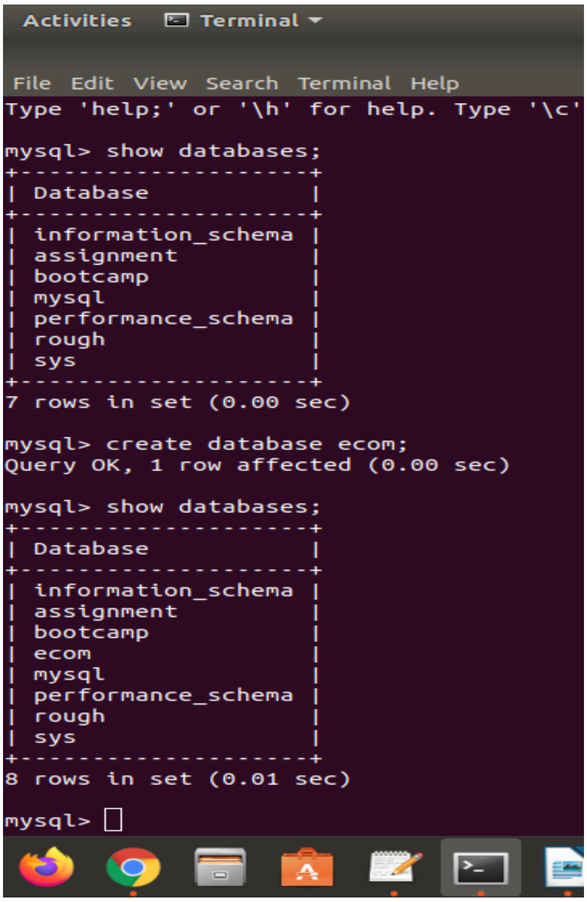
# Database Assignment

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.

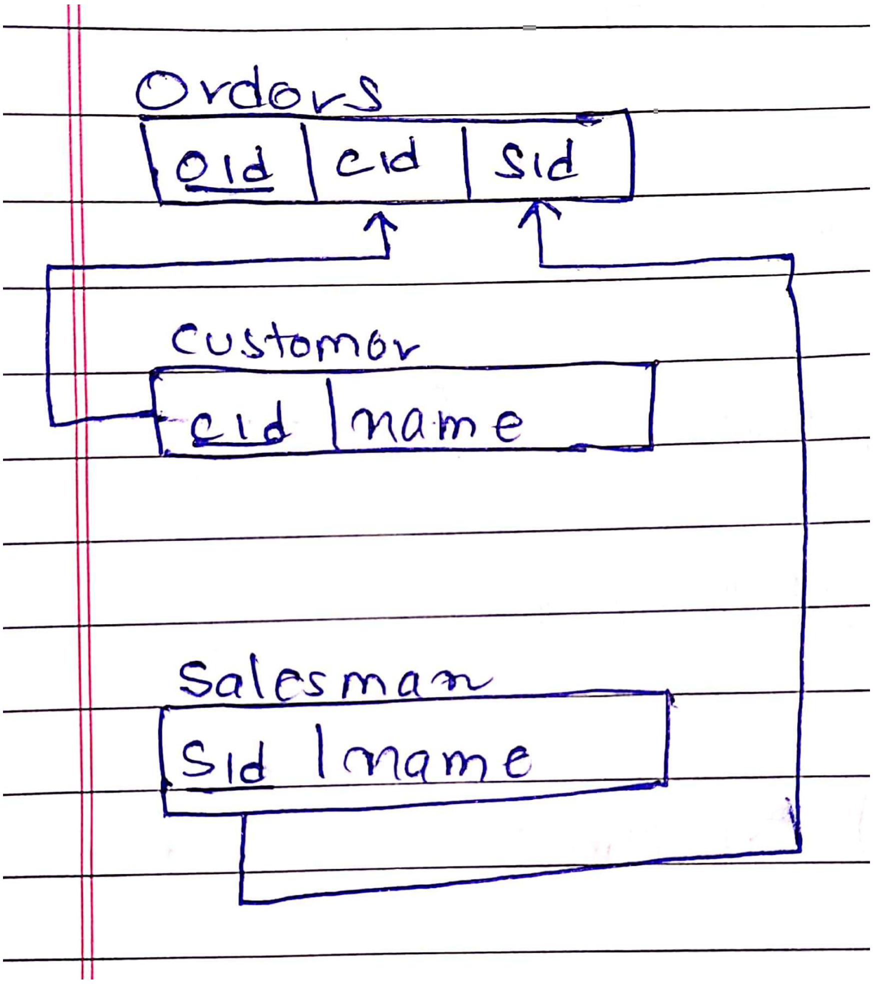
1) Create Database

sql query – **create database ecom;**



```
Type 'help;' or '\h' for help. Type '\c'

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

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

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| assignment         |
| bootcamp           |
| ecom               |
| mysql              |
| performance_schema |
| rough              |
| sys                |
+--------------------+
8 rows in set (0.01 sec)

mysql> 
```

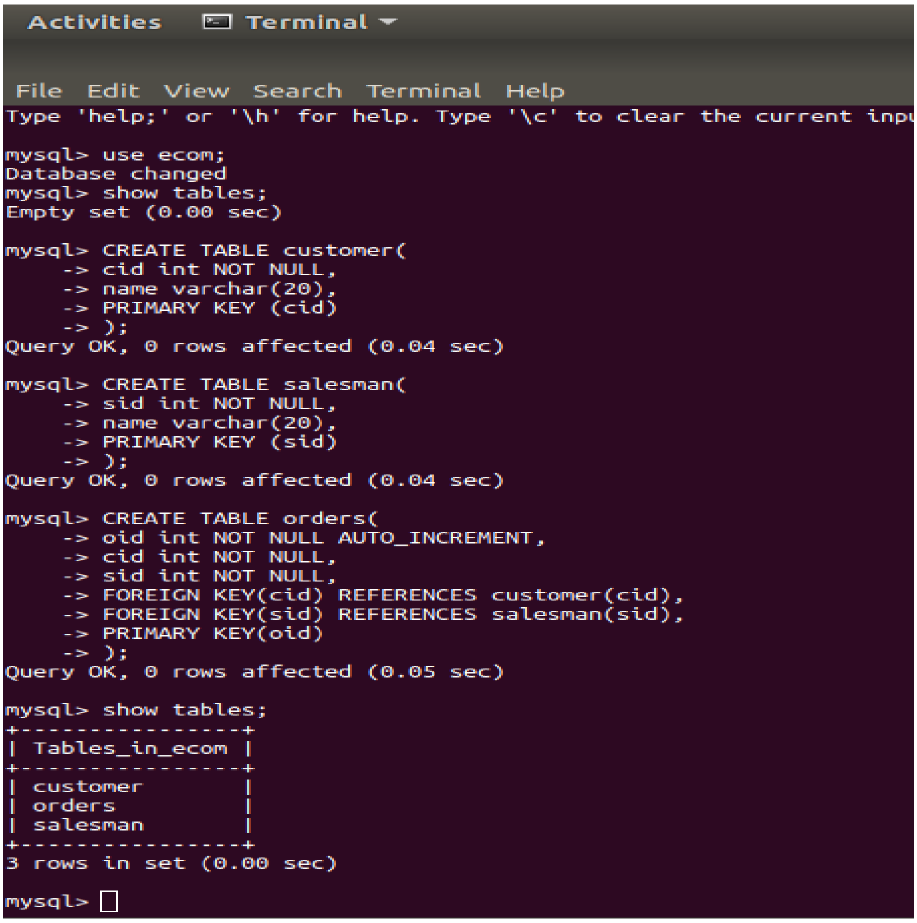
## 2) Design Schema



## 3) Create tables

**sql queries -**

```
CREATE TABLE customer(
cid int NOT NULL,
name varchar(20),
PRIMARY KEY (cid)
);

CREATE TABLE salesman(
sid int NOT NULL,
name varchar(20),
PRIMARY KEY (sid)
);

CREATE TABLE orders(
oid int NOT NULL AUTO_INCREMENT,
cid int NOT NULL,
sid int NOT NULL,
FOREIGN KEY(cid) REFERENCES customer(cid),
FOREIGN KEY(sid) REFERENCES salesman(sid),
PRIMARY KEY(oid)
);
```

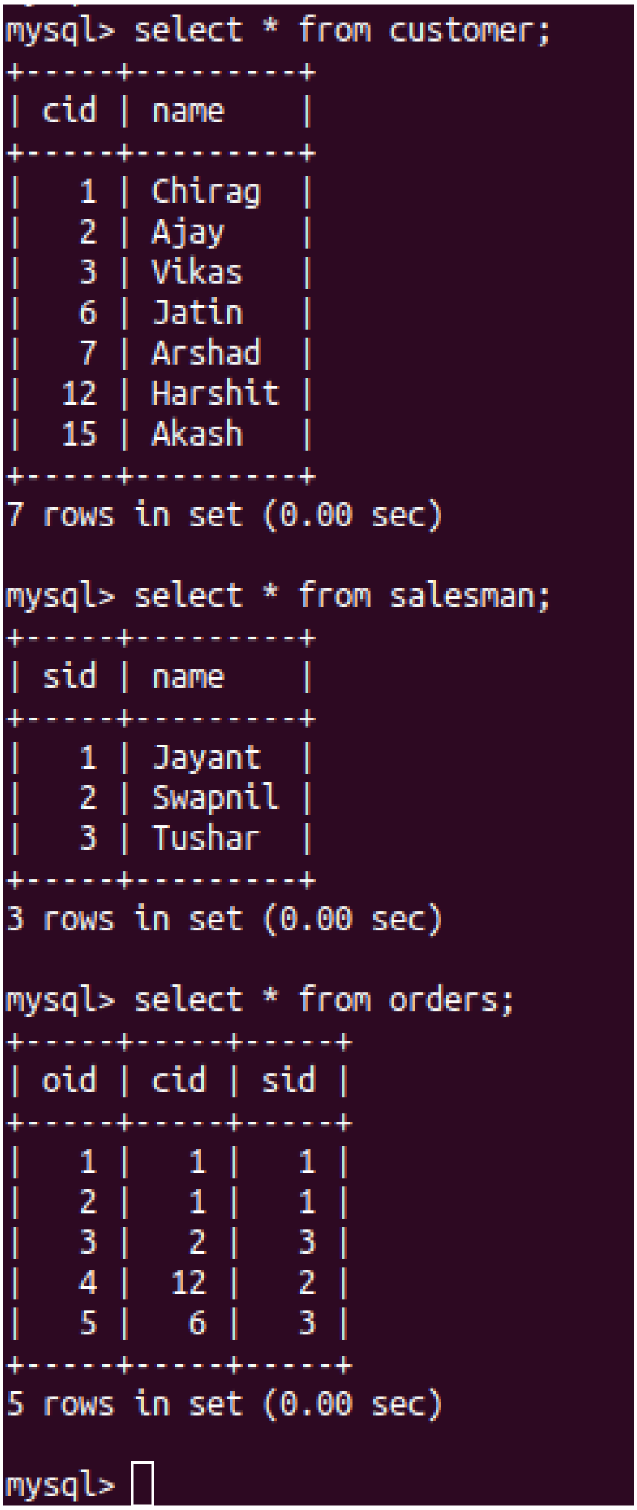


```
Type 'help;' or '\h' for help. Type '\c' to clear the current inpu

mysql> use ecom;
Database changed
mysql> show tables;
Empty set (0.00 sec)

mysql> CREATE TABLE customer(
    -> cid int NOT NULL,
    -> name varchar(20),
    -> PRIMARY KEY (cid)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> CREATE TABLE salesman(
    -> sid int NOT NULL,
    -> name varchar(20),
    -> PRIMARY KEY (sid)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> CREATE TABLE orders(
    -> oid int NOT NULL AUTO_INCREMENT,
    -> cid int NOT NULL,
    -> sid int NOT NULL,
    -> FOREIGN KEY(cid) REFERENCES customer(cid),
    -> FOREIGN KEY(sid) REFERENCES salesman(sid),
    -> PRIMARY KEY(oid)
    -> );
Query OK, 0 rows affected (0.05 sec)

mysql> show tables;
+----------------+
| Tables_in_ecom |
+----------------+
| customer       |
| orders         |
| salesman       |
+----------------+
3 rows in set (0.00 sec)

mysql> 
```

## 4) Insert sample data

sql query used :

INSERT INTO <tablename> (<col1>,<col2>...<coln>)VALUES (<val1>,<val2>...<valn>);

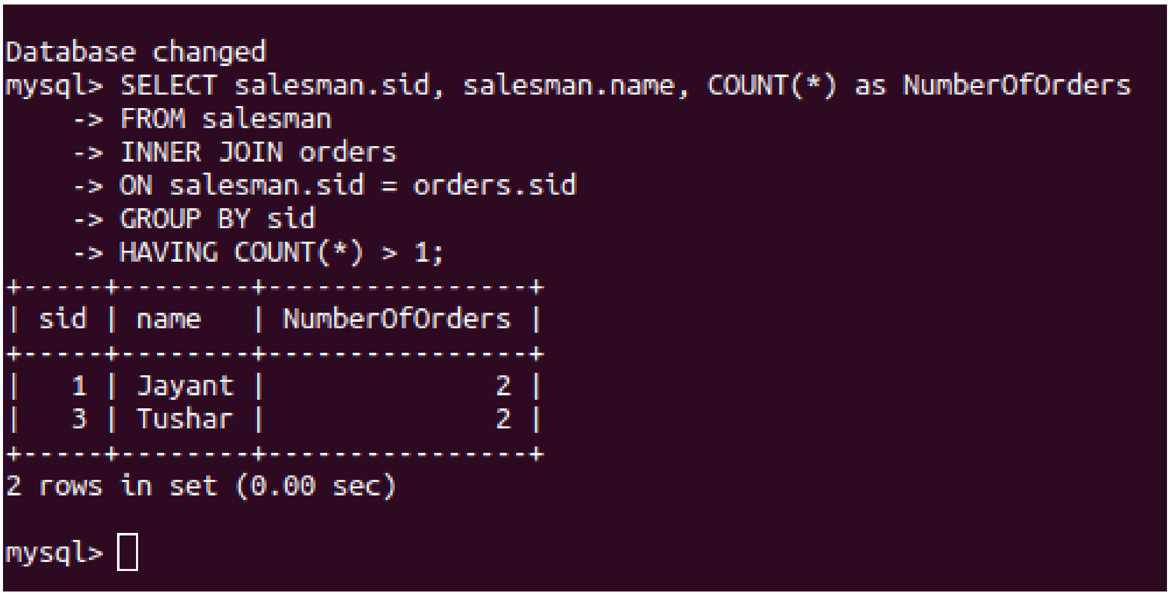


```
mysql> select * from customer;
+-----+---------+
| cid | name    |
+-----+---------+
|   1 | Chirag  |
|   2 | Ajay    |
|   3 | Vikas   |
|   6 | Jatin   |
|   7 | Arshad  |
|  12 | Harshit |
|  15 | Akash   |
+-----+---------+
7 rows in set (0.00 sec)

mysql> select * from salesman;
+-----+---------+
| sid | name    |
+-----+---------+
|   1 | Jayant  |
|   2 | Swapnil |
|   3 | Tushar  |
+-----+---------+
3 rows in set (0.00 sec)

mysql> select * from orders;
+-----+-----+-----+
| oid | cid | sid |
+-----+-----+-----+
|   1 |   1 |   1 |
|   2 |   1 |   1 |
|   3 |   2 |   3 |
|   4 |  12 |   2 |
|   5 |   6 |   3 |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

5) Find the sales person have multiple orders.

sql query :

**SELECT salesman.sid, salesman.name, COUNT(*) as NumberOfOrders**
**FROM salesman**
**INNER JOIN orders**
**ON salesman.sid = orders.sid**
**GROUP BY sid**
**HAVING COUNT(*) > 1;**

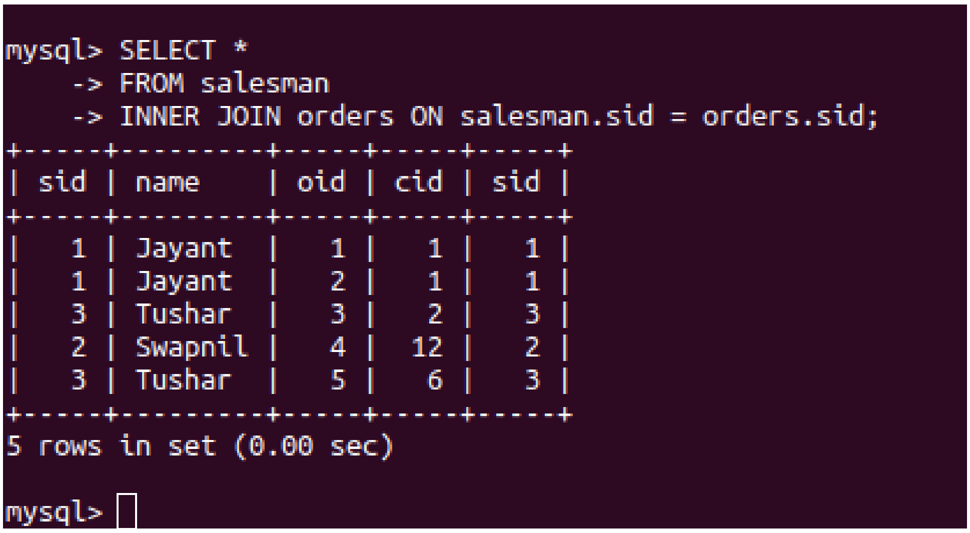


```
Database changed
mysql> SELECT salesman.sid, salesman.name, COUNT(*) as NumberOfOrders
    -> FROM salesman
    -> INNER JOIN orders
    -> ON salesman.sid = orders.sid
    -> GROUP BY sid
    -> HAVING COUNT(*) > 1;
+-----+--------+----------------+
| sid | name   | NumberOfOrders |
+-----+--------+----------------+
|   1 | Jayant |              2 |
|   3 | Tushar |              2 |
+-----+--------+----------------+
2 rows in set (0.00 sec)

mysql>
```

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

sql query :

**SELECT ***
**FROM salesman**
**INNER JOIN orders ON salesman.sid = orders.sid;**

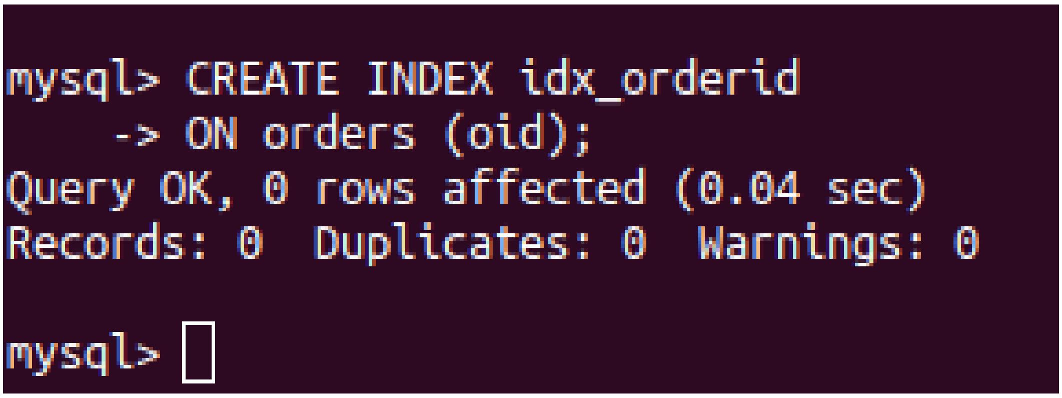


```
mysql> SELECT *
    -> FROM salesman
    -> INNER JOIN orders ON salesman.sid = orders.sid;
+-----+---------+-----+-----+-----+
| sid | name    | oid | cid | sid |
+-----+---------+-----+-----+-----+
|   1 | Jayant  |   1 |   1 |   1 |
|   1 | Jayant  |   2 |   1 |   1 |
|   3 | Tushar  |   3 |   2 |   3 |
|   2 | Swapnil |   4 |  12 |   2 |
|   3 | Tushar  |   5 |   6 |   3 |
+-----+---------+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

7) Create index

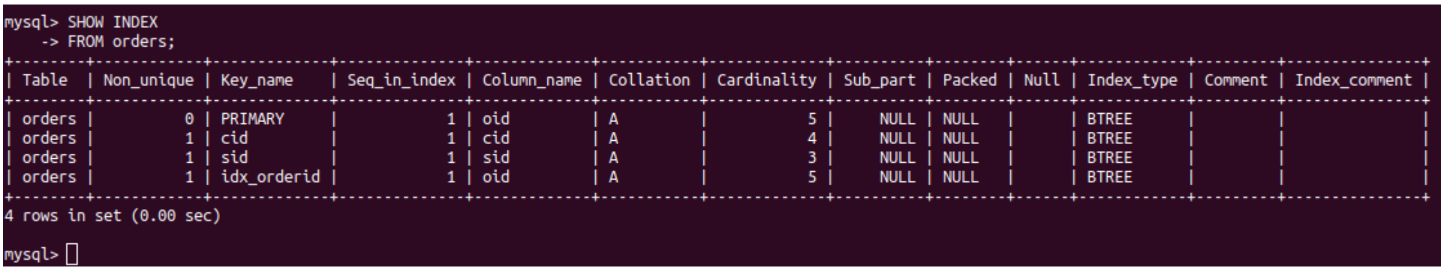
sql query :

**CREATE INDEX idx_orderid**
**ON orders (oid);**



```
mysql> CREATE INDEX idx_orderid
    -> ON orders (oid);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> 
```

8) How to show index on a table

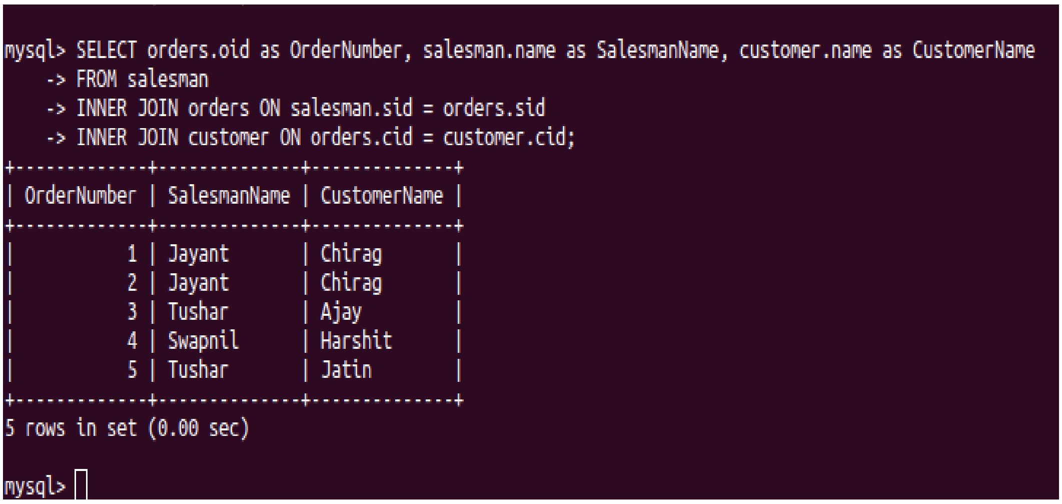


```
mysql> SHOW INDEX
    -> FROM orders;
+--------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
| Table  | Non_unique | Key_name    | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment |
+--------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
| orders |          0 | PRIMARY     |            1 | oid         | A         |           5 |     NULL | NULL   |      | BTREE      |         |               |
| orders |          1 | cid         |            1 | cid         | A         |           4 |     NULL | NULL   |      | BTREE      |         |               |
| orders |          1 | sid         |            1 | sid         | A         |           3 |     NULL | NULL   |      | BTREE      |         |               |
| orders |          1 | idx_orderid |            1 | oid         | A         |           5 |     NULL | NULL   |      | BTREE      |         |               |
+--------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
4 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.

sql query :

**SELECT orders.oid as OrderNumber, salesman.name as SalesmanName, customer.name as CustomerName**
**FROM salesman**
**INNER JOIN orders ON salesman.sid = orders.sid**
**INNER JOIN customer ON orders.cid = customer.cid;**



```
mysql> SELECT orders.oid as OrderNumber, salesman.name as SalesmanName, customer.name as CustomerName
    -> FROM salesman
    -> INNER JOIN orders ON salesman.sid = orders.sid
    -> INNER JOIN customer ON orders.cid = customer.cid;
+-------------+--------------+--------------+
| OrderNumber | SalesmanName | CustomerName |
+-------------+--------------+--------------+
|           1 | Jayant       | Chirag       |
|           2 | Jayant       | Chirag       |
|           3 | Tushar       | Ajay         |
|           4 | Swapnil      | Harshit      |
|           5 | Tushar       | Jatin        |
+-------------+--------------+--------------+
5 rows in set (0.00 sec)

mysql> 
```