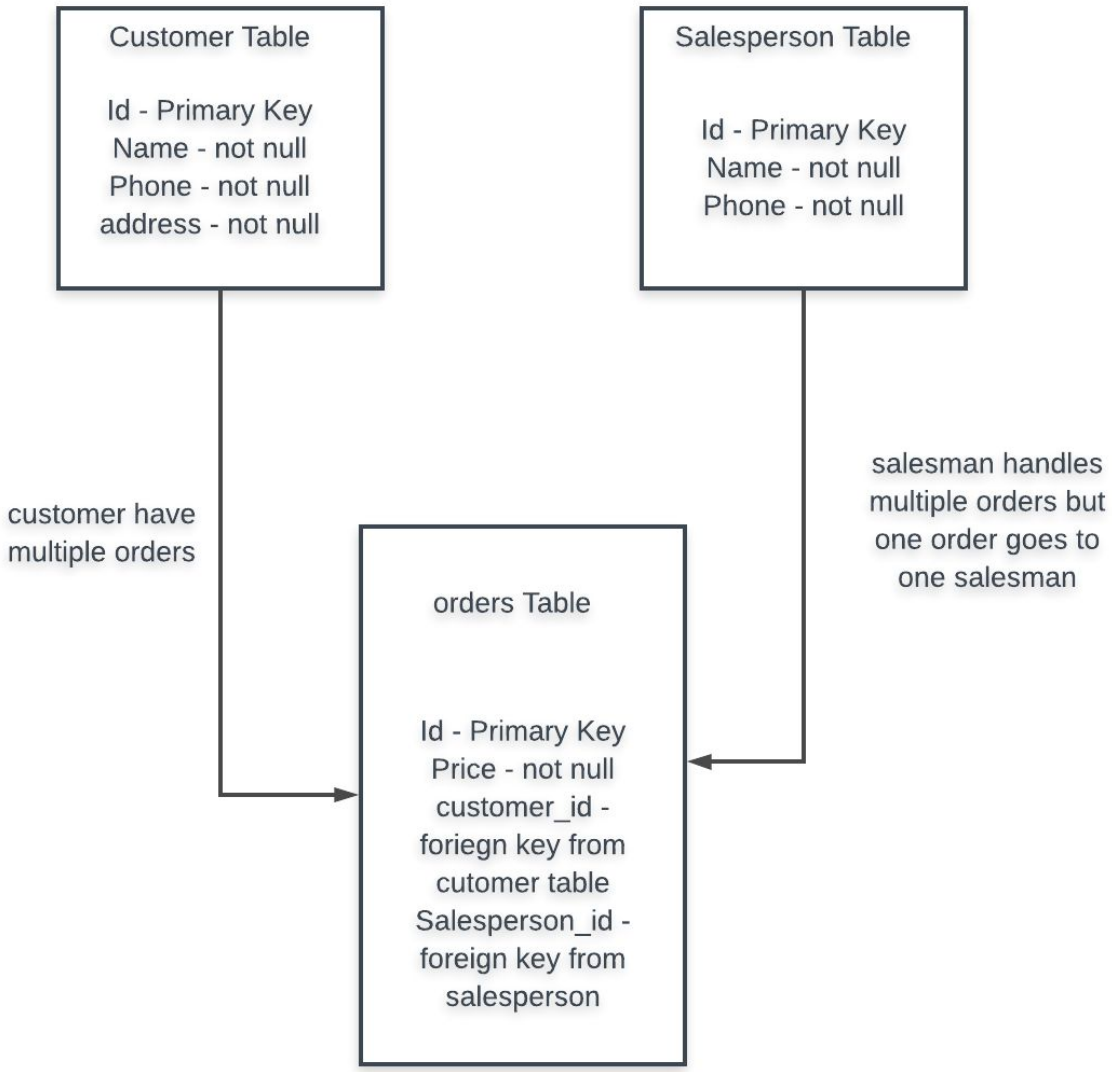
Exercise - Introduction to Database

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

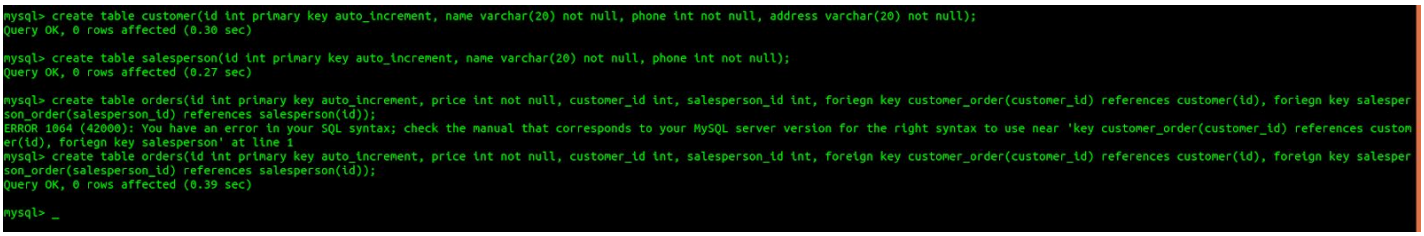
1. Create Database

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

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| backup             |
| bootcamp           |
| exercise           |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
7 rows in set (0.00 sec)

mysql> _
```

2. Design Schema



3. Create tables



create table customer(id int primary key auto_increment, name varchar(20) not null, phone int not null, address varchar(20) not null);

create table salesperson(id int primary key auto_increment, name varchar(20) not null, phone int not null);

create table orders(id int primary key auto_increment, price int not null, customer_id int, salesperson_id int, foreign key customer_order(customer_id) references customer(id), foreign key salesperson_order(salesperson_id) references salesperson(id));

4. Insert sample data

```
mysql> insert into customer(name,phone,address) values("Kunark",989898,"Delhi");

Query OK, 1 row affected (0.06 sec)

mysql> insert into customer(name,phone,address) values("Dipesh",787878,"Noida");

Query OK, 1 row affected (0.04 sec)

mysql> insert into customer(name,phone,address) values("Dipesh",787878,"Gurgaon"
);
Query OK, 1 row affected (0.04 sec)

mysql> insert into customer(name,phone,address) values("Nikki",585858,"Dwarka");

Query OK, 1 row affected (0.03 sec)

mysql>
```

```
mysql> select * from customer;
+----+--------+--------+---------+
| id | name   | phone  | address |
+----+--------+--------+---------+
|  1 | Kunark | 989898 | Delhi   |
|  2 | Dipesh | 787878 | Noida   |
|  3 | Dipesh | 787878 | Gurgaon |
|  4 | Nikki  | 585858 | Dwarka  |
+----+--------+--------+---------+
4 rows in set (0.00 sec)
```

```
mysql> insert into salesperson(name,phone) values("Dinesh",365412);
Query OK, 1 row affected (0.11 sec)

mysql> insert into salesperson(name,phone) values("Ramesh",124563);
Query OK, 1 row affected (0.04 sec)

mysql> insert into salesperson(name,phone) values("Mahesh",752364);
Query OK, 1 row affected (0.04 sec)

mysql> _
```

```
mysql> select * from salesperson;
+----+--------+--------+
| id | name   | phone  |
+----+--------+--------+
|  1 | Dinesh | 365412 |
|  2 | Ramesh | 124563 |
|  3 | Mahesh | 752364 |
+----+--------+--------+
3 rows in set (0.00 sec)
```

```
mysql> insert into salesperson(name,phone) values("Dinesh",365412);
Query OK, 1 row affected (0.11 sec)

mysql> insert into salesperson(name,phone) values("Ramesh",124563);
Query OK, 1 row affected (0.04 sec)

mysql> insert into salesperson(name,phone) values("Mahesh",752364);
Query OK, 1 row affected (0.04 sec)

mysql> _
```

```
mysql> select * from orders;
+----+-------+-------------+-----------------+
| id | price | customer_id | salesperson_id |
+----+-------+-------------+-----------------+
|  1 |   123 |           1 |               1 |
|  2 |  1200 |           1 |               1 |
|  3 |    12 |           2 |               1 |
|  4 |  1265 |           4 |               2 |
|  5 |  7896 |           3 |               3 |
|  6 |   254 |           4 |               3 |
+----+-------+-------------+-----------------+
6 rows in set (0.00 sec)
```

5. Find the sales person have multiple orders.

```
mysql> select * from orders where salesperson_id in (select salesperson_id
from orders group by salesperson_id having count(salesperson_id)>1);
+----+-------+-------------+----------------+
| id | price | customer_id | salesperson_id |
+----+-------+-------------+----------------+
|  1 |   123 |           1 |              1 |
|  2 |  1200 |           1 |              1 |
|  3 |    12 |           2 |              1 |
|  5 |  7896 |           3 |              3 |
|  6 |   254 |           4 |              3 |
+----+-------+-------------+----------------+
5 rows in set (0.00 sec)
```

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

```
mysql> select sp.*, ord.* from salesperson sp inner join orders ord on sp.i
d = ord.salesperson_id;
+----+--------+--------+----+-------+-------------+----------------+
| id | name   | phone  | id | price | customer_id | salesperson_id |
+----+--------+--------+----+-------+-------------+----------------+
|  1 | Dinesh | 365412 |  1 |   123 |           1 |              1 |
|  1 | Dinesh | 365412 |  2 |  1200 |           1 |              1 |
|  1 | Dinesh | 365412 |  3 |    12 |           2 |              1 |
|  2 | Ramesh | 124563 |  4 |  1265 |           4 |              2 |
|  3 | Mahesh | 752364 |  5 |  7896 |           3 |              3 |
|  3 | Mahesh | 752364 |  6 |   254 |           4 |              3 |
+----+--------+--------+----+-------+-------------+----------------+
6 rows in set (0.00 sec)
```

7. Create index

```
mysql> create index test_index on orders(salesperson_id);
Query OK, 0 rows affected (0.35 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
+--------+------------+----------------+--------------+----------------
| orders |          0 | PRIMARY        |            1 | id
| orders |          1 | customer_order |            1 | customer_id
| orders |          1 | test_index     |            1 | salesperson_id
+--------+------------+----------------+--------------+----------------
```

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

```
mysql> select o.id order_id, s.name salesperson_name, c.name customer_name from orders o,
salesperson s, customer c where o.salesperson_id = s.id and  o.customer_id = c.id;
+----------+------------------+---------------+
| order_id | salesperson_name | customer_name |
+----------+------------------+---------------+
|        1 | Dinesh           | Kunark        |
|        2 | Dinesh           | Kunark        |
|        3 | Dinesh           | Dipesh        |
|        4 | Ramesh           | Nikki         |
|        5 | Mahesh           | Dipesh        |
|        6 | Mahesh           | Nikki         |
+----------+------------------+---------------+
6 rows in set (0.01 sec)
```