

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 | 000000000001 | Kiran | Kumar | 33 | M | 91999999999999 |
| 2 | 000000000002 | Charan | Rao | 28 | M | 9199999999998 |
| 3 | 000000000003 | Farhan | Abdul | 37 | M | 9199999999997 |
| 4 | 000000000004 | Kiesan | Chery | 21 | M | 9199999999996 |
| 5 | 000000000005 | Laban | Seth | 18 | M | 9199999999995 |
| 6 | 000000000006 | Chemana | Kumar | 35 | M | 9199999999994 |
| 7 | 000000000007 | Eeshwar | Prasad | 53 | M | 9199999999993 |
| 8 | 000000000008 | Raghava... | Swamy | 42 | M | 9199999999992 |

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 | KissanChery |
| 3 | LabanSeth |
| 4 | ChakramKumar |
| 5 | JaiKrishna |
| 6 | DeepakChowdary |
| 7 | KarthikSajjan |
| 8 | MansawinKsheeraja |
| 9 | ShreyaKuppa |
| 10 | SrinidhiKuppa |
| 11 | KrishnaPanchajanya |

| | customer_id | first_name | last_name | age | gender | phone |
|---|-------------|------------|-----------|-----|--------|---------------|
| 1 | 0000000019 | Shreya | Kuppa | 8 | F | 9199999999187 |
| 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 | 919999999998 |
| 3 0000000006 | Cheman | Kumar | 35 | M | 919999999994 |
| 4 0000000014 | Deepak | Chowdary | 19 | M | 919999999915 |
| 5 0000000007 | Eashwar | Prasad | 53 | M | 919999999993 |
| 6 0000000003 | Farhan | Abdul | 37 | M | 919999999997 |
| 7 0000000011 | Jai | Krishna | 28 | M | 919999999912 |
| 8 0000000015 | Karthik | Sajan | 20 | M | 919999999189 |

| 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. PARESH | 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 | 3 | 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%';

```

```
select last_name,sum(age)
from T3_CustomerDetails
where customer_id=ANY(select customer_id
from T3_BookingDetails
where payment_amount=50000)
group by last_name
having last_name like '%a%';
```

OUTPUT:

| | designation | AverageSalary |
|---|----------------------------|---------------|
| 1 | Luggage Manager | 5000.000000 |
| | last_name (No column name) | |
| 1 | Abdul | 37 |
| 2 | Chary | 21 |
| 3 | Chatrapati | 61 |
| 4 | Kumar | 80 |
| 5 | Prasad | 53 |
| 6 | Rao | 28 |
| 7 | Swamy | 42 |
| | last_name (No column name) | |
| 1 | Chowdary | 19 |
| 2 | Krishna | 28 |
| 3 | Ksheeraja | 16 |
| 4 | Kuppa | 13 |
| 5 | lingaraju | 41 |
| 6 | Ram | 108 |
| 7 | Sajjan | 20 |
| 8 | Thakur | 33 |

QUESTION-6:

Illustrate the Usage of Except, Exists, Not Exists, Union, Intersection

QUERIES:

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 09:16:00.000 | NULL | NULL | NULL |
| 5 | 0000000005 | 0100005 | 25000.00 | 2021-02-19 09:07:00.000 | NULL | NULL | NULL |
| 6 | 0000000006 | 0100006 | 25000.00 | 2021-02-19 09:07:00.000 | NULL | NULL | NULL |
| 7 | 0000000007 | 0100007 | 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 | NULL | 0100001 | Kulu Manali | Raj Palace | Good | |
| 2 | 0000000002 | 0100002 | 25000.00 | 2021-02-19 09:42:00.000 | NULL | NULL | NULL | 0100002 | Kulu Manali | Raj Palace | Good | |
| 3 | 0000000003 | 0100003 | 25000.00 | 2021-02-19 09:16:00.000 | NULL | NULL | NULL | 0100003 | Kulu Manali | Raj Palace | Good | |
| 4 | 0000000004 | 0100004 | 25000.00 | 2021-02-19 09:07:00.000 | NULL | NULL | NULL | 0100004 | Kulu Manali | Raj Palace | Good | |
| 5 | 0000000005 | 0100005 | 25000.00 | 2021-02-19 09:34:00.000 | NULL | NULL | NULL | 0100005 | Kulu Manali | Raj Palace | Good | |
| 6 | 0000000006 | 0100006 | 25000.00 | 2021-02-19 09:12:00.000 | NULL | NULL | NULL | 0100006 | Kulu Manali | Raj Palace | Good | |
| 7 | 0000000007 | 0100007 | 25000.00 | 2021-02-19 09:18:00.000 | NULL | NULL | NULL | 0100007 | Kulu Manali | Raj Palace | Good | |
| 8 | 0000000008 | 0100008 | 25000.00 | 2021-02-19 09:58:00.000 | NULL | NULL | NULL | 0100008 | Kulu Manali | Raj Palace | Good | |
| | customer_id | booking_id | payment_amount | payment_dateTime | refunded | refund_amount | refund_dateTime | booking_id | bis_id | bis_type | dateAndTime_of_Arrival | dateAndTime_of_Departure |
| 1 | 0000000001 | 0100001 | 25000.00 | 2021-02-19 09:37:00.000 | NULL | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 9199999999923 |
| 2 | Somesh | 0200013 | 33 | 9199999999914 |
| 3 | Shreya | 0200019 | 8 | 9199999999187 |
| 4 | Raghavendra | 0100008 | 42 | 919999999992 |
| 5 | Eeshwar | 0100007 | 53 | 919999999993 |
| 6 | Deepak | 0200014 | 19 | 9199999999915 |
| 7 | Cheman | 0100006 | 35 | 919999999994 |