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

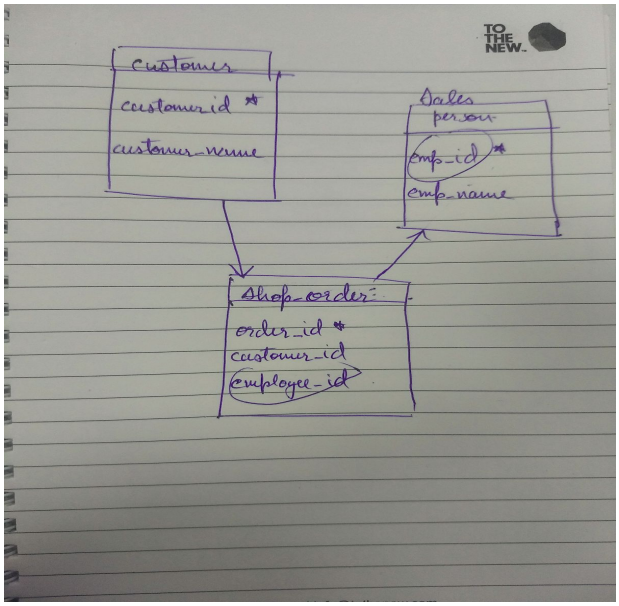
Q1. Create Database

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

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| market             |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
5 rows in set (0.00 sec)

mysql>
```

Q2. Design Schema



Q3. Create tables

```
mysql> use market
Database changed
mysql> create table customer (customer_id integer primary key, customer_name varchar(20));
Query OK, 0 rows affected (0.37 sec)

mysql> create table sales_person (employee_id integer primary key, employee_name varchar(20));
Query OK, 0 rows affected (0.32 sec)

mysql> create table shop_order (order_id integer primary key, customer_id integer, employee_id integer, foreign key (customer_id) references customer
(customer_id), foreign key (employee_id) references sales_person (employee_id));
Query OK, 0 rows affected (0.45 sec)
```

```
mysql> describe customer
    -> ;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| customer_id   | int(11)     | NO   | PRI | NULL    |       |
| customer_name | varchar(20) | YES  |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> describe sales_person;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| employee_id   | int(11)     | NO   | PRI | NULL    |       |
| employee_name | varchar(20) | YES  |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> describe shop_order;
+-------------+---------+------+-----+---------+-------+
| Field       | Type    | Null | Key | Default | Extra |
+-------------+---------+------+-----+---------+-------+
| order_id    | int(11) | NO   | PRI | NULL    |       |
| customer_id | int(11) | YES  | MUL | NULL    |       |
| employee_id | int(11) | YES  | MUL | NULL    |       |
+-------------+---------+------+-----+---------+-------+
3 rows in set (0.01 sec)
```

Q4. Insert sample data

```
mysql> insert into customer values (56, "vedant");
Query OK, 1 row affected (0.06 sec)

mysql> insert into customer values (5656, "rob");
Query OK, 1 row affected (0.07 sec)

mysql> insert into customer values (45, "mike");
Query OK, 1 row affected (0.09 sec)

mysql> select * from customer;
+-------------+---------------+
| customer_id | customer_name |
+-------------+---------------+
|          45 | mike          |
|          56 | vedant        |
|        5656 | rob           |
+-------------+---------------+
3 rows in set (0.00 sec)
```

```
mysql> insert into sales_person values (345, "ridhima");
Query OK, 1 row affected (0.08 sec)

mysql> insert into sales_person values (546, "deepika");
Query OK, 1 row affected (0.09 sec)

mysql> insert into sales_person values (989, "kavita");
Query OK, 1 row affected (0.10 sec)

mysql> insert into sales_person values (596, "tarun");
Query OK, 1 row affected (0.11 sec)

mysql> select * from sales_person;
+-------------+---------------+
| employee_id | employee_name |
+-------------+---------------+
|         345 | ridhima       |
|         546 | deepika       |
|         596 | tarun         |
|         989 | kavita        |
+-------------+---------------+
4 rows in set (0.00 sec)
```

```
mysql> insert into shop_order values (1, 45, 546);
Query OK, 1 row affected (0.06 sec)

mysql> insert into shop_order values (2, 56, 989);
Query OK, 1 row affected (0.05 sec)

mysql> insert into shop_order values (3, 56, 596);
Query OK, 1 row affected (0.06 sec)

mysql> insert into shop_order values (5, 5656, 989);
Query OK, 1 row affected (0.06 sec)

mysql> insert into shop_order values (9, 45, 989);
Query OK, 1 row affected (0.06 sec)

mysql> select * from shop_order;
+----------+-------------+-------------+
| order_id | customer_id | employee_id |
+----------+-------------+-------------+
|        1 |          45 |         546 |
|        2 |          56 |         989 |
|        3 |          56 |         596 |
|        5 |        5656 |         989 |
|        9 |          45 |         989 |
+----------+-------------+-------------+
5 rows in set (0.00 sec)
```

Q5. Find the sales person have multiple orders.

select sp.* from sales_person sp join shop_order so on sp.employee_id = so.employee_id group by so.employee_id having count(so.employee_id) > 1;

```
mysql> select sp.* from sales_person sp join shop_order so on sp.employee_id = so.employee_id group by so.employee_id having count(so.employee_id) > 1
;
+-------------+---------------+
| employee_id | employee_name |
+-------------+---------------+
|         989 | kavita        |
+-------------+---------------+
1 row in set (0.00 sec)

mysql>
```

Q6. Find the all sales person details along with order details

```
mysql> select sp.*, so.customer_id, so.order_id from sales_person sp join shop_order so on sp.employee_id = so.employee_id;
+-------------+---------------+-------------+----------+
| employee_id | employee_name | customer_id | order_id |
+-------------+---------------+-------------+----------+
|         546 | deepika       |          45 |        1 |
|         596 | tarun         |          56 |        3 |
|         989 | kavita        |          56 |        2 |
|         989 | kavita        |        5656 |        5 |
|         989 | kavita        |          45 |        9 |
+-------------+---------------+-------------+----------+
5 rows in set (0.00 sec)
```

Q7. Create index

```
mysql> create index first_ind on shop_order (customer_id);
Query OK, 0 rows affected (0.60 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

Q8. How to show index on a table

```
mysql> show index from shop_order;
+------------+------------+------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+----
-----------+
| Table      | Non_unique | Key_name   | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Ind
ex_comment |
+------------+------------+------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+----
-----------+
| shop_order |          0 | PRIMARY    |            1 | order_id    | A         |           4 |     NULL | NULL   |      | BTREE      |         |
            |
| shop_order |          1 | employee_id |            1 | employee_id | A         |           3 |     NULL | NULL   | YES  | BTREE      |         |
            |
| shop_order |          1 | first_ind  |            1 | customer_id | A         |           3 |     NULL | NULL   | YES  | BTREE      |         |
            |
+------------+------------+------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+----
-----------+
3 rows in set (0.00 sec)
```

Q9. Find the order number, sale person name, along with the customer to whom that order belongs to

```
mysql> select so.order_id, sp.employee_name, c.customer_name from shop_order so inner
join sales_person sp inner join customer c on so.employee_id = sp.employee_id and so.c
ustomer_id = c.customer_id;
+----------+---------------+---------------+
| order_id | employee_name | customer_name |
+----------+---------------+---------------+
|        1 | deepika       | mike          |
|        2 | kavita        | vedant        |
|        3 | tarun         | vedant        |
|        5 | kavita        | rob           |
|        9 | kavita        | mike          |
+----------+---------------+---------------+
5 rows in set (0.00 sec)
```