PRACTICAL EXPERIMENT-6

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EXPERIMENT- 6

Implement Aggregate Functions, Group by & Having Clauses, Nested, Correlated Nested, Views, Indices and DCL Commands on Case Study 1 **(TRANSPORT DEPARTMENT)**

PRE-LAB :

1. Discuss about GRANT, REVOKE and SYNONYM
2. Give the differences between AVERAGE and ROUND commands?
3. What is the use of VIEW statement in SQL?
4. Discuss about any 5 aggregate functions.
5. What do you mean by a nested query in SQL?
6. What are the pattern matching operators that can be used in PostgreSQL?
7. Write a SQL Query to display the Current Date?
8. Discuss about any 5 Character Manipulation functions?
9. Display the structure of the table?
10. What is meant by aliasing in SQL?

1. Grant: SQL Grant command is specifically used to provide privileges to database objects for a user. This command also allows user to grant permissions to other users too.

2. Revoke: Revoke command withdraw user privileges on database objects if any granted. It does operations opposite to the grant command.

3. Uses of a view:

   1. Restricting data acces - view provide an additional level of table security.
   2. Hiding data complexity - A view can hide the complexity that exists in a multiple table join.

Use the tables and data in Experiment – 5, In-Lab section and work on the following queries

1.Display the list of customers available in a branch.

A. select c.cust_name from Customer c INNER JOIN branch b on c.cust_id=b.c_id;

```
labs=# select c.cust_name from Customer c INNER JOIN branch b on c.cust_id=b.c_id;
 cust_name
-----------
 raju
 raju
 hari
 giri
 ramu
 ramu
 hari
 gopi
 karthik
 giri
(10 rows)
```

2.Create a SQL query to know the older of all the customers

A. select max(dob) from customer;

```
labs=# select max(dob) from customer;
    max
------------
 25-03-1999
(1 row)
```

3. Write a SQL query to calculate the total amount generated by giving contract permission for amount per seat

A. select sum(amount_per_seat) from contract_permission;

```
labs=# select sum(amount_per_seat) from contract_permission;
 sum
-----
 700
(1 row)
```

4. Create a query to display all the type of vehicles present

A. select distinct veh_type from vehicle;

```
labs=# select distinct veh_type from vehicle;
 veh_type
-----------
 4_wheeler
 2_wheeler
 3_wheeler
(3 rows)
```

5. Write SQL query to display all the cities present in a given state.

A. select city from dealer where state='AndhraPradesh'or state='Telangana';

```
labs=# select city from dealer where state='AndhraPradesh'or state='Telangana';
    city
------------
 Guntur
 Hyderabad
 Hyderabad
 Hyderabad
 Hyderabad
 Hyderabad
 Hyderabad
 Guntur
 Guntur
 Vijayawada
(10 rows)
```

6. Display the number of vehicles of customers who are not having photo identity

A. select count(v_id) from customer INNER JOIN vehicle on vehicle.veh_id=customer.y_id where customer.photo_identity='n';

```
labs=# select count(y_id) from customer INNER JOIN vehicle on vehicle.veh_id=customer.y_id where customer.photo_identity='n';
 count
-------
     3
(1 row)
```

7. Write SQL statement to search for vehicle type which is having the vehicle id as the smallest number

A. select veh_type from vehicle where veh_id=1;

```
labs=# select veh_type from vehicle where veh_id=1;
 veh_type
-----------
 2_wheeler
(1 row)
```

8. Create a SQL query to know the branch name and phone number of a customer who is having license period of 2 years.

```
labs=# select b.branch_id, b.phno1 from branch b INNER JOIN renewal r on b.c_id=r.c_id where r.check_license_period=2;
 branch_id | phno1
-----------+-------
(0 rows)
```

9. Display the vehicle details for which maximum amount is paid per seat for contract permission.
A. select v.* from vehicle v INNER JOIN contract_permission c on v.veh_id=c.veh_id where amount_per_seat=(select max(amount_per_seat) from contract_permission);

```
 veh_id | veh_type  |  veh_name  | veh_number
--------+-----------+------------+------------
     10 | 4_wheeler | ambassador | TS4567
(1 row)
```

10. Write Co-related nested subquery to know the customer name, phone number, city whose branch name is ‘Madhapur’

A. select c.cust_name,c.city,c.ph_no from customer c INNER JOIN branch b on c.cust_id=b.c_id where b.b_name=(select b_name from branch where b_name='madhapur');

```
 cust_name |  city   |   ph_no
-----------+---------+------------
 raju      | Guntur | 9123456789
(1 row)
```

11. Create a view “Present_Customer” with customer name, phone number, state and city of customer and display the view.

A. create view Present_customer as select cust_name,ph_no,state,city from customer;

select * from Present_customer;//display the vew

```
labs=# create view Present_customer as select cust_name,ph_no,state,city from customer;
CREATE VIEW
labs=# select * from Present_customer;
 cust_name |   ph_no    |     state      |    city
-----------+------------+----------------+------------
 raju      | 9123456789 | Andhra Pradesh | Guntur
 hari      | 1122334455 | TamilNadu      | Perambur
 giri      | 8877665544 | Telangana      | Hyderabad
 ramu      | 7654564321 | Andhra Pradesh | Vijayawada
 rahul     | 9999999998 | Andhra Pradesh | Guntur
 gopi      | 7787777775 | Telangana      | Hyderabad
 karthik   | 7788776633 | Andhra Pradesh | Guntur
 gopal     | 6734556345 | Telangana      | Hyderabad
 Dinesh    | 6794537212 | Telangana      | Hyderabad
 Suresh    | 7896543233 | Andhra Pradesh | Vijayawada
(10 rows)
```

12. Write SQL query to show indexes on customer table.

A. SHOW INDEXES FROM customer;

13. Create a query to display the count of dealers from “Andhra Pradesh”

A. select count(*) from dealer where state='AndhraPradesh';

```
labs=# select count(*) from dealer where state='AndhraPradesh';
 count
-------
     4
(1 row)
```

14. Display the number of cities in each state

A. select count(city),state from customer group by state;

```
 count |     state
-------+----------------
     5 | Andhra Pradesh
     4 | Telangana
     1 | TamilNadu
(3 rows)
```

15. Drop the view “Present_Customer”

A.drop view Present_customer;

```
labs=# drop view Present_customer;
DROP VIEW
```

POSTLAB

1.Create a SQL query to display employees details whose salary is greater than 30000 and less than 50000

A. select * from worker where salary>30000 and salary<50000;

```
labs=# select * from worker where salary>30000 and salary<50000;
 worker_id | first_name | last_name | salary | joining_date | department
-----------+------------+-----------+--------+--------------+------------
(0 rows)
```

2. Display the no. of employees in each department

A. select department,count(*) from worker group by department;

```
labs=# select department,count(*) from worker group by department;
 department | count
------------+-------
            |     1
 Admin      |     4
 Account    |     2
 HR         |     2
(4 rows)
```

3. Display the count of employees with same designation in an organization

A. select worker_title,count(*) from Title group by worker_title;

```
labs=# select worker_title,count(*) from Title group by worker_title;
 worker_title  | count
---------------+-------
 Manager       |     2
 Executive     |     3
 Lead          |     2
 Asst. Manager |     1
(4 rows)
```