SQL DATARITHMUS

Environment setup

1. Navigate to sandboxsql.com
2. Click "New" button
3. Choose "**Hospital Template**"
4. Enter an name and click ok

Questions

1. Which SQL statement is used to modify existing data in a table?

   A) MODIFY
   B) UPDATE
   C) CHANGE
   D) ALTER

2. What keyword is used to sort the result set in SQL?

   A) SORT BY
   B) ORDER BY
   C) GROUP BY
   D) FILTER BY

3. **Question:** Write a query to select the names and insurance ids of all patients in the `Patient` table.

   ```
   SELECT Name, InsuranceID
   FROM Patient;
   ```

4. **Question:** How would you retrieve the details of doctors from the `Physician` table whose position is 'Surgical Attending Physician'?

   ```
   SELECT *
   FROM Physician
   WHERE Position = 'Surgical Attending Physician';
   ```

5. **Question:** Write a query to find the total number of patients in the `Patient` table.

   ```
   SELECT COUNT(*) AS Total_Patients
   FROM Patient;
   ```

6. **Question:** What is the primary affiliated physician for each department Hint: use following tables: `Physician, Department, Affiliated_With` ?

   ```
   SELECT D.Name AS Department_Name,
          P.Name AS Primary_Physician
   FROM Department D
   JOIN Affiliated_With A ON
   D.DepartmentID = A.DepartmentID
   JOIN Physician P ON A.PhysicianID =
   P.PhysicianID
   WHERE A.PrimaryAffiliation = 'true';
   ```

7. **Question:** How many patients are assigned to each physician in the `Appointment` table?

   ```
   SELECT PhysicianID, COUNT(PatientID) AS Total_Patients
   FROM Appointment
   GROUP BY PhysicianID;
   ```

8. **Question:** Write a query to list all appointments along with the names of the patients and their doctors.

   ```
   // SELECT A.AppointmentID,
          Pa.Name AS Patient_Name,
          Ph.Name AS Physician_Name,
          A.StartDate
   FROM Appointment A
   JOIN Patient Pa ON
   A.PatientID = Pa.PatientID
   JOIN Physician Ph ON
   A.PhysicianID = Ph.PhysicianID;
   ```

9. **Question:** Write a query to find the names of patients who have more than one appointment.

   ```
   SELECT Pa.Name AS Patient_Name,
          M.Name AS Medication_Name
   FROM Prescribes Pr
   JOIN Patient Pa ON Pr.PatientID = Pa.PatientID
   JOIN Medication M ON Pr.MedicationID = M.Code;
   ```

10. **Question:** How would you find the name of the patient and the medication name that is given to them? Hint: use `Patient, Prescribes, Medication` tables.

    ```
    10 // SELECT Pa.Name AS Patient_Name,
            M.Name AS Medication_Name
    FROM Prescribes Pr
    JOIN Patient Pa ON Pr.PatientID = Pa.PatientID
    JOIN Medication M ON Pr.MedicationID = M.Code;
    ```