the patient know whether the doctor is present in hospital or not.

Interoperability & Data Exchange: The doctor / receptionist inputs the data for the patient (appointment date, problem, prescriptions, test results). The patient has the view-only access to the data as he/she can hamper the important data. But the patient has the authority to whom he/she can share the data.

Support for health care providers: This feature includes all the clinics, medicals, pathology labs along with Asha workers who contribute in providing healthcare to the users. The patient record will store the appropriate data from who he/she has been benefitted.

Requirement Analysis of the project:

Software Analysis

- Database Management System (DBMS) MySQL, MongoDB, PHP
- Front-end languages like HTML, CSS & JS for web development
- Programming languages such as Python, Java, or C++ to develop custom analysis scripts or tools and models.
- Machine learning libraries like TensorFlow, PyTorch, Keras API
- Data Models like CNN for image processing
- Blockchain Technology

Hardware Analysis

- Network Resources
- Redundancy and Backup Resources
- Server or powerful workstation to host your database and perform the analysis.

TECHNICAL OVERVIEW

- **Architecture:** The ecosystem utilizes a modular and scalable architecture, built on modern cloud infrastructure, ensuring flexibility and adaptability to evolving healthcare needs.

- **Interoperability:** It employs industry-standard protocols like HL7 FHIR and DICOM for seamless data exchange, promoting interoperability with various healthcare systems.

- **Data Security**: Robust encryption, access controls, and regular security audits ensure the highest level of data protection and compliance with healthcare regulations (e.g., HIPAA).

- **User Interfaces:** The ecosystem features user-friendly interfaces tailored for patients and healthcare providers, accessible via web and mobile devices for a seamless user experience.

- **Data Repository**: A secure, centralized data repository houses patient records, allowing real-time access, updates, and sharing while ensuring data consistency.

- **Patient Engagement Tools:** The platform includes secure messaging, appointment scheduling, and educational resources to enhance patient engagement.

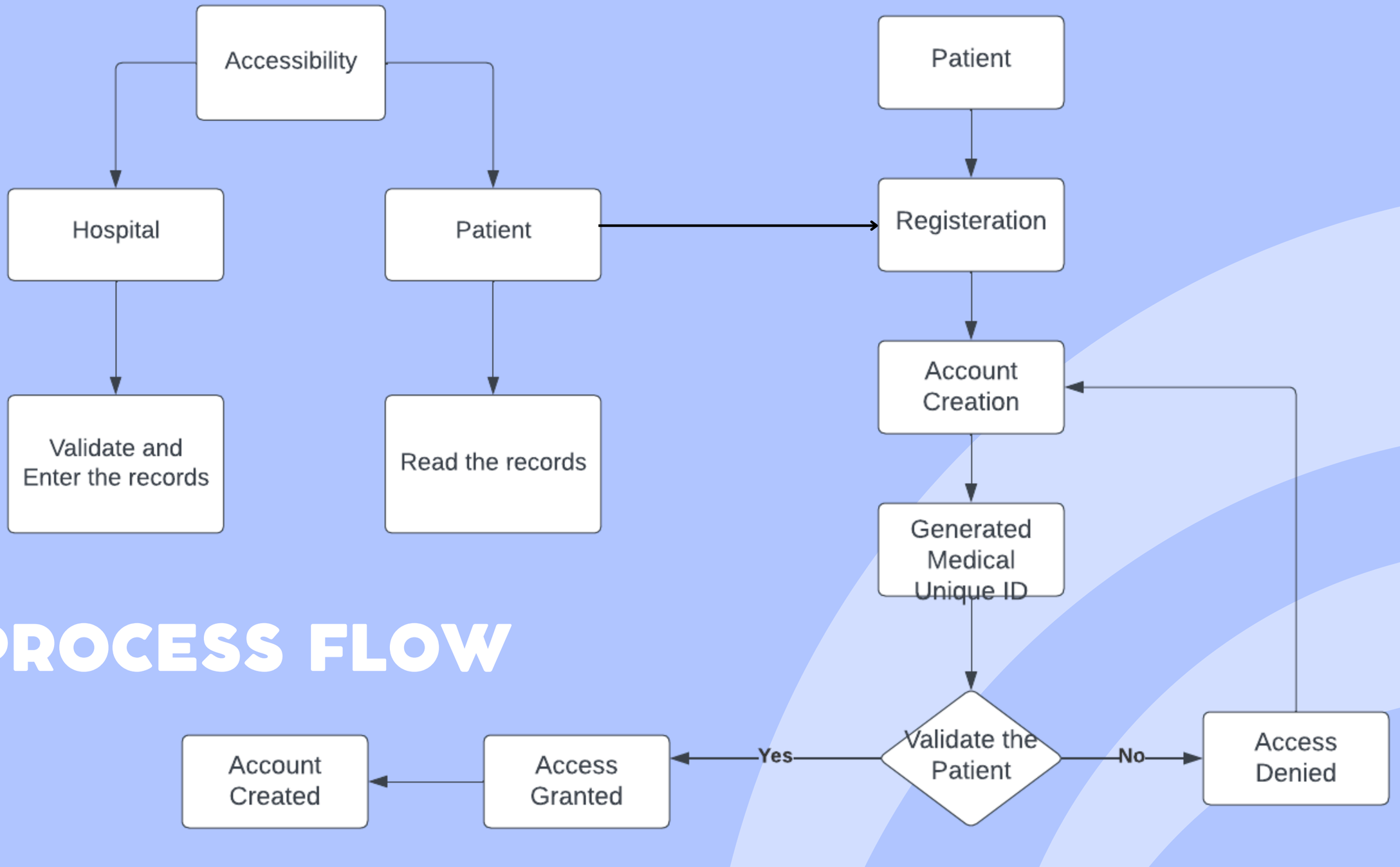
- **Healthcare Provider Support**: Ecosystem equips healthcare providers with analytics, decision support, and real-time access to patient data to expedite and improve care delivery.

- **Scalability**: Designed for scalability, ecosystem can handle a growing volume of data and users as healthcare networks expand.

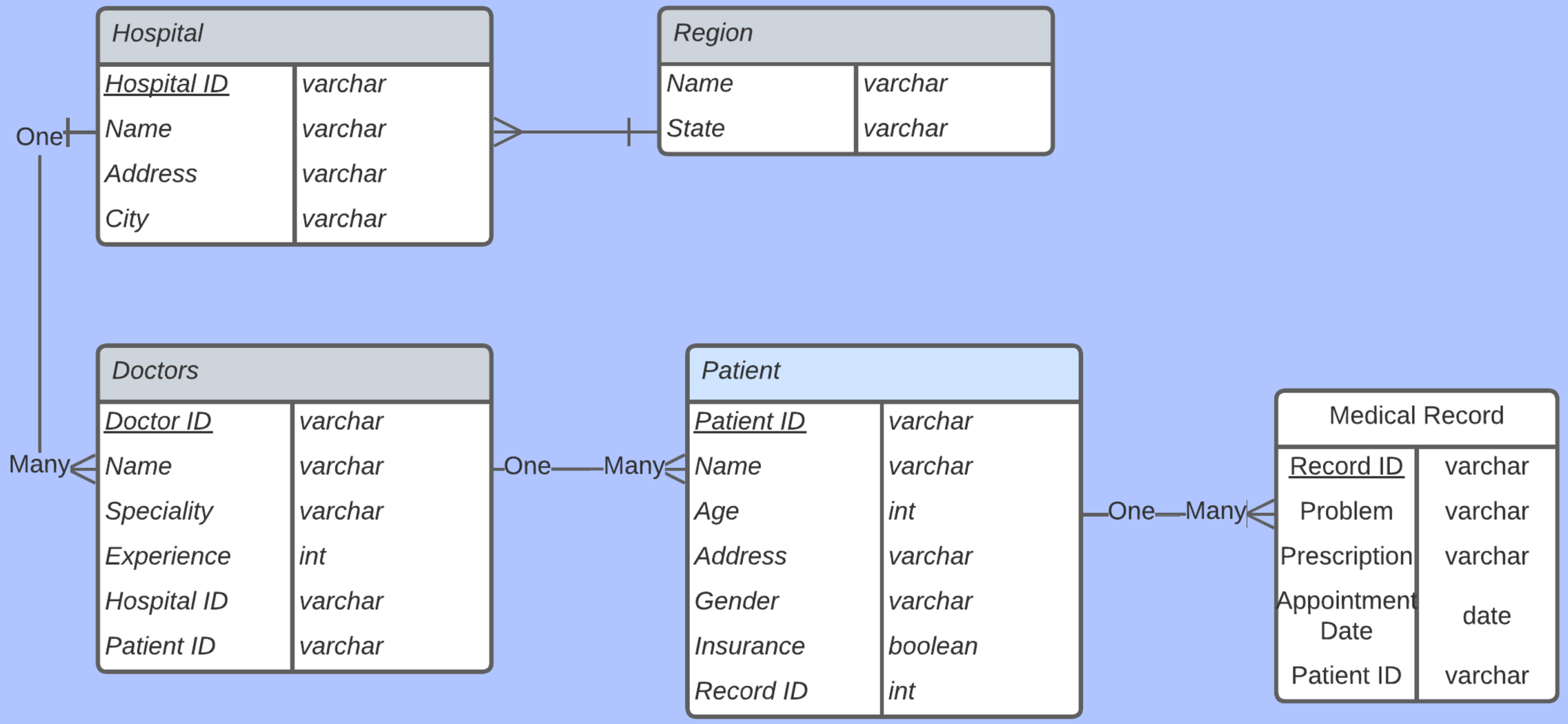
- **Integration**: Integration with electronic health records (EHR) systems and healthcare institutions ensures a seamless transition and adoption.

- **Monitoring and Maintenance:** Continuous monitoring, regular updates, and disaster recovery planning ensure high availability and data integrity.

PROCESS FLOW



RELATIONAL DATABASE MODEL FOR HEALTHCARE ECOSYSTEM



MARKET PROSPECT

- **Projected Growth**: The global healthcare IT market is expected to grow significantly, driven by the increasing need for integrated patient data solutions.

- **Market Demand:** Growing demand for improved patient engagement, streamlined healthcare processes, and data accessibility is creating a strong market.

- **Competitive Edge**: The ecosystem's innovative approach, focusing on patient-centric care, data exchange, and interoperability, positions it as a market leader in addressing key industry challenges.

- **Regulatory Support:** This ecosystem aligns with healthcare regulations, such as HIPAA, promoting trust and compliance among healthcare providers.

- **Partnerships**: Collaboration with healthcare providers and institutions enhances market reach and adoption potential.

THANK YOU !!

This platform will surely help in bridging the patient-provider gap, improving outcomes, and streamlining healthcare processes.

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