Exercise : 3

Problem Statement: There can be multiple customers, who can place multiple orders on the site. Now a sales person can handle these orders will distribute into multiple sales persons (One order will be assign to one salesperson only). So a sales person can have multiple orders of multiple customers

1. Create Database

   Database can be created by using following command;

   CREATE DATABASE BOOTCAMP;

```
mysql> CREATE DATABASE bootcamp;
Query OK, 1 row affected (0.01 sec)

mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| bootcamp           |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
```

2. Design Schema

   Schema is the structure of the table and it can be created by the following:

```
mysql> DESC CUSTOMER;
+-----------+-------------+------+-----+---------+----------------+
| Field     | Type        | Null | Key | Default | Extra          |
+-----------+-------------+------+-----+---------+----------------+
| CUST_ID   | int(11)     | NO   | PRI | NULL    | auto_increment |
| CUST_NAME | varchar(20) | NO   |     | NULL    |                |
+-----------+-------------+------+-----+---------+----------------+
2 rows in set (0.00 sec)
```

```
mysql> DESC SALES_PERSON;
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| SALES_ID | varchar(20) | NO   | PRI | NULL    |       |
| S_NAME   | varchar(20) | YES  |     | NULL    |       |
| SALARY   | int(11)     | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
3 rows in set (0.01 sec)
```

```
mysql> DESC ORDERS;
+----------+--------------+------+-----+---------+-------+
| Field    | Type         | Null | Key | Default | Extra |
+----------+--------------+------+-----+---------+-------+
| ORDER_ID | int(11)      | NO   | PRI | NULL    |       |
| PRICE    | int(11)      | NO   |     | NULL    |       |
| CUST_ID  | varchar(200) | NO   |     | NULL    |       |
| SALES_ID | varchar(20)  | YES  |     | NULL    |       |
+----------+--------------+------+-----+---------+-------+
```

3. Create tables

   Tables is created by using the command Create TABLE <tablename>(id <datatype>,name <datatype

```
mysql> CREATE TABLE ORDERS (ORDER_ID INT PRIMARY KEY ,PRICE INT NOT NULL,CUST_ID VARCHAR(200) NOT NULL,SALES_ID VARCHAR(20)
Query OK, 0 rows affected (0.32 sec)
```

```
mysql> CREATE TABLE ORDERS (ORDER_ID INT PRIMARY KEY ,PRICE INT NOT NULL,CUST_ID VARCHAR(200) NOT NULL,SALES_ID VARCHAR(20) NO
Query OK, 0 rows affected (0.32 sec)

mysql> CREATE TABLE SALES_PERSON (SALES_ID VARCHAR(20) PRIMARY KEY ,SALARY INT NOT NULL,ORDER_ID INT NOT NULL,CUST_ID INT NOT
Query OK, 0 rows affected (0.33 sec)

mysql> ALTER TABLE CUSTOMER DROP COLUMN ORDER_ID;
Query OK, 0 rows affected (0.88 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> ALTER TABLE ORDERS DROP COLUMN SALES_ID;
Query OK, 0 rows affected (0.47 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

4. Insert sample data

   Data can be inserted in the table with the INSERT command a shown:

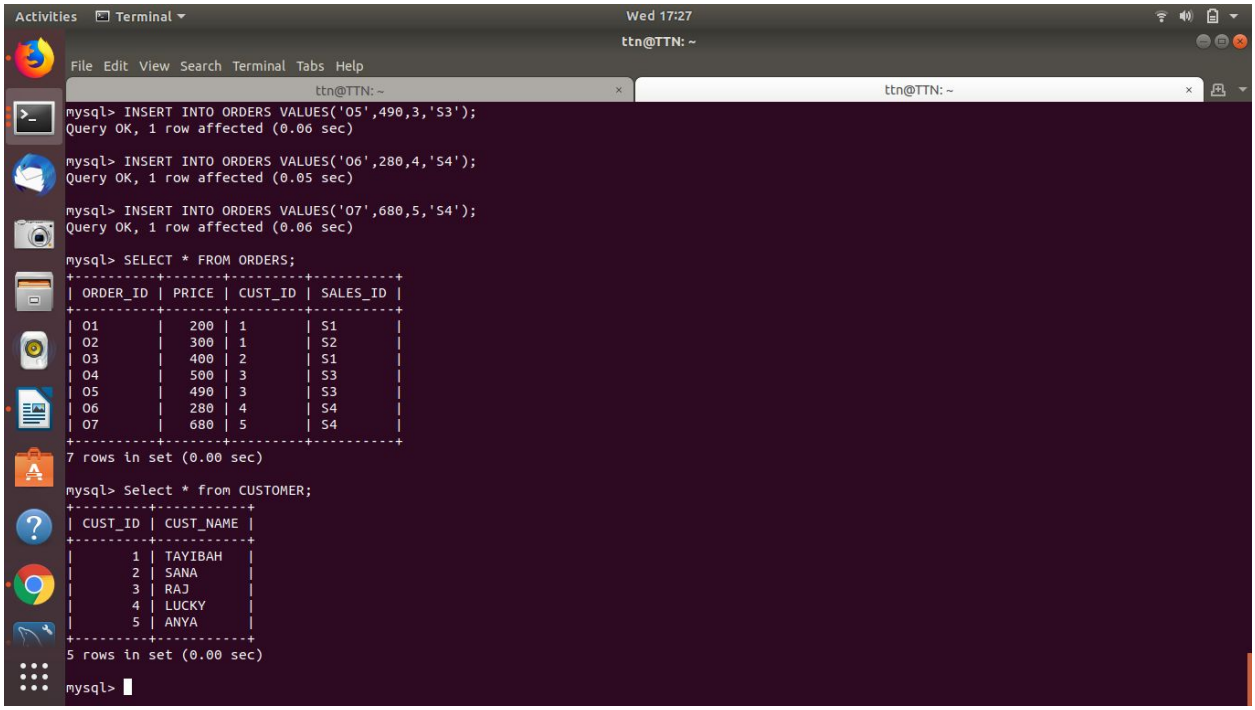
```
mysql> INSERT INTO CUSTOMER VALUES(01,"TAYIBAH");
Query OK, 1 row affected (0.06 sec)

mysql> INSERT INTO CUSTOMER VALUES(01,"SANA");
ERROR 1062 (23000): Duplicate entry '1' for key 'PRIMARY'
mysql> INSERT INTO CUSTOMER VALUES("SANA");
ERROR 1136 (21S01): Column count doesn't match value count at row 1
mysql> INSERT INTO CUSTOMER VALUES(02,"SANA");
Query OK, 1 row affected (0.06 sec)

mysql> INSERT INTO CUSTOMER VALUES(03,"RAJ");
Query OK, 1 row affected (0.05 sec)

mysql> INSERT INTO CUSTOMER VALUES(04,"LUCKY");
Query OK, 1 row affected (0.05 sec)

mysql> INSERT INTO CUSTOMER VALUES(05,"ANYA");
Query OK, 1 row affected (0.04 sec)
```




```
mysql> SELECT * FROM SALES_PERSON;
+----------+---------+---------+
| SALES_ID | S_NAME  | SALARY  |
+----------+---------+---------+
| S1       | RAMESH  |    5000 |
| S2       | SANJAY  |    4000 |
| S3       | TINA    |    3500 |
| S4       | PRIYA   |    4900 |
+----------+---------+---------+
4 rows in set (0.00 sec)
```

5. Find the sales person have multiple orders.

   Ans.

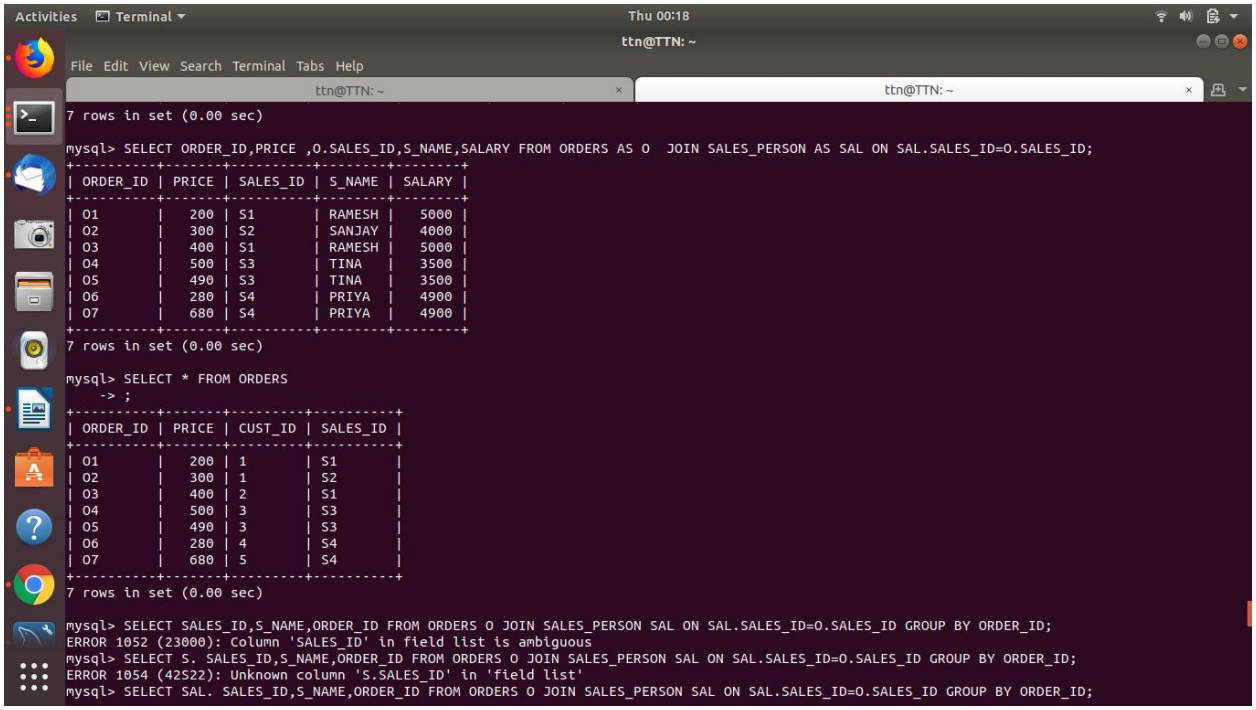
   We ca find sales person having multiple orders by using Group by which allows to group repetitive entities and by using ‘having’ condition to fulfill the desired result.

```
mysql> SELECT SALES_ID,COUNT(ORDER_ID) FROM ORDERS GROUP BY SALES_ID
 HAVING COUNT(ORDER_ID)>1;
+----------+------------------+
| SALES_ID | COUNT(ORDER_ID) |
+----------+------------------+
| S1       |                2 |
| S3       |                2 |
| S4       |                2 |
+----------+------------------+
3 rows in set (0.00 sec)
```

6. Find the all sales person details along with order details

   Ans.

   We need to perform Join on the two tables by using a foreign key which acts as primary key in the parent table and is called foreign key in the child table.



7. Create index

Indexes are used to retrieve data from the database very fast.

```
mysql> CREATE INDEX I  ON CUSTOMER (CUST_NAME);
Query OK, 0 rows affected (0.37 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

8. How to show index on a table

Index can be shown by following:

```
mysql> SHOW INDEX FROM CUSTOMER;
+----------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------
--------------+
| Table    | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed |
Index_comment |
+----------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------
--------------+
| CUSTOMER |          0 | PRIMARY  |            1 | CUST_ID     | A         |           5 |     NULL | NULL   |
              |
| CUSTOMER |          1 | I        |            1 | CUST_NAME   | A         |           5 |     NULL | NULL   |
              |
+----------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------
--------------+
```