EXPERIMENT - III
BASIC SQL QUERIES - II

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AIM

To study the basic SQL queries such as:

1. ALTER
2. RENAME
3. SELECT DISTINCT
4. SQL IN
5. SQL BETWEEN
6. SQL Aliases
7. SQL AND
8. SQL OR

QUESTIONS

Create a table named car_details and populate the table as shown below.

ID	NAME	Company	Country	ApproxPrice
1	Beat	Chevrolet	USA	4
2	Swift	Maruti	Japan	6
3	Escort	Ford	USA	4.2
4	Sunny	Nissan	Japan	8
5	Beetle	Volkswagen	Germany	21
6	Etios	Toyota	Japan	7.2
7	Sail	Chevrolet	USA	5
8	Aria	Tata	India	7
9	Passat	Volkswagen	Germany	25
10	SX4	Maruti	Japan	6.7

```
postgres=# CREATE TABLE CAR_DETAILS (
postgres(# ID INT PRIMARY KEY NOT NULL,
postgres(# NAME TEXT NOT NULL,
postgres(# COMPANY TEXT NOT NULL,
postgres(# COUNTRY TEXT NOT NULL,
postgres(# APPROXPRICE FLOAT NOT NULL);
CREATE TABLE
postgres=# INSERT INTO CAR_DETAILS VALUES (1,'Beat','Chevrolet','USA',4);
INSERT 0 1
postgres=# INSERT INTO CAR_DETAILS VALUES (2,'Swift','Maruti','Japan',6);
INSERT 0 1
postgres=# INSERT INTO CAR_DETAILS VALUES (3,'Escort','Ford','USA',4.2);
INSERT 0 1
postgres=# INSERT INTO CAR_DETAILS VALUES (4,'Sunny','Nissan','Japan',8);
INSERT 0 1
postgres=# INSERT INTO CAR_DETAILS VALUES (5,'Beetle','Volkswagen','Germany',21);
INSERT 0 1
postgres=# INSERT INTO CAR_DETAILS VALUES (6,'Etios','Toyota','Japan',7.2);
INSERT 0 1
postgres=# INSERT INTO CAR_DETAILS VALUES (7,'Sail','Chevrolet','USA',5);
INSERT 0 1
postgres=# INSERT INTO CAR_DETAILS VALUES (8,'Aria','Tata','India',7);
INSERT 0 1
postgres=# INSERT INTO CAR_DETAILS VALUES (9,'Passat','Volkswagen','Germany',25);
INSERT 0 1
postgres=# INSERT INTO CAR_DETAILS VALUES (10,'SX4','Maruti','Japan',6.7);
INSERT 0 1
postgres=#
```

1. List the names of all companies as mentioned in the database.

```
postgres=# SELECT DISTINCT COMPANY FROM CAR_DETAILS;
  company
------------
 Ford
 Maruti
 Chevrolet
 Tata
 Toyota
 Nissan
 Volkswagen
(7 rows)

postgres=#
```

2. List the names of all countries having car production companies.

```
postgres=# SELECT DISTINCT COUNTRY FROM CAR_DETAILS;
 country
---------
 USA
 Germany
 India
 Japan
(4 rows)

postgres=#
```

3. 3.List the details of all cars within a price range 4 to 7 lakhs.

```
postgres=# SELECT * FROM CAR_DETAILS
postgres-# WHERE APPROXPRICE BETWEEN 4 AND 7;
 id |  name   |  company   | country | approxprice
----+---------+------------+---------+-------------
  1 | Beat    | Chevrolet | USA     |           4
  2 | Swift   | Maruti     | Japan   |           6
  3 | Escort | Ford       | USA     |         4.2
  7 | Sail    | Chevrolet | USA     |           5
  8 | Aria    | Tata       | India   |           7
 10 | SX4     | Maruti     | Japan   |         6.7
(6 rows)

postgres=#
```

4. List the name and company of all cars originating from Japan and having price<=6 lakhs.

```
postgres=# SELECT NAME,COMPANY FROM CAR_DETAILS
postgres-# WHERE COUNTRY='Japan' AND APPROXPRICE<=6;
 name  | company
-------+---------
 Swift | Maruti
(1 row)

postgres=#
```

5. List the names and the companies of all cars either from Nissan or having a price greater than 20 lakhs.

```
postgres=# SELECT NAME,COMPANY FROM CAR_DETAILS
postgres-# WHERE COMPANY='Nissan' OR APPROXPRICE>20;
  name  |  company
--------+------------
 Sunny  | Nissan
 Beetle | Volkswagen
 Passat | Volkswagen
(3 rows)

postgres=#
```

6. List the names of all cars produced by (Maruti,Ford).Use SQL IN statement.

```
postgres=# SELECT NAME FROM CAR_DETAILS
postgres-# WHERE COMPANY IN ('Maruti','Ford');
  name
--------
 Swift
 Escort
 SX4
(3 rows)

postgres=#
```

7. Alter the table cars to add a new field year (model release year).Upadate the year column for all the rows in the database.

```
postgres=# ALTER TABLE CAR_DETAILS
postgres-# ADD YEAR INT;
ALTER TABLE
postgres=# UPDATE CAR_DETAILS
postgres-# SET YEAR=2015;
UPDATE 10
postgres=# SELECT * FROM CAR_DETAILS;
 id |  name  |  company   | country | approxprice | year
----+--------+------------+---------+-------------+------
  1 | Beat   | Chevrolet  | USA     |           4 | 2015
  2 | Swift  | Maruti     | Japan   |           6 | 2015
  3 | Escort | Ford       | USA     |         4.2 | 2015
  4 | Sunny  | Nissan     | Japan   |           8 | 2015
  5 | Beetle | Volkswagen | Germany |          21 | 2015
  6 | Etios  | Toyota     | Japan   |         7.2 | 2015
  7 | Sail   | Chevrolet  | USA     |           5 | 2015
  8 | Aria   | Tata       | India   |           7 | 2015
  9 | Passat | Volkswagen | Germany |          25 | 2015
 10 | SX4    | Maruti     | Japan   |         6.7 | 2015
(10 rows)

postgres=#
```

8. Display the names of all cars as Car_name (while displaying the name attribute should be listed as car_aliases)

```
postgres=# SELECT NAME AS CAR_NAME FROM CAR_DETAILS;
 car_name
----------
 Beat
 Swift
 Escort
 Sunny
 Beetle
 Etios
 Sail
 Aria
 Passat
 SX4
(10 rows)

postgres=#
```

9. Rename the attribute name to car_name

```
postgres=# ALTER TABLE CAR_DETAILS
postgres-# RENAME COLUMN NAME TO CAR_NAME;
ALTER TABLE
postgres=# SELECT * FROM CAR_DETAILS;
 id | car_name |  company   | country | approxprice | year
----+----------+------------+---------+-------------+------
  1 | Beat     | Chevrolet  | USA     |           4 | 2015
  2 | Swift    | Maruti     | Japan   |           6 | 2015
  3 | Escort   | Ford       | USA     |         4.2 | 2015
  4 | Sunny    | Nissan     | Japan   |           8 | 2015
  5 | Beetle   | Volkswagen | Germany |          21 | 2015
  6 | Etios    | Toyota     | Japan   |         7.2 | 2015
  7 | Sail     | Chevrolet  | USA     |           5 | 2015
  8 | Aria     | Tata       | India   |           7 | 2015
  9 | Passat   | Volkswagen | Germany |          25 | 2015
 10 | SX4      | Maruti     | Japan   |         6.7 | 2015
(10 rows)

postgres=#
```

10. List the car manufactured by Toyota(to be displayed as cars_Toyota)

```
postgres=# SELECT CAR_NAME AS CARS_TOYOTA FROM CAR_DETAILS
postgres-# WHERE COMPANY='Toyota';
 cars_toyota
-------------
 Etios
(1 row)

postgres=#
```

11. List the details of all cars in alphabetical order

```
postgres=# SELECT * FROM CAR_DETAILS
postgres-# ORDER BY CAR_NAME;
 id | car_name |  company   | country | approxprice | year
----+----------+------------+---------+-------------+------
  8 | Aria     | Tata       | India   |           7 | 2015
  1 | Beat     | Chevrolet  | USA     |           4 | 2015
  5 | Beetle   | Volkswagen | Germany |          21 | 2015
  3 | Escort   | Ford       | USA     |         4.2 | 2015
  6 | Etios    | Toyota     | Japan   |         7.2 | 2015
  9 | Passat   | Volkswagen | Germany |          25 | 2015
  7 | Sail     | Chevrolet  | USA     |           5 | 2015
  4 | Sunny    | Nissan     | Japan   |           8 | 2015
  2 | Swift    | Maruti     | Japan   |           6 | 2015
 10 | SX4      | Maruti     | Japan   |         6.7 | 2015
(10 rows)

postgres=#
```

12. List the details of all cars from cheapest to costliest.

```
postgres=# SELECT * FROM CAR_DETAILS
postgres-# ORDER BY APPROXPRICE;
 id | car_name |  company   | country | approxprice | year
----+----------+------------+---------+-------------+------
  1 | Beat     | Chevrolet  | USA     |           4 | 2015
  3 | Escort   | Ford       | USA     |         4.2 | 2015
  7 | Sail     | Chevrolet  | USA     |           5 | 2015
  2 | Swift    | Maruti     | Japan   |           6 | 2015
 10 | SX4      | Maruti     | Japan   |         6.7 | 2015
  8 | Aria     | Tata       | India   |           7 | 2015
  6 | Etios    | Toyota     | Japan   |         7.2 | 2015
  4 | Sunny    | Nissan     | Japan   |           8 | 2015
  5 | Beetle   | Volkswagen | Germany |          21 | 2015
  9 | Passat   | Volkswagen | Germany |          25 | 2015
(10 rows)

postgres=#
```

RESULT

The query was executed successfully and output was verified.