Name: Gurdev singh

Id:100376466

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Lab: 5

SQL Queries:

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1. List full details of all hotels.

Ans:

 SELECT * FROM hotel.

	hotel_no [PK] character varying	name character varying	city character varying
1	H111	Empire Hotel	New York
2	H235	Park Place	New York
3	H432	Brownstone Hotel	Toronto
4	H498	James Plaza	Toronto
5	H193	Devon Hotel	Boston
6	H437	Clairmont Hotel	Boston

2. List full details of all hotels in New York.

Ans:

SELECT *

FROM hotel

WHERE city = 'New York';

	hotel_no [PK] character varying	name character varying	city character varying
1	H111	Empire Hotel	New York
2	H235	Park Place	New York

3. **List the names and cities of all guests, ordered according to their cities.**

   Ans:

   SELECT name, city
   FROM guest
   ORDER BY city;

	name character varying	city character varying
1	Robert Swift	Atlanta
2	Tara Cummings	Baltimore
3	Edward Cane	Baltimore
4	Tom Hancock	Philadelphia
5	Adam Wayne	Pittsburgh
6	Vanessa Parry	Pittsburgh

4. **List all details for non-smoking rooms in ascending order of price**

   Ans:

   SELECT *
   FROM room
   WHERE type='N'
   ORDER BY price;

	room_no [PK] integer	hotel_no [PK] character varying	type character (3)	price numeric (6,2)
1	257	H437	N	140.00
2	412	H111	N	145.00
3	223	H437	N	155.00
4	345	H498	N	160.00
5	1201	H193	N	175.00
6	1267	H235	N	175.00
7	467	H498	N	180.00
8	1289	H235	N	195.00

5. List the number of hotels there are.

Ans:

SELECT Hotel_No

FROM hotel;

	hotel_no [PK] character varying
1	H111
2	H235
3	H432
4	H498
5	H193
6	H437

6. List the cities in which guests live. Each city should be listed only once.

Ans:

SELECT DISTINCT(city)

FROM guest;

	city character varying
1	Pittsburgh
2	Philadelphia
3	Baltimore
4	Atlanta

7. List the average price of a room.
   Ans:
   SELECT AVG(price) ::NUMERIC(7,2) AS "Average Price Of Room"
   FROM room;

	Average Price Of Room numeric (7,2)
1	155.67

8. List hotel names, their room numbers, and the type of that room.
   Ans:
   SELECT name AS "Hotel Name",room_no, type
   FROM hotel , room
   WHERE hotel.hotel_no=room.hotel_no;

	Hotel Name character varying	room_no integer	type character (3)
1	Empire Hotel	313	S
2	Empire Hotel	412	N
3	Park Place	1267	N
4	Park Place	1289	N
5	Brownstone Hotel	876	S
6	Brownstone Hotel	898	S
7	James Plaza	345	N
8	James Plaza	467	N
9	Devon Hotel	1001	S
10	Devon Hotel	1201	N
11	Clairmont Hotel	257	N
12	Clairmont Hotel	223	N

9. List the hotel names, booking dates, and room numbers for all hotels in New York.

Ans:

SELECT name ,date_from,room_no

FROM booking,hotel

WHERE hotel.hotel_no=booking.hotel_no AND hotel.city='New York'

Data output   Messages   Notifications

	name character varying	date_from date	room_no integer
1	Empire Hotel	1999-08-10	412
2	Empire Hotel	1999-08-18	412
3	Park Place	1999-09-05	1267

10.   What is the number of bookings that started in the month of September?

Ans:

SELECT count(date_from) As "No of booking started in sept"

FROM booking

WHERE Extract(Month FROM date_from)=9 ;

Data output   Messages   Notifications

	No of booking started in sept bigint
1	4

11. List the names and cities of guests who began a stay in New York in August

Ans:

--//I used a subquery :

SELECT name ,city

From Guest

WHERE guest_No IN(

SELECT guest_no

FROM booking ,hotel

WHERE hotel.city='New York' AND Extract(Month FROM booking.date_from)=8 AND

   booking.hotel_No=hotel.hotel_no

   );

	name character varying 🔒	city character varying 🔒
1	Tara Cummings	Baltimore
2	Adam Wayne	Pittsburgh

12.   **List the hotel names and room numbers of any hotel rooms that have not been booked**.

Ans:

SELECT name,room_no AS "Room available"

FROM hotel JOIN room

   ON hotel.hotel_no=room.hotel_no

WHERE room_no IN(

SELECT room_no

FROM room

EXCEPT

SELECT room_no

FROM booking

)

Data output   Messages   Notifications

	name character varying	Room available integer
1	Empire Hotel	313
2	Park Place	1289
3	Brownstone Hotel	876
4	Brownstone Hotel	898
5	Clairmont Hotel	257

13.   List the hotel name and city of the hotel with the highest priced room.

Ans:

SELECT name, city

FROM hotel JOIN room

    ON hotel.hotel_no = room.hotel_no

ORDER BY price DESC

limit 1;

name character varying	city character varying
Park Place	New York

14.   List hotel names, room numbers, cities, and prices for hotels that have rooms with prices lower than the lowest priced room in a Boston hotel.

Ans:

SELECT name,room.room_no,city,price

FROM room JOIN hotel

    ON room.hotel_no=hotel.hotel_no

WHERE price<

(

        --Gives the lowest price in boston

SELECT MIN(price) AS "Min price"

FROM room JOIN hotel

    ON room.hotel_no=hotel.hotel_no

WHERE city='Boston'

)

Q: 15 List the average price of a room grouped by city

Ans:

 SELECT city ,Avg(price)::NUMERIC(5,2) AS "Average price"

 FROM room JOIN hotel

ON room.hotel_no=hotel.hotel_no

GROUP BY(city)

	city character varying 🔒	Average price numeric (5,2) 🔒
1	New York	165.00
2	Boston	155.00
3	Toronto	147.00