Introduction To Database

Assessment

Name – Maithely Sharma
College – University of Petroleum and Energy Studies
EmployeeID – 4057

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

```
maithely@maithely:dbase $ sudo mysql -p -u root
[sudo] password for maithely:
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 22
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

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

mysql>
```
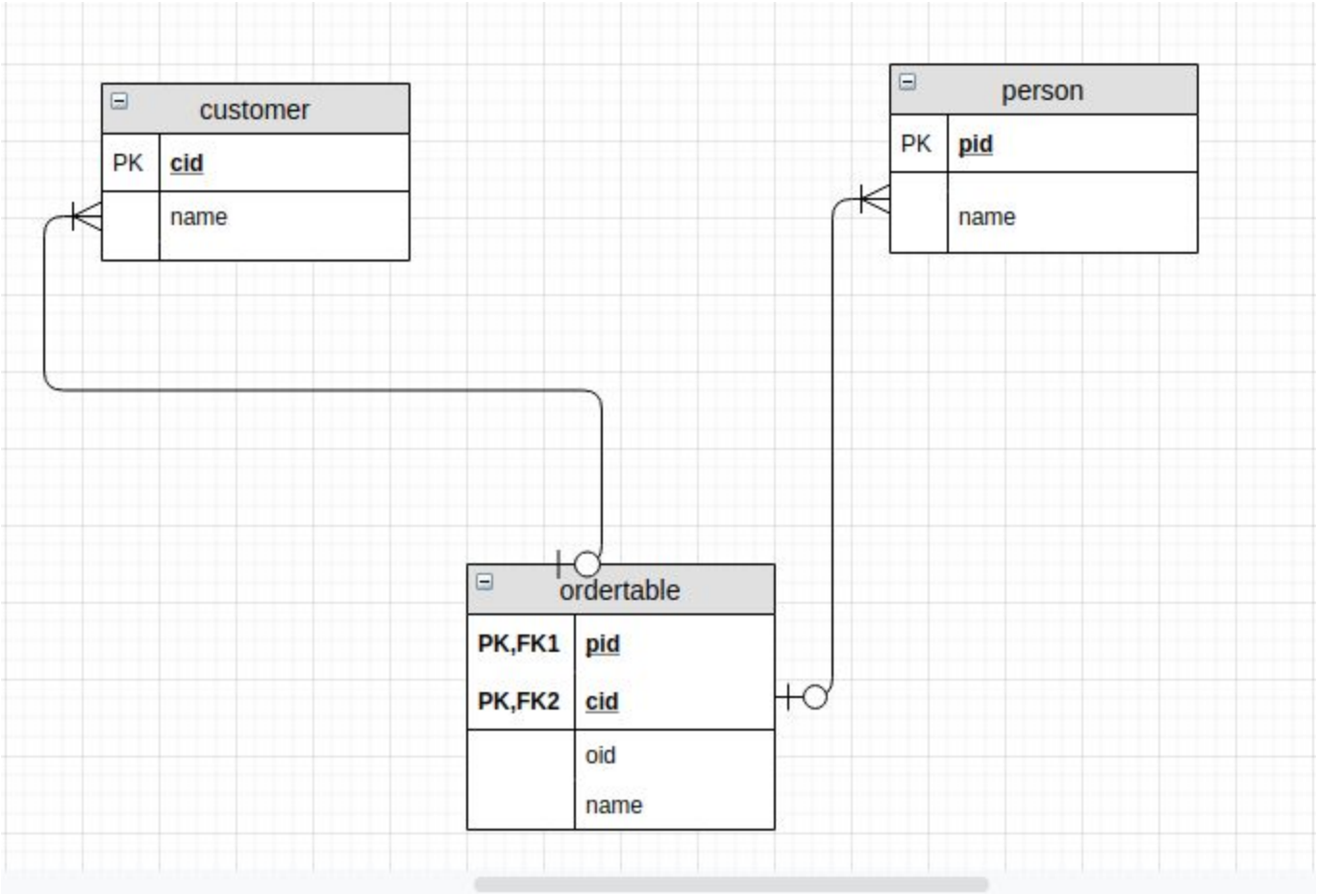

2. Design Schema



3. Create tables

```
mysql> create table customer( cid int primary key, name varchar(20) not null);
Query OK, 0 rows affected (0.03 sec)

mysql> create table person( pid int primary key, name varchar(20) not null);
Query OK, 0 rows affected (0.04 sec)
```

```
mysql> create table orders ( oid int primary key, name varchar(20) not null);
Query OK, 0 rows affected (0.04 sec)

mysql>
```

```
mysql> create table ordertable ( oid int primary key, name varchar(25) not null, cid int , pid int, foreign key (pid) references person (pid),
 foreign key (cid) references customer (cid) );
Query OK, 0 rows affected (0.04 sec)

mysql>
```

```
mysql> show tables;
+-----------------+
| Tables_in_sales |
+-----------------+
| customer        |
| ordertable      |
| person          |
+-----------------+
3 rows in set (0.00 sec)

mysql>
```

4. Insert sample data

```
mysql> insert into customer values ( 101,'maithely');
Query OK, 1 row affected (0.02 sec)

mysql>  insert into customer values ( 102,'shivansh');
Query OK, 1 row affected (0.01 sec)

mysql> insert into customer values ( 103,'ekanshu');
Query OK, 1 row affected (0.01 sec)

mysql> insert into customer values ( 104,'aaysuh');
Query OK, 1 row affected (0.00 sec)

mysql> insert into customer values ( 105,'abhishek');
Query OK, 1 row affected (0.01 sec)

mysql> select * from customer;
+-----+----------+
| cid | name     |
+-----+----------+
| 101 | maithely |
| 102 | shivansh |
| 103 | ekanshu  |
| 104 | aaysuh   |
| 105 | abhishek |
+-----+----------+
5 rows in set (0.00 sec)

mysql>
```

```
mysql>  insert into person values ( 1,'ram');
Query OK, 1 row affected (0.01 sec)

mysql> insert into person values ( 2,'sham');
Query OK, 1 row affected (0.01 sec)

mysql>  insert into person values ( 3,'rohan');
Query OK, 1 row affected (0.01 sec)

mysql>  insert into person values ( 4,'mohit');
Query OK, 1 row affected (0.00 sec)

mysql>  insert into person values ( 5,'john');
Query OK, 1 row affected (0.00 sec)

mysql> select * from person;
+-----+-------+
| pid | name  |
+-----+-------+
|   1 | ram   |
|   2 | sham  |
|   3 | rohan |
|   4 | mohit |
|   5 | john  |
+-----+-------+
5 rows in set (0.00 sec)

mysql>
```

```
mysql>  insert into ordertable values( 10001,'hevels', 101,5);
Query OK, 1 row affected (0.01 sec)

mysql> insert into ordertable values( 10005,'caprese',104,2);
Query OK, 1 row affected (0.01 sec)

mysql> insert into ordertable values( 10891,'clovia',103,1);
Query OK, 1 row affected (0.01 sec)

mysql> insert into ordertable values( 13451,'thinkpad',102,1);
Query OK, 1 row affected (0.00 sec)

mysql> insert into ordertable values( 10671,'lakme',105,3);
Query OK, 1 row affected (0.00 sec)

mysql>
mysql>
mysql>
mysql> select * from ordertable;
+-------+----------+------+------+
| oid   | name     | cid  | pid  |
+-------+----------+------+------+
| 10001 | hevels   |  101 |    5 |
| 10005 | caprese  |  104 |    2 |
| 10671 | lakme    |  105 |    3 |
| 10891 | clovia   |  103 |    1 |
| 13451 | thinkpad |  102 |    1 |
+-------+----------+------+------+
5 rows in set (0.01 sec)

mysql>
```

5. Find the sales person have multiple orders.

```
mysql> select person.name,person.pid from person inner join ordertable
    -> on person.pid=ordertable.pid group by person.pid having count(person.pid)>1;
+------+-----+
| name | pid |
+------+-----+
| ram  |   1 |
+------+-----+
1 row in set (0.00 sec)

mysql>
```

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

```
mysql> select * from person inner join ordertable on person.pid=ordertable.pid;
+------+-------+-------+----------+------+------+
| pid  | name  | oid   | name     | cid  | pid  |
+------+-------+-------+----------+------+------+
|    1 | ram   | 10891 | clovia   |  103 |    1 |
|    1 | ram   | 13451 | thinkpad |  102 |    1 |
|    2 | sham  | 10005 | caprese  |  104 |    2 |
|    3 | rohan | 10671 | lakme    |  105 |    3 |
|    5 | john  | 10001 | hevels   |  101 |    5 |
+------+-------+-------+----------+------+------+
5 rows in set (0.00 sec)

mysql>
```

7. Create index

```
mysql> create index index_order on ordertable (oid);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

8. How to show index on a table

```
mysql> show indexes from ordertable;
+------------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------
---+---------------+
| Table      | Non_unique | Key_name    | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comm
ent | Index_comment |
+------------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------
---+---------------+
| ordertable |          0 | PRIMARY     |            1 | oid         | A         |           5 |     NULL | NULL   |      | BTREE      |
   |               |
| ordertable |          1 | pid         |            1 | pid         | A         |           4 |     NULL | NULL   | YES  | BTREE      |
   |               |
| ordertable |          1 | cid         |            1 | cid         | A         |           5 |     NULL | NULL   | YES  | BTREE      |
   |               |
| ordertable |          1 | index_order |            1 | oid         | A         |           5 |     NULL | NULL   |      | BTREE      |
   |               |
| ordertable |          1 | index_order1 |           1 | oid         | A         |           5 |     NULL | NULL   |      | BTREE      |
   |               |
+------------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------
---+---------------+
5 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 p.pid ,p.name,c.name,c.cid ,oid from ordertable o inner join
    -> person p on p.pid=o.pid inner join customer c on c.cid=o.cid;
+-----+-------+----------+-----+-------+
| pid | name  | name     | cid | oid   |
+-----+-------+----------+-----+-------+
|   5 | john  | maithely | 101 | 10001 |
|   2 | sham  | aaysuh   | 104 | 10005 |
|   3 | rohan | abhishek | 105 | 10671 |
|   1 | ram   | ekanshu  | 103 | 10891 |
|   1 | ram   | shivansh | 102 | 13451 |
+-----+-------+----------+-----+-------+
5 rows in set (0.00 sec)

mysql>
```