**Problem statement 5:**

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)

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);

insert into room values (107,3,'Double',20000);

insert into room values (108,2,'Double',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');

**Solve following queries by SQL**

**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)List all guests currently staying at the Grosvenor Hotl.**

SELECT \* FROM guest

WHERE guestno =

(S

ELECT guestno FROM booking

WHERE datefrom <= CURRENT\_DATE AND

dateto >= CURRENT\_DATE AND

hotel\_no =

(SELECT hotel\_no FROM hotel

WHERE hotelname = 'GrosvenorHotel'));

**6)List all double or family rooms with a price below £40.00 per night, in ascending order of price.**

select \* from room where type='Double' and price<40000;

**7)How many different guests have made bookings for August?**

SELECT COUNT(DISTINCT (guest\_no)) FROM booking

WHERE (datefrom <= DATE'2004-08-01' AND dateto >= DATE'2004-08-01') OR (datefrom >= DATE'2004-08-01' AND datefrom <= DATE'2004-08-31');

SELECT COUNT(DISTINCT guestno)FROM booking WHERE (datefrom <= ‘8/31/06’ AND dateto >= ‘8/1/06’);

**8)What is the total income from bookings for the Grosvenor Hotel today?**

**9)What is the most commonly booked room type for each hotel in London?**

select MAX(type1) from Room where hotelno = '1';

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

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