SQL ASSIGNMENT-3

By Devayush Bajaj

1) Creating table customers

```
mysql> create table Customers(
    -> ID int primary key,
    -> Name varchar(40),
    -> Age int,
    -> Address varchar(40),
    -> Salary int);
Query OK, 0 rows affected (0.05 sec)

mysql> desc customers
    -> ;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| ID      | int         | NO   | PRI | NULL    |       |
| Name    | varchar(40) | YES  |     | NULL    |       |
| Age     | int         | YES  |     | NULL    |       |
| Address | varchar(40) | YES  |     | NULL    |       |
| Salary  | int         | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
5 rows in set (0.03 sec)
```

2) Creating table orders

```
mysql> create table Orders(
    -> O_id int PRIMARY KEY NOT NULL,
    -> O_date date,
    -> Customer_id int,
    -> Ammount int );
Query OK, 0 rows affected (0.10 sec)

mysql> desc Orders;
+-------------+------+------+-----+---------+-------+
| Field       | Type | Null | Key | Default | Extra |
+-------------+------+------+-----+---------+-------+
| O_id        | int  | NO   | PRI | NULL    |       |
| O_date      | date | YES  |     | NULL    |       |
| Customer_id | int  | YES  |     | NULL    |       |
| Ammount     | int  | YES  |     | NULL    |       |
+-------------+------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

3) Inserting 5 entries with same customer Ids

```
mysql> Insert into Customers (ID, Name, Age, Address, Salary) values
    -> (1, "Devayush", 24, "Bhopal", 20000),
    -> (2, "Amit", 20, "Indore", 20000),
    -> (3, "Ram", 23, "Pune", 24000),
    -> (4, "Roan", 23, "Pune", 30000),
    -> (5, "Sham", 20, "Mumbai", 30000);
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select* from customers;
+----+----------+------+---------+--------+
| ID | Name     | Age  | Address | Salary |
+----+----------+------+---------+--------+
|  1 | Devayush |   24 | Bhopal  |  20000 |
|  2 | Amit     |   20 | Indore  |  20000 |
|  3 | Ram      |   23 | Pune    |  24000 |
|  4 | Roan     |   23 | Pune    |  30000 |
|  5 | Sham     |   20 | Mumbai  |  30000 |
+----+----------+------+---------+--------+
5 rows in set (0.00 sec)
```

Adding more rows

```
mysql> Insert into customers(ID, Name, Address, Salary) values
    -> (15,"Abhishek","Bangal", 49000),
    -> (16,"Akshay","Gandhinagar", 46000),
    -> (178,"Ajay","MUMBAI", 46000);
Query OK, 3 rows affected (0.00 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> select * from customers;
+-----+----------+------+-------------+--------+
| ID  | Name     | Age  | Address     | Salary |
+-----+----------+------+-------------+--------+
|   1 | Devayush |   24 | Bhopal      |  20000 |
|   2 | Amit     |   20 | Indore      |  20000 |
|   3 | Ram      |   23 | Pune        |  24000 |
|   4 | Roan     |   23 | Pune        |  30000 |
|   5 | Sham     |   20 | Mumbai      |  30000 |
|  15 | Abhishek | NULL | Bangal      |  49000 |
|  16 | Akshay   | NULL | Gandhinagar |  46000 |
| 178 | Ajay     | NULL | MUMBAI      |  46000 |
+-----+----------+------+-------------+--------+
8 rows in set (0.00 sec)
```

```
mysql> insert into Orders(O_ID, o_date,Customer_id,ammount) values
    -> (1001, "2022-02-12",1,98000),
    -> (1002, "2022-05-15",2,8000),
    -> (1003, "2021-06-10",3,9000),
    -> (1004, "2022-08-19",4,50000),
    -> (1005, "2022-02-27",5,134402);
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select * from Orders;
+------+------------+-------------+---------+
| O_id | O_date     | Customer_id | Ammount |
+------+------------+-------------+---------+
| 1001 | 2022-02-12 |           1 |   98000 |
| 1002 | 2022-05-15 |           2 |    8000 |
| 1003 | 2021-06-10 |           3 |    9000 |
| 1004 | 2022-08-19 |           4 |   50000 |
| 1005 | 2022-02-27 |           5 |  134402 |
+------+------------+-------------+---------+
5 rows in set (0.00 sec)
```

Adding more rows

4) Inner join customer with order table

```
mysql> Select customers.ID, customers.name, orders.ammount, orders.O_date from customers
    -> INNER JOIN orders ON customers.id = orders.Customer_id;
+----+----------+---------+------------+
| ID | name     | ammount | O_date     |
+----+----------+---------+------------+
|  1 | Devayush |   98000 | 2022-02-12 |
|  2 | Amit     |    8000 | 2022-05-15 |
|  3 | Ram      |    9000 | 2021-06-10 |
|  4 | Roan     |   50000 | 2022-08-19 |
|  5 | Sham     |  134402 | 2022-02-27 |
+----+----------+---------+------------+
5 rows in set (0.00 sec)
```

5)Left outer join

```
mysql> Select customers.ID, customers.name, orders.ammount, orders.O_date from customers
    -> LEFT JOIN orders ON customers.id = orders.Customer_id;
+----+----------+---------+------------+
| ID | name     | ammount | O_date     |
+----+----------+---------+------------+
|  1 | Devayush |   98000 | 2022-02-12 |
|  2 | Amit     |    8000 | 2022-05-15 |
|  3 | Ram      |    9000 | 2021-06-10 |
|  4 | Roan     |   50000 | 2022-08-19 |
|  5 | Sham     |  134402 | 2022-02-27 |
+----+----------+---------+------------+
5 rows in set (0.00 sec)
```

6) Right outer join

```
mysql> Select customers.ID, customers.name, orders.ammount, orders.O_date from customers
    -> RIGHT JOIN orders ON customers.id = orders.Customer_id;
+------+----------+---------+------------+
| ID   | name     | ammount | O_date     |
+------+----------+---------+------------+
|    1 | Devayush |   98000 | 2022-02-12 |
|    2 | Amit     |    8000 | 2022-05-15 |
|    3 | Ram      |    9000 | 2021-06-10 |
|    4 | Roan     |   50000 | 2022-08-19 |
|    5 | Sham     |  134402 | 2022-02-27 |
+------+----------+---------+------------+
5 rows in set (0.00 sec)
```

7) Full outer join using union all set operation

```
mysql> Select customers.ID, customers.name, orders.ammount, orders.O_date from customers
    -> LEFT JOIN orders ON customers.id = orders.Customer_id
    -> UNION
    -> Select customers.ID, customers.name, orders.ammount, orders.O_date from customers
    -> RIGHT JOIN orders ON customers.id = orders.Customer_id;
+------+----------+---------+------------+
| ID   | name     | ammount | O_date     |
+------+----------+---------+------------+
|    1 | Devayush |   98000 | 2022-02-12 |
|    2 | Amit     |    8000 | 2022-05-15 |
|    3 | Ram      |    9000 | 2021-06-10 |
|    4 | Roan     |   50000 | 2022-08-19 |
|    5 | Sham     |  134402 | 2022-02-27 |
+------+----------+---------+------------+
5 rows in set (0.00 sec)
```

8)
SELF join and display pair of customers belongs to same address:

```
mysql> select * from customers a, customers b
    -> WHERE a.address = b.address AND a.id <> b.id;
+----+------+------+---------+--------+----+------+------+---------+--------+
| ID | Name | Age  | Address | Salary | ID | Name | Age  | Address | Salary |
+----+------+------+---------+--------+----+------+------+---------+--------+
|  4 | Roan |   23 | Pune    |  30000 |  3 | Ram  |   23 | Pune    |  24000 |
|  3 | Ram  |   23 | Pune    |  24000 |  4 | Roan |   23 | Pune    |  30000 |
+----+------+------+---------+--------+----+------+------+---------+--------+
2 rows in set (0.00 sec)
```

9) cross/cartesian join

```
mysql> select ID, Name, ammount, O_date from customers, orders;
+----+----------+---------+------------+
| ID | Name     | ammount | O_date     |
+----+----------+---------+------------+
|  5 | Sham     |   98000 | 2022-02-12 |
|  4 | Roan     |   98000 | 2022-02-12 |
|  3 | Ram      |   98000 | 2022-02-12 |
|  2 | Amit     |   98000 | 2022-02-12 |
|  1 | Devayush |   98000 | 2022-02-12 |
|  5 | Sham     |    8000 | 2022-05-15 |
|  4 | Roan     |    8000 | 2022-05-15 |
|  3 | Ram      |    8000 | 2022-05-15 |
|  2 | Amit     |    8000 | 2022-05-15 |
|  1 | Devayush |    8000 | 2022-05-15 |
|  5 | Sham     |    9000 | 2021-06-10 |
|  4 | Roan     |    9000 | 2021-06-10 |
|  3 | Ram      |    9000 | 2021-06-10 |
|  2 | Amit     |    9000 | 2021-06-10 |
|  1 | Devayush |    9000 | 2021-06-10 |
|  5 | Sham     |   50000 | 2022-08-19 |
|  4 | Roan     |   50000 | 2022-08-19 |
|  3 | Ram      |   50000 | 2022-08-19 |
|  2 | Amit     |   50000 | 2022-08-19 |
|  1 | Devayush |   50000 | 2022-08-19 |
|  5 | Sham     |  134402 | 2022-02-27 |
|  4 | Roan     |  134402 | 2022-02-27 |
|  3 | Ram      |  134402 | 2022-02-27 |
|  2 | Amit     |  134402 | 2022-02-27 |
|  1 | Devayush |  134402 | 2022-02-27 |
+----+----------+---------+------------+
```

10) Select customers having salary more than 20000

```
mysql> select * from customers WHERE salary > 20000;
+----+------+------+---------+--------+
| ID | Name | Age  | Address | Salary |
+----+------+------+---------+--------+
|  3 | Ram  |   23 | Pune    |  24000 |
|  4 | Roan |   23 | Pune    |  30000 |
|  5 | Sham |   20 | Mumbai  |  30000 |
+----+------+------+---------+--------+
3 rows in set (0.00 sec)
```

11) creating a back-up table “cust_bkp” of the table customers by using insert statement

```
mysql> INSERT INTO cyst_bkp
    -> select * from customers;
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select * from cyst_bkp;
+------+----------+------+---------+--------+
| ID   | Name     | age  | Address | salary |
+------+----------+------+---------+--------+
|    1 | Devayush |   24 | Bhopal  |  20000 |
|    2 | Amit     |   20 | Indore  |  20000 |
|    3 | Ram      |   23 | Pune    |  24000 |
|    4 | Roan     |   23 | Pune    |  30000 |
|    5 | Sham     |   20 | Mumbai  |  30000 |
+------+----------+------+---------+--------+
5 rows in set (0.00 sec)
```

12) Updating the salary by 10% of all the customers (in customers table) having age greater than or equal to 24 by using subquery with update clause (by using table cust_bkp

```
mysql> SELECT * FROM customers;
+----+----------+------+---------+--------+
| ID | Name     | Age  | Address | Salary |
+----+----------+------+---------+--------+
|  1 | Devayush |   24 | Bhopal  |  20000 |
|  2 | Amit     |   20 | Indore  |  20000 |
|  3 | Ram      |   23 | Pune    |  24000 |
|  4 | Roan     |   23 | Pune    |  30000 |
|  5 | Sham     |   20 | Mumbai  |  30000 |
+----+----------+------+---------+--------+
5 rows in set (0.00 sec)

mysql>  UPDATE cyst_bkp
    -> SET Salary = salary + (salary * 10/100) WHERE age >= 24;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> Select * from cyst_bkp where age >= 24;
+------+----------+------+---------+--------+
| ID   | Name     | age  | Address | salary |
+------+----------+------+---------+--------+
|    1 | Devayush |   24 | Bhopal  |  22000 |
+------+----------+------+---------+--------+
1 row in set (0.00 sec)
```

13) Deleting all the customers having age greater than by using delete clause

```
mysql> DELETE from customers WHERE age >= 26;
Query OK, 0 rows affected (0.00 sec)
```