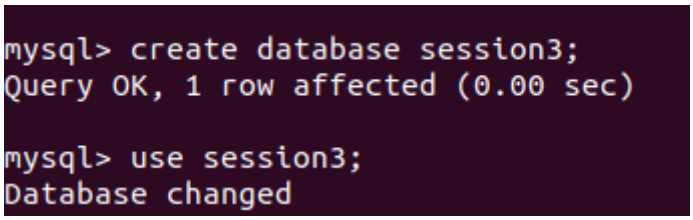
Problem Statement: There can be multiple customers, who can place multiple orders on the site. Now a sales person can handle these orders will distribute into multiple sales persons (One order will be assign to one salesperson only). So a sales person can have multiple orders of multiple customers

1.Create Database



2.Design Schema

```
mysql> show tables;
+--------------------+
| Tables_in_session3 |
+--------------------+
| customer           |
| orders             |
| salesperson        |
+--------------------+
3 rows in set (0.00 sec)

mysql> desc customer;
+-------+-------------+------+-----+---------+----------------+
| Field | Type        | Null | Key | Default | Extra          |
+-------+-------------+------+-----+---------+----------------+
| cid   | int(11)     | NO   | PRI | NULL    | auto_increment |
| name  | varchar(50) | YES  |     | NULL    |                |
+-------+-------------+------+-----+---------+----------------+
2 rows in set (0.00 sec)

mysql> desc salesperson;
+-------+-------------+------+-----+---------+----------------+
| Field | Type        | Null | Key | Default | Extra          |
+-------+-------------+------+-----+---------+----------------+
| sid   | int(11)     | NO   | PRI | NULL    | auto_increment |
| name  | varchar(50) | YES  |     | NULL    |                |
+-------+-------------+------+-----+---------+----------------+
2 rows in set (0.00 sec)

mysql> desc orders;
+--------+-------------+------+-----+---------+----------------+
| Field  | Type        | Null | Key | Default | Extra          |
+--------+-------------+------+-----+---------+----------------+
| oid    | int(11)     | NO   | PRI | NULL    | auto_increment |
| orders | varchar(50) | YES  |     | NULL    |                |
| osid   | int(11)     | YES  | MUL | NULL    |                |
| ocid   | int(11)     | YES  | MUL | NULL    |                |
```

3 .Create tables

```
mysql> create table customer(cid int primary key auto_increment,name varchar(50));
Query OK, 0 rows affected (0.05 sec)

mysql> create table salesperson(sid int primary key auto_increment,name varchar(50));
Query OK, 0 rows affected (0.05 sec)
```

```
mysql> create table orders(oid int primary key auto_increment,orders varchar(50),osid int,ocid int,foreign key(osid) references salesperson(si
d),foreign key(ocid) references customer(cid)) ;
Query OK, 0 rows affected (0.05 sec)
```

4.Insert sample data

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

mysql> insert into customer values(2,'Ashish'),(3,'Ashu');

Query OK, 2 rows affected (0.04 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql>
mysql> select * from customer;
+-----+--------+
| cid | name   |
+-----+--------+
|   1 | Jay    |
|   2 | Ashish |
|   3 | Ashu   |
+-----+--------+
3 rows in set (0.00 sec)

mysql>
```

```
mysql> insert into salesperson values(1,'Divya'),(2,'Shivani'),(3,'Ujju');
Query OK, 3 rows affected (0.03 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> select * from salesperson;
+-----+---------+
| sid | name    |
+-----+---------+
|   1 | Divya   |
|   2 | Shivani |
|   3 | Ujju    |
+-----+---------+
3 rows in set (0.00 sec)
```

```
mysql> desc orders;
+--------+-------------+------+-----+---------+----------------+
| Field  | Type        | Null | Key | Default | Extra          |
+--------+-------------+------+-----+---------+----------------+
| oid    | int(11)     | NO   | PRI | NULL    | auto_increment |
| orders | varchar(50) | YES  |     | NULL    |                |
| osid   | int(11)     | YES  | MUL | NULL    |                |
| ocid   | int(11)     | YES  | MUL | NULL    |                |
+--------+-------------+------+-----+---------+----------------+
4 rows in set (0.00 sec)

mysql> insert into orders values(1,'AT Bag',1,1),(2,'Cookware',2,2),(3,'TV',3,3),(4,'TV',3,1),(5,'cookware',3,3);
Query OK, 5 rows affected (0.01 sec)
Records: 5  Duplicates: 0  Warnings: 0

mysql> select * from orders;
+-----+----------+------+------+
| oid | orders   | osid | ocid |
+-----+----------+------+------+
|   1 | AT Bag   |    1 |    1 |
|   2 | Cookware |    2 |    2 |
|   3 | TV       |    3 |    3 |
|   4 | TV       |    3 |    1 |
|   5 | cookware |    3 |    3 |
+-----+----------+------+------+
5 rows in set (0.00 sec)

mysql>
```

5 .Find the sales person have multiple orders.

```
mysql> select * from orders;
+-----+----------+------+------+
| oid | orders   | osid | ocid |
+-----+----------+------+------+
|   1 | AT Bag   |    1 |    1 |
|   2 | Cookware |    2 |    2 |
|   3 | TV       |    3 |    3 |
|   4 | TV       |    3 |    1 |
|   5 | cookware |    3 |    3 |
|   6 | AT_Bag   |    2 |    2 |
+-----+----------+------+------+
6 rows in set (0.00 sec)

mysql> select name from salesperson where sid in (select osid from orders group by osid having count(osid)>1);
+---------+
| name    |
+---------+
| Shivani |
| Ujju    |
+---------+
2 rows in set (0.00 sec)

mysql>
```

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

```
mysql> select orders,name from orders,salesperson where orders.osid=salesperson.sid;
+----------+---------+
| orders   | name    |
+----------+---------+
| AT Bag   | Divya   |
| Cookware | Shivani |
| AT_Bag   | Shivani |
| TV       | Ujju    |
| TV       | Ujju    |
| cookware | Ujju    |
+----------+---------+
6 rows in set (0.01 sec)

mysql> select name,orders from salesperson left outer join orders on salesperson.sid=orders.osid;
+---------+----------+
| name    | orders   |
+---------+----------+
| Divya   | AT Bag   |
| Shivani | Cookware |
| Shivani | AT_Bag   |
| Ujju    | TV       |
| Ujju    | TV       |
| Ujju    | cookware |
| Jay     | NULL     |
+---------+----------+
7 rows in set (0.00 sec)

mysql>
```

7. Create index

```
mysql> create index session3 on orders(oid);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

8.How to show index on a table

```
mysql> show index from orders;
+--------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---
------------+
| Table  | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | In
dex_comment |
+--------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---
------------+
| orders |          0 | PRIMARY  |            1 | oid         | A         |           5 |     NULL | NULL   |      | BTREE      |         |
            |
| orders |          1 | osid     |            1 | osid        | A         |           3 |     NULL | NULL   | YES  | BTREE      |         |
            |
| orders |          1 | ocid     |            1 | ocid        | A         |           3 |     NULL | NULL   | YES  | BTREE      |         |
            |
| orders |          1 | session3 |            1 | oid         | A         |           6 |     NULL | NULL   |      | BTREE      |         |
            |
+--------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---
------------+
4 rows in set (0.00 sec)
```

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

```
mysql> select orders.oid,salesperson.name,customer.name ,orders.orders from orders,salesperson,customer where orders.ocid=customer.cid and ord
ers.osid=salesperson.sid;
+-----+---------+--------+----------+
| oid | name    | name   | orders   |
+-----+---------+--------+----------+
|   1 | Divya   | Jay    | AT Bag   |
|   2 | Shivani | Ashish | Cookware |
|   6 | Shivani | Ashish | AT_Bag   |
|   4 | Ujju    | Jay    | TV       |
|   3 | Ujju    | Ashu   | TV       |
|   5 | Ujju    | Ashu   | cookware |
+-----+---------+--------+----------+
6 rows in set (0.00 sec)

mysql>
```