

BASIC SQL QUERIES - II

AIM:

Introduction to SQL statements

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

QUESTION:

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

ID	Name	company	country	ApproxPrice(in lakhs)
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

```
hishamali p : psql — Konsole <2>
asd_lab=# CREATE TABLE car_details(id INT NOT NULL PRIMARY KEY,
asd_lab(#      name TEXT NOT NULL,
asd_lab(#      company TEXT NOT NULL,
asd_lab(#      country TEXT NOT NULL,
asd_lab(#      Approx_Price FLOAT NOT NULL);
CREATE TABLE
asd_lab=# INSERT INTO car_details VALUES(1, 'Beat', 'Chevorlet', 'USA', 4),
asd_lab=#      (2, 'Swift', 'Maruthi', 'Japan', 6),
asd_lab=#      (3, 'Escort', 'Ford', 'USA', 4.2),
asd_lab=#      (4, 'Sunny', 'Nissan', 'Japan', 8),
asd_lab=#      (5, 'Beetle', 'Volkswagen', 'Germany', 21),
asd_lab=#      (6, 'Etios', 'Toyota', 'Japan', 7.2),
asd_lab=#      (7, 'Sail', 'Chevorlet', 'USA', 5),
asd_lab=#      (8, 'Aria', 'Tata', 'India', 7),
asd_lab=#      (9, 'Passat', 'Volkswagen', 'Germany', 25),
asd_lab=#      (10, 'SX4', 'Maruthi', 'Japan', 6.7);
INSERT 0 10
asd_lab=#
```

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

```
hishamalip : psql — Konsole <2>
asd_lab=# SELECT DISTINCT company FROM car_details;
company
-----
Ford
Maruthi
Tata
Toyota
Chevorlet
Nissan
Volkswagen
(7 rows)

asd_lab=#
```

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

```
hishamalip : psql — Konsole <2>
asd_lab=# SELECT DISTINCT country FROM car_details;
country
-----
USA
Germany
India
Japan
(4 rows)

asd_lab=#
```

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

```
hishamalip : psql — Konsole <2>
asd_lab=# SELECT * FROM car_details
asd_lab=# WHERE Approx_Price
asd_lab=# BETWEEN 4 AND 7;
 id | name  | company | country | approx_price
-----+-----+-----+-----+-----
  1 | Beat  | Chevorlet | USA     |          4
  2 | Swift | Maruthi   | Japan   |          6
  3 | Escort | Ford      | USA     |         4.2
  7 | Sail  | Chevorlet | USA     |          5
  8 | Aria  | Tata      | India   |          7
 10 | SX4   | Maruthi   | Japan   |         6.7
(6 rows)

asd_lab=#
```

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

```
hishamalip : psql — Konsole <2>
asd_lab=# SELECT name, company FROM car_details
          WHERE country = 'Japan'
          AND Approx_Price <= 6;

 name | company 
-----+-----
 Swift | Maruthi 
(1 row)

asd_lab=#
```

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

```
hishamalip : psql — Konsole <2>
asd_lab=# SELECT name, company FROM car_details
          WHERE company = 'Nissan'
          OR Approx_Price > 20;

 name | company 
-----+-----
 Sunny | Nissan  
 Beetle | Volkswagen
 Passat | Volkswagen
(3 rows)

asd_lab=#
```

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

```
hishamalip : psql — Konsole <2>
asd_lab=# SELECT name FROM car_details
          WHERE company IN ('Maruthi', 'Ford');

 name 
-----
 Swift
 Escort
 SX4
(3 rows)

asd_lab=#
```

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

```
asd_lab=# ALTER TABLE car_details ADD year INT;
ALTER TABLE
asd_lab=# UPDATE car_details SET year = 2015;
UPDATE 10
asd_lab=# SELECT * FROM car_details ;
 id | car_name | company | country | approx_price | year
-----+-----+-----+-----+-----+-----
  1 | Beat     | Chevorlet | USA     | 4            | 2015
  2 | Swift    | Maruthi  | 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     | Chevorlet | USA     | 5            | 2015
  8 | Aria     | Tata     | India   | 7            | 2015
  9 | Passat   | Volkswagen | Germany | 25           | 2015
 10 | SX4      | Maruthi  | Japan   | 6.7          | 2015
(10 rows)
```

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

```
asd_lab=# SELECT name AS car_aliases FROM car_details;
 car_aliases
-----
 Beat
 Swift
 Escort
 Sunny
 Beetle
 Etios
 Sail
 Aria
 Passat
 SX4
(10 rows)
```

9. Rename the attribute name to car_name

```
asd_lab=# ALTER TABLE car_details RENAME name TO car_name;
ALTER TABLE
asd_lab=# select car_name from car_details ;
 car_name
-----
 Beat
 Swift
 Escort
 Sunny
 Beetle
 Etios
 Sail
 Aria
 Passat
 SX4
(10 rows)
```

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

```
asd_lab=# SELECT car_name AS cars_Toyota
asd_lab=# FROM car_details
asd_lab=# WHERE company = 'Toyota' ;
 cars_toyota
-----
Etios
(1 row)

asd_lab=#
```

11. List the details of all cars in alphabetical order.

```
asd_lab=# SELECT * FROM car_details ORDER BY car_name ;
 id | car_name | company | country | approx_price | year
-----+-----+-----+-----+-----+-----
  8 | Aria     | Tata   | India   | 7            | 2015
  1 | Beat     | Chevorlet | 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     | Chevorlet | USA     | 5            | 2015
  4 | Sunny    | Nissan   | Japan   | 8            | 2015
  2 | Swift    | Maruthi  | Japan   | 6            | 2015
 10 | SX4      | Maruthi  | Japan   | 6.7          | 2015
(10 rows)

asd_lab=#
```

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

```
asd_lab=# SELECT * FROM car_details ORDER BY approx_price ASC;
 id | car_name | company | country | approx_price | year
-----+-----+-----+-----+-----+-----
  1 | Beat     | Chevorlet | USA     | 4            | 2015
  3 | Escort   | Ford     | USA     | 4.2          | 2015
  7 | Sail     | Chevorlet | USA     | 5            | 2015
  2 | Swift    | Maruthi  | Japan   | 6            | 2015
 10 | SX4      | Maruthi  | 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)

asd_lab=#
```

RESULT :

The query was executed successfully and output was verified.