

Unit 0 – Compulsory assignment

1. Design an entity-relationship diagram (ERD) for a hospital management system. The system should capture the following key aspects:

The database schema represents a system for managing medical information, including patient records, appointments, diagnoses, medications, payments, and user authentication.

It stores details about individuals receiving medical care and tracks their personal information. Additionally, it maintains records of medical professionals, their specialties, and contact details. The system facilitates scheduling and managing medical appointments between patients and doctors.

Medical records, including diagnoses and admission dates, are stored within the system. It also keeps track of prescribed medications, including dosages, and manages financial transactions related to patient payments.

Furthermore, the system includes user login functionality, allowing authorized users to access the system securely. User login information, including usernames and passwords, is stored to authenticate users.

This schema enables efficient management and organization of medical data and facilitates seamless interactions between patients, medical professionals, and administrative staff.

2. Transform the entity-relationship diagram into database tables, defining the tables, their columns, and the relationships between them based on the entities, attributes, and relationships represented in the ERD
3. Use MySQL Workbench to create the Hospital schema
4. Using the Hospital schema, provide the SQL statements to accomplish the following queries:
 - a. List all appointments made for a specific doctor
 - b. Find the total amount paid by each patient
 - c. Display the medications prescribed for each patient
 - d. List all appointments scheduled for a specific date
 - e. Find the patient with the highest total payment
 - f. Display patient login details (username and associated patient name)
 - g. Find the patients who have not made any payment
5. Generate two more queries with the solution. Complexity will be taken into account.

