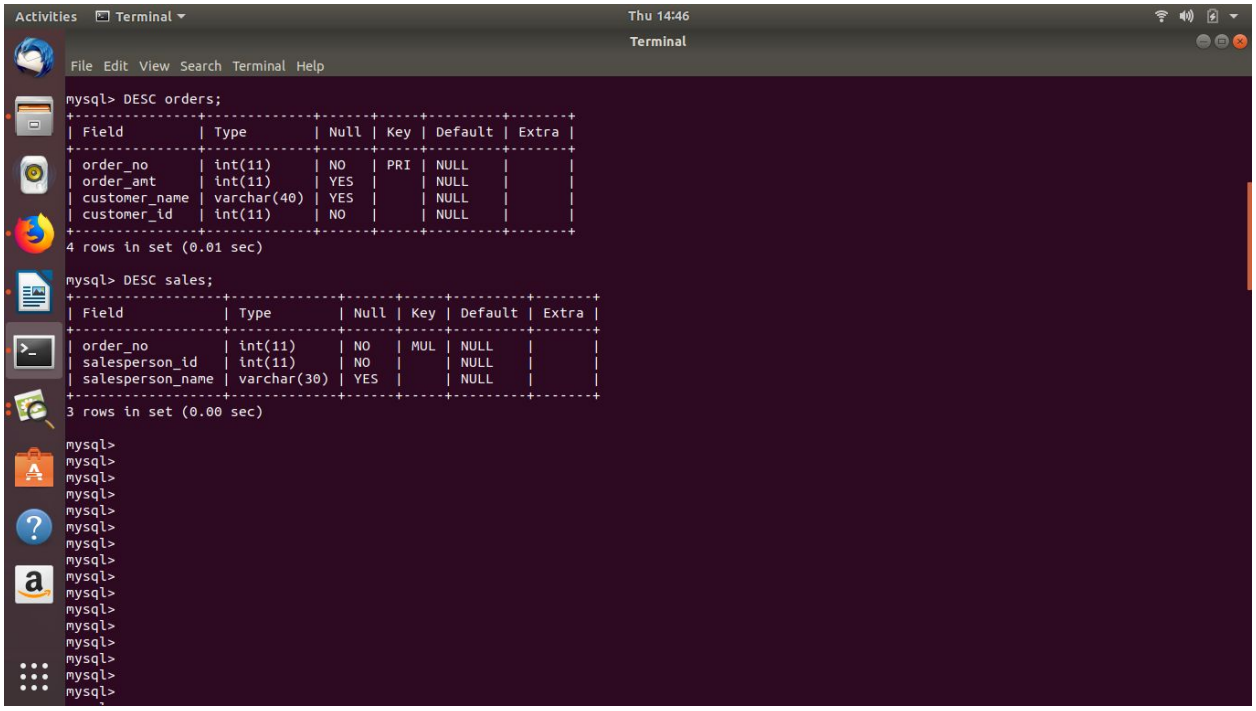
Problem Statement : There can be multiple customers, who can place multiple orders on the site. Now a sales person can handle these orders will distribute into multiple sales persons (One order will be assign to one salesperson only). So a sales person can have multiple orders of multiple customers.

1.Create Database

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

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

2.-Design Schema



```
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mysql> DESC orders;
+---------------+------------+------+-----+---------+-------+
| Field         | Type       | Null | Key | Default | Extra |
+---------------+------------+------+-----+---------+-------+
| order_no      | int(11)    | NO   | PRI | NULL    |       |
| order_amt     | int(11)    | YES  |     | NULL    |       |
| customer_name | varchar(40)| YES  |     | NULL    |       |
| customer_id   | int(11)    | NO   |     | NULL    |       |
+---------------+------------+------+-----+---------+-------+
4 rows in set (0.01 sec)

mysql> DESC sales;
+------------------+-------------+------+-----+---------+-------+
| Field            | Type        | Null | Key | Default | Extra |
+------------------+-------------+------+-----+---------+-------+
| order_no         | int(11)     | NO   | MUL | NULL    |       |
| salesperson_id   | int(11)     | NO   |     | NULL    |       |
| salesperson_name | varchar(30) | YES  |     | NULL    |       |
+------------------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)

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```
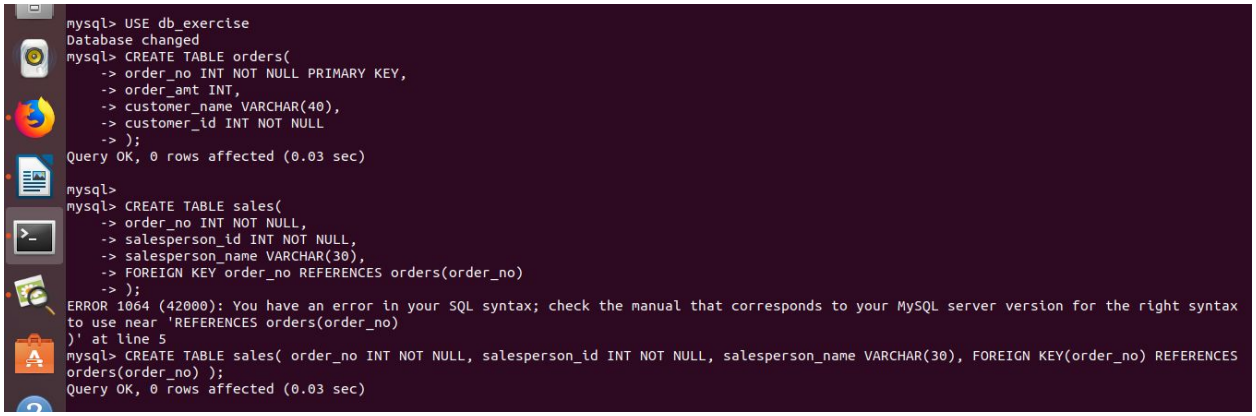
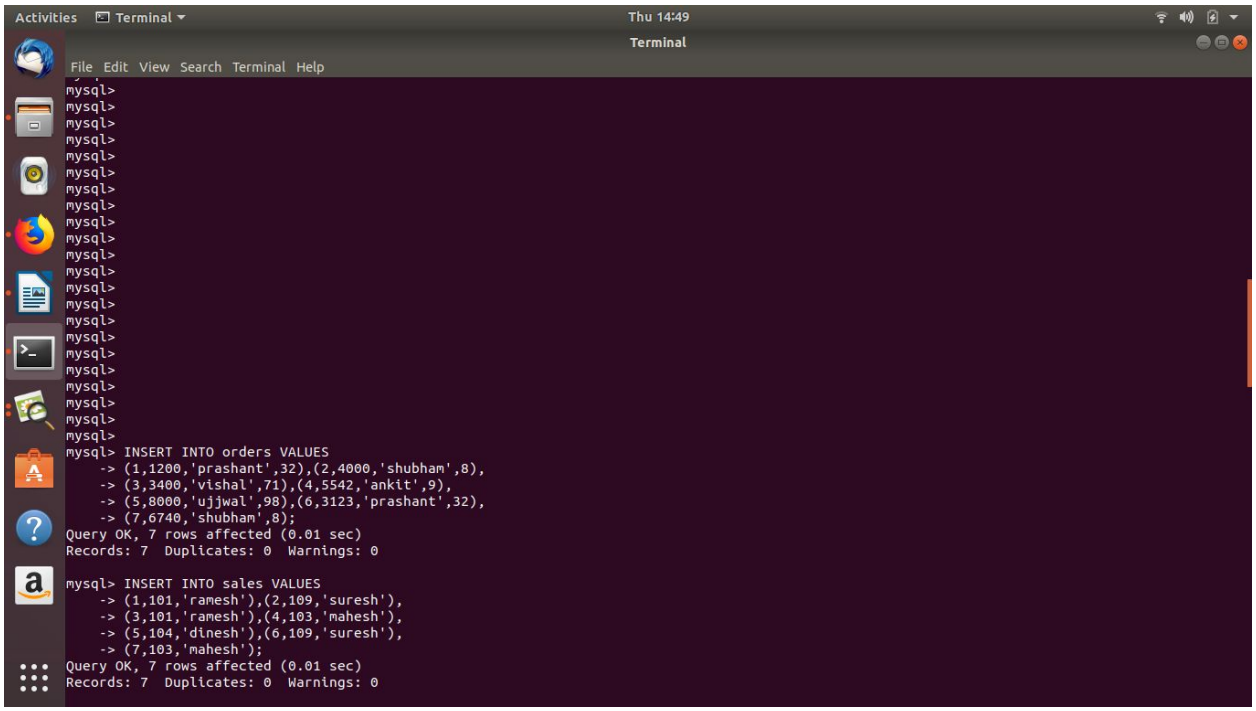

3.-Create tables



```
mysql> USE db_exercise
Database changed
mysql> CREATE TABLE orders(
    -> order_no INT NOT NULL PRIMARY KEY,
    -> order_amt INT,
    -> customer_name VARCHAR(40),
    -> customer_id INT NOT NULL
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql>
mysql> CREATE TABLE sales(
    -> order_no INT NOT NULL,
    -> salesperson_id INT NOT NULL,
    -> salesperson_name VARCHAR(30),
    -> FOREIGN KEY order_no REFERENCES orders(order_no)
    -> );
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax
to use near 'REFERENCES orders(order_no)
)' at line 5
mysql> CREATE TABLE sales( order_no INT NOT NULL, salesperson_id INT NOT NULL, salesperson_name VARCHAR(30), FOREIGN KEY(order_no) REFERENCES
orders(order_no) );
Query OK, 0 rows affected (0.03 sec)
```

4.Insert sample data



```
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mysql> INSERT INTO orders VALUES
    -> (1,1200,'prashant',32),(2,4000,'shubham',8),
    -> (3,3400,'vishal',71),(4,5542,'ankit',9),
    -> (5,8000,'ujjwal',98),(6,3123,'prashant',32),
    -> (7,6740,'shubham',8);
Query OK, 7 rows affected (0.01 sec)
Records: 7  Duplicates: 0  Warnings: 0

mysql> INSERT INTO sales VALUES
    -> (1,101,'ramesh'),(2,109,'suresh'),
    -> (3,101,'ramesh'),(4,103,'mahesh'),
    -> (5,104,'dinesh'),(6,109,'suresh'),
    -> (7,103,'mahesh');
Query OK, 7 rows affected (0.01 sec)
Records: 7  Duplicates: 0  Warnings: 0
```
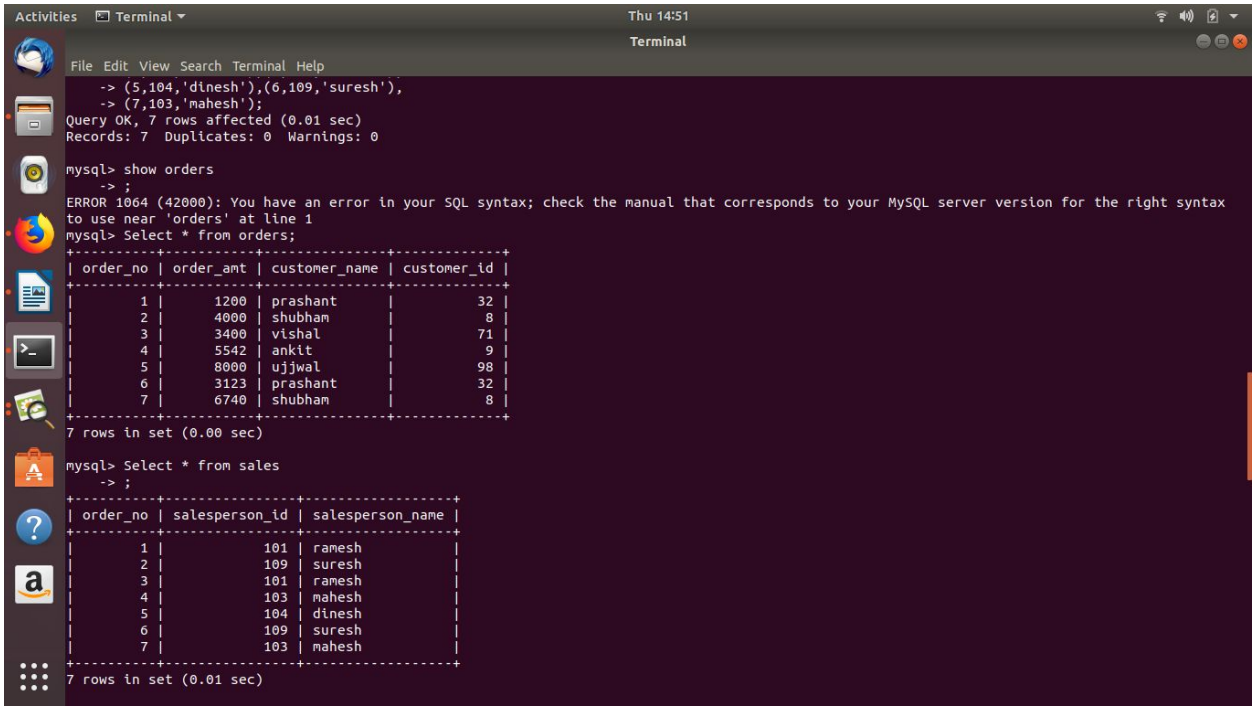
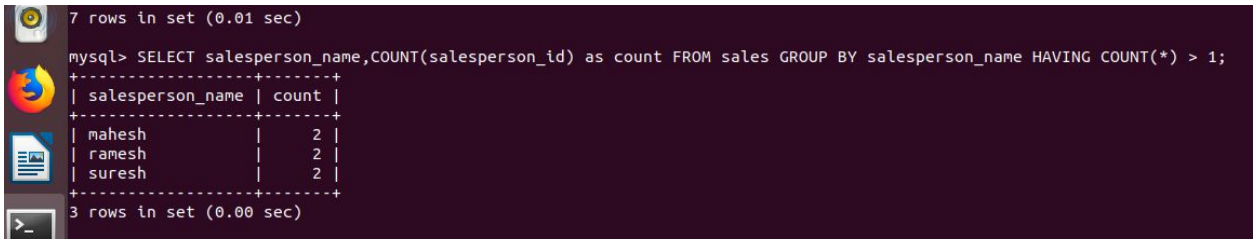
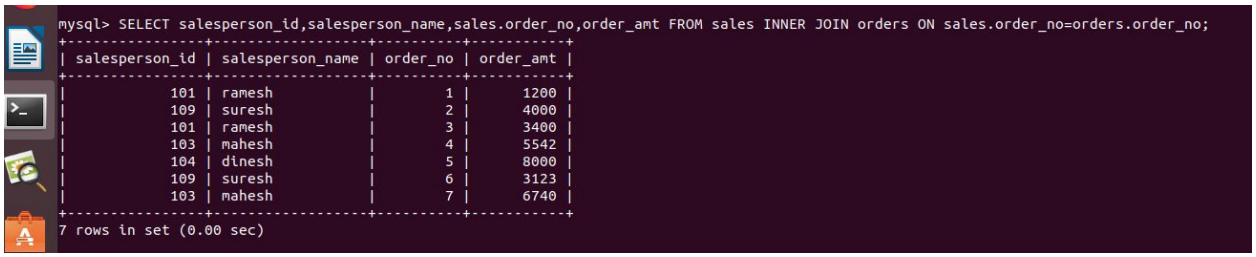



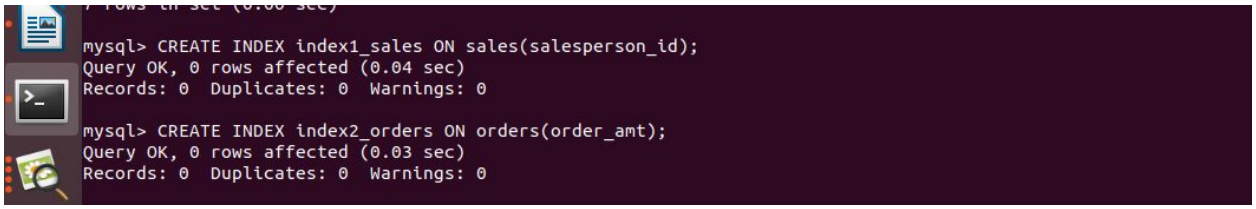
5.Find the sales person having multiple orders.



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

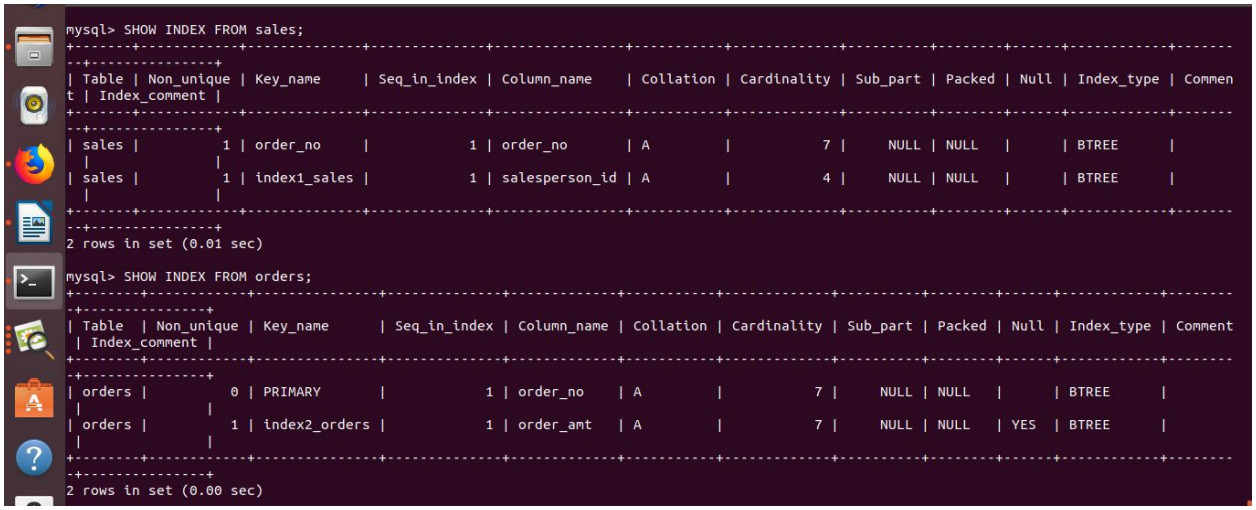


7.Create index



```
mysql> CREATE INDEX index1_sales ON sales(salesperson_id);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> CREATE INDEX index2_orders ON orders(order_amt);
Query OK, 0 rows affected (0.03 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

8.How to show index on a table



```
mysql> SHOW INDEX FROM sales;
+-------+------------+--------------+--------------+---------------+-----------+-------------+----------+--------+------+------------+---------
--+---------------+
| Table | Non_unique | Key_name     | Seq_in_index | Column_name   | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Commen
t | Index_comment |
+-------+------------+--------------+--------------+---------------+-----------+-------------+----------+--------+------+------------+---------
--+---------------+
| sales |          1 | order_no     |            1 | order_no      | A         |           7 |     NULL | NULL   |      | BTREE      |
  |               |
| sales |          1 | index1_sales |            1 | salesperson_id | A         |           4 |     NULL | NULL   |      | BTREE      |
  |               |
+-------+------------+--------------+--------------+---------------+-----------+-------------+----------+--------+------+------------+---------
--+---------------+
2 rows in set (0.01 sec)

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 | order_no    | A         |           7 |     NULL | NULL   |      | BTREE      |
 |               |
| orders |          1 | index2_orders |            1 | order_amt   | A         |           7 |     NULL | NULL   | YES  | BTREE      |
  |               |
+--------+------------+--------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+--------
-+---------------+
2 rows in set (0.00 sec)
```

9.Find the order number, sales person name, along with the customer to whom that order belongs to

```
mysql> SELECT sales.order_no, salesperson_name, customer_name FROM sales
    -> INNER JOIN orders
    -> ON sales.order_no=orders.order_no;
+----------+-----------------+---------------+
| order_no | salesperson_name | customer_name |
+----------+-----------------+---------------+
|        1 | ramesh          | prashant      |
|        2 | suresh          | shubham       |
|        3 | ramesh          | vishal        |
|        4 | mahesh          | ankit         |
|        5 | dinesh          | ujjwal        |
|        6 | suresh          | prashant      |
|        7 | mahesh          | shubham       |
+----------+-----------------+---------------+
7 rows in set (0.00 sec)

mysql>
```