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create database HospitalDB;
use HospitalDB;

create table Patients(
    patient_id INT PRIMARY KEY AUTO_INCREMENT,
    name varchar(100) not null,
    gender varchar(10),
    age int,
    phone varchar(15));

insert into Patients (name, gender, age, phone) values
('Rahul Sharma','Male',25,'9876543210'),
('Priya Singh','Female',30,'9876543211'),
('Amit Kumar','Male',40,'9876543212'),
('Neha Verma','Female',28,'9876543213'),
('Arjun Patel','Male',35,'9876543214');

create table Doctors(
    doctor_id INT PRIMARY KEY AUTO_INCREMENT,
    name varchar(100) not null,
    specialization varchar(100),
    consultation_fee decimal(10,2));

insert into Doctors (name, specialization, consultation_fee) values
('Dr. Mehta','Cardiologist',800),
('Dr. Rao','Dermatologist',500),
('Dr. Khan','Orthopedic',700),
('Dr. Sharma','Neurologist',900);

create table Appointments(
    appointment_id INT PRIMARY KEY AUTO_INCREMENT,
    patient_id int,
    doctor_id int,
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appointment_date date,  
status varchar(20),  
FOREIGN KEY (patient_id) REFERENCES Patients(patient_id),  
FOREIGN KEY (doctor_id) REFERENCES Doctors(doctor_id));  
  
insert into Appointments (patient_id, doctor_id, appointment_date, status) values  
(1,1,'2025-01-10','Completed'),  
(2,2,'2025-01-11','Completed'),  
(3,1,'2025-01-12','Pending'),  
(4,3,'2025-01-13','Completed'),  
(5,4,'2025-01-14','Completed'),  
(1,2,'2025-01-15','Completed');
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create table Treatments(  
treatment_id INT PRIMARY KEY AUTO_INCREMENT,  
appointment_id int,  
diagnosis varchar(255),  
cost decimal(10,2),  
FOREIGN KEY (appointment_id) REFERENCES Appointments(appointment_id));  
  
insert into Treatments (appointment_id, diagnosis, cost) values  
(1,'Heart Checkup',2000),  
(2,'Skin Allergy',1500),  
(4,'Fracture Treatment',3000),  
(5,'Brain Scan',4000),  
(6,'Skin Infection',1800);
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1.select*from Patients;

2.select*from Doctors;

3.select*from Appointments;

4.select*from Treatments;

5.select name, specialization from Doctors;

6.select * from Appointments where status='Completed';

7.select * from Patients where age > 30;

8.select COUNT(*) as total_patients from Patients;

9.select p.name, d.name as doctor from Appointments a JOIN Patients p on a.patient_id=p.patient_id JOIN Doctors d on a.doctor_id=d.doctor_id;

10.select p.name, a.appointment_date from Patients p join Appointments a on p.patient_id=a.patient_id;

11.select d.name, COUNT(a.appointment_id) as total_appointments from Doctors d left join Appointments a on d.doctor_id=a.doctor_id group by d.name;

12.select p.name, t.diagnosis from Treatments t join Appointments a on t.appointment_id=a.appointment_id join Patients p on a.patient_id=p.patient_id;

13.create view AppointmentDetails as select a.appointment_id,p.name as patient,d.name as doctor,d.specialization,a.appointment_date,a.status from Appointments a join Patients p on a.patient_id = p.patient_id join Doctors d on a.doctor_id = d.doctor_id;

select * from AppointmentDetails;

14.select SUM(cost) as total_revenue from Treatments;

15.select AVG(cost) as avg_treatment_cost from Treatments;

16.select MAX(cost) as highest_treatment from Treatments;

17.select COUNT(*) from Appointments where status='Pending';

18.select * from Doctors order by consultation_fee DESC;

19.select * from Patients order by age;

20.select * from Treatments where cost > 2000;

21.select name from Patients where gender='Female';

22.select * from Appointments where appointment_date='2025-01-10';

23.select name from Doctors where doctor_id in (select doctor_id from Appointments);

24.select p.name, COUNT(a.appointment_id) as visits from Patients p join Appointments a on p.patient_id=a.patient_id group by p.name;

25.select specialization, COUNT(*) as doctor_count from Doctors group by specialization;

26.update Patients set phone='9999999999' where patient_id=1;

27.select DATE_FORMAT(appointment_date,'%Y-%m') as month,COUNT(*) as total_appointments from Appointments group by month;