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| **National University of Computer and Emerging Sciences, Lahore Campus** | | | | |
| C:\Users\saif\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\final design.jpg | **Course Name:** | **Database Systems** | **Course Code:** | **CS2005** |
|  |  | **Semester:** | **Spring 2023** |
| **Type** | **Assignment 01** | **Total Marks:** | **60** |
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**SUBMIT YOUR QUERIES IN SQL FILE**

**PLAGIARISM WILL CAUSE ADVERSE CONSEQUENCES.**

**(0 for all upcoming assignments as well as this one)**

**NOTE:**

**All questions carry equal marks.**

**You have to provide a report having inserted data, and results of respective queries with the sql file.**

**Scenario: Hospital Management System**

**The provided schema represents a simplified Hospital Management System database. This database is designed to manage various aspects of a hospital's operations, including patient information, medical staff details, appointments, medical records, billing, medications, tests, and departments.**

**Explanation of the Schema:**

**- Patients: This table stores information about patients, including their name, date of birth, gender, contact details, address, and email.**

**- MedicalStaff: This table contains data about medical staff members, including doctors and nurses. It includes their name, date of birth, gender, contact details, address, role (e.g., Doctor, Nurse), and department they belong to.**

**-Departments: This table represents different departments within the hospital, such as Cardiology, Pediatrics, and Orthopedics.**

**-Appointments: This table records appointments made by patients with medical staff. It includes the patient's ID, staff member's ID, appointment date and time, and status (e.g., Scheduled, Completed).**

**- MedicalRecords: This table contains medical records for patients' visits, including the date of service, diagnosis, treatment, prescription, test results, and notes. Each record is associated with a patient and a staff member.**

**- Billing: This table keeps track of billing information, including the patient's ID, staff member's ID, date of billing, total billing amount, and payment status (e.g., Paid, Unpaid).**

**- Medications: This table stores information about medications, including the medication name, dosage, and instructions for use.**

**- Tests: This table contains data related to medical tests, including the test name, description, and cost.**

**Scenario Usage:**

**In this Hospital Management System:**

**- Patients can schedule appointments with medical staff.**

**- Medical staff members, including doctors and nurses, are associated with specific departments.**

**- Medical records are created for each patient visit, detailing diagnoses, treatments, and prescriptions.**

**- Billing records are generated for each patient visit to track payment status.**

**- Medications and tests are available for prescribing and ordering as part of patient treatment plans.**

**- Departments help organize and manage the hospital's various medical specialties.**

**Create tables with proper datatypes and actions appropriate according to you.**

**Write sql queries for the following:**

1. **List female patients whose contact number ends with 5 or 6 and were treated by “dr.sarah”**
2. **list all nurses younger than 30**
3. **Retrieve appointments with a "Scheduled" status for male patients (ordered by appointment date)**
4. **Retrieve the top 3 most expensive tests along with their descriptions**
5. **Find all appointments scheduled for the future**
6. **List patients who have the same last name as any medical staff (ordered by last name)**
7. **Identify Patients Who Haven't Received a Bill**
8. **List All Medications and Their Usage Instructions**
9. **Identify Patients Who Haven't Received a Bill**
10. **Find Patients Who Have Appointments But No Medical Records**
11. **Find Patients Who Have Appointments, Medical Records, or Bills**
12. **Find all patients who have had appointments with doctors in the 'Cardiology' department.**
13. **Find the doctors (medical staff) who have treated patients born after 1990 and have 'Paid' billing status.**
14. **List all patients who have either 'Scheduled' or 'Completed' appointments.**
15. **Find all patients who have both a medical record and a billing record.**
16. **Get a list of patients who have undergone the 'X-ray' test or have been treated by 'Dr. Lisa Wang'.**
17. **Find all patients who have had appointments with doctors in every department.**
18. **Find patients who have received at least two different medications, along with the list of medications they have received.**
19. **List the names of patients who have scheduled appointments along with the department they are associated with**
20. **Retrieve the names of patients along with their medical records, including diagnosis and treatment, and the names of the doctors who treated them**