

ASSIGNMENT-5

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QUESTION-1:

Illustrate logical ANY, ALL and LIKE operator- the queries should be relevant to your respective databases 3 queries for each operator. One query explaining the difference between ANY and ALL

QUERY-1 FOR ANY:

```
use [T3 Travel]
select phone_number
from T3_EmployeeDetails
where designation=any(select designation
                      from T3_EmployeeDetails
                      where salary=12500);
```

QUERY-2 FOR ANY:

```
use [T3 Travel]
select payment_amount
from T3_BookingDetails
where customer_id=any(select customer_id
                     from T3_CustomerDetails
                     where age<30);
```

QUERY-3 FOR ANY:

```
use [T3 Travel]
select *
from T3_CustomerDetails
where age< any(select age
               from T3_CustomerDetails
               where gender='M');
```

OUTPUT FOR ABOVE THREE QUERIES:

phone_number	
1	911234567890
2	911234567891
3	911234567892
4	911234567893

payment_amount	
1	25000.00
2	25000.00
3	25000.00
4	25000.00
5	50000.00
6	50000.00
7	50000.00
8	50000.00

customer_id	first_name	last_name	age	gender	phone
1	Kiran	Kumar	31	M	91999999999
2	Charan	Rao	28	M	91999999998
3	Farhan	Abdul	37	M	91999999997
4	Kissan	Chary	21	M	91999999996
5	Laban	Seth	18	M	91999999995
6	Cheman	Kumar	35	M	91999999994
7	Eeshwar	Prasad	53	M	91999999993
8	Raghav	Swamy	42	M	91999999992

QUERY-1 FOR ALL:

```
use [T3 Travel]
select phone_number
from T3_EmployeeDetails
where designation=ALL(select designation
                        from T3_EmployeeDetails
                        where salary=12500);
```

QUERY-2 FOR ALL:

```
use [T3 Travel]
select concat(first_name,last_name) as name
from T3_CustomerDetails
where age<ALL(select age
               from T3_CustomerDetails
               where age>30);
```

QUERY-3 FOR ALL:

```
use [T3 Travel]
select *
from T3_CustomerDetails
where age< ALL(select age
                from T3_CustomerDetails
                where gender='M');
```

OUTPUT FOR ABOVE THREE QUERIES:

	phone_number
1	911234567890
2	911234567891
3	911234567892
4	911234567893

	name
1	CharanRao
2	KissanChary
3	LobanSeth
4	ChakramKumar
5	Jaikrishna
6	DeepakChowdary
7	KarthikSajjan
8	ManaswiniKsheeraja
9	ShreyaKuppa
10	SrinidhiKuppa
11	KrishnaPaanchajanya

	customer_id	first_name	last_name	age	gender	phone
1	0000000019	Shreya	Kuppa	8	F	919999999187
2	0000000020	Srinidhi	Kuppa	5	F	919999999964

QUERY-1 FOR LIKE:

```
use [T3 Travel]
select name,designation
from T3_EmployeeDetails
where employee_id LIKE '02%';
```

QUERY-2 FOR LIKE:

```
use [T3 Travel]
select concat(first_name,last_name) as name
from T3_CustomerDetails
where first_name LIKE 'C%';
```

QUERY-3 FOR LIKE:

```
use [T3 Travel]
select distinct package_name
from [T3_Package Details]
where booking_id LIKE '01%';
```

OUTPUT FOR ABOVE THREE QUERIES:

	name	designation
1	B. SURESH	Driver
2	N. NARESH	Driver
3	T. MALLESH	Cleaner
4	P. PARAMESH	Luggage Manager

	name
1	CharanRao
2	ChemanKumar
3	ChakramKumar

	package_name
1	Kulu Manali

QUERY TO DIFFERENTIATE BETWEEN ALL AND ANY:

ANY:

```
use [T3 Travel]
select concat(first_name,last_name) as name
from T3_CustomerDetails
where first_name=ANY(select first_name
                      from T3_CustomerDetails
                      where first_name like 'C%');
```

ALL:

```
use [T3 Travel]
select concat(first_name,last_name) as name
from T3_CustomerDetails
where first_name=all(select first_name
                     from T3_CustomerDetails
                     where first_name like 'C%');
```

OUTPUT:

	name
1	CharanRao
2	ChemanKumar
3	ChakramKumar

QUESTION-2:

One query for each Aggregate function.

```
use [T3 Travel]
select avg(salary)
from T3_EmployeeDetails
where designation='Driver';
select count(*)
from [T3_Package Details]
where cost>25000;
select max(age)
from T3_CustomerDetails;
select min(age)
from T3_CustomerDetails;
select sum(payment_amount)
from T3_BookingDetails;
```

OUTPUT:

	(No column name)
1	12500.000000
	(No column name)
1	10
	(No column name)
1	61
	(No column name)
1	5
	(No column name)
1	750000.00

QUESTION-3:

Illustrate the usage of order by, group by and having clause (2 queries for each case)

QUERIES FOR ORDER BY:

```
use [T3 Travel]
select *
from T3_CustomerDetails
order by first_name asc;
select *
from T3_EmployeeDetails
order by employee_id desc;
```

OUTPUT:

	customer_id	first_name	last_name	age	gender	phone
1	0000000010	Chakram	Kumar	14	M	919999999990
2	0000000002	Charan	Rao	28	M	919999999996
3	0000000006	Cheman	Kumar	35	M	919999999994
4	0000000014	Deepak	Chowdary	19	M	919999999915
5	0000000007	Eeshwar	Prasad	53	M	919999999993
6	0000000003	Fahran	Abdul	37	M	919999999997
7	0000000011	Jai	Krishna	28	M	919999999912
8	0000000015	Karthik	Sajan	20	M	9199999999189

	employee_id	name	designation	phone_number	salary
1	02008	P. PARAMESH	Luggage Manager	911234567898	5000.00
2	02006	T. MALLESH	Cleaner	911234567895	8000.00
3	02004	N. NARESH	Driver	911234567893	12500.00
4	02003	B. SURESH	Driver	911234567892	12500.00
5	01007	O. JAYESH	Luggage Manager	911234567897	5000.00
6	01005	R. PARISH	Cleaner	911234567894	8000.00
7	01002	A. RAMESH	Driver	911234567891	12500.00
8	01001	P. RAJESH	Driver	911234567890	12500.00

QUERIES FOR GROUP BY:

```
use [T3 Travel]
select gender ,count(*)
from T3_CustomerDetails
where age>21
group by gender;
select bus_type,count(*)
from T3Bus
group by bus_type;
```

OUTPUT:

	gender	(No column name)
1	F	1
2	M	12

	bus_type	(No column name)
1	2 Seater	10
2	Sleeper	10

QUERIES FOR HAVING:

```
use [T3 Travel]
select count(employee_id),designation
from T3_EmployeeDetails
group by designation
having count(employee_id)>1;
select count(customer_id),last_name
from T3_CustomerDetails
group by last_name
having count(customer_id)>1;
```

OUTPUT:

	(No column name)	designation
1	2	Cleaner
2	4	Driver
3	2	Luggage Manager

	(No column name)	last_name
1	3	Kumar
2	2	Kuppa
3	2	Ram

QUESTION-4:

Use Aggregate function with group by and having

QUERIES:

```
use [T3 Travel]
select avg(age)
from T3_CustomerDetails
group by last_name
having last_name='Ram'
select count(booking_id)
from [T3_Package Details]
group by cost
```

```

having cost=50000;
select max(payment_amount)
from T3_BookingDetails
group by payment_dateTime
having payment_dateTime='2021-02-19 09:37:00.000';
select min(age)
from T3_CustomerDetails
group by last_name
having last_name='vanga';
select sum(salary)
from T3_EmployeeDetails
group by designation
having designation='Driver';

```

OUTPUT:

	(No column name)
1	54

	(No column name)
1	10

	(No column name)
1	25000.00

	(No column name)
1	5

	(No column name)
1	50000.00

QUESTION-5:

Write at least 3 nested queries using order by, group by and having clause.

QUERIES:

```

use [T3 Travel]
select designation, avg(salary) as AverageSalary
from T3_EmployeeDetails
where designation='Luggage Manager'
group by designation
having avg(salary)<(select avg(salary)
                                from T3_EmployeeDetails
                                where designation='Cleaner');

select last_name, sum(age)
from T3_CustomerDetails
where customer_id=ANY(select customer_id
                                from T3_BookingDetails
                                where payment_amount=25000)

group by last_name
having last_name like '%a%';

```


OUTPUT:

customer_id	
1	0000000021
2	0000000024

customer_id	first_name	last_name	age	gender	phone	
1	0000000001	Kiran	Kumar	31	M	919999999999
2	0000000002	Charan	Rao	28	M	919999999998
3	0000000003	Farhan	Abdul	37	M	919999999997
4	0000000004	Kissan	Chary	21	M	919999999996

customer_id	booking_id	payment_amount	payment_dateTime	refunded	refund_amount	refund_dateTime	
1	0000000001	0100001	25000.00	2021-02-19 09:37:00.000	NULL	NULL	NULL
2	0000000002	0100002	25000.00	2021-02-19 09:42:00.000	NULL	NULL	NULL
3	0000000003	0100003	25000.00	2021-02-19 09:16:00.000	NULL	NULL	NULL
4	0000000004	0100004	25000.00	2021-02-19 09:07:00.000	NULL	NULL	NULL

customer_id	
1	0000000001
2	0000000002
3	0000000003
4	0000000004

booking_id	
1	0100001
2	0100002
3	0100003
4	0100004
5	0100005
6	0100006
7	0100007
8	0100008

QUESTION-7:

INNER JOIN, LEFT OUTER JOIN, RIGHT OUTER JOIN- 3 queries for each instance

QUERIES FOR INNER JOIN:

```
use [T3 Travel]
select *
from T3_DestinationDetails as dest inner join [T3_Package Details] as pack on
dest.booking_id=pack.booking_id;
select *
from T3_BookingDetails as booking inner join T3_DestinationDetails as dest on
booking.booking_id=dest.booking_id;
select *
from T3_BookingDetails as booking inner join T3Bus as bus on
booking.booking_id=bus.booking_id;
```

OUTPUT:

	booking_id	city	hotel_name	hotel_description	address	booking_id	package_name	package_description	cost	starting_point
1	0100001	Kulu Manali	Raj Palace	Good	Kulu Manali	0100001	Kulu Manali	Chill Out	25000.00	Hyderabad
2	0100002	Kulu Manali	Raj Palace	Good	Kulu Manali	0100002	Kulu Manali	Chill Out	25000.00	Hyderabad
3	0100003	Kulu Manali	Raj Palace	Good	Kulu Manali	0100003	Kulu Manali	Chill Out	25000.00	Hyderabad
4	0100004	Kulu Manali	Raj Palace	Good	Kulu Manali	0100004	Kulu Manali	Chill Out	25000.00	Hyderabad
5	0100005	Kulu Manali	Raj Palace	Good	Kulu Manali	0100005	Kulu Manali	Chill Out	25000.00	Hyderabad
6	0100006	Kulu Manali	Raj Palace	Good	Kulu Manali	0100006	Kulu Manali	Chill Out	25000.00	Hyderabad
7	0100007	Kulu Manali	Raj Palace	Good	Kulu Manali	0100007	Kulu Manali	Chill Out	25000.00	Hyderabad
8	0100008	Kulu Manali	Raj Palace	Good	Kulu Manali	0100008	Kulu Manali	Chill Out	25000.00	Hyderabad

	customer_id	booking_id	payment_amount	payment_dateTime	refunded	refund_amount	refund_dateTime	booking_id	city	hotel_name	hotel_description	address
1	0000000001	0100001	25000.00	2021-02-19 09:37:00.000	NULL	NULL	0100001	Kulu Manali	Raj Palace	Good	Kulu Manali	Kulu Manali
2	0000000002	0100002	25000.00	2021-02-19 09:42:00.000	NULL	NULL	0100002	Kulu Manali	Raj Palace	Good	Kulu Manali	Kulu Manali
3	0000000003	0100003	25000.00	2021-02-19 09:16:00.000	NULL	NULL	0100003	Kulu Manali	Raj Palace	Good	Kulu Manali	Kulu Manali
4	0000000004	0100004	25000.00	2021-02-19 09:07:00.000	NULL	NULL	0100004	Kulu Manali	Raj Palace	Good	Kulu Manali	Kulu Manali
5	0000000005	0100005	25000.00	2021-02-19 09:34:00.000	NULL	NULL	0100005	Kulu Manali	Raj Palace	Good	Kulu Manali	Kulu Manali
6	0000000006	0100006	25000.00	2021-02-19 09:12:00.000	NULL	NULL	0100006	Kulu Manali	Raj Palace	Good	Kulu Manali	Kulu Manali
7	0000000007	0100007	25000.00	2021-02-19 09:18:00.000	NULL	NULL	0100007	Kulu Manali	Raj Palace	Good	Kulu Manali	Kulu Manali
8	0000000008	0100008	25000.00	2021-02-19 09:58:00.000	NULL	NULL	0100008	Kulu Manali	Raj Palace	Good	Kulu Manali	Kulu Manali

	customer_id	booking_id	payment_amount	payment_dateTime	refunded	refund_amount	refund_dateTime	booking_id	bus_id	bus_type	dateAndTime_of_Arrival	dateAndTime_of_Departure
1	0000000001	0100001	25000.00	2021-02-19 09:37:00.000	NULL	NULL	0100001	8714	Sleeper	2021-03-04 15:15:00.000	2021-03-06 15:15:00.000	
2	0000000002	0100002	25000.00	2021-02-19 09:42:00.000	NULL	NULL	0100002	8714	Sleeper	2021-03-04 15:15:00.000	2021-03-06 15:15:00.000	
3	0000000003	0100003	25000.00	2021-02-19 09:16:00.000	NULL	NULL	0100003	8714	Sleeper	2021-03-04 15:15:00.000	2021-03-06 15:15:00.000	
4	0000000004	0100004	25000.00	2021-02-19 09:07:00.000	NULL	NULL	0100004	8714	Sleeper	2021-03-04 15:15:00.000	2021-03-06 15:15:00.000	
5	0000000005	0100005	25000.00	2021-02-19 09:34:00.000	NULL	NULL	0100005	8714	Sleeper	2021-03-04 15:15:00.000	2021-03-06 15:15:00.000	
6	0000000006	0100006	25000.00	2021-02-19 09:12:00.000	NULL	NULL	0100006	8714	Sleeper	2021-03-04 15:15:00.000	2021-03-06 15:15:00.000	
7	0000000007	0100007	25000.00	2021-02-19 09:18:00.000	NULL	NULL	0100007	8714	Sleeper	2021-03-04 15:15:00.000	2021-03-06 15:15:00.000	
8	0000000008	0100008	25000.00	2021-02-19 09:58:00.000	NULL	NULL	0100008	8714	Sleeper	2021-03-04 15:15:00.000	2021-03-06 15:15:00.000	
9	0000000009	0100009	25000.00	2021-02-19 09:54:00.000	NULL	NULL	0100009	8714	Sleeper	2021-03-04 15:15:00.000	2021-03-06 15:15:00.000	
10	0000000010	0100010	25000.00	2021-02-19 11:12:00.000	NULL	NULL	0100010	8714	Sleeper	2021-03-04 15:15:00.000	2021-03-06 15:15:00.000	
11	0000000011	0200011	50000.00	2021-02-19 11:13:00.000	NULL	NULL	0200011	6938	2 Seater	2021-03-04 05:30:00.000	2021-03-08 15:15:00.000	
12	0000000012	0200012	50000.00	2021-02-19 10:18:00.000	NULL	NULL	0200012	6938	2 Seater	2021-03-04 05:30:00.000	2021-03-08 15:15:00.000	
13	0000000013	0200013	50000.00	2021-02-19 10:20:00.000	NULL	NULL	0200013	6938	2 Seater	2021-03-04 05:30:00.000	2021-03-08 15:15:00.000	
14	0000000014	0200014	50000.00	2021-02-19 10:25:00.000	NULL	NULL	0200014	6938	2 Seater	2021-03-04 05:30:00.000	2021-03-08 15:15:00.000	
15	0000000015	0200015	50000.00	2021-02-19 10:38:00.000	NULL	NULL	0200015	6938	2 Seater	2021-03-04 05:30:00.000	2021-03-08 15:15:00.000	

QUESTION-8:

Use all the above condition in JOIN as well.

```
select first_name,min(booking_id) as booking_id,avg(age) as age,max(phone) as  
phone_number  
from T3_CustomerDetails as customer  
join  
T3_BookingDetails as booking on customer.customer_id=booking.customer_id  
group by first_name having first_name like '%e%' order by first_name desc;
```

OUTPUT:

	first_name	booking_id	age	contact_no
1	Sunder	0200017	54	919999999923
2	Somesh	0200013	33	919999999914
3	Shreya	0200019	8	9199999999187
4	Raghavendra	0100008	42	919999999992
5	Eeshwar	0100007	53	919999999993
6	Deepak	0200014	19	919999999915
7	Cheman	0100006	35	919999999994