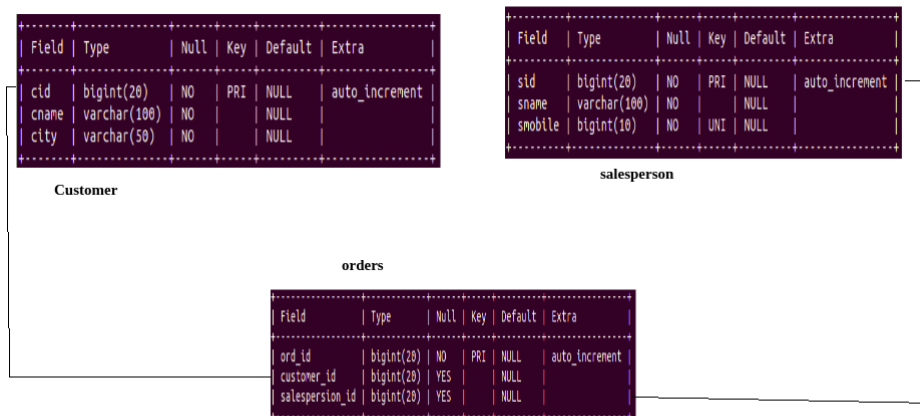# Assignment –3
# Introduction to Database

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 customer

1. Create databases

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

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| my_db              |
| mysql              |
| new_db             |
| performance_schema |
| shoping_db         |
| sys                |
+--------------------+
7 rows in set (0.00 sec)
```

2: Design Schema

| Field | Type         | Null | Key | Default | Extra          |
|-------|--------------|------|-----|---------|----------------|
| cid   | bigint(20)   | NO   | PRI | NULL    | auto_increment |
| cname | varchar(100) | NO   |     | NULL    |                |
| city  | varchar(50)  | NO   |     | NULL    |                |

**Customer**

| Field   | Type         | Null | Key | Default | Extra          |
|---------|--------------|------|-----|---------|----------------|
| sid     | bigint(20)   | NO   | PRI | NULL    | auto_increment |
| sname   | varchar(100) | NO   |     | NULL    |                |
| smobile | bigint(10)   | NO   | UNI | NULL    |                |

**salesperson**

**orders**

| Field          | Type       | Null | Key | Default | Extra          |
|----------------|------------|------|-----|---------|----------------|
| ord_id         | bigint(20) | NO   | PRI | NULL    | auto_increment |
| customer_id    | bigint(20) | YES  |     | NULL    |                |
| salespersion_id| bigint(20) | YES  |     | NULL    |                |

3: Create tables

```
mysql> create table orders(
    -> ord_id bigint(20) primary key,
    -> customer_id bigint(20) references customer(cid),
    -> salespersion_id bigint(20) references salesperson(sid));
Query OK, 0 rows affected (0.24 sec)
```

```
mysql> create table customer(
    -> cid bigint(20) primary key,
    -> cname varchar(100) not null,
    -> city varchar(50) not null);
Query OK, 0 rows affected (0.26 sec)
```

```
mysql> create table salesperson( sid bigint(20) primary key, sname varchar(100) not null, smobile bigint(10) not null unique);
Query OK, 0 rows affected (0.33 sec)
```

4: Insert Sample data

```
mysql> insert into customer (cname,city) values ('Abhishek','Kanpur'), ('Akahsh','Noida'), ('Deepak','delhi');
Query OK, 3 rows affected (0.04 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> select * from customer;
+-----+----------+--------+
| cid | cname    | city   |
+-----+----------+--------+
|   1 | Abhishek | Kanpur |
|   2 | Akahsh   | Noida  |
|   3 | Deepak   | delhi  |
+-----+----------+--------+
3 rows in set (0.00 sec)
```

```
mysql> insert into salesperson (sname,smobile) values
    -> ('SalePerson1',1234567890),
    -> ('SalePerson2',1234567891),
    -> ('SalePerson3',1234567892);
Query OK, 3 rows affected (0.03 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> select * from salesperson;
+-----+-------------+------------+
| sid | sname       | smobile    |
+-----+-------------+------------+
|   1 | SalePerson1 | 1234567890 |
|   2 | SalePerson2 | 1234567891 |
|   3 | SalePerson3 | 1234567892 |
+-----+-------------+------------+
3 rows in set (0.00 sec)
```

```
mysql> insert into orders(customer_id,salespersion_id) values (1,1), (2,1), (3,2), (2,3);
Query OK, 4 rows affected (0.03 sec)
Records: 4  Duplicates: 0  Warnings: 0

mysql> select * from orders;
+--------+-------------+----------------+
| ord_id | customer_id | salespersion_id |
+--------+-------------+----------------+
|      1 |           1 |              1 |
|      2 |           2 |              1 |
|      3 |           3 |              2 |
|      4 |           2 |              3 |
+--------+-------------+----------------+
4 rows in set (0.01 sec)
```

Q5: Find the sales person have multiple orders

```
mysql> select * from salesperson where sid in (
    -> select salespersion_id from orders group by salespersion_id having count(ord_id)>1);
+-----+------------+------------+
| sid | sname      | smobile    |
+-----+------------+------------+
|   1 | SalePerson1 | 1234567890 |
+-----+------------+------------+
1 row in set (0.00 sec)
```

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

```
mysql> select s.*,o.* from salesperson s inner join orders o on s.sid=o.salespersion_id;
+-----+------------+------------+--------+-------------+----------------+
| sid | sname      | smobile    | ord_id | customer_id | salespersion_id |
+-----+------------+------------+--------+-------------+----------------+
|   1 | SalePerson1 | 1234567890 |      1 |           1 |              1 |
|   1 | SalePerson1 | 1234567890 |      2 |           2 |              1 |
|   2 | SalePerson2 | 1234567891 |      3 |           3 |              2 |
|   3 | SalePerson3 | 1234567892 |      4 |           2 |              3 |
+-----+------------+------------+--------+-------------+----------------+
4 rows in set (0.00 sec)
```

Q7: Create an index

```
mysql> create index index1 on customer(cid);
Query OK, 0 rows affected (0.26 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

Q8: Show index on a table

```
mysql> show index from customer;
+----------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
| Table    | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment |
+----------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
| customer |          0 | PRIMARY  |            1 | cid         | A         |           3 |     NULL | NULL   |      | BTREE      |         |               |
| customer |          1 | index1   |            1 | cid         | A         |           3 |     NULL | NULL   |      | BTREE      |         |               |
+----------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
2 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 o.ord_id,c.cname,s.sname from customer c,salesperson s,orders o where c.cid=o.customer_id and s.sid=o.salespersion_id;
+--------+----------+------------+
| ord_id | cname    | sname      |
+--------+----------+------------+
|      1 | Abhishek | SalePerson1 |
|      2 | Akahsh   | SalePerson1 |
|      3 | Deepak   | SalePerson2 |
|      4 | Akahsh   | SalePerson3 |
+--------+----------+------------+
4 rows in set (0.00 sec)
```