DBMS LAB
ASSIGNMENT-4

CH.BhawanKumar

19BCS031

1) Write 5 Nested Queries for your respective database- the queries should not be very similar like just changing the where clause or just building all the queries on only one or two tables etc. The queries should make sense, it should cover most part of your database tables:

QUERY 1:

```
use Hotel;

select * from Customer
    where customerid in (
        select customerid from Receptionist where Name = 'priya'
    );
```

149 %

Results | Messages

	customerid	Name	Roomnumber	phonenumber	email
1	2	chen	002	9514863258	test@gmail.com
2	12	kamal	012	4862159735	test@gmail.com
3	16	raj	016	1589746238	test@gmail.com

QUERY 2:

```
use Hotel;

select Name, phonenumber from Customer where Roomnumber in (
    select roomnumber from Room where roomid in (
        select roomid from Receptionist where Name = 'priya'
    )
);
```

149 %

Results | Messages

	Name	phonenumber
1	chen	9514863258
2	kamal	4862159735
3	raj	1589746238

QUERY 3:

```
use Hotel;

select * from Customer
    where customerid in (
        select customerid from Manager
    );
```

149 %

Results | Messages

	customerid	Name	Roomnumber	phonenumber	email
1	2	chen	002	9514863258	test@gmail.com
2	9	bobby	009	7564218930	test@gmail.com
3	16	raj	016	1589746238	test@gmail.com

QUERY 4:

```
use Hotel;

select * from Customer
    where exists(
        select * from Manager
            where Manager.customerid = Customer.customerid
    );
```

149 %

Results | Messages

	customerid	Name	Roomnumber	phonenumber	email
1	2	chen	002	9514863258	test@gmail.com
2	9	bobby	009	7564218930	test@gmail.com
3	15	mona	015	1258974631	test@gmail.com
4	16	raj	016	1589746238	test@gmail.com
5	18	edfh	018	4879635428	test@gmail.com
6	20	dhoni	020	4897563215	test@gmail.com

QUERY 5:

```
use Hotel;

select Name, address, phonenumber from Manager
    where customerid in(
        select customerid from Customer
        where Roomnumber in (
            select roomnumber from Room where stockid = 2
        )
    );
```

149 %

Results | Messages

	Name	address	phonenumber
1	daniel	33-6-213	5469871230
2	daniel	33-6-213	5469871230

2)Illustrate how we can use CONCAT and AS operations in SQL (minimum 3 queries):

QUERY 1:

```
use Hotel;

select concat(Name, ' ', Roomnumber) as details, phonenumber, email from Customer;
```

149 %

Results | Messages

	details	phonenumber	email
1	peter 001	8754321987	test@gmail.com
2	chen 002	9514863258	test@gmail.com
3	rosy 003	7531598526	test@gmail.com
4	gill 004	8524569631	test@gmail.com
5	rio 005	7896321456	test@gmail.com
6	professor 006	8426957130	test@gmail.com
7	langford 007	7254796318	test@gmail.com
8	justin 008	9571536293	test@gmail.com
9	bobby 009	7564218930	test@gmail.com
10	bob 010	9658741230	test@gmail.com
11	cristen 011	7895621301	test@gmail.com
12	kamal 012	4862159735	test@gmail.com
13	dinesh 013	6547893215	test@gmail.com
14	abcd 014	2589641375	test@gmail.com
15	mona 015	1258974631	test@gmail.com
16	raj 016	1589746238	test@gmail.com
17	kumar 017	8459761238	test@gmail.com
18	edfh 018	4879635428	test@gmail.com
19	mahesh 019	8796532485	test@gmail.com
20	dhoni 020	4897563215	test@gmail.com

QUERY 2:

```
use Hotel;

select concat(address, ' ', phonenumber) as info, Name from Manager where Name = 'johnny';
```

149 %

Results | Messages

	info	Name
1	20-3-152/A 9513647852	johnny
2	20-3-152/A 9513647852	johnny
3	20-3-152/A 9513647852	johnny

QUERY 3:

```
use Hotel;

select concat(address, ' ', phonenumber) as personal_info, Name, phonenumber from Manager
    where customerid in(
        select customerid from Customer
        where Roomnumber in (
            select roomnumber from Room where stockid = 2
        )
    );
```

149 %

Results | Messages

	personal_info	Name	phonenumber
1	33-6-213 5469871230	daniel	5469871230
2	33-6-213 5469871230	daniel	5469871230

3) Illustrate all the Comparison operator (2 queries for each operator):

OPERATOR	Description
=	Equal to.
>	Greater than.
<	Less than.
>=	Greater than equal to.
<=	Less than equal to.
<>	Not equal to.

QUERY FOR "=":

```
USE HOTEL;

SELECT * FROM T2_Rooms WHERE Room_location='block-2';

SELECT * FROM T2_CUSTOMER_ADDRESS WHERE Customer_ID='3';
```

100 %

Results | Messages

	Room_number	Room_Type	Room_location	number_of_beds	Customer_ID
1	1	Deluxe	block-2	1	2
2	3	Deluxe	block-2	1	4

	Customer_ID	Street	DNO	City	State
1	3	JS Nagar	7-13	Lucknow	Utter pradesh

QUERY FOR “>” :

```
SELECT * FROM T2_Billing WHERE Room_charge > '2500';

SELECT * FROM T2_Reservation WHERE Number_of_guests > '3';
```

100 %

Results | Messages

	Billing_#	Room_charge	Credit_card	Payment_date	Customer_ID
1	2	5000	9876543211	2021-05-05	2
2	3	6000	1234987655	2021-09-30	3
3	4	3000	5546666666	2021-12-11	4

	Reservation_number	Check_in_date	Check_out_date	Number_of_guests	Reservation_date	Customer_ID	Room_number
1	1	1999-02-03	1999-02-22	5	1999-02-01	2	1
2	2	1999-02-03	1999-02-22	4	1999-02-03	1	2

QUERY FOR “<” :

```
SELECT * FROM T2_Billing WHERE Room_charge > '2500';

SELECT * FROM T2_Reservation WHERE Number_of_guests > '3';

SELECT * FROM T2_Customer WHERE Zipcode < '534203';

SELECT * FROM T2_CUSTOMER_ADDRESS WHERE Customer_ID < '4';
```

100 %

Results | Messages

	Customer_ID	Customer_Name	Phone_number	City	State	Zipcode	Email_ID
1	1	Loffiin	8688543748	Nagpur	MP	534201	loff@gmail.com
2	4	Prabha	8688543766	Bengaluru	Karnataka	534201	prab@gmail.com

	Customer_ID	Street	DNO	City	State
1	1	RP NAGAR	7-11	Nagpur	Madhya pradesh
2	2	Sriram nagar	9-12	hyderabad	Telengana
3	3	JS Nagar	7-13	Lucknow	Utter pradesh

QUERY FOR “>=” :

```
SELECT * FROM T2_Billing WHERE Room_charge > '2500';

SELECT * FROM T2_Reservation WHERE Number_of_guests > '3';

SELECT * FROM T2_Customer WHERE Zipcode < '534203';

SELECT * FROM T2_CUSTOMER_ADDRESS WHERE Customer_ID < '4';

SELECT * FROM T2_SERVICES WHERE Reservation_number >= '2';

SELECT Customer_ID, Reservation_number FROM T2_Reservation WHERE Check_in_date >= '1999-02-03';
```

100 %

Results | Messages

	Service_ID	Service_name	Service_cost	Reservation_number
1	2	Transport	8000	3
2	3	Room	4000	2

	Customer_ID	Reservation_number
1	2	1
2	1	2
3	4	3

QUERY FOR “<=” :

```
SELECT * FROM T2_Billing WHERE Room_charge > '2500';

SELECT * FROM T2_Reservation WHERE Number_of_guests > '3';

SELECT * FROM T2_Customer WHERE Zipcode < '534203';

SELECT * FROM T2_CUSTOMER_ADDRESS WHERE Customer_ID < '4';

SELECT * FROM T2_SERVICES WHERE Reservation_number >= '2';

SELECT Customer_ID, Reservation_number FROM T2_Reservation WHERE Check_in_date >= '1999-02-03';

SELECT  Customer_Name FROM T2_Customer WHERE Customer_ID <= '3';
SELECT * FROM emp_info WHERE age<=35;
```

100 % Results Messages

	Customer_Name
1	Loffiin
2	Ram
3	Mahesh

	empid	empname	dob	age
1	1	Max	1999-03-21	22
2	3	Nax	1992-07-07	29

QUERY FOR “<>” :

```
SELECT * FROM T2_Reservation WHERE Number_of_guests > '3';

SELECT * FROM T2_Customer WHERE Zipcode < '534203';

SELECT * FROM T2_CUSTOMER_ADDRESS WHERE Customer_ID < '4';

SELECT * FROM T2_SERVICES WHERE Reservation_number >= '2';

SELECT Customer_ID, Reservation_number FROM T2_Reservation WHERE Check_in_date >= '1999-02-03';

SELECT  Customer_Name FROM T2_Customer WHERE Customer_ID <= '3';
SELECT * FROM emp_info WHERE age<=35;

SELECT * FROM emp_info WHERE empname <> 'Jax';
SELECT * FROM T2_Rooms WHERE Room_Type <> 'Deluxe';
```

0 % Results Messages

empid	empname	dob	age
1	Max	1999-03-21	22
3	Nax	1992-07-07	29

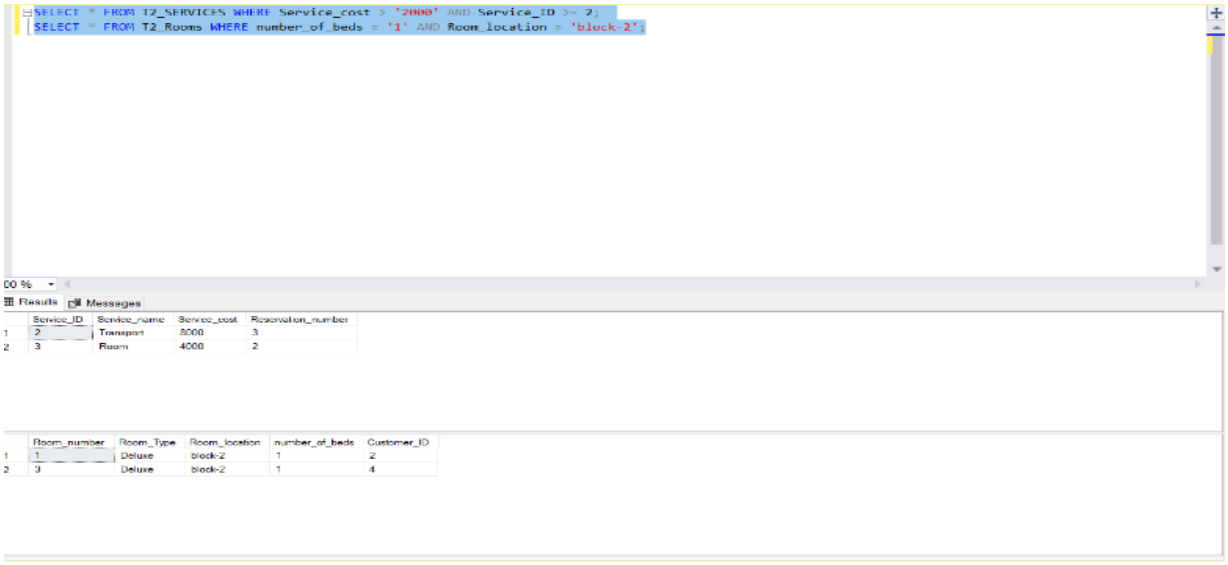
Room_number	Room_Type	Room_location	number_of_beds	Customer_ID
2	Economic	block-1	3	1

4)Illustrate Logical operators except ANY, ALL and LIKE (2 queries for each operator):

LOGICAL OPERATOR	Description

AND	Both the conditions mentioned in the WHERE clause should be TRUE.
OR	At least one of the conditions mentioned in the WHERE clause should be TRUE.
NOT	The mentioned condition should be false in the WHERE clause.
IN	Is used to search for specified value matches any value in set of multiple values.
BETWEEN	Is used to get values within a range.

QUERY FOR “AND” :



QUERY FOR “OR” :

```
SELECT * FROM T2_SERVICES WHERE Service_cost > '2000' AND Service_ID >= 2;
SELECT * FROM T2_Rooms WHERE number_of_beds = '1' AND Room_location = 'block-2';

SELECT Reservation_number FROM T2_Reservation WHERE Reservation_date > '1999-02-02' OR Room_number = '1';
SELECT Customer_ID FROM T2_CUSTOMER_ADDRESS WHERE Street='JS Nagar' OR DNO = '9-12';
```

100 %

Results | Messages

	Reservation_number
1	1
2	2
3	3

	Customer_ID
1	2
2	3

QUERY FOR “NOT” :

```
SELECT * FROM T2_SERVICES WHERE Service_cost > '2000' AND Service_ID >= 2;
SELECT * FROM T2_Rooms WHERE number_of_beds = '1' AND Room_location = 'block-2';

SELECT Reservation_number FROM T2_Reservation WHERE Reservation_date > '1999-02-02' OR Room_number = '1';
SELECT Customer_ID FROM T2_CUSTOMER_ADDRESS WHERE Street='JS Nagar' OR DNO = '9-12';

SELECT * FROM T2_Customer WHERE City IN ('hyderabad', 'Bengaluru');
SELECT * FROM T2_Billing WHERE Payment_date IN('2021-05-05');

SELECT * FROM T2_Reservation WHERE NOT Reservation_number = '2';
SELECT * FROM Customer_Backup WHERE NOT Customer_Name='Lofflin';
```

100 %

Results | Messages

	Reservation_number	Check_in_date	Check_out_date	Number_of_guests	Reservation_date	Customer_ID	Room_number
1	1	1999-02-03	1999-02-22	5	1999-02-01	2	1
2	3	1999-04-03	1999-04-04	2	1999-04-01	4	3

	Customer_ID	Customer_Name	Phone_number	City	State	Zipcode	Email_ID
1	2	Ram	8688543744	hyderabad	TN	534204	Ram@gmail.com
2	3	Mahesh	8688543746	Lucknow	UP	534205	mah@gmail.com
3	4	Prabha	8688543766	Bengaluru	Karnataka	534201	prab@gmail.com

QUERY FOR “IN” :

```
SELECT * FROM T2_SERVICES WHERE Service_cost > '2000' AND Service_ID >= 2;
SELECT * FROM T2_Rooms WHERE number_of_beds = '1' AND Room_location = 'block-2';

SELECT Reservation_number FROM T2_Reservation WHERE Reservation_date > '1999-02-02' OR Room_number = '1';
SELECT Customer_ID FROM T2_CUSTOMER_ADDRESS WHERE Street='JS Nagar' OR DNO = '9-12';

SELECT * FROM T2_Customer WHERE City IN ('hyderabad', 'Bengaluru');
SELECT * FROM T2_Billing WHERE Payment_date IN('2021-05-05');
```

100 %

Results | Messages

	Customer_ID	Customer_Name	Phone_number	City	State	Zipcode	Email_ID
1	2	Ram	8688543744	hyderabad	TN	534204	Ram@gmail.com
2	4	Prabha	8688543766	Bengaluru	Karnataka	534201	prab@gmail.com

	Billing_#	Room_charge	Credit_card	Payment_date	Customer_ID
1	2	5000	9876543211	2021-05-05	2

QUERY FOR “BETWEEN” :

```
SELECT * FROM T2_SERVICES WHERE Service_cost > '2000' AND Service_ID >= 2;
SELECT * FROM T2_Rooms WHERE number_of_beds = '1' AND Room_location = 'block-2';

SELECT Reservation_number FROM T2_Reservation WHERE Reservation_date > '1999-02-02' OR Room_number = '1';
SELECT Customer_ID FROM T2_CUSTOMER_ADDRESS WHERE Street='JS Nagar' OR DNO = '9-12';

SELECT * FROM T2_Customer WHERE City IN ('hyderabad', 'Bengaluru');
SELECT * FROM T2_Billing WHERE Payment_date IN('2021-05-05');

SELECT * FROM T2_Reservation WHERE NOT Reservation_number = '2';
SELECT * FROM Customer_Backup WHERE NOT Customer_Name='Lofflin';

SELECT empname FROM emp_info WHERE AGE BETWEEN 25 AND 70;
SELECT Service_ID,Service_name,Service_cost FROM T2_SERVICES WHERE Reservation_number BETWEEN 2 AND 3;
```

100 %

Results | Messages

	empname
1	Jax
2	Nax

	Service_ID	Service_name	Service_cost
1	2	Transport	8000
2	3	Room	4000