

PRACTICAL EXPERIMENT-5

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1. Create the database in PostgreSQL and create the necessary tables for the given case study using appropriate keys and relationships between the tables

```
labs=# \d
```

Schema	Name	Type	Owner
public	branch	table	postgres
public	contract_permission	table	postgres
public	customer	table	postgres
public	dealer	table	postgres
public	edu_bus	table	postgres
public	registration	table	postgres
public	renewal	table	postgres
public	vehicle	table	postgres

(8 rows)

2. Insert at least 10 records into every table that is implemented in the case study

A. I inserted all the records using insert command.

3. Create a query to find the vehicles that are permitted by branches located in Andhra Pradesh

A. `select b.* from vehicle v INNER JOIN branch b on v.veh_id=b.v_id INNER JOIN contract_permission c on b.branch_id=c.branch_id where state='Andhra Pradesh';`

```
labs=# select b.* from vehicle v INNER JOIN branch b on v.veh_id=b.v_id INNER JOIN contract_permission c on b.branch_id=c.branch_id where state='Andhra Pradesh';
branch_id | b_name | state | city | pincode | street | d_no | phno1 | phno2 | c_id | v_id | e_id
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----
(0 rows)
```

4. Create a query to find no.of.customers who had registered in month of July 2020

A. `select count(date) from registration where date='%-07-2020';`

```

labs=# select count(date) from registration where date='%-07-2020';
count
-----
      0
(1 row)

```

5. Display the list of 4-wheeler vehicles

A. select v.veh_id,v.veh_name,d.deal_name from vehicle v INNER JOIN registration r on v.veh_id= r.veh_id INNER JOIN dealer d on r.deal_id= d.deal_id where d.deal_name='raghu';

```

labs=# select * from vehicle where veh_type='4_wheeler';
 veh_id | veh_type |  veh_name  | veh_number
-----+-----+-----+-----
      4 | 4_wheeler | fiat      | AP2346
      5 | 4_wheeler | benz      | TS1256
     10 | 4_wheeler | ambassador | TS4567
(3 rows)

```

6. Display the vehicles that were registered by the dealer name 'Raghu'

A. select v.veh_id,v.veh_name,d.deal_name from vehicle v INNER JOIN registration r on v.veh_id= r.veh_id INNER JOIN dealer d on r.deal_id= d.deal_id where d.deal_name='raghu';

```

 veh_id | veh_name | deal_name
-----+-----+-----
      5 | benz    | raghu
      6 | auto    | raghu
      8 | bajaj   | raghu
(3 rows)

```

7. Display the list of customers who have applied for new license.

A. (Data is not given)

8. Display the vehicles who have been given 30 days of contract permission.

A. select v.veh_name from vehicle v INNER JOIN contract_permission c on v.veh_id=c.veh_id where c.no_of_days=30;

```
labs=# select v.veh_name from vehicle v INNER JOIN contract_permission c on v.veh_id=c.veh_id where c.no_of_days=30;
veh_name
-----
(0 rows)
```

9. Create a query to display all the records who applied for renewal of license

A. select c.* from customer c INNER JOIN renewal r on c.cust_id=r.c_id ;

```
labs=# select c.* from customer c INNER JOIN renewal r on c.cust_id=r.c_id ;
```

cust_id	cust_name	dob	city	street	state	pincode	ph_no	deal_no	photo_identity	y_id
41	raju	13-09-1996	Guntur	Ramgopal street	Andhra Pradesh	500213	9123456789	10	Y	3
42	hari	19-06-2016	Perambur	Mylapur	TamilNadu	500211	1122334455	20	N	2
43	giri	20-01-1995	Hyderabad	SR Nagar	Telangana	500079	8877665544	30	Y	4
44	ramu	17-07-1996	Vijayawada	Benz circle	Andhra Pradesh	512345	7654564321	40	Y	5
45	rahul	08-12-1995	Guntur	Raju Nagar	Andhra Pradesh	523022	9999999998	50	y	7
46	gopi	13-08-1979	Hyderabad	Gachibowli	Telangana	567089	7787777775	10	n	1
47	karthik	15-01-2004	Guntur	Chandramouli nagar	Andhra Pradesh	546789	7788776633	20	n	6
48	gopal	06-12-2000	Hyderabad	Ameerpet	Telangana	500023	6734556345	30	y	8
49	Dinesh	10-12-2001	Hyderabad	Kondapur	Telangana	502033	6794537212	30	n	10
50	Suresh	25-03-1999	Vijayawada	Poranki	Andhra Pradesh	512022	7896543233	20	y	9

```
(10 rows)
```

10. Display the count of vehicles of different types.

A. select veh_type,count(*) from vehicle group by veh_type;

```
labs=# select veh_type,count(*) from vehicle group by veh_type;
```

veh_type	count
4_wheeler	3
2_wheeler	5
3_wheeler	2

```
(3 rows)
```

11. Create a query to display customer details who have 2-wheeler vehicle.

A. select c.* from customer c INNER JOIN vehicle v on c.v_id=v.veh_id where veh_type='2_wheeler';

```
labs=# select c.* from customer c INNER JOIN vehicle v on c.y_id=v.veh_id where veh_type='2_wheeler';
```

cust_id	cust_name	dob	city	street	state	pincode	ph_no	deal_no	photo_identity	y_id
41	raju	13-09-1996	Guntur	Ramgopal street	Andhra Pradesh	500213	9123456789	10	Y	3
45	raahul	08-12-1995	Guntur	Raju Nagar	Andhra Pradesh	523022	9999999998	50	y	7
46	gopi	13-08-1979	Hyderabad	Gachibowli	Telangana	567089	7787777775	10	n	1
48	gopal	06-12-2000	Hyderabad	Ameerpet	Telangana	500023	6734556345	30	y	8
50	Suresh	25-03-1999	Vijayawada	Poranki	Andhra Pradesh	512022	7896543233	20	y	9

(5 rows)

12. Create a query that displays the customer details whose license expires in 5 days.

```
labs=# select c.* from customer c INNER JOIN renewal r on c.cust_id=r.c_id where r.check_license_period=5;
```

cust_id	cust_name	dob	city	street	state	pincode	ph_no	deal_no	photo_identity	y_id
---------	-----------	-----	------	--------	-------	---------	-------	---------	----------------	------

(0 rows)

13. Display the list of educational institutions who applied for permit

A. (Data is not given)

14. Display the total number of vehicles license allotted by each branch.

A. select b.b_name,count(veh_id) from vehicle INNER JOIN branch b on vehicle.veh_id=b.v_id group by b.branch_id;

b_name	count
kukatpally	1
punjagutta	1
ameerpet	1
raju nagar	1
hitech city	1
bachupally	1
miyapur	1
sanathnagar	1
madhapur	1
pnbs	1

(10 rows)

15. Display the number of customer present under each dealer

A. select count(cust_name) from customer INNER JOIN dealer d on customer.cust_name=d.deal_name;

```
labs=# select count(cust_name) from customer INNER JOIN dealer d on customer.cust_name=d.deal_name;
count
-----
      2
(1 row)
```

POST-LAB

```
db_2000031509=> \d
                        List of relations
 Schema | Name      | Type  | Owner
-----+-----+-----+-----
 public | customer  | table | db_2000031509
 public | orders    | table | db_2000031509
 public | stadium   | table | db_2000031509
 public | weather   | table | db_2000031509
 public | world     | table | db_2000031509
(5 rows)
```

1. Suppose that a website contains two tables, the Customers table and the Orders table. Write a SQL query to find all customers who never order anything.

A. select c.name from customer c LEFT JOIN Orders r on c.Id = r.customerid where r.id is null;

```
db_2000031509=> select c.name from customer c LEFT JOIN Orders r on c.Id = r.customerid where r.id is null;
name
-----
Henry
Max
(2 rows)
```

2. Given a Weather table, write a SQL query to find all dates' Ids with higher temperature compared to its previous (yesterday's) dates.

```
db_2000031509=> select recorddate, temperature from weather order by temperature desc;
recorddate | temperature
-----+-----
2015-04-01 |          30
2015-02-01 |          25
2015-03-01 |          20
2015-01-01 |          10
(4 rows)
```

3. A country is big if it has an area of bigger than 3 million square km or a population of more than 25 million. Write a SQL solution to output big countries' name, population and area.

```
db_2000031509=> select name,population,area from world where (area>3000000 or population > 25000000);
name      | population | area
-----+-----+-----
Afghanistan | 25500100 | 652230
Algeria    | 37100000 | 2381741
(2 rows)
```

4. Write a query to display the records which have 3 or more consecutive rows and the amount of people more than 100

A. db_2000031509=> select * from stadium where people > 100;

```
db_2000031509=> select * from stadium where people > 100;
id | visit_date | people
---+-----+-----
2 | 2017-01-02 | 109
3 | 2017-01-03 | 150
5 | 2017-01-05 | 145
6 | 2017-01-06 | 1455
7 | 2017-01-07 | 199
8 | 2017-01-08 | 188
(6 rows)
```