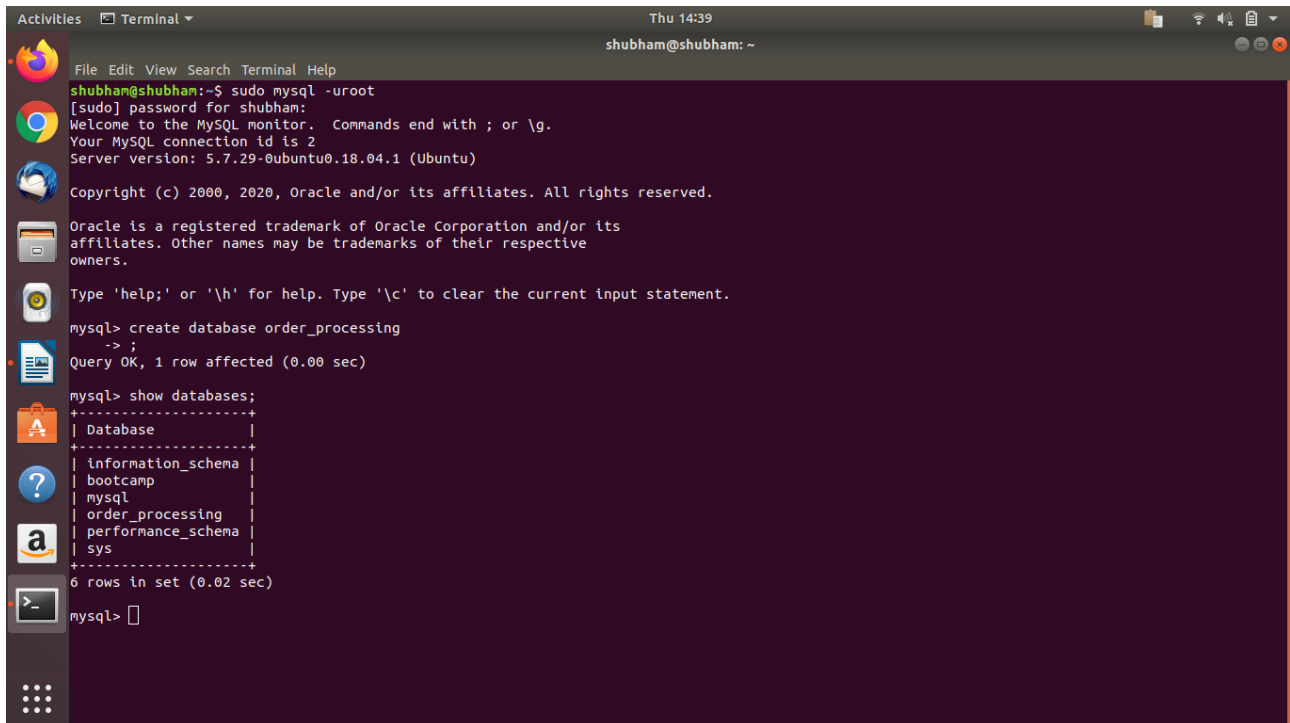


Problem Statement: There can be multiple customers, who can place multiple orders on the site. Now a sales person can handle these orders will distribute into multiple sales persons (One order will be assign to one salesperson only). So a sales person can have multiple orders of multiple customers.

1. Create Database

A terminal window titled 'Terminal' with a dark background. The user 'shubham@shubham' is logged in. The terminal shows the execution of 'sudo mysql -uroot', followed by a MySQL prompt. The user enters 'create database order_processing;', and the terminal shows 'Query OK, 1 row affected (0.00 sec)'. Then, the user enters 'show databases;', and the terminal displays a list of databases: information_schema, bootcamp, mysql, order_processing, performance_schema, and sys. The terminal also shows the MySQL version 5.7.29-0ubuntu0.18.04.1 (Ubuntu) and copyright information.

```
shubham@shubham:~$ sudo mysql -uroot
[sudo] password for shubham:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

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owners.

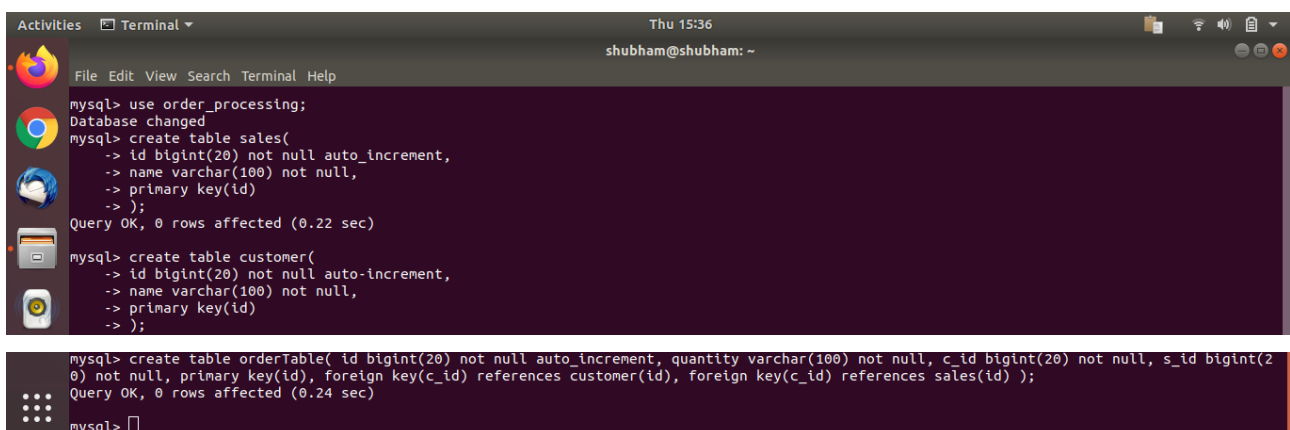
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> create database order_processing;
Query OK, 1 row affected (0.00 sec)

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| bootcamp |
| mysql |
| order_processing |
| performance_schema |
| sys |
+-----+
6 rows in set (0.02 sec)

mysql>
```

2. Create tables

A terminal window titled 'Terminal' with a dark background. The user 'shubham@shubham' is logged in. The terminal shows the execution of 'use order_processing;', followed by a MySQL prompt. The user enters 'create table sales(' followed by 'id bigint(20) not null auto_increment,', 'name varchar(100) not null,', and 'primary key(id)'. The terminal shows 'Query OK, 0 rows affected (0.22 sec)'. Then, the user enters 'create table customer(' followed by 'id bigint(20) not null auto-increment,', 'name varchar(100) not null,', and 'primary key(id)'. The terminal shows 'Query OK, 0 rows affected (0.24 sec)'. Finally, the user enters 'create table orderTable(' followed by 'id bigint(20) not null auto_increment, quantity varchar(100) not null, c_id bigint(20) not null, s_id bigint(20) not null, primary key(id), foreign key(c_id) references customer(id), foreign key(c_id) references sales(id));'. The terminal shows 'Query OK, 0 rows affected (0.24 sec)'.

```
mysql> use order_processing;
Database changed
mysql> create table sales(
  -> id bigint(20) not null auto_increment,
  -> name varchar(100) not null,
  -> primary key(id)
  -> );
Query OK, 0 rows affected (0.22 sec)

mysql> create table customer(
  -> id bigint(20) not null auto-increment,
  -> name varchar(100) not null,
  -> primary key(id)
  -> );
Query OK, 0 rows affected (0.24 sec)

mysql> create table orderTable( id bigint(20) not null auto_increment, quantity varchar(100) not null, c_id bigint(20) not null, s_id bigint(20) not null, primary key(id), foreign key(c_id) references customer(id), foreign key(c_id) references sales(id) );
Query OK, 0 rows affected (0.24 sec)

mysql>
```

3. Design Schema

```
Activities Terminal Thu 15:41 shubham@shubham: ~
File Edit View Search Terminal Help
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax
to use near 'references customer(id),
foreign key(c_id) references customer(id),
)' at line 7
mysql> create table orderTable( id bigint(20) not null auto_increment, quantity varchar(100) not null, c_id bigint(20) not null, s_id bigint(2
0) not null, primary key(id), foreign key(c_id) references customer(id), foreign key(c_id) references sales(id), );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax
to use near ')' at line 1
mysql> create table orderTable( id bigint(20) not null auto_increment, quantity varchar(100) not null, c_id bigint(20) not null, s_id bigint(2
0) not null, primary key(id), foreign key(c_id) references customer(id), foreign key(c_id) references sales(id) );
Query OK, 0 rows affected (0.24 sec)

mysql>
mysql>
mysql>
mysql>
mysql> desc sales;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| id    | bigint(20)    | NO   | PRI | NULL    | auto_increment |
| name  | varchar(100)  | NO   |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> desc customer;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| id    | bigint(20)    | NO   | PRI | NULL    | auto_increment |
| name  | varchar(100)  | NO   |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> desc orderTable;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| id    | bigint(20)    | NO   | PRI | NULL    | auto_increment |
| quantity | varchar(100)  | NO   |     | NULL    |                |
| c_id  | bigint(20)    | NO   | MUL | NULL    |                |
| s_id  | bigint(20)    | NO   |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

4. Insert sample data

```
Activities Terminal Thu 16:29 shubham@shubham: ~
File Edit View Search Terminal Help
mysql> insert into sales(name)values('A');
Query OK, 1 row affected (0.05 sec)

mysql> insert into sales(name)values('B')
-> ;
Query OK, 1 row affected (0.03 sec)

mysql> insert into sales(name)values('C');
Query OK, 1 row affected (0.02 sec)

mysql> insert into customer(name)values('X');
Query OK, 1 row affected (0.03 sec)

mysql> insert into customer(name)values('Y');
Query OK, 1 row affected (0.09 sec)

mysql> insert into customer(name)values('Z');
Query OK, 1 row affected (0.07 sec)

mysql> insert into orderTable(quantity, c_id,s_id)values('5 nos.',1,2);
Query OK, 1 row affected (0.03 sec)

mysql> insert into orderTable(quantity, c_id,s_id)values('1 kg',1,3);
Query OK, 1 row affected (0.03 sec)

mysql> insert into orderTable(quantity, c_id,s_id)values('5 kg',2,2);
Query OK, 1 row affected (0.03 sec)

mysql> insert into orderTable(quantity, c_id,s_id)values('10 kg',3,2);
Query OK, 1 row affected (0.03 sec)

mysql> insert into orderTable(quantity, c_id,s_id)values('3 kg',3,3);
Query OK, 1 row affected (0.03 sec)

mysql> insert into orderTable(quantity, c_id,s_id)values('1 kg',3,2);
Query OK, 1 row affected (0.03 sec)

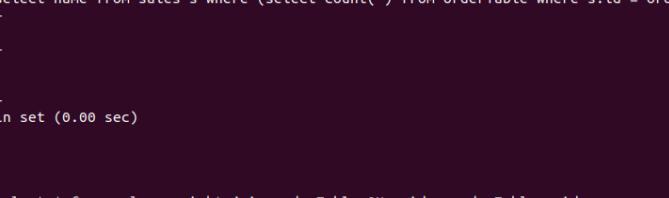
mysql> insert into orderTable(quantity, c_id,s_id)values('2 nos.',1,1);
```

5. Find the sales person having multiple orders

```
mysql>
mysql>
mysql> select name from sales s where (select count(*) from orderTable where s.id = orderTable.s_id)>1;
+-----+
| name |
+-----+
| B    |
| C    |
+-----+
2 rows in set (0.00 sec)

mysql>
```

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



```

mysql>
mysql>
mysql> select name from sales s where (select count(*) from orderTable where s.id = orderTable.s_id)>1;
+-----+
| name |
+-----+
| B    |
| C    |
+-----+
2 rows in set (0.00 sec)

mysql>
mysql>
mysql>
mysql> select * from sales s right join orderTable ON s.id = orderTable.s_id;
+-----+-----+-----+-----+-----+-----+
| id | name | id | quantity | c_id | s_id |
+-----+-----+-----+-----+-----+-----+
| 1 | A    | 7 | 2 nos.   | 1    | 1    |
| 2 | B    | 1 | 5 nos.   | 1    | 2    |
| 2 | B    | 3 | 5 kg     | 2    | 2    |
| 2 | B    | 4 | 10 kg    | 3    | 2    |
| 2 | B    | 6 | 1 kg     | 3    | 2    |
| 3 | C    | 2 | 1 kg     | 1    | 3    |
| 3 | C    | 5 | 3 kg     | 3    | 3    |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.01 sec)

mysql>

```

7. Create index

```
mysql> alter table customer add index ccid(id);
Query OK, 0 rows affected (0.31 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>
```

8. How to show index on a table

```
mysql> show indexes from customer;
```

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment
customer	0	PRIMARY	1	id	A	2	NONE	NONE	BTREE		
customer	1	ccid	1	id	A	3	NONE	NONE	BTREE		

2 rows in set (0.00 sec)

```
mysql>
```

9. Find the order number, sale person name, along with the customer to whom that order belongs to

```
mysql>
mysql> select orderTable.id,sales.name,orderTable.c_id from sales right join orderTable ON sales.id =orderTable.s_id;
+----+-----+-----+
| id | name | c_id |
+----+-----+-----+
| 7  | A    | 1    |
| 1  | B    | 1    |
| 3  | B    | 2    |
| 4  | B    | 3    |
| 6  | B    | 3    |
| 2  | C    | 1    |
| 5  | C    | 3    |
+----+-----+-----+
7 rows in set (0.00 sec)

mysql>
```