

## Exercise:

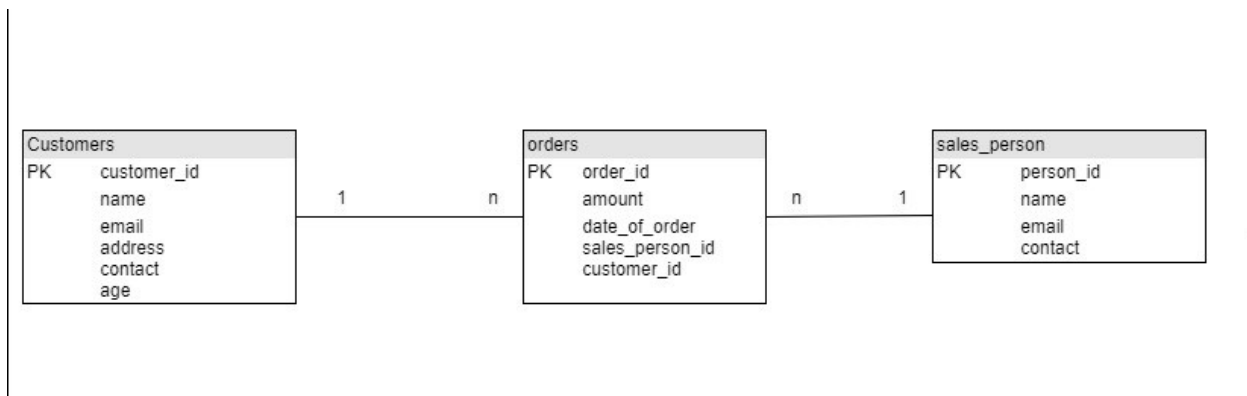
Problem Statement: There can be multiple customers, who can place multiple orders on the site. Now a sales person can handle these orders will distribute into multiple sales persons (One order will be assign to one salesperson only). So a sales person can have multiple orders of multiple customers

### 1. Create Database

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

mysql>
```

### 2. Design Schema



### 3. Create tables

```
mysql> use assignment;
Database changed
mysql> create table customers(customer_id int primary key auto_increment, name varchar(50), email varchar(100), address varchar(200), contact bigint(20), age int(3));
Query OK, 0 rows affected (0.29 sec)

mysql> create table sales_person(person_id int primary key auto_increment, name varchar(100), email varchar(200), contact bigint(20));
Query OK, 0 rows affected (0.29 sec)

mysql> create table orders( order_id int primary key auto_increment, amount double(10,2), date_of_order date, sales_person_id int references sales_person(person_id), customer_id int references customers(customer_id));
Query OK, 0 rows affected (0.27 sec)

mysql>
```

### 4. Insert sample data

```
mysql> insert into customers values(1, "Jim Smith", "jim98@gmail.com", "81 Down street", 9874567983, 34);
Query OK, 1 row affected (0.05 sec)

mysql> insert into customers values(2, "Smith John", "john198@gmail.com", "811 lane street", 9462839472, 35);
Query OK, 1 row affected (0.05 sec)

mysql> insert into customers values(3, "Abby San", "asan66@gmail.com", "A-HIG Mall road", 8362092648, 45);
Query OK, 1 row affected (0.04 sec)

mysql>
```

```
mysql> insert into sales_person values(1, "Henry K", "henry_001@gmail.com", 8364750375);
Query OK, 1 row affected (0.05 sec)

mysql> insert into sales_person values(2, "Conail Denrey", "cd88@gmail.com", 8364755938);
Query OK, 1 row affected (0.04 sec)

mysql> insert into sales_person values(2, "Drake Dawson", "drake@gmail.com", 8362837938);
ERROR 1062 (23000): Duplicate entry '2' for key 'PRIMARY'
mysql> insert into sales_person values(3, "Drake Dawson", "drake@gmail.com", 8362837938);
Query OK, 1 row affected (0.05 sec)

mysql>
```

```
mysql> insert into orders values(1, 7270.50, "2019-01-27", 1, 1);
Query OK, 1 row affected (0.05 sec)

mysql> insert into orders values(1, 1994.50, "2019-01-07", 1, 3);
ERROR 1062 (23000): Duplicate entry '1' for key 'PRIMARY'
mysql> insert into orders values(2, 1994.50, "2019-01-07", 1, 3);
Query OK, 1 row affected (0.04 sec)

mysql> insert into orders values(3, 2000.00, "2019-02-01", 2, 3);
Query OK, 1 row affected (0.05 sec)

mysql> insert into orders values(4, 799.00, "2019-02-04", 3, 2);
Query OK, 1 row affected (0.03 sec)

mysql>
```

5. Find the sales person have multiple orders.

```
mysql> select sp.name, count(o.sales_person_id) total_orders from orders o JOIN sales_person sp on sp.person_id=o.sales_person_id group by o.s
ales_person_id having count(o.sales_person_id)>1;
+-----+-----+
| name | total_orders |
+-----+-----+
| Henry K | 2 |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

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

```
mysql> select sp.name, sp.email, sp.contact, o.* from sales_person sp JOIN orders o on sp.person_id=o.sales_person_id;
+-----+-----+-----+-----+-----+-----+-----+-----+
| name | email | contact | order_id | amount | date_of_order | sales_person_id | customer_id |
+-----+-----+-----+-----+-----+-----+-----+-----+
| Henry K | henry_001@gmail.com | 8364750375 | 1 | 7270.50 | 2019-01-27 | 1 | 1 |
| Henry K | henry_001@gmail.com | 8364750375 | 2 | 1994.50 | 2019-01-07 | 1 | 3 |
| Conail Denrey | cd88@gmail.com | 8364755938 | 3 | 2000.00 | 2019-02-01 | 2 | 3 |
| Drake Dawson | drake@gmail.com | 8362837938 | 4 | 799.00 | 2019-02-04 | 3 | 2 |
+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

7. Create index

```
mysql> alter table customers add index email_index(email);
Query OK, 0 rows affected (0.34 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>
```

8. How to show index on a table

```
mysql> show index from customers;
+-----+-----+-----+-----+-----+-----+-----+-----+
| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Commen
t | Index_comment |
+-----+-----+-----+-----+-----+-----+-----+-----+
| customers | 0 | PRIMARY | 1 | customer_id | A | 2 | NULL | NULL | | BTREE | |
| customers | 1 | email_index | 1 | email | A | 3 | 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

```
mysql> select o.order_id, sp.name sales_person, c.name customer from orders o JOIN sales_person sp on o.sales_person_id=sp.person_id JOIN cust
omers c on c.customer_id=o.customer_id;
+-----+-----+-----+
| order_id | sales_person | customer |
+-----+-----+-----+
| 1 | Henry K | Jin Smith |
| 2 | Henry K | Abby Sam |
| 3 | Conail Denrey | Abby Sam |
| 4 | Drake Dawson | Smith John |
+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```