# College Of Engineering Trivandrum

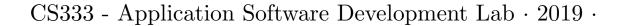
# Application Software Development Lab



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### Cycle 1

## Exp No 3

# BASIC SQL QUERIES – II

#### 1 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

### 2 Questions

Create a table named car\_details and populate the table.

create table car\_details(ID int not null,Name Varchar(10),company varchar(10),
country varchar(10),ApproxPrice real);

```
insert into car_details values ('1' , 'Beat','Chevrolet' ,'USA','4');
insert into car_details values ('2' , 'Swift','Maruti' ,'Japan','6');
insert into car_details values ('3' , 'Escort','Ford' ,'USA','4.2');
insert into car_details values ('4' , 'Sunny','Nissan' ,'Japan','8');
insert into car_details values ('5' , 'Etios','Toyoto' ,'Japan','7.2');
insert into car_details values ('6' , 'Beetle','Volkswagen' ,'Germany','21');
insert into car_details values ('7' , 'Sail','Chevrolet' ,'USA','5');
insert into car_details values ('8' , 'Aria','Tata' ,'India','7');
insert into car_details values ('9' , 'Passat','Volkswagen' ,'Germany','25');
insert into car_details values ('10' , 'SX4','Maruti' ,'Japan','6.7');
```

#### 0. Display the details of all cars

select \* from car\_details;

id	name	t * from car company	country	арргохргісе			
	+   Beat	Chevrolet	   USA	4			
2			Japan	6			
3	Escort		USA	4.2			
4	Sunny	Nissan	Japan	8			
5	Etios	Toyoto	Japan	7.2			
6	Beetle	Volkswagen	Germany	21			
7	Sail	Chevrolet	USA	5			
8	Aria	Tata	India	7			
9	Passat	Volkswagen	Germany	25			
10	SX4	Maruti	Japan	6.7			
(10 rows)							
asdlab=#							

Figure 1:  $Car_details Table$ 

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

select distinct company from car\_details;

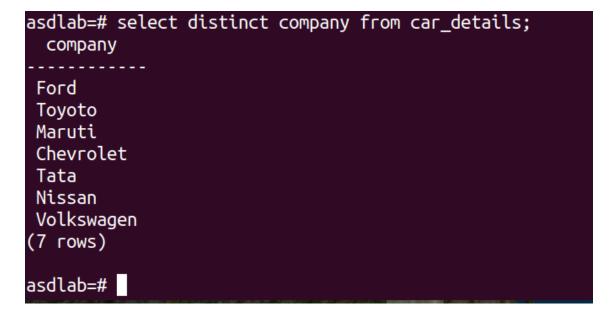


Figure 2: Company names

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

select distinct country from car\_details;

```
asdlab=# select distinct country from car_details;
country

USA
Germany
India
Japan
(4 rows)

asdlab=#
```

Figure 3: Country Names

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

select \* from car\_details where approxprice>='4' and approxprice<=7;</pre>

```
asdlab=# select * from car_details where approxprice>='4' and approxprice<=7;
id | name | company | country | approxprice
     Beat
               Chevrolet |
                           USA
                                                4
 1 I
                                                6
 2
     Swift
               Maruti
                           Japan
 3
                           USA
     Escort
               Ford
                                              4.2
               Chevrolet
                           USA
                                                5
     Sail
     Aria
               Tata
                           India
     SX4
               Maruti
                           Japan
(6 rows)
```

Figure 4: Cars in between 4 lakh and 7 lakh

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

select name, company from car\_details where country='Japan' and approxprice<='6';

Figure 5: cars in japan below 6 lakhs

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

select name, company from car\_details where company='Nissan' or approxprice>'20';

Figure 6: Nissan or price greater than 20 lakhs

 $6\ \mathrm{List}$  the names of all cars produced by (Maruti,Ford). Use SQL IN statement.

select name from car\_details where company in ('Maruti', 'Ford');

```
asdlab=# select name from car_details where company in ('Maruti' , 'Ford');
    name
------
Swift
Escort
SX4
(3 rows)
asdlab=#
```

Figure 7: Maruti or Ford

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.

```
alter table car_details add year int;
update car_details set year='2015';
```

```
asdlab=# alter table car_details add year int;
ALTER TABLE
asdlab=# update car_details set year='2015';
UPDATE 10
asdlab=# select * from car details ;
       name
                company
                           | country | approxprice | year
               Chevrolet
  1
      Beat
                             USA
                                                  4
                                                       2015
      Swift
               Maruti
                                                  6
  2
                             Japan
                                                      2015
               Ford
                             USA
  3
      Escort
                                                4.2
                                                      2015
  4
              | Nissan
                                                  8
                                                      2015
     Sunny
                             Japan
  5
      Etios
                                                      2015
               Toyoto
                             Japan
                                                7.2
      Beetle
               Volkswagen
                             Germany
                                                 21
                                                      2015
  7
    | Sail
               Chevrolet
                             USA
                                                  5
                                                      2015
               Tata
                                                  7
  8
      Aria
                             India
                                                      2015
      Passat | Volkswagen |
  9
                             Germany
                                                 25
                                                      2015
 10 | SX4
              | Maruti
                             Japan
                                                6.7 | 2015
(10 rows)
asdlab=#
```

Figure 8: Adding Year Column

8 Display the names of all cars as Car\_name (while displaying the name attribute should be listed as car\_aliases).

select name as Car\_name from car\_details ;

```
asdlab=# select name as Car_name from car_details;
car_name
-----
Beat
Swift
Escort
Sunny
Etios
Beetle
Sail
Aria
Passat
SX4
(10 rows)

asdlab=#
```

Figure 9: Selecting car names as car\_names

9 Rename the attribute name to car\_name.

alter table car\_details rename name to car\_name;

```
asdlab=# alter table car_details rename name to
ALTER TABLE
asdlab=# \d+ car_details
                                            Table
                                         Collation
   Column
                        Type
 id
               integer
               character varying(10)
 car_name
               character varying(10)
company
               character varying(10)
 country
               real
 approxprice
               integer
 year
asdlab=#
```

Figure 10: Rename car name

10 List the car manufactured by Toyota(to be displayed as cars\_Toyota) select car\_name as cars\_toyoto from car\_details where company='Toyoto';

```
asdlab=# select car_name as cars_toyoto from car_details where company='Toyoto';
cars_toyoto
------
Etios
(1 row)
asdlab=#
```

Figure 11: Cars of Toyoto

11 List the details of all cars in alphabetical order.

select \* from car\_details order by car\_name;

asdlab=# selec	dlab=# select * from car_details order by car_name;						
id   car_name	company	country	approxprice	year			
+	-+	+	+	+			
8   Aria	Tata	India	7	2015			
1   Beat	Chevrolet	USA	4	2015			
6   Beetle	Volkswagen	Germany	21	2015			
3   Escort	Ford	USA	4.2	2015			
5   Etios	Toyoto	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)							
asdlab=#							

Figure 12: Car details in alphabetical order

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

select \* from car\_details order by approxprice;

asdlab=# select * from car_details order by approxprice;								
id	car_name	company	country	арргохргісе	year			
+ 1	 Beat	Chevrolet	USA	4	   2015			
3	Escort	Ford	USA	4.2	2015			
7 j	Sail	Chevrolet	USA	5	2015			
2	Swift	Maruti	Japan	6	2015			
10	SX4	Maruti	Japan	6.7	2015			
8	Aria	Tata	India	7	2015			
5	Etios	Toyoto	Japan	7.2	2015			
4	Sunny	Nissan	Japan	8	2015			
6	Beetle	Volkswagen	Germany	21	2015			
9	Passat	Volkswagen	Germany	25	2015			
(10 rows)								
asdlab=#								

Figure 13: Car details in cheapest to costliest

# 3 Result

The query was executed successfully and output was verified.