Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

SCHOOL OF COMPUTING

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

USECASE SUBMISSION

Pro g r a mme	:	B.TechComputerScience&Engineering
Course Code / Course Name	:	10211CS207 / Database Management System
Year / Semester	:	2025-26 / Summer
Faculty Name	:	Dr. Krishnaveni.N
Slot	:	**S7L1**
Task No	:	**1**
Title	:	**HOSPITAL INFORMATION SYSTEM**
Problem Statement		**they often rely on inefficient, manual, and fragmented processes, leading to delays, errors, and poor data management. This results in challenges like long patient wait times, difficulty accessing complete patient records, and inefficient resource allocation. A comprehensive, integrated Hospital Information System (HIS) is needed to automate tasks, improve data accuracy, enhance communication, and reduce operational inefficiencies and errors.**

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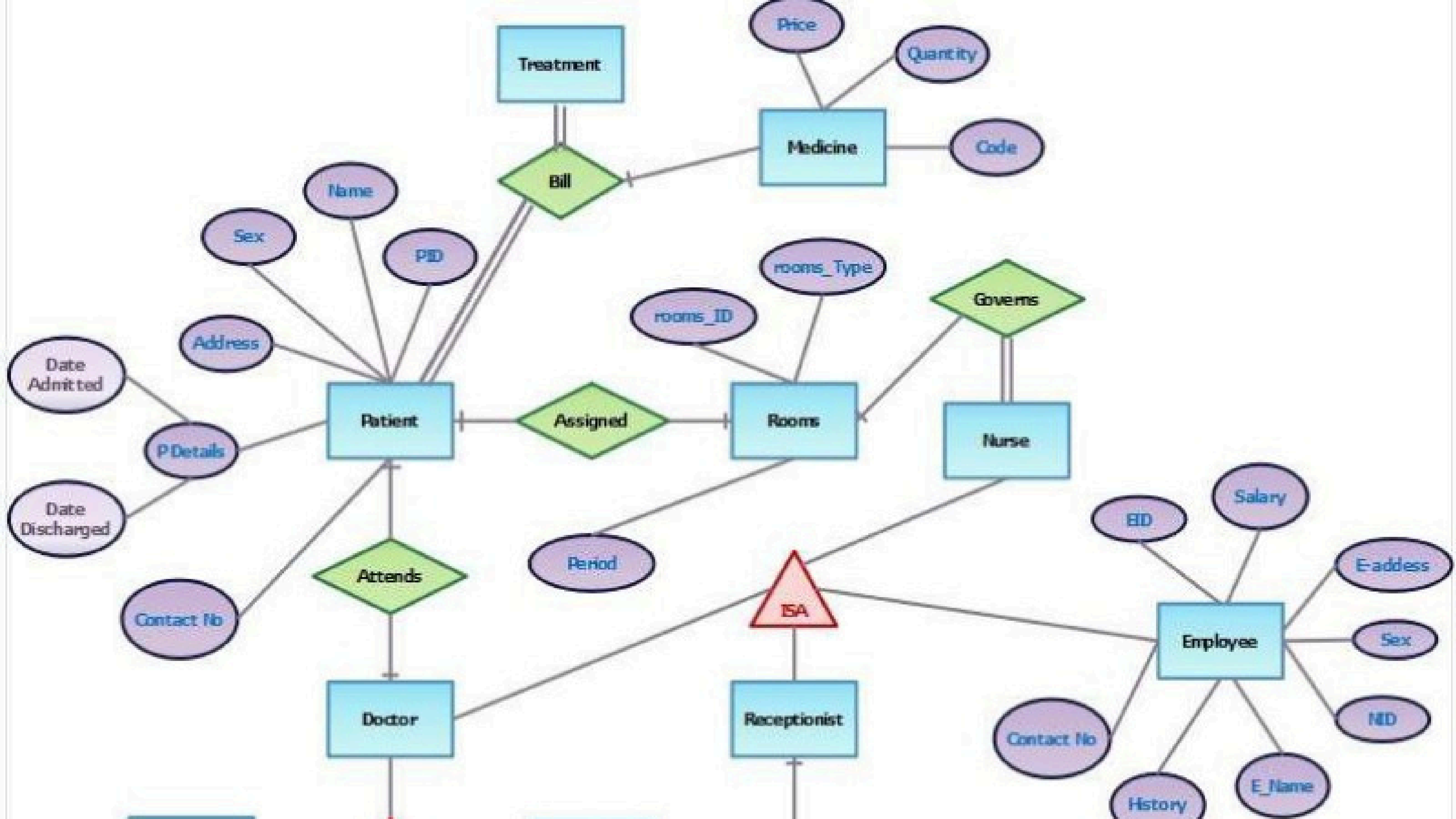
Hospital Information Systems

Om prakash tripathi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Quantity
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Code
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Name
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Date Admitted
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Date Discharged
Contact No
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Nurse
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Attends
Doctor
ISA
Receptionist
Salary
EID
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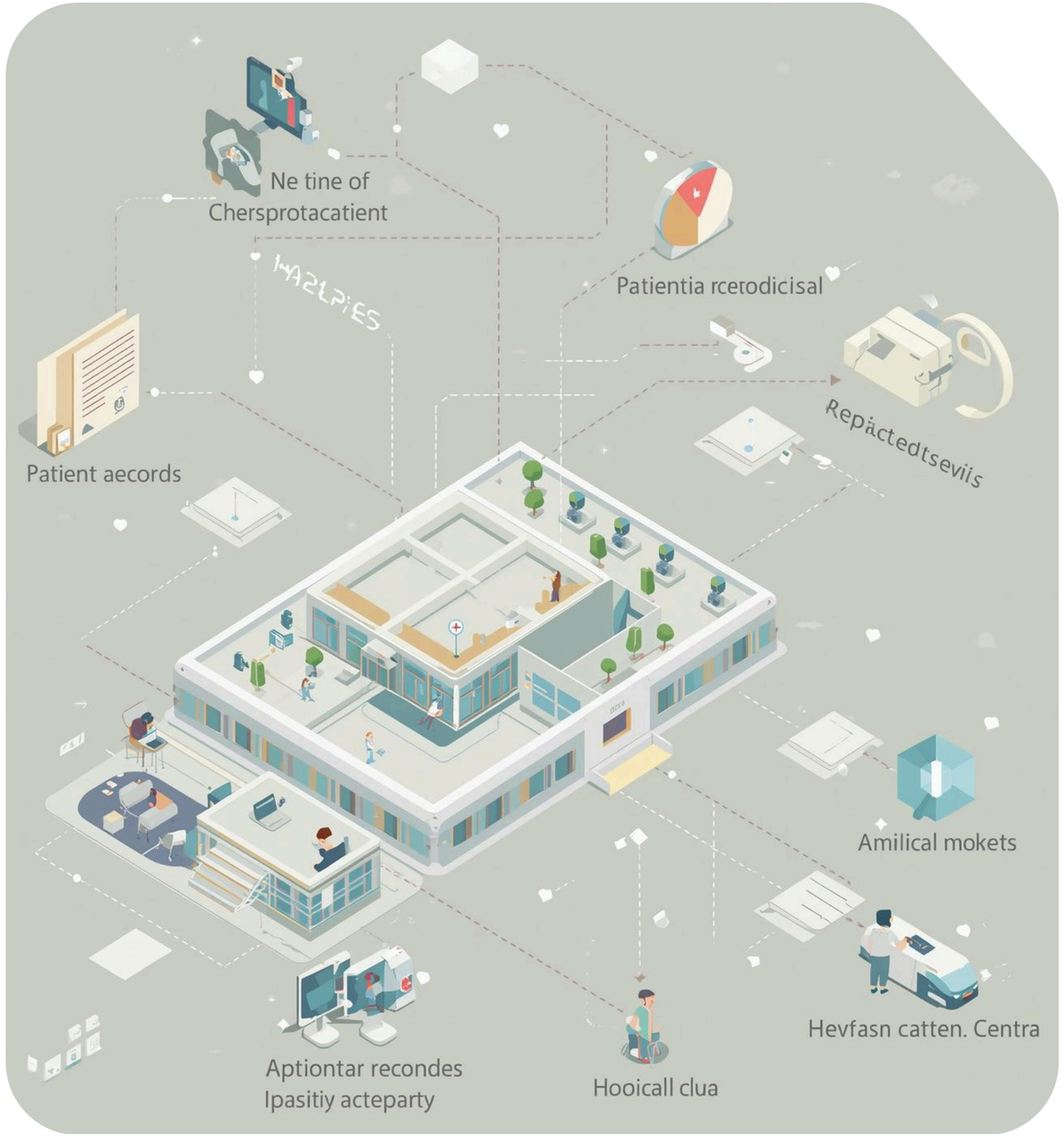
Sex
NID
E_Name
History
Contact No
Employee

Evolution

- Integration of systems enhances **communication** between departments
- Improved data accuracy leads to better **patient outcomes**
- Adoption of electronic health records streamlines **workflow**
- Use of telemedicine supports **remote care** and access



Core Concepts of Database Management Systems

Organizes hospital data efficiently

Ensures data integrity and security

Supports large data volume management

Types of Databases

Relational

Structured data in tables

NoSQL

Flexible schema for diverse data

In-Memory

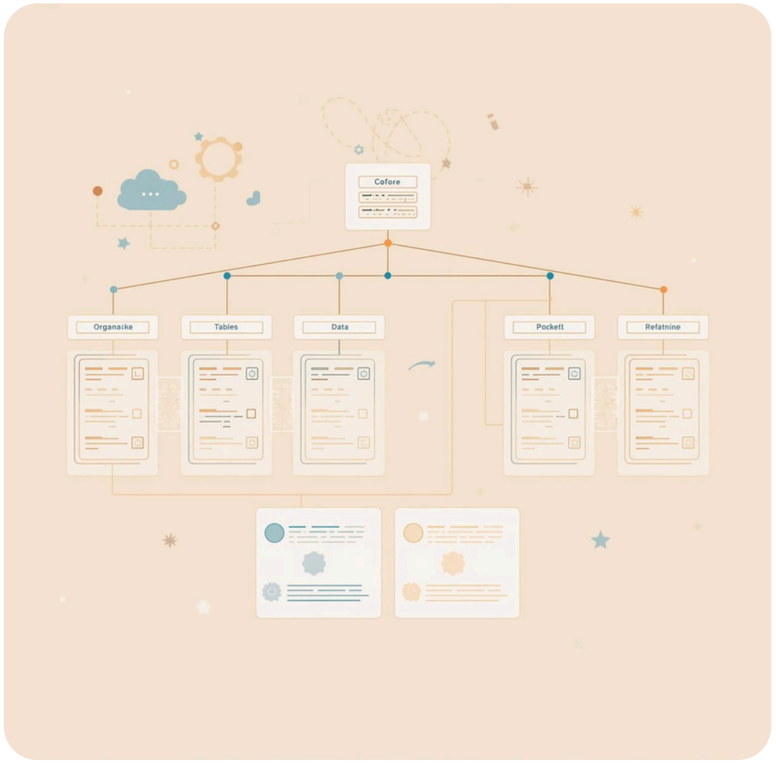
Fast access for real-time data

Cloud

Scalable storage and access solutions

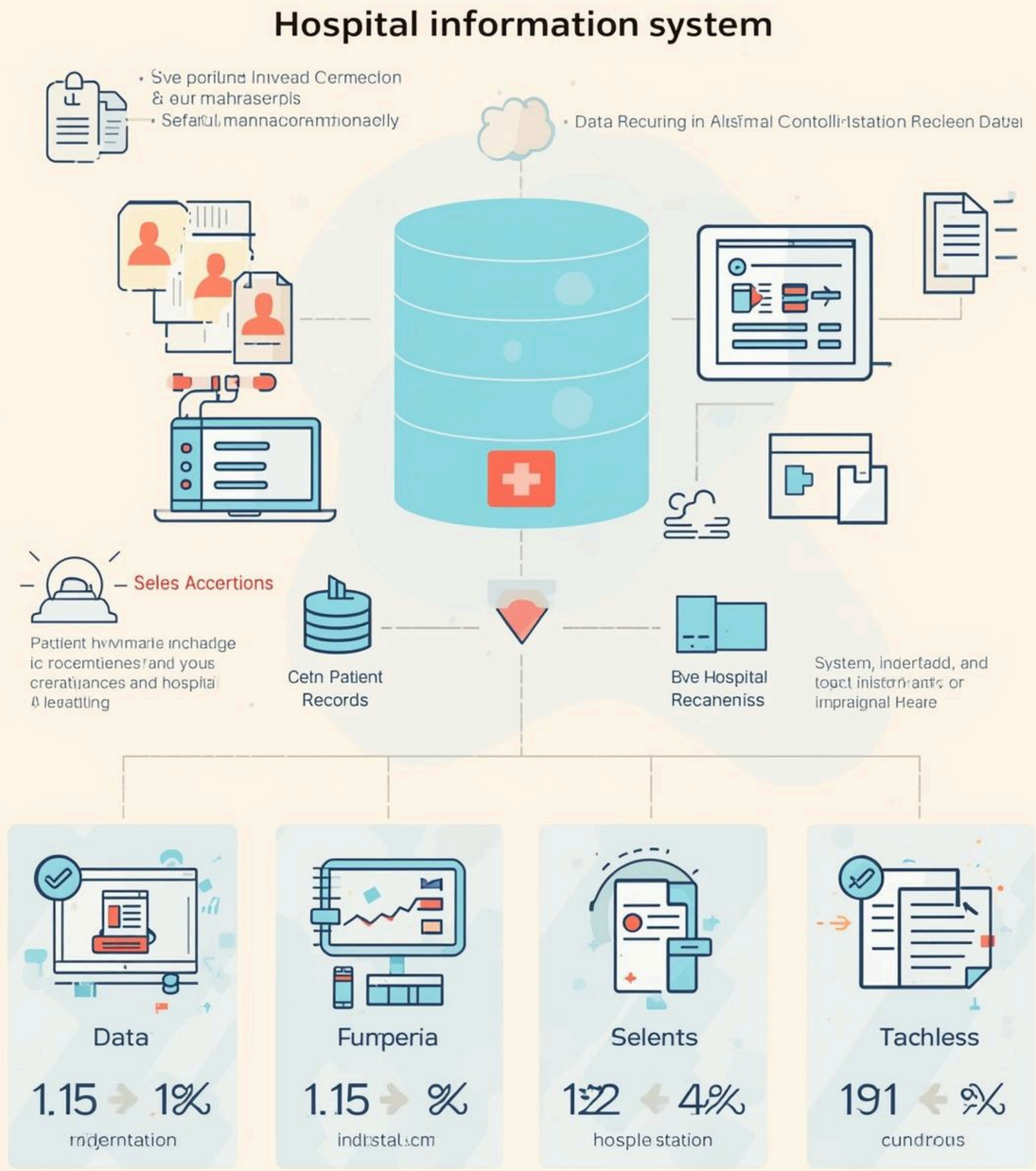
Core DBMS Features

Essential functions for effective hospital management



DBMS in HIS

Supporting efficient data management and retrieval processes

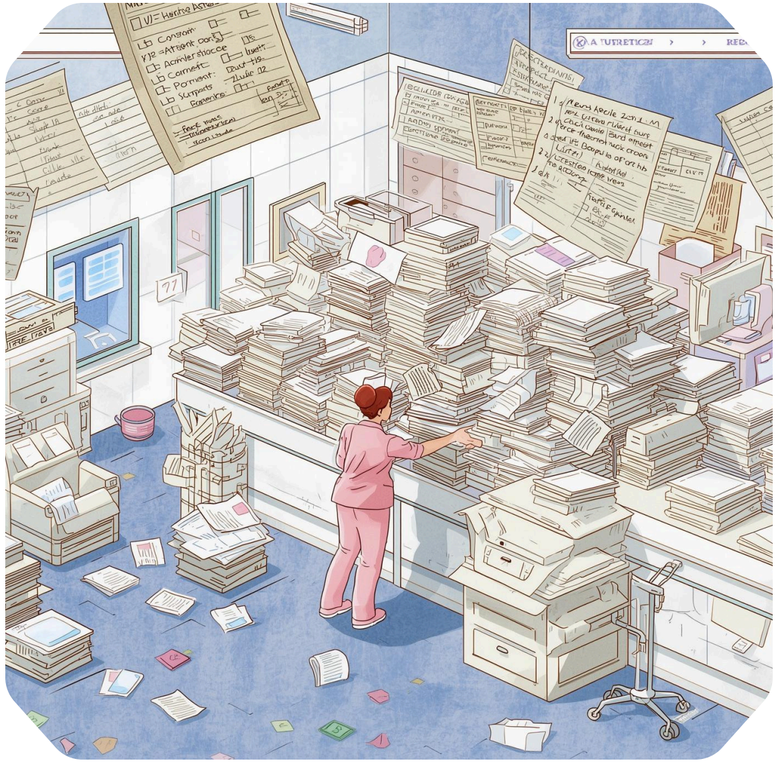


HIS and DBMS Interaction

Effective Data Management in Healthcare Systems

The integration of HIS and DBMS allows seamless management of patient data, ensuring accurate data flow, reliable access, and strong security measures essential for optimal healthcare delivery.

Patient Admission Process: Before and After



Manual Entry

Time-consuming and prone to errors

HIS-DBMS Workflow

Efficient and accurate data processing

Data Flow

Data Entry

- User Input
- Module Interaction

Database Storage

- Data Organization
- Access and Retrieval

Database Challenges

Privacy

Protecting patient information securely

Data

Ensuring accuracy and reliability

Concurrency

Managing simultaneous data access

Compliance

Adhering to regulations and standards

Conclusion: HIS and DBMS Impact

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