

An isometric illustration of a healthcare database system. A large laptop on the left displays a human figure with data points and a heart rate line. To its right, a tablet shows a heart and a pulse line. In the foreground, a stethoscope lies on a surface. A large tablet in the bottom right corner features a grid of icons for various medical functions. The background is populated with stylized figures of doctors, patients, and a person in a wheelchair, all interacting with the digital elements. A large pill bottle and scattered pills are also visible in the upper right. The overall theme is the integration of technology and healthcare.

# **DBMS**

# **MINI PROJECT**

**Title:** Hospital Management System

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# Abstract:

Hospital Management System (HMS) is a crucial component of the healthcare industry, as it streamlines various processes and enhances the overall efficiency of healthcare organizations. This system integrates various functions, such as patient management, medical records, appointment scheduling, billing, and inventory management, into a single platform. The use of HMS leads to improved patient care, reduced costs, and increased productivity. This study focuses on the design and implementation of a comprehensive HMS, with a user-friendly interface and advanced features to meet the needs of healthcare organizations. The system is developed using modern technologies, such as cloud computing and database management, to ensure scalability, reliability, and security. The results of this study demonstrate the feasibility and effectiveness of the developed HMS, and its potential to improve the quality of healthcare delivery and patient outcomes.

# Problem Statement:

The healthcare industry is facing numerous challenges, such as increasing patient volume, limited resources, and rising costs, which are affecting the quality of healthcare delivery. To address these challenges, many healthcare organizations are turning to technology-driven solutions, such as Hospital Management Systems (HMS). However, the current HMS solutions available in the market often lack integration with a centralized database, leading to fragmented information and manual processes.

# Objective:

The objective of this study is to design and implement a comprehensive HMS in DBMS that integrates various functions, such as patient management, medical records, appointment scheduling, billing, and inventory management, into a single platform. The system should have a user-friendly interface and advanced features, such as data analytics, to meet the needs of healthcare organizations. Additionally, the HMS should be developed using modern technologies, such as cloud computing and database management, to ensure scalability, reliability, and security.



# Scope of project:

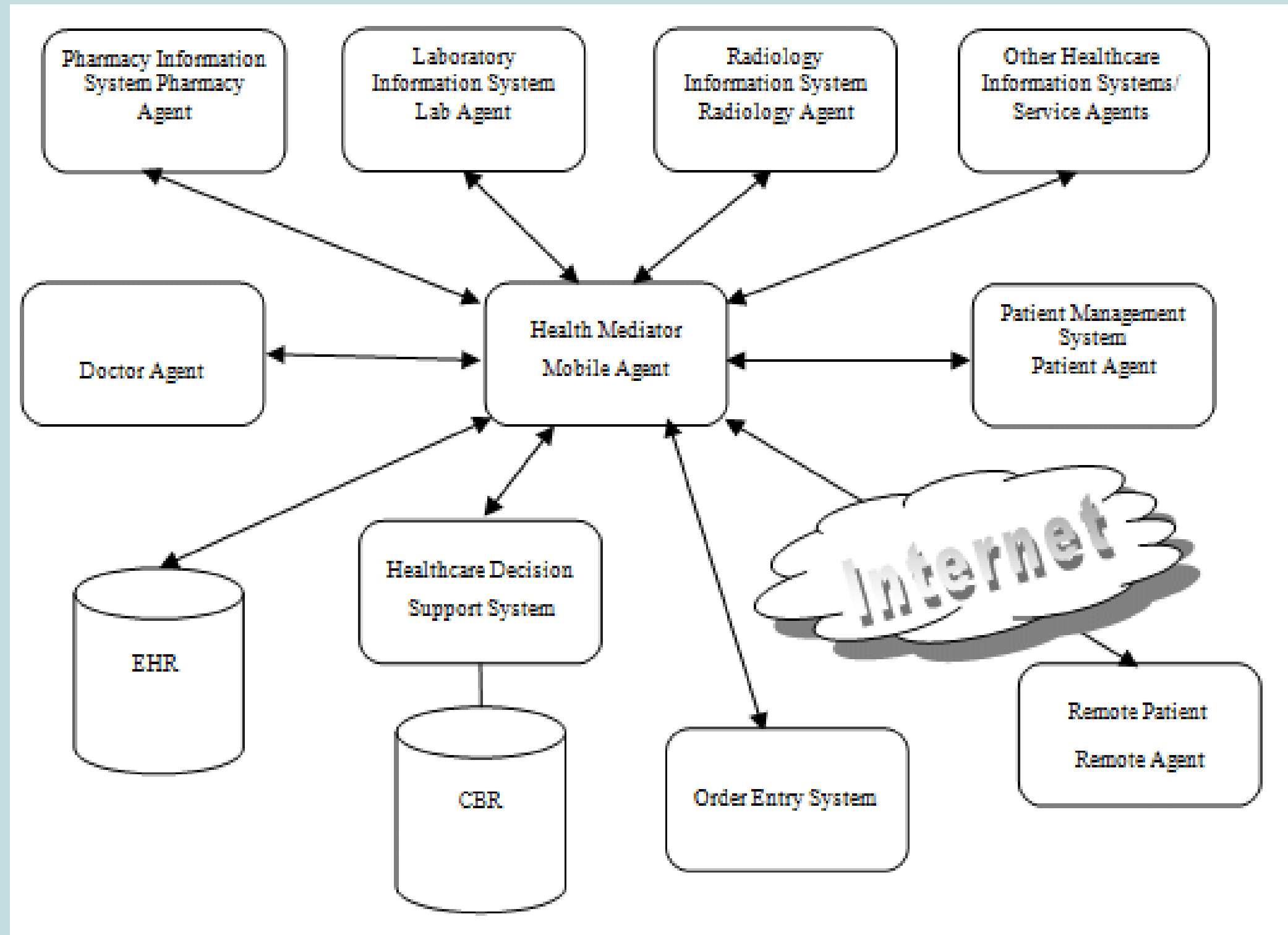
1. Patient Management: The HMS should allow healthcare organizations to efficiently manage patient information, including demographics, medical history, and insurance details.
2. Medical Records Management: The system should enable healthcare providers to easily access and manage electronic medical records, including diagnostic test results, prescriptions, and progress notes.
3. Appointment Scheduling: The HMS should provide an efficient appointment scheduling system, enabling patients to book appointments and healthcare providers to manage their schedules.

- **Billing and Payment Management:** The system should have an integrated billing and payment management system, which can handle insurance claims, co-payments, and patient billing.
- **Inventory Management:** The HMS should have an inventory management system, which can track and manage medical supplies, equipment, and drugs.
- **Data Analytics:** The system should provide real-time data analytics and reporting, enabling healthcare organizations to make informed decisions based on data.
- **Security and Privacy:** The HMS should ensure the security and privacy of patient information, in compliance with regulations such as HIPAA.

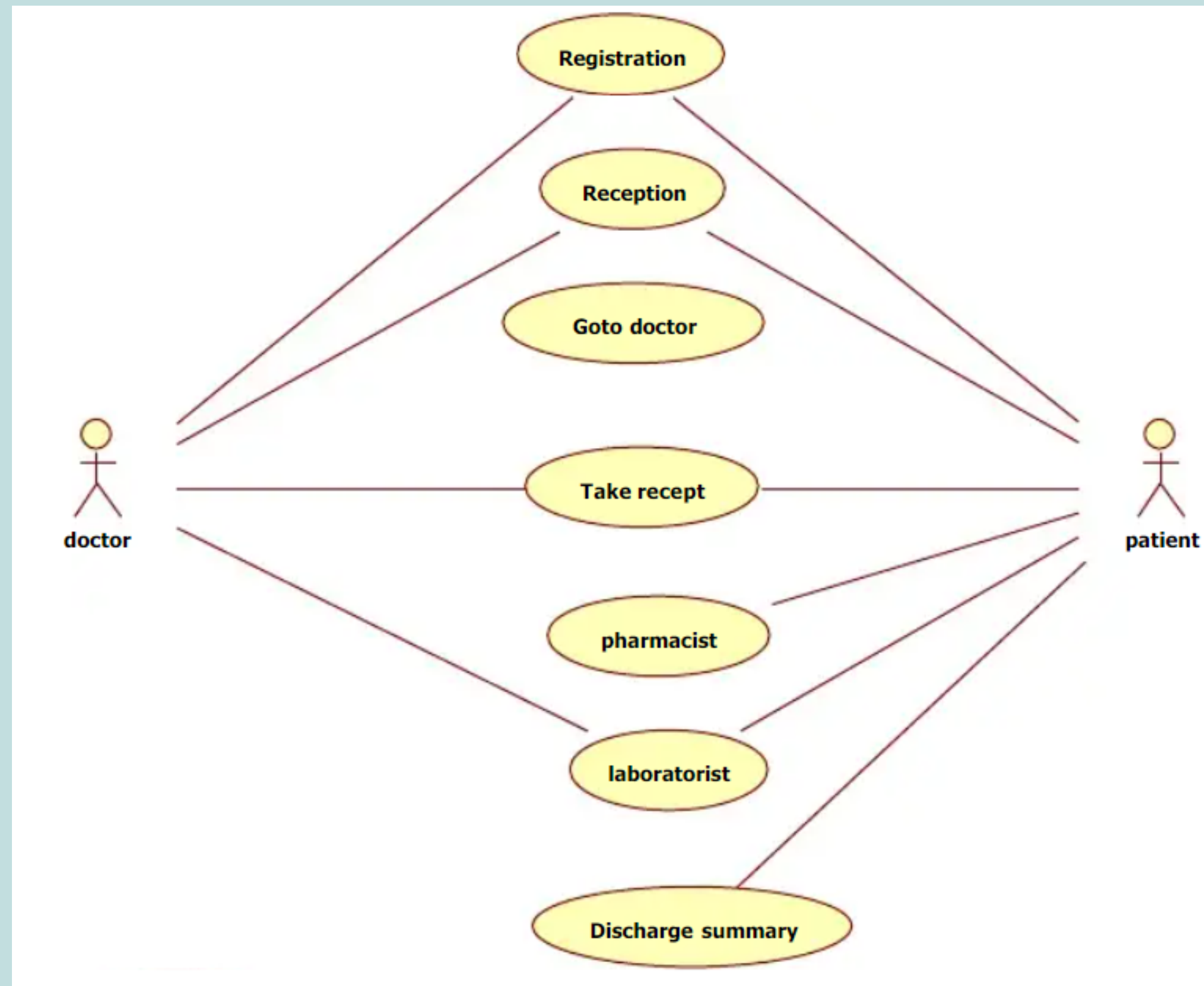


- User Management: The system should have a user management system, which can manage user access to the system based roles and permiss

# System Architecture:



# Use Case Diagram:



# References:

- [https://www.academia.edu/7149341/HOSPITAL MANAGEMENT SYSTEM A PROJECT REPORT Submitted in Partial Fulfillment of the requirements for the Award of the](https://www.academia.edu/7149341/HOSPITAL_MANAGEMENT_SYSTEM_A_PROJECT_REPORT_Submitted_in_Partial_Fulfillment_of_the_requirements_for_the_Award_of_the)
- <https://www.studocu.com/in/document/gujarat-university/mscit/hospital-management-system-project-rdbms/26465589>