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-- 1. create the database and use it:
create database hotel;
use hotel;

-- 2. create tables:
-- hotel table:
create table hotel (
    hotelno int primary key,
    name varchar(30),
    city varchar(20)
);

-- room table:
create table room (
    roomno int,
    hotelno int,
    type varchar(50),
    price int,
    primary key(hotelno, roomno),
    foreign key(hotelno) references hotel(hotelno)
);

-- guest table:
create table guest (
    guestno int primary key,
    gname varchar(50),
    gadder varchar(100)
);

-- booking table:
create table booking (
    hotelno int,
    guestno int,
    datefrom date,
    dateto date,
    roomno int,
    primary key(hotelno, guestno, datefrom),
    foreign key(hotelno) references hotel(hotelno),
    foreign key(guestno) references guest(guestno),
    foreign key(hotelno, roomno) references room(hotelno, roomno)
);

-- 3. insert data:
-- insert into the hotel table:
insert into hotel (hotelno, name, city) values
(1, 'Grosvenor Hotel', 'London'),
(2, 'Rajdhani Hotel', 'Pune'),
(3, 'Blue Ridge Hotel', 'Mumbai');

-- insert into the room table:
insert into room (roomno, hotelno, type, price) values
(101, 1, 'Single', 100.00),
(102, 1, 'Double', 150.00),
(201, 2, 'Single', 90.00),
(202, 2, 'Double', 120.00),
(301, 3, 'Single', 110.00),
(302, 3, 'Double', 140.00);

-- insert into the guest table:

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insert into guest values
(1, 'rahul', 'pune'),
(2, 'amit', 'mumbai'),
(3, 'snehal', 'pune');

-- insert into the booking table:
insert into booking (hotelno, guestno, datefrom, dateto, roomno) values
(1, 1, '2024-11-01', '2024-11-05', 101),
(1, 2, '2024-11-03', '2024-11-07', 102),
(2, 3, '2024-11-02', '2024-11-04', 201);

-- 4. select queries:
-- count the number of hotels:
select count(*) as numberofhotels from hotel;

-- join hotel and room to show room types and prices for "Grosvenor Hotel":
select h.name, r.type, r.price
from hotel h
join room r on h.hotelno = r.hotelno
where h.name = 'Grosvenor Hotel';

-- count room types per hotel:
select h.name, count(r.type) as typesofroom
from hotel h
join room r on h.hotelno = r.hotelno
group by h.name;

-- increase the price of all rooms by 5%:
update room
set price = price * 1.05;

-- select rooms in hotels located in London:
select * from room
where hotelno in (select hotelno from hotel where city = 'London');

-- select guests who booked at the "Grosvenor Hotel":
select g.guestno, g.gname, g.gadder
from guest g
join booking b on g.guestno = b.guestno
join hotel h on b.hotelno = h.hotelno
where h.name = 'Grosvenor Hotel';

-- count the number of rooms booked in London:
select count(b.roomno)
from booking b
join hotel h on b.hotelno = h.hotelno
where h.city = 'London';

-- 5. create a view:
create view hotelroom as
select h.hotelno, h.name as hotelname, r.roomno, r.type, r.price
from hotel h
join room r on h.hotelno = r.hotelno;

-- view data from hotelroom:
select * from hotelroom;

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