

**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

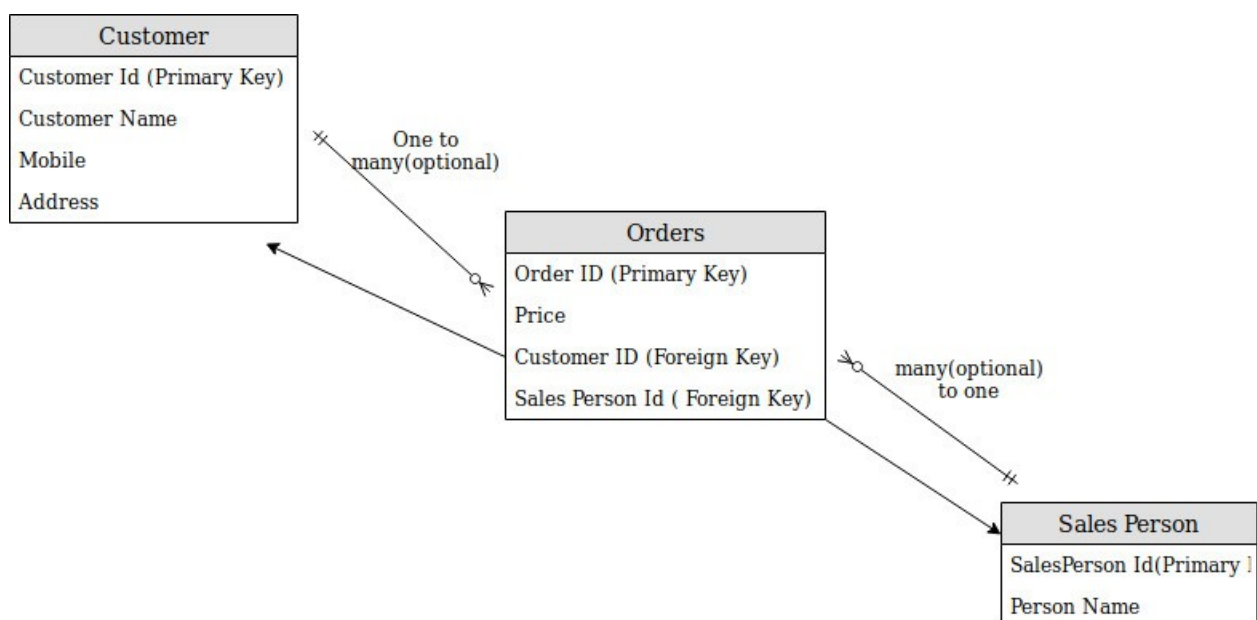
## 1. Create Database

```
mysql> create database exercise
-> ;
Query OK, 1 row affected (0.01 sec)

mysql> use exercise
Database changed
mysql> select database()
-> ;
+-----+
| database() |
+-----+
| exercise   |
+-----+
1 row in set (0.00 sec)

mysql> 
```

## 2. Design Schema



### 3. Create tables

```
mysql> create table orders ( o_id int PRIMARY KEY, s_id int NOT NULL, c_id int(20) NOT NULL, o_name varchar(50), FOREIGN KEY (c_id) REFERENCES customer(cust_id), FOREIGN KEY (s_id) REFERENCES sellers(s_id) );
Query OK, 0 rows affected (0.73 sec)
```

```
mysql> █
```

```
mysql> desc customer;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| cust_id    | int(20)       | NO   | PRI | NULL    |       |
| cust_name  | char(50)      | YES  |     | NULL    |       |
| mobile_no  | bigint(20)    | YES  |     | NULL    |       |
| address    | varchar(50)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> desc sellers;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| s_id       | int(11)       | NO   | PRI | NULL    |       |
| s_name     | char(50)      | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> desc orders;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| o_id       | int(11)       | NO   | PRI | NULL    |       |
| s_id       | int(11)       | NO   | MUL | NULL    |       |
| c_id       | int(20)       | NO   | MUL | NULL    |       |
| o_name     | varchar(50)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

### 4. Insert sample data

```
mysql> insert into customer
-> values(1,"Ritesh Singh",988888888,"a-32"),
-> (2,"Vishal Sharma",720000000,"gzb"),
-> (3,"Rishabh","999999999","greno");
Query OK, 3 rows affected (0.08 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> insert into sellers
-> values(21,"Shiv"),
-> (22,"Pratap");
Query OK, 2 rows affected (0.04 sec)
Records: 2  Duplicates: 0  Warnings: 0

mysql> insert into orders
-> values(1011,22,1,"cola"),
-> (1012,21,2,"pepsi"),
-> (1013,22,3,"cola");
Query OK, 3 rows affected (0.04 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> 
```

5. Find the sales person have multiple orders.

```
mysql> SELECT o.s_id, s.s_name, COUNT(*) FROM orders o, sellers s WHERE o.s_id = s.s_id GROUP BY o.s_id HAVING COUNT(*) > 1;
+-----+-----+-----+
| s_id | s_name | COUNT(*) |
+-----+-----+-----+
| 22 | Pratap | 2 |
+-----+-----+-----+
1 row in set (0.03 sec)
```

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

```
mysql> select * from sellers s, orders o where o.s_id = s.s_id;
+-----+-----+-----+-----+-----+-----+
| s_id | s_name | o_id | s_id | c_id | o_name |
+-----+-----+-----+-----+-----+-----+
| 22 | Pratap | 1011 | 22 | 1 | cola |
| 21 | Shiv | 1012 | 21 | 2 | pepsi |
| 22 | Pratap | 1013 | 22 | 3 | cola |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

## 7. Create index

```
mysql> create index seller_id_index on orders(s_id);
Query OK, 0 rows affected (0.44 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 | Index_comment | | | | | | | |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| orders | 0 | PRIMARY | 1 | o_id | A | 3 | NULL | NULL | |
| BTREE | | | | | | | | | |
| orders | 1 | c_id | 1 | c_id | A | 3 | NULL | NULL | |
| BTREE | | | | | | | | | |
| orders | 1 | seller_id_index | 1 | s_id | A | 2 | NULL | NULL | |
| BTREE | | | | | | | | | |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3 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 o.o_id AS order_number, s.s_name, c.cust_id, c.cust_name
from orders o, sellers s, customer c where o.s_id=s.s_id && o.c_id = c.
cust_id;
+-----+-----+-----+-----+-----+
| order_number | s_name | cust_id | cust_name |
+-----+-----+-----+-----+-----+
| 1011 | Pratap | 1 | Ritesh Singh |
| 1012 | Shiv | 2 | Vishal Sharma |
| 1013 | Pratap | 3 | Rishabh |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```