ASD Lab Report

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Contents

1 Aim

Understand basic SQL queries
a. ALTER
b. RENAME
c. SELECT DISTINCT
d. SQL IN
e. SQL BETWEEN
f. SQL ALIASES
g. SQL AND
h. SQL OR

2 Questions

2.1 Question 1

Create a CAR database with the following details.

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

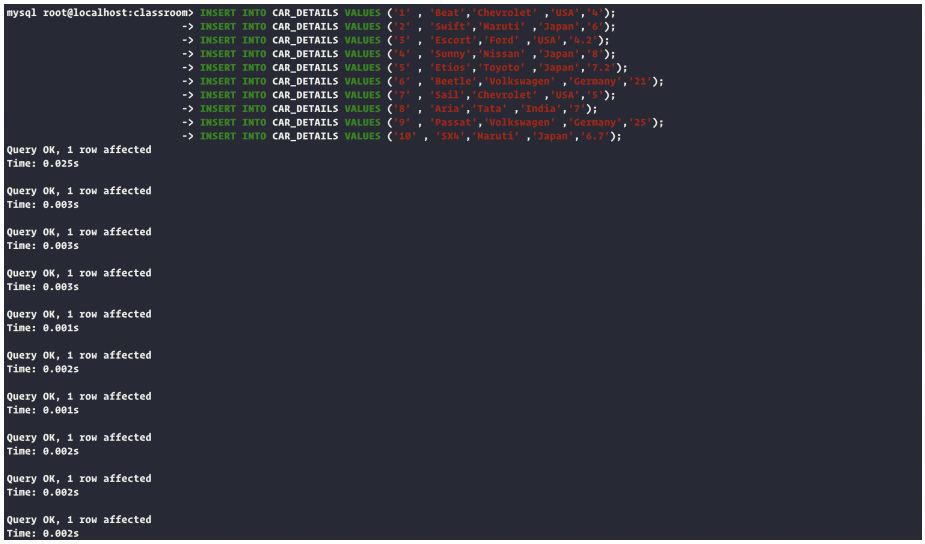
2.1.1 Source Code

```
create table car_details(ID int not null,Name Varchar(10),company varchar(10),country

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’);
```

2.1.2 Screenshot Question



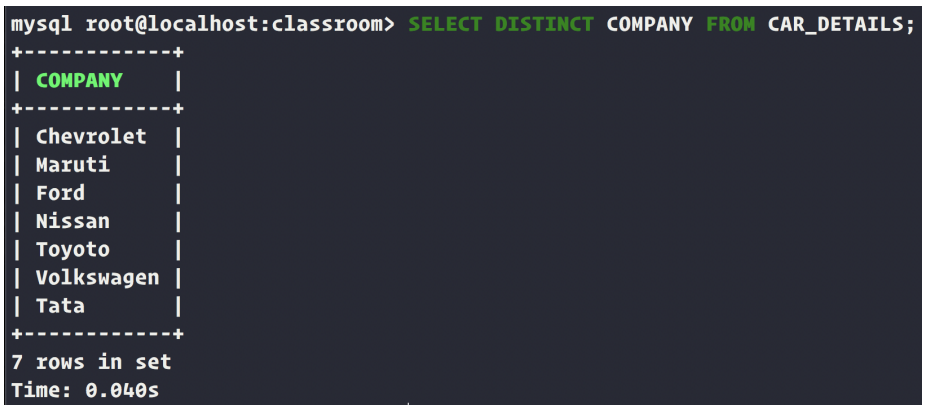
2.2 Question 2

List the car companies in the database.

2.2.1 Source Code

```
SELECT DISTINCT COMPANY FROM CAR_DETAILS;
```

2.2.2 Screenshot 2



2.3 Question 3

List the names of countries with car production companies.

2.3.1 Source Code

```
SELECT DISTINCT COUNTRY FROM CAR_DETAILS;
```

2.3.2 Screenshot 3

```
mysql root@localhost:classroom> SELECT DISTINCT COUNTRY FROM CAR_DETAILS;
+---------+
| COUNTRY |
+---------+
| USA     |
| Japan   |
| Germany |
| India   |
+---------+
4 rows in set
Time: 0.008s
```

2.4 Question 4

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

2.4.1 Source Code

```
SELECT * FROM CAR_DETAILS WHERE APPROXPRICE>='4' AND APPROXPRICE<=7;
```

2.4.2 Screenshot 4

```
mysql root@localhost:classroom> SELECT * FROM CAR_DETAILS WHERE APPROXPRICE>='4' AND APPROXPRICE<=7;
+----+--------+-----------+---------+-------------+
| ID | Name   | company   | country | ApproxPrice |
+----+--------+-----------+---------+-------------+
| 1  | Beat   | Chevrolet | USA     | 4.0         |
| 2  | Swift  | Maruti    | Japan   | 6.0         |
| 3  | Escort | Ford      | USA     | 4.2         |
| 7  | Sail   | Chevrolet | USA     | 5.0         |
| 8  | Aria   | Tata      | India   | 7.0         |
| 10 | SX4    | Maruti    | Japan   | 6.7         |
+----+--------+-----------+---------+-------------+

6 rows in set
Time: 0.012s
```

2.5 Question 5

List the name and company of all the cars originating from India and having price ¡ = 8 lakhs.

2.5.1 Source Code

```
SELECT NAME,COMPANY FROM CAR_DETAILS WHERE COUNTRY='India' AND APPROXPRICE <='8';
```

2.5.2 Screenshot 5

```
mysql root@localhost:classroom> SELECT NAME,COMPANY FROM CAR_DETAILS WHERE COUNTRY='India' AND APPROXPRICE <='8';
+------+---------+
| NAME | COMPANY |
+------+---------+
| Aria | Tata    |
+------+---------+
1 row in set
Time: 0.008s
```

2.6 Question 6

List the names, companies and countries of cars either from Nissan or from Germany.

2.6.1 Source Code

2.6.2 Screenshot 6

```
mysql root@localhost:classroom> SELECT NAME,COMPANY,COUNTRY FROM CAR_DETAILS WHERE COMPANY='NISSAN' OR
                             -> COUNTRY='GERMANY';
+--------+------------+---------+
| NAME   | COMPANY    | COUNTRY |
+--------+------------+---------+
| Sunny  | Nissan     | Japan   |
| Beetle | Volkswagen | Germany |
| Passat | Volkswagen | Germany |
+--------+------------+---------+
3 rows in set
Time: 0.009s
```

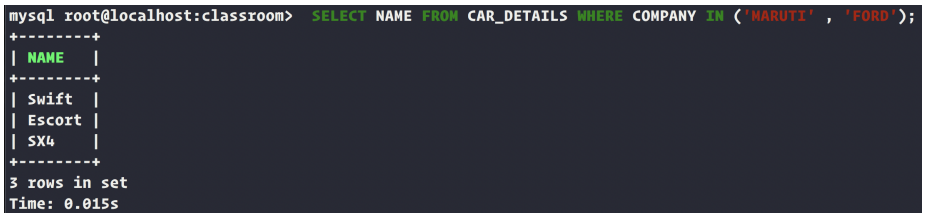
2.7 Question 7

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

2.7.1 Source Code

```
SELECT NAME FROM CAR_DETAILS WHERE COMPANY IN ('MARUTI' , 'FORD');
```

2.7.2 Screenshot 7



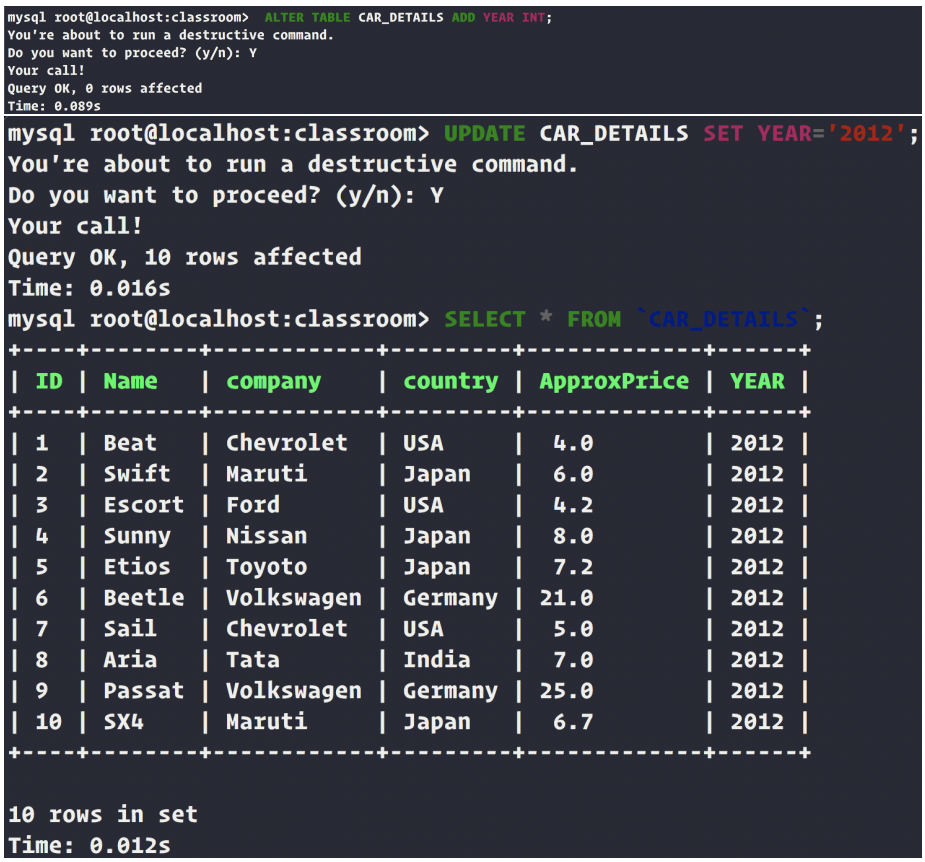
2.8 Question 8

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

2.8.1 Source Code

```
ALTER TABLE CAR_DETAILS ADD YEAR INT;
UPDATE CAR_DETAILS SET YEAR='2012';
```

2.8.2 Screenshot 8



```
mysql root@localhost:classroom> ALTER TABLE CAR_DETAILS ADD YEAR INT;
You're about to run a destructive command.
Do you want to proceed? (y/n): Y
Your call!
Query OK, 0 rows affected
Time: 0.089s
mysql root@localhost:classroom> UPDATE CAR_DETAILS SET YEAR='2012';
You're about to run a destructive command.
Do you want to proceed? (y/n): Y
Your call!
Query OK, 10 rows affected
Time: 0.016s
mysql root@localhost:classroom> SELECT * FROM `CAR_DETAILS`;
+----+--------+-----------+---------+-------------+------+
| ID | Name   | company   | country | ApproxPrice | YEAR |
+----+--------+-----------+---------+-------------+------+
| 1  | Beat   | Chevrolet | USA     |  4.0        | 2012 |
| 2  | Swift  | Maruti    | Japan   |  6.0        | 2012 |
| 3  | Escort | Ford      | USA     |  4.2        | 2012 |
| 4  | Sunny  | Nissan    | Japan   |  8.0        | 2012 |
| 5  | Etios  | Toyoto    | Japan   |  7.2        | 2012 |
| 6  | Beetle | Volkswagen| Germany | 21.0        | 2012 |
| 7  | Sail   | Chevrolet | USA     |  5.0        | 2012 |
| 8  | Aria   | Tata      | India   |  7.0        | 2012 |
| 9  | Passat | Volkswagen| Germany | 25.0        | 2012 |
| 10 | SX4    | Maruti    | Japan   |  6.7        | 2012 |
+----+--------+-----------+---------+-------------+------+

10 rows in set
Time: 0.012s
```

2.9 Question 9

Retrieve the names of all cars and display names under 'Car_name'.

2.9.1 Source Code

```
SELECT NAME AS CAR_NAME FROM CAR_DETAILS;
```

2.9.2 Screenshot 9

```
mysql root@localhost:classroom> SELECT NAME AS CAR_NAME FROM CAR_DETAILS;
+----------+
| CAR_NAME |
+----------+
| Beat     |
| Swift    |
| Escort   |
| Sunny    |
| Etios    |
| Beetle   |
| Sail     |
| Aria     |
| Passat   |
| SX4      |
+----------+
10 rows in set
Time: 0.010s
```

2.10 Question 10

Rename the attribute name to car_name.

2.10.1 Source Code

```
ALTER TABLE CAR_DETAILS RENAME COLUMN NAME TO CAR_NAME;
```

2.10.2 Screenshot 10

```
mysql root@localhost:classroom> ALTER TABLE CAR_DETAILS RENAME COLUMN Name TO CAR_NAME;
You're about to run a destructive command.
Do you want to proceed? (y/n): Y
Your call!
Query OK, 0 rows affected
Time: 0.024s
mysql root@localhost:classroom> SHOW COLUMNS FROM `CAR_DETAILS`;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| ID          | int         | NO   |     | <null>  |       |
| CAR_NAME    | varchar(10) | YES  |     | <null>  |       |
| company     | varchar(10) | YES  |     | <null>  |       |
| country     | varchar(10) | YES  |     | <null>  |       |
| ApproxPrice | double      | YES  |     | <null>  |       |
| YEAR        | int         | YES  |     | <null>  |       |
+-------------+-------------+------+-----+---------+-------+

6 rows in set
Time: 0.013s
```

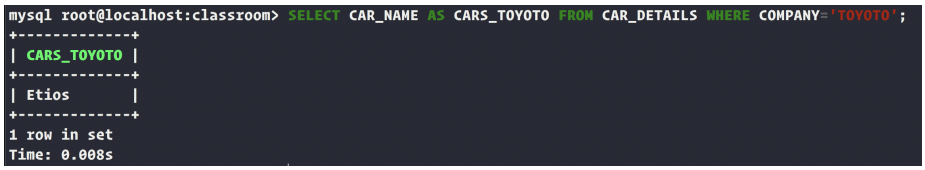
2.11 Question 11

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

2.11.1 Source Code

```
SELECT CAR_NAME AS CARS_TOYOTO FROM CAR_DETAILS WHERE COMPANY='TOYOTO';
```

2.11.2 Screenshot 11



```
mysql root@localhost:classroom> SELECT CAR_NAME AS CARS_TOYOTO FROM CAR_DETAILS WHERE COMPANY='TOYOTO';
+-------------+
| CARS_TOYOTO |
+-------------+
| Etios       |
+-------------+
1 row in set
Time: 0.008s
```

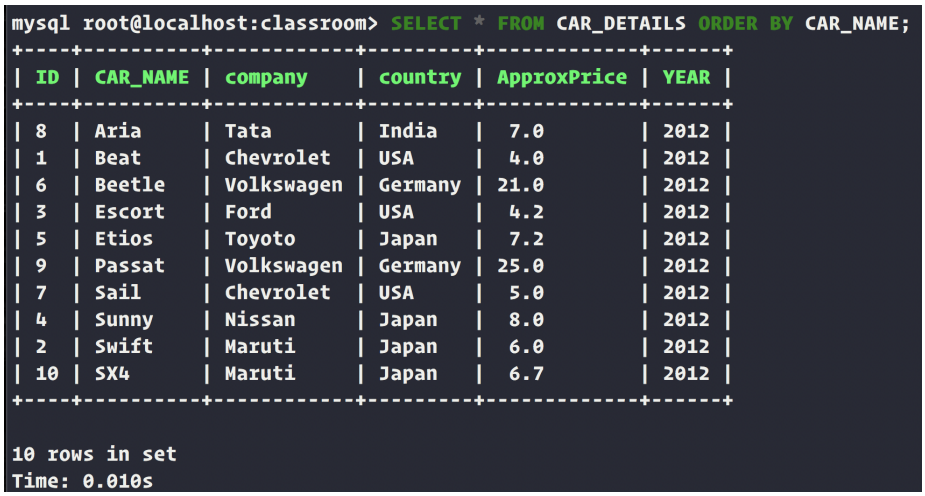
2.12 Question 12

List the details of all cars in alphabetical order.

2.12.1 Source Code

```
SELECT * FROM CAR_DETAILS ORDER BY CAR_NAME;
```

2.12.2 Screenshot 12



```
mysql root@localhost:classroom> SELECT * FROM CAR_DETAILS ORDER BY CAR_NAME;
+----+----------+------------+---------+-------------+------+
| ID | CAR_NAME | company    | country | ApproxPrice | YEAR |
+----+----------+------------+---------+-------------+------+
| 8  | Aria     | Tata       | India   |  7.0        | 2012 |
| 1  | Beat     | Chevrolet  | USA     |  4.0        | 2012 |
| 6  | Beetle   | Volkswagen | Germany | 21.0        | 2012 |
| 3  | Escort   | Ford       | USA     |  4.2        | 2012 |
| 5  | Etios    | Toyoto     | Japan   |  7.2        | 2012 |
| 9  | Passat   | Volkswagen | Germany | 25.0        | 2012 |
| 7  | Sail     | Chevrolet  | USA     |  5.0        | 2012 |
| 4  | Sunny    | Nissan     | Japan   |  8.0        | 2012 |
| 2  | Swift    | Maruti     | Japan   |  6.0        | 2012 |
| 10 | SX4      | Maruti     | Japan   |  6.7        | 2012 |
+----+----------+------------+---------+-------------+------+

10 rows in set
Time: 0.010s
```

2.13 Question 13

List the details of all cars from cheapest to costliest.

2.13.1 Source Code

```
SELECT * FROM CAR_DETAILS ORDER BY APPROXPRICE;
```

2.13.2 Screenshot 13

```
mysql root@localhost:classroom> SELECT * FROM CAR_DETAILS ORDER BY APPROXPRICE;
+----+----------+------------+---------+-------------+------+
| ID | CAR_NAME | company    | country | ApproxPrice | YEAR |
+----+----------+------------+---------+-------------+------+
| 1  | Beat     | Chevrolet  | USA     |  4.0        | 2012 |
| 3  | Escort   | Ford       | USA     |  4.2        | 2012 |
| 7  | Sail     | Chevrolet  | USA     |  5.0        | 2012 |
| 2  | Swift    | Maruti     | Japan   |  6.0        | 2012 |
| 10 | SX4      | Maruti     | Japan   |  6.7        | 2012 |
| 8  | Aria     | Tata       | India   |  7.0        | 2012 |
| 5  | Etios    | Toyoto     | Japan   |  7.2        | 2012 |
| 4  | Sunny    | Nissan     | Japan   |  8.0        | 2012 |
| 6  | Beetle   | Volkswagen | Germany | 21.0        | 2012 |
| 9  | Passat   | Volkswagen | Germany | 25.0        | 2012 |
+----+----------+------------+---------+-------------+------+

10 rows in set
Time: 0.008s
```

3 Result

The required problem was analysed and implemneted using the commands learnt.
The program executed perfectly.