**Problem Statement 3:**

The following tables form part of a database held in a relational DBMS:

Hotel (HotelNo, Name, City) HotelNo is the primary key

Room (RoomNo, HotelNo, Type, Price)

Booking (HotelNo, GuestNo, DateFrom, DateTo, RoomNo)

Guest (GuestNo, GuestName, GuestAddress) GuestNo is primary key

Room contains room details for each hotel and (HotelNo, RoomNo) forms the primary key.Booking contains details of the bookings and the primary key comprises

(HotelNo, GuestNo and DateFrom)

create table hotel(hotelno number(3), hotelname varchar(20), city varchar(20), primary key(hotelno));

insert into hotel values(1,'GrosvenorHotel','London');

insert into hotel values(2,'SpringVilla','London');

insert into hotel values(3,'Jwmarriot','India');

insert into hotel values(4,'TajPalace','India');

create table room (roomno number(3), hotel\_num number(3),type varchar(20),price number(10), primary key(roomno), foreign key (hotel\_num) references hotel(hotelno));

alter table room modify price number(10);

insert into room values (101,1,'Suite',10000);

insert into room values (102,1,'Motel',20000);

insert into room values (103,2,'Resort',15000);

insert into room values (104,3,'Resort',15000);

insert into room values (105,4,'Motel',20000);

insert into room values (106,4,'Motel',20000);

create table guest (guestno number(3), guestname varchar(20), gaddress varchar(20), primary key(guestno) );

insert into guest values(11,'Isha','UK');

insert into guest values(12,'Avadhut','UK');

insert into guest values(13,'Sanjana','USA');

insert into guest values(14,'Adi','INDIA');

insert into guest values(15,'Samu','INDIA');

create table booking(

hotel\_no number(3),

guest\_no number(3),

room\_no number(3),

datefrom date,

dateto date,

foreign key (hotel\_no) references hotel(hotelno),

foreign key (guest\_no) references guest(guestno),

foreign key (room\_no) references room(roomno));

insert into booking values(1,11,101,date '2022-10-01',date '2022-10-05');

insert into booking values(1,12,101,date '2022-04-01',date '2022-04-05');

insert into booking values(2,13,102,date '2022-04-05',date '2022-04-09');

insert into booking values(3,14,103,date '2022-05-05',date '2022-06-09');

insert into booking values(4,15,104,date '2022-04-05',date '2022-04-09');

select \* from booking;

**Solve following queries by SQL 1) 1)List full details of all hotels.**

SELECT \* FROM hotel;

**2)How many hotels are there?**

SELECT COUNT(\*) FROM hotel;

**3)List the price and type of all rooms at the Grosvenor Hotel.**

SELECT price, type FROM room WHERE hotel\_num = (SELECT hotelno FROM hotel WHERE hotelname = 'GrosvenorHotel');

**4)List the number of rooms in each hotel.**

SELECT hotel\_num, COUNT(roomno) AS count FROM room

GROUP BY hotel\_num;

**5)Update the price of all rooms by 5%.**

UPDATE room SET price= price + (price \* 5 / 100);

select \* from room;

**6) List full details of all hotels in London.**

select \* from hotel where city='London';

**7)What is the average price of a room?**

SELECT AVG(price) FROM room;

**8)List all guests currently staying at the Grosvenor Hotel.**

SELECT \* FROM guest WHERE guestno = (SELECT guestno FROM booking

WHERE datefrom <= CURRENT\_DATE AND dateto >= CURRENT\_DATE AND hotel\_no =(SELECT hotelno FROM hotel WHERE hotelname = 'GrosvenorHotel'));

**9)List the number of rooms in each hotel in London.**

SELECT hotelno, COUNT(roomno) AS count FROM room r, hotel h WHERE r.hotel\_num = h.hotelno AND city = 'London' GROUP BY h.hotelno;

**10)Create one view on above database and query it.**

CREATE VIEW view1 AS SELECT hotelno, hotelname FROM hotel where city='London';

select \* from view1;