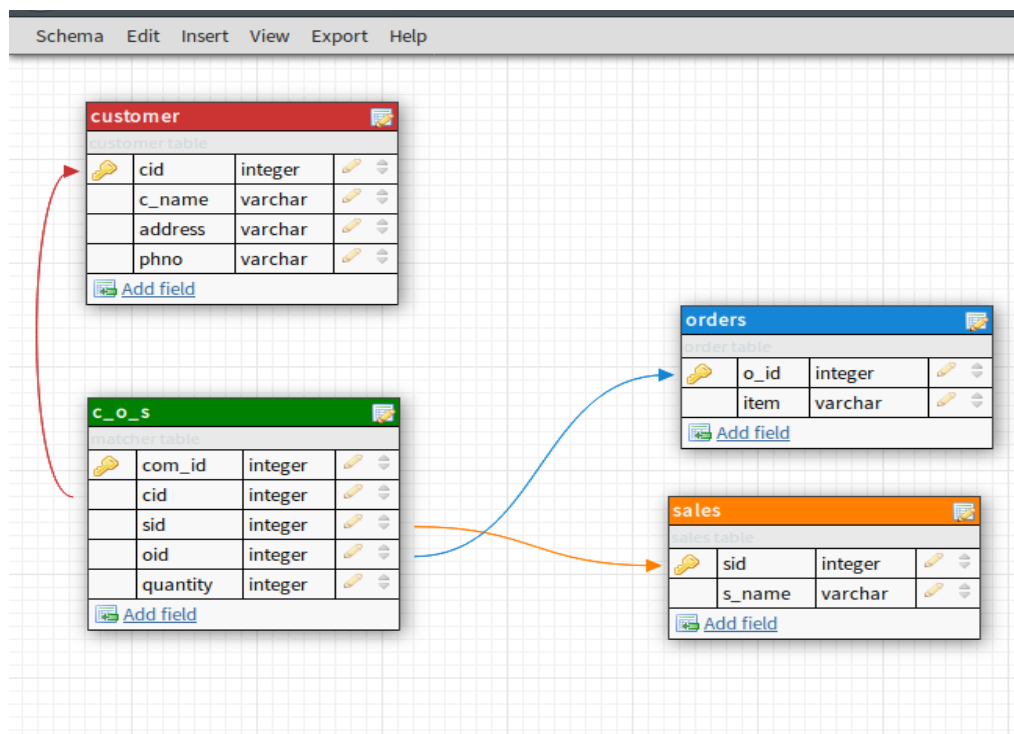


Problem Statement: There can be multiple customers, who can place multiple orders on the site. Now these orders will distribute into multiple sales persons (One order will be assign to one salesperson only). So a sales person can have multiple orders of multile customers

1. Create Database

```
ttn@ttn: ~  
File Edit View Search Terminal Help  
mysql> create database if not exists mydb  
-> ;  
Query OK, 1 row affected (0.04 sec)  
  
mysql> show databases;  
+-----+  
| Database |  
+-----+  
| information_schema |  
| mydb |  
| mysql |  
| performance_schema |  
| sys |  
+-----+  
5 rows in set (0.07 sec)  
  
mysql> 
```

2.Design Schema



3.Create tables

```
ttn@ttn: ~  
File Edit View Search Terminal Help  
mysql> use mydb;  
Database changed  
mysql> create table if not exists customer(  
-> c_id int not null auto_increment,  
-> c_name varchar(255),  
-> ph_no varchar(255),  
-> address varchar(255),  
-> primary key(c_id)  
-> )  
-> ;  
Query OK, 0 rows affected (0.33 sec)  
  
mysql> desc customer  
-> ;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| c_id  | int(11)       | NO   | PRI | NULL    | auto_increment |  
| c_name | varchar(255)  | YES  |     | NULL    |               |  
| ph_no | varchar(255)  | YES  |     | NULL    |               |  
| address | varchar(255) | YES  |     | NULL    |               |  
+-----+-----+-----+-----+-----+-----+  
4 rows in set (0.01 sec)
```

```
ttn@ttn: ~  
File Edit View Search Terminal Help  
mysql> use mydb  
Reading table information for completion of table and column names  
You can turn off this feature to get a quicker startup with -A  
  
Database changed  
mysql> create table if not exists orders(  
-> o_id int not null auto_increment,  
-> item varchar(255),  
-> primary key(o_id));  
Query OK, 0 rows affected (0.32 sec)  
  
mysql> desc orders;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| o_id  | int(11)       | NO   | PRI | NULL    | auto_increment |  
| item  | varchar(255)  | YES  |     | NULL    |               |  
+-----+-----+-----+-----+-----+-----+  
2 rows in set (0.00 sec)  
  
mysql> 
```

```
ttn@ttn: ~  
File Edit View Search Terminal Help  
mysql> create table if not exists sales( s_id int not null, s_name varchar(255),  
primary key(s_id));  
Query OK, 0 rows affected (0.41 sec)  
  
mysql> show tables;  
+-----+  
| Tables_in_mydb |  
+-----+  
| customer        |  
| orders          |  
| sales           |  
+-----+  
3 rows in set (0.01 sec)  
  
mysql> desc sales;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type          | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| s_id  | int(11)       | NO   | PRI | NULL    |               |  
| s_name | varchar(255)  | YES  |     | NULL    |               |  
+-----+-----+-----+-----+-----+-----+  
2 rows in set (0.00 sec)  
  
mysql> 
```

```
mysql> create table if not exists c_o_s(
-> com_id int not null,
-> cid int,
-> sid int,
-> oid int,
-> quantity int,
-> primary key(com_id),
-> foreign key(sid) references sales(s_id),
-> foreign key(oid) references orders(o_id),
-> foreign key(cid) references customer(cid));
Query OK, 0 rows affected (0.50 sec)

mysql> desc c_o_s
-> ;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| com_id | int(11) | NO | PRI | NULL | |
| cid | int(11) | YES | MUL | NULL | |
| sid | int(11) | YES | MUL | NULL | |
| oid | int(11) | YES | MUL | NULL | |
| quantity | int(11) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> 
```

4.Insert sample data

```
ttn@ttn: ~
File Edit View Search Terminal Help
mysql> desc customer;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| cid | int(11) | NO | PRI | NULL | auto_increment |
| c_name | varchar(255) | YES | | NULL | |
| ph_no | varchar(255) | YES | | NULL | |
| adress | varchar(255) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> insert into customer values(
-> "souvik","1234","gahziabad");
ERROR 1136 (21S01): Column count doesn't match value count at row 1
mysql> insert into customer values(1,"souvik","1234","gahziabad");
Query OK, 1 row affected (0.09 sec)

mysql> insert into customer values("dhruv","2345","sahibabad");
ERROR 1136 (21S01): Column count doesn't match value count at row 1
mysql> insert into customer values(2,"dhruv","2345","sahibabad");
Query OK, 1 row affected (0.05 sec)

mysql> insert into customer values(2,"deepak","3456","gurgaon");
ERROR 1062 (23000): Duplicate entry '2' for key 'PRIMARY'
mysql> insert into customer values(3,"deepak","3456","gurgaon");
Query OK, 1 row affected (0.08 sec)

mysql> insert into customer values(4,"deepika","0456","palam");
Query OK, 1 row affected (0.06 sec)

mysql> 
```

```
ttn@ttn: ~
File Edit View Search Terminal Help
mysql> select * from customer;
+-----+-----+-----+-----+
| cid | c_name | ph_no | adress |
+-----+-----+-----+-----+
| 1 | souvik | 1234 | gahziabad |
| 2 | dhruv | 2345 | sahibabad |
| 3 | deepak | 3456 | gurgaon |
| 4 | deepika | 0456 | palam |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> 
```

```
File Edit View Search Terminal Help
mysql> desc orders;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| o_id  | int(11)       | NO   | PRI | NULL    | auto_increment |
| item  | varchar(255)  | YES  |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> insert into orders values(10,"shoe1");
Query OK, 1 row affected (0.07 sec)

mysql> insert into orders values(11,"shoe2");
Query OK, 1 row affected (0.07 sec)

mysql> insert into orders values(12,"shoe3");
Query OK, 1 row affected (0.06 sec)

mysql> insert into orders values(13,"shoe4");
Query OK, 1 row affected (0.06 sec)

mysql> select * from orders;
+-----+-----+
| o_id | item |
+-----+-----+
| 10   | shoe1 |
| 11   | shoe2 |
| 12   | shoe3 |
| 13   | shoe4 |
+-----+-----+
4 rows in set (0.00 sec)

mysql> 
```

```
ttn@ttn: ~
File Edit View Search Terminal Help
mysql> insert into sales values( 66,"flipkart"),
-> (67,"amazon"),
-> (68,"snapdeal");
Query OK, 3 rows affected (0.05 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> select * from sales;
+-----+-----+
| s_id | s_name |
+-----+-----+
| 66   | flipkart |
| 67   | amazon  |
| 68   | snapdeal |
+-----+-----+
3 rows in set (0.00 sec)

mysql> 
```

```

ttn@ttn: ~
File Edit View Search Terminal Help
mysql> desc c_o_s;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| com_id | int(11) | NO | PRI | NULL | |
| cid | int(11) | YES | MUL | NULL | |
| sid | int(11) | YES | MUL | NULL | |
| oid | int(11) | YES | MUL | NULL | |
| quantity | int(11) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from c_o_s;
+-----+-----+-----+-----+-----+
| com_id | cid | sid | oid | quantity |
+-----+-----+-----+-----+-----+
| 100 | 1 | 66 | 10 | 1 |
| 101 | 2 | 67 | 11 | 2 |
| 102 | 3 | 68 | 12 | 1 |
| 103 | 4 | 66 | 13 | 2 |
| 104 | 1 | 67 | 11 | 1 |
| 105 | 1 | 68 | 12 | 2 |
| 106 | 1 | 66 | 13 | 1 |
| 107 | 2 | 67 | 10 | 2 |
| 108 | 2 | 68 | 12 | 1 |
| 109 | 2 | 66 | 13 | 2 |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)

mysql> 

```

5. Find the sales person have multiple orders.

```

mysql> select c_o_s.sid, count(c_o_s.sid) from sales join c_o_s on sales.s_id=c_o_s.sid group by c_o_s.sid;
+-----+-----+
| sid | count(c_o_s.sid) |
+-----+-----+
| 66 | 4 |
| 67 | 4 |
| 68 | 3 |
| 69 | 1 |
+-----+-----+
4 rows in set (0.00 sec)

mysql> select c_o_s.sid, count(c_o_s.sid) from sales join c_o_s on sales.s_id=c_o_s.sid group by c_o_s.sid having count(c_o_s.sid) > 1;
+-----+-----+
| sid | count(c_o_s.sid) |
+-----+-----+
| 66 | 4 |
| 67 | 4 |
| 68 | 3 |
+-----+-----+
3 rows in set (0.00 sec)

mysql> 

```

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

```

ttn@ttn: ~
File Edit View Search Terminal Help
mysql> select sales.s_name, orders.item, c_o_s.quantity from c_o_s join sales on sales.s_id join orders on orders.o_id=c_o_s.oid;
+-----+-----+-----+
| s_name | item | quantity |
+-----+-----+-----+
| flipkart | shoe1 | 1 |
| amazon | shoe1 | 1 |
| snapdeal | shoe1 | 1 |
| ebay | shoe1 | 1 |
| flipkart | shoe2 | 2 |
| amazon | shoe2 | 2 |
| snapdeal | shoe2 | 2 |
| ebay | shoe2 | 2 |
| flipkart | shoe3 | 1 |
| amazon | shoe3 | 1 |
| snapdeal | shoe3 | 1 |
| ebay | shoe3 | 1 |
| flipkart | shoe4 | 2 |
| amazon | shoe4 | 2 |
| snapdeal | shoe4 | 2 |
| ebay | shoe4 | 2 |
| flipkart | shoe2 | 1 |
| amazon | shoe2 | 1 |
| snapdeal | shoe2 | 1 |
+-----+-----+-----+

```

7.Create index

8.show index

```
ttn@ttn: ~  
File Edit View Search Terminal Help  
mysql> alter table customer add index c_name(c_name);  
Query OK, 0 rows affected (0.33 sec)  
Records: 0 Duplicates: 0 Warnings: 0  
  
mysql> show index customer;  
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 'custo  
mer' at line 1  
mysql> show index from customer;  
+-----+-----+-----+-----+-----+-----+-----+-----+  
| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Ca  
rdinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment |  
+-----+-----+-----+-----+-----+-----+-----+-----+  
| customer | 0 | PRIMARY | 1 | cid | A | 4 | NULL | NULL | NULL | BTREE | | |  
| customer | 1 | c_name | 1 | c_name | A | 4 | NULL | NULL | YES | 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

```
ttn@ttn: ~  
File Edit View Search Terminal Help  
mysql> select c_o_s.com_id,customer.c_name,customer.ph_no,customer.adress,orders  
.o_id,orders.item,sales.s_name from c_o_s join customer on c_o_s.cid=customer.c  
id  
join orders on c_o_s.oid=orders.o_id  
join sales on c_o_s.sid=sales.s_id ;  
+-----+-----+-----+-----+-----+-----+-----+  
| com_id | c_name | ph_no | adress | o_id | item | s_name |  
+-----+-----+-----+-----+-----+-----+-----+  
| 100 | souvik | 1234 | gahziabad | 10 | shoe1 | flipkart |  
| 101 | dhruv | 2345 | sahibabad | 11 | shoe2 | amazon |  
| 102 | deepak | 3456 | gurgaon | 12 | shoe3 | snapdeal |  
| 103 | deepika | 0456 | palam | 13 | shoe4 | flipkart |  
| 104 | souvik | 1234 | gahziabad | 11 | shoe2 | amazon |  
| 105 | souvik | 1234 | gahziabad | 12 | shoe3 | snapdeal |  
| 106 | souvik | 1234 | gahziabad | 13 | shoe4 | flipkart |  
| 107 | dhruv | 2345 | sahibabad | 10 | shoe1 | amazon |  
| 108 | dhruv | 2345 | sahibabad | 12 | shoe3 | snapdeal |  
| 109 | dhruv | 2345 | sahibabad | 13 | shoe4 | flipkart |  
| 110 | deepika | 0456 | palam | 10 | shoe1 | amazon |  
| 111 | deepika | 0456 | palam | 13 | shoe4 | ebay |  
+-----+-----+-----+-----+-----+-----+-----+  
12 rows in set (0.00 sec)  
  
mysql> 
```