MANAGERIAL QUERIES

1. Show patient table
SELECT * FROM Patient;

2. Count number of patients
SELECT COUNT(*) AS NumberOfPatients FROM Patient;

3. Get number of doctors
SELECT COUNT(*) AS NumberOfDoctors FROM Doctor;

4. Display number of patients by blood type
SELECT BloodType, COUNT(*) AS NumberOfPatients
FROM Patient
GROUP BY BloodType;

5. Count number of doctors per department
SELECT d.DepartmentName, COUNT(doc.DoctorID) AS NumberOfDoctors
FROM Doctor doc
JOIN Department d ON doc.DepartmentID = d.DepartmentID
GROUP BY d.DepartmentName;

6. Count number of doctors per specialty
SELECT ms.SpecialtyField, COUNT(d.DoctorID) AS NumberOfDoctors
FROM Doctor d
JOIN MedicalSpecialty ms ON d.SpecialtyID = ms.SpecialtyID
GROUP BY ms.SpecialtyField;

7. Count number of nurses per department
SELECT d.DepartmentName, COUNT(n.NurseID) AS NumberOfNurses
FROM Nurse n
JOIN Department d ON n.DepartmentID = d.DepartmentID
GROUP BY d.DepartmentName;

8. List all female patients
SELECT * FROM Patient
WHERE Gender = 'Female';

9. Average doctor salary per department
SELECT d.DepartmentName, AVG(s.Salary) AS AverageSalary
FROM Doctor doc
JOIN Department d ON doc.DepartmentID = d.DepartmentID
JOIN SalariesAccounts s ON doc.AccountNumber = s.AccountNumber
GROUP BY d.DepartmentName;

10. Doctors in department with ID 1 or 3 (Emergency or Neurology)
SELECT * FROM Doctor
WHERE DepartmentID IN (1, 3);

11. Display all patient names and their descriptions on the medical record
SELECT p.Name, p.Surname, mr.Description
FROM Patient p
JOIN MedicalRecord mr ON p.MedicalRecordID = mr.MedicalRecordID;

12. Find number of appointments for each doctor (done and not done)
SELECT d.DoctorID, d.Name, d.Surname,
    COUNT(a.AppointmentID) AS TotalAppointments,
    SUM(CASE WHEN a.isDone THEN 1 ELSE 0 END) AS DoneAppointments,
    SUM(CASE WHEN NOT a.isDone THEN 1 ELSE 0 END) AS NotDoneAppointments
FROM Doctor d
JOIN Conducts c ON d.DoctorID = c.DoctorID
JOIN Appointment a ON c.AppointmentID = a.AppointmentID
GROUP BY d.DoctorID, d.Name, d.Surname;

13. Show all departments on second floor
SELECT * FROM Department
WHERE FloorNumber = 2;

14. Display total nurse bonuses by department
SELECT d.DepartmentName, SUM(s.Bonus) AS TotalBonus
FROM Nurse n
JOIN Department d ON n.DepartmentID = d.DepartmentID
JOIN SalariesAccounts s ON n.AccountNumber = s.AccountNumber
GROUP BY d.DepartmentName;

15. Show doctor name, surname, bank account number and full compensation (salary + bonus)
SELECT d.Name, d.Surname, s.AccountNumber, (s.Salary + s.Bonus) AS TotalCompensation
FROM Doctor d
JOIN SalariesAccounts s ON d.AccountNumber = s.AccountNumber;

16. Get total revenue of a day in the hospital
SELECT DateOfMeet, SUM(AppointmentBill) AS TotalRevenue
FROM Appointment
GROUP BY DateOfMeet;

17. See which patients can give blood to someone that has B+
SELECT * FROM Patient
WHERE BloodType IN ('B+', 'B-', 'O+', 'O-');

18. Find all doctors who have appointments that are not done and the number of them
SELECT d.DoctorID, d.Name, d.Surname, COUNT(*) AS NotDoneAppointments
FROM Doctor d
JOIN Conducts c ON d.DoctorID = c.DoctorID
JOIN Appointment a ON c.AppointmentID = a.AppointmentID
WHERE a.isDone = FALSE
GROUP BY d.DoctorID, d.Name, d.Surname;

19. Find the date that has the most appointments
SELECT DateOfMeet, COUNT(*) AS TotalAppointments
FROM Appointment
GROUP BY DateOfMeet
ORDER BY TotalAppointments DESC
LIMIT 1;

20. Patients whose medical record was created before April 1, 2025
SELECT * FROM Patient
WHERE MedicalRecordID IN (
    SELECT MedicalRecordID
    FROM MedicalRecord
    WHERE RegistrationDate < '2025-04-01'
);

21. Average bill per doctor
SELECT d.DoctorID, d.Name, d.Surname, AVG(a.AppointmentBill) AS AverageBill
FROM Doctor d
JOIN Conducts c ON d.DoctorID = c.DoctorID
JOIN Appointment a ON c.AppointmentID = a.AppointmentID
GROUP BY d.DoctorID, d.Name, d.Surname;