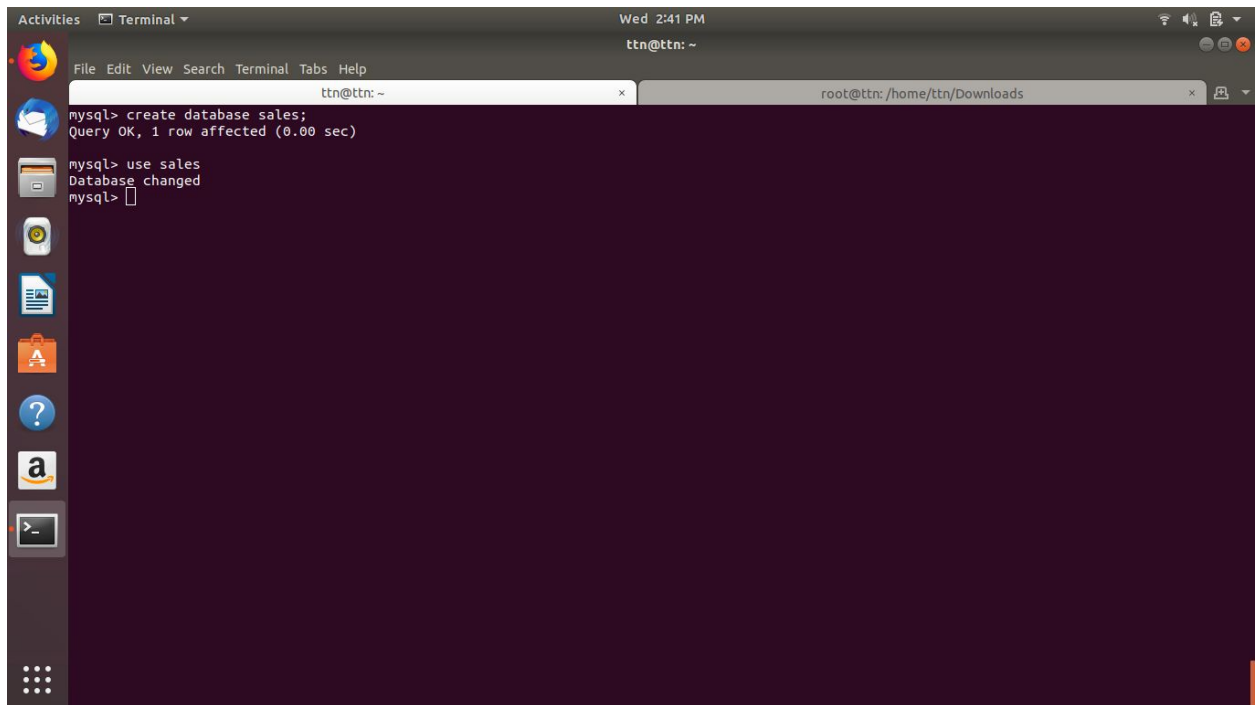


## 1. Create Database

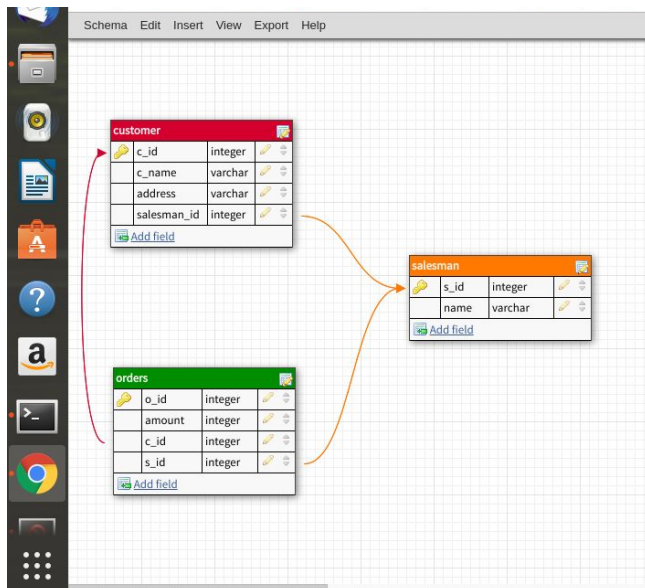


A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Tabs, Help) and a status bar (Wed 2:41 PM, ttn@ttn: ~). The terminal shows the following commands and output:

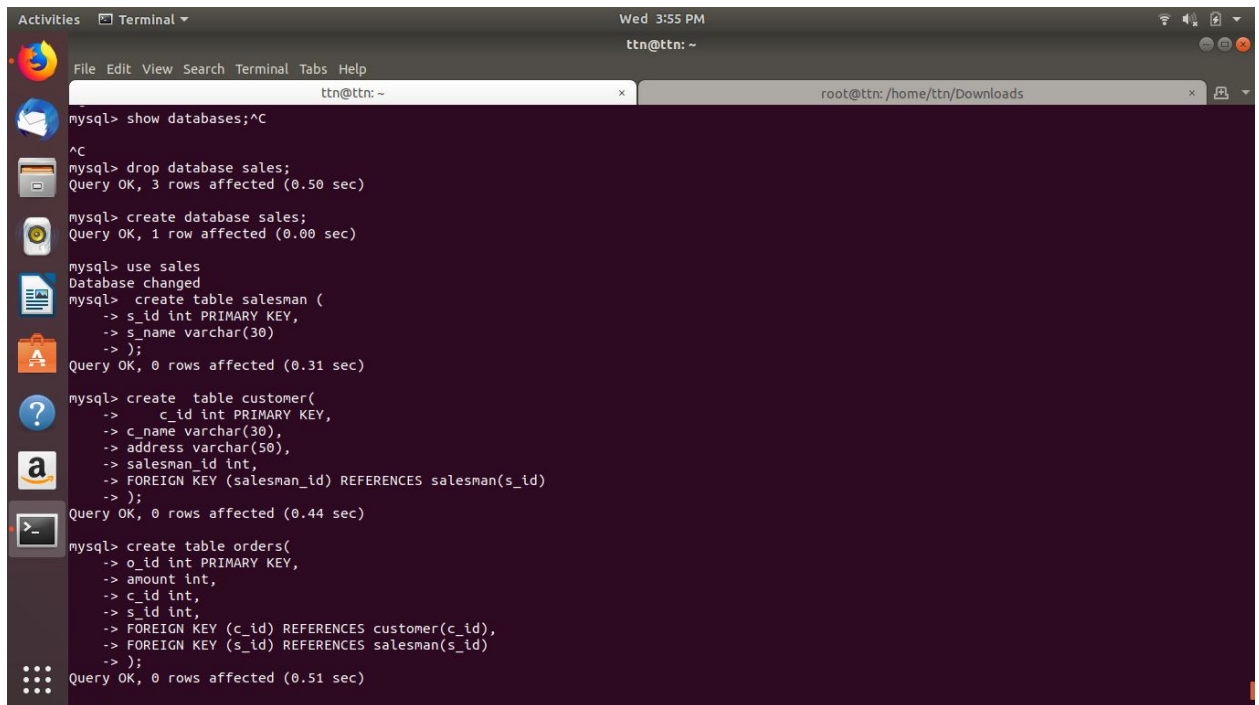
```
mysql> create database sales;
Query OK, 1 row affected (0.00 sec)

mysql> use sales
Database changed
mysql>
```

## 2. Design Schema



### 3. Create tables



The screenshot shows a terminal window with the following MySQL commands and output:

```
mysql> show databases;^C
mysql> drop database sales;
Query OK, 3 rows affected (0.50 sec)

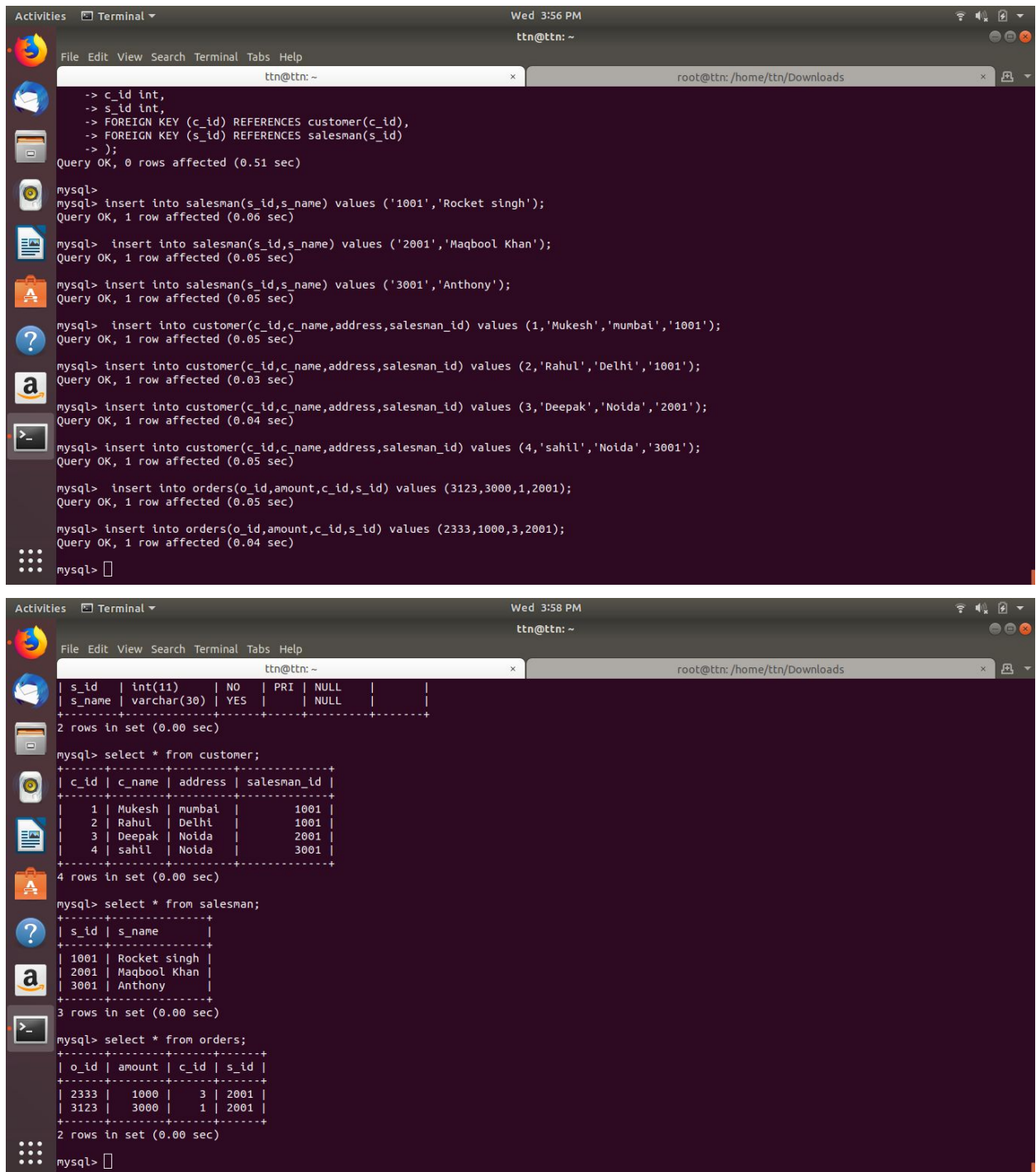
mysql> create database sales;
Query OK, 1 row affected (0.00 sec)

mysql> use sales
Database changed
mysql> create table salesman (
->   s_id int PRIMARY KEY,
->   s_name varchar(30)
-> );
Query OK, 0 rows affected (0.31 sec)

mysql> create table customer(
->   c_id int PRIMARY KEY,
->   c_name varchar(30),
->   address varchar(50),
->   salesman_id int,
->   FOREIGN KEY (salesman_id) REFERENCES salesman(s_id)
-> );
Query OK, 0 rows affected (0.44 sec)

mysql> create table orders(
->   o_id int PRIMARY KEY,
->   amount int,
->   c_id int,
->   s_id int,
->   FOREIGN KEY (c_id) REFERENCES customer(c_id),
->   FOREIGN KEY (s_id) REFERENCES salesman(s_id)
-> );
Query OK, 0 rows affected (0.51 sec)
```

#### 4. Insert sample data



```

-> c_id int,
-> s_id int,
-> FOREIGN KEY (c_id) REFERENCES customer(c_id),
-> FOREIGN KEY (s_id) REFERENCES salesman(s_id)
-> );
Query OK, 0 rows affected (0.51 sec)

mysql>
mysql> insert into salesman(s_id,s_name) values ('1001','Rocket singh');
Query OK, 1 row affected (0.06 sec)

mysql> insert into salesman(s_id,s_name) values ('2001','Maqbool Khan');
Query OK, 1 row affected (0.05 sec)

mysql> insert into salesman(s_id,s_name) values ('3001','Anthony');
Query OK, 1 row affected (0.05 sec)

mysql> insert into customer(c_id,c_name,address,salesman_id) values (1,'Mukesh','mumbai','1001');
Query OK, 1 row affected (0.05 sec)

mysql> insert into customer(c_id,c_name,address,salesman_id) values (2,'Rahul','Delhi','1001');
Query OK, 1 row affected (0.03 sec)

mysql> insert into customer(c_id,c_name,address,salesman_id) values (3,'Deepak','Noida','2001');
Query OK, 1 row affected (0.04 sec)

mysql> insert into customer(c_id,c_name,address,salesman_id) values (4,'sahil','Noida','3001');
Query OK, 1 row affected (0.05 sec)

mysql> insert into orders(o_id,amount,c_id,s_id) values (3123,3000,1,2001);
Query OK, 1 row affected (0.05 sec)

mysql> insert into orders(o_id,amount,c_id,s_id) values (2333,1000,3,2001);
Query OK, 1 row affected (0.04 sec)

mysql>

```

```

ttn@ttn: ~
File Edit View Search Terminal Tabs Help

ttn@ttn: ~
root@ttn: /home/ttn/Downloads

| s_id | int(11) | NO | PRI | NULL | | |
| s_name | varchar(30) | YES | | NULL | | |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> select * from customer;
+-----+-----+-----+-----+
| c_id | c_name | address | salesman_id |
+-----+-----+-----+-----+
| 1 | Mukesh | mumbai | 1001 |
| 2 | Rahul | Delhi | 1001 |
| 3 | Deepak | Noida | 2001 |
| 4 | sahil | Noida | 3001 |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

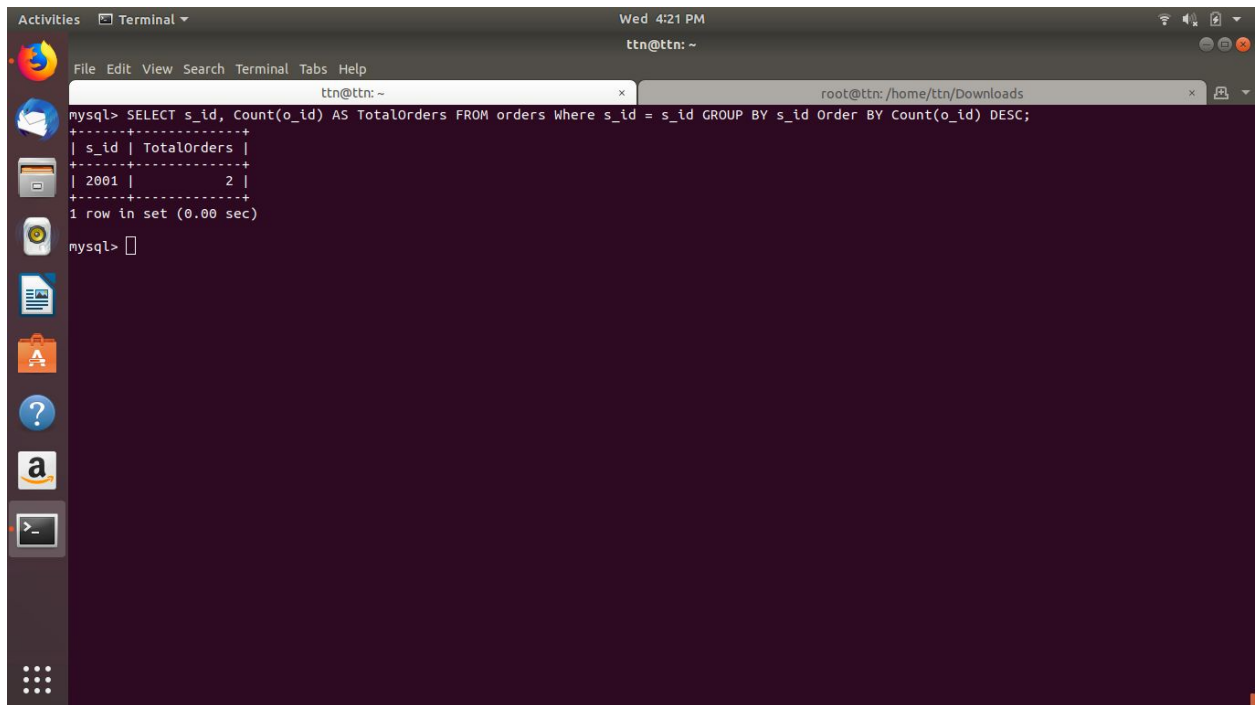
mysql> select * from salesman;
+-----+-----+
| s_id | s_name |
+-----+-----+
| 1001 | Rocket singh |
| 2001 | Maqbool Khan |
| 3001 | Anthony |
+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from orders;
+-----+-----+-----+-----+
| o_id | amount | c_id | s_id |
+-----+-----+-----+-----+
| 2333 | 1000 | 3 | 2001 |
| 3123 | 3000 | 1 | 2001 |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql>

```

5. Find the sales person have multiple orders.

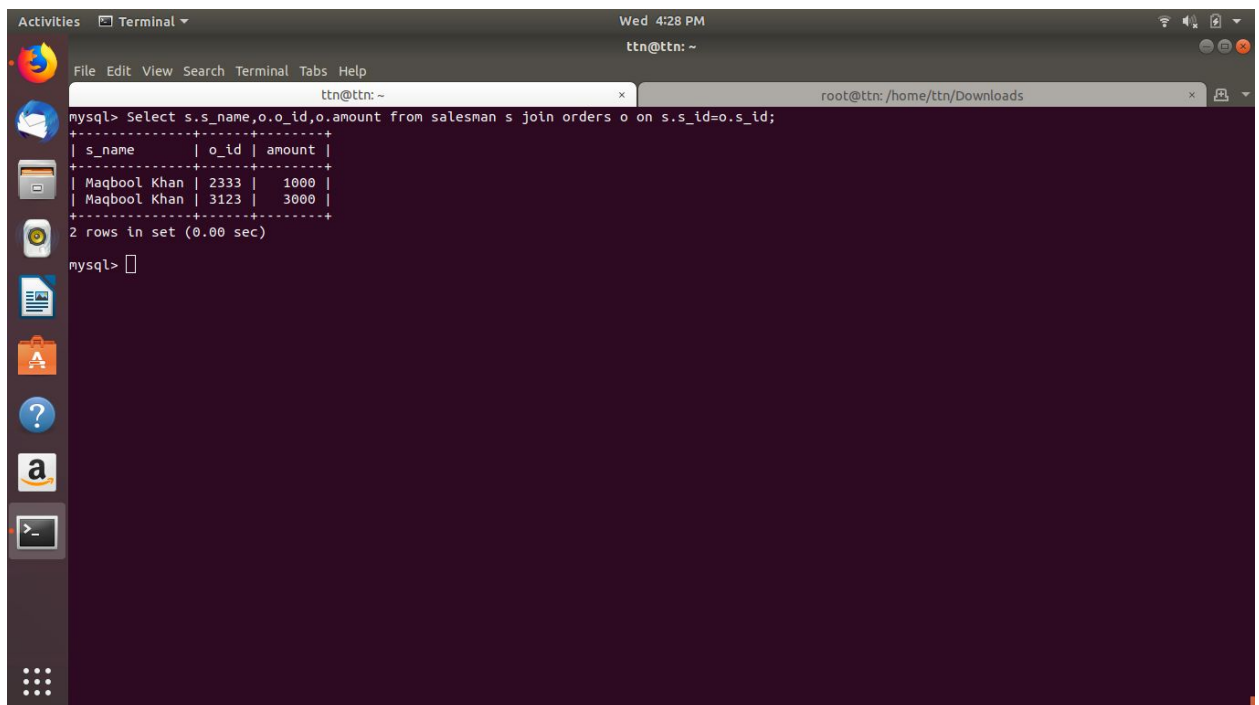


A terminal window showing a MySQL query execution. The query is: `mysql> SELECT s_id, Count(o_id) AS TotalOrders FROM orders Where s_id = s_id GROUP BY s_id Order BY Count(o_id) DESC;` The output is a table with two columns: `s_id` and `TotalOrders`. The first row shows `2001` and `2`. The message `1 row in set (0.00 sec)` is displayed below the table.

```
mysql> SELECT s_id, Count(o_id) AS TotalOrders FROM orders Where s_id = s_id GROUP BY s_id Order BY Count(o_id) DESC;
+-----+-----+
| s_id | TotalOrders |
+-----+-----+
| 2001 |          2 |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```

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



A terminal window showing a MySQL query execution. The query is: `mysql> Select s.s_name,o.o_id,o.amount from salesman s join orders o on s.s_id=o.s_id;` The output is a table with three columns: `s_name`, `o_id`, and `amount`. The first two rows show `Maqbool Khan` with `2333` and `1000`, and `3123` and `3000` respectively. The message `2 rows in set (0.00 sec)` is displayed below the table.

```
mysql> Select s.s_name,o.o_id,o.amount from salesman s join orders o on s.s_id=o.s_id;
+-----+-----+-----+
| s_name | o_id | amount |
+-----+-----+-----+
| Maqbool Khan | 2333 |    1000 |
| Maqbool Khan | 3123 |    3000 |
+-----+-----+-----+
2 rows in set (0.00 sec)

mysql>
```

## 7. Create index

Activities Terminal Wed 5:01 PM ttn@ttn: ~

File Edit View Search Terminal Tabs Help

ttn@ttn: ~ root@ttn: /home/ttn/Downloads

```
mysql> create index index2 on customer(c_id);
Query OK, 0 rows affected, 1 warning (0.34 sec)
Records: 0 Duplicates: 0 Warnings: 1

mysql> show index2 from customer;
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 'index2 from customer' at line 1
mysql> show INDEX from customer;
```

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment
customer	0	PRIMARY	1	c_id	A	4				BTREE	
customer	1	salesman_id	1	salesman_id	A	3			YES	BTREE	
customer	1	index1	1	c_id	A	4				BTREE	
customer	1	index2	1	c_id	A	4				BTREE	

```
4 rows in set (0.00 sec)

mysql>
```

## 8. How to show index on a table

Activities Terminal Wed 4:43 PM ttn@ttn: ~

File Edit View Search Terminal Tabs Help

ttn@ttn: ~ root@ttn: /home/ttn/Downloads

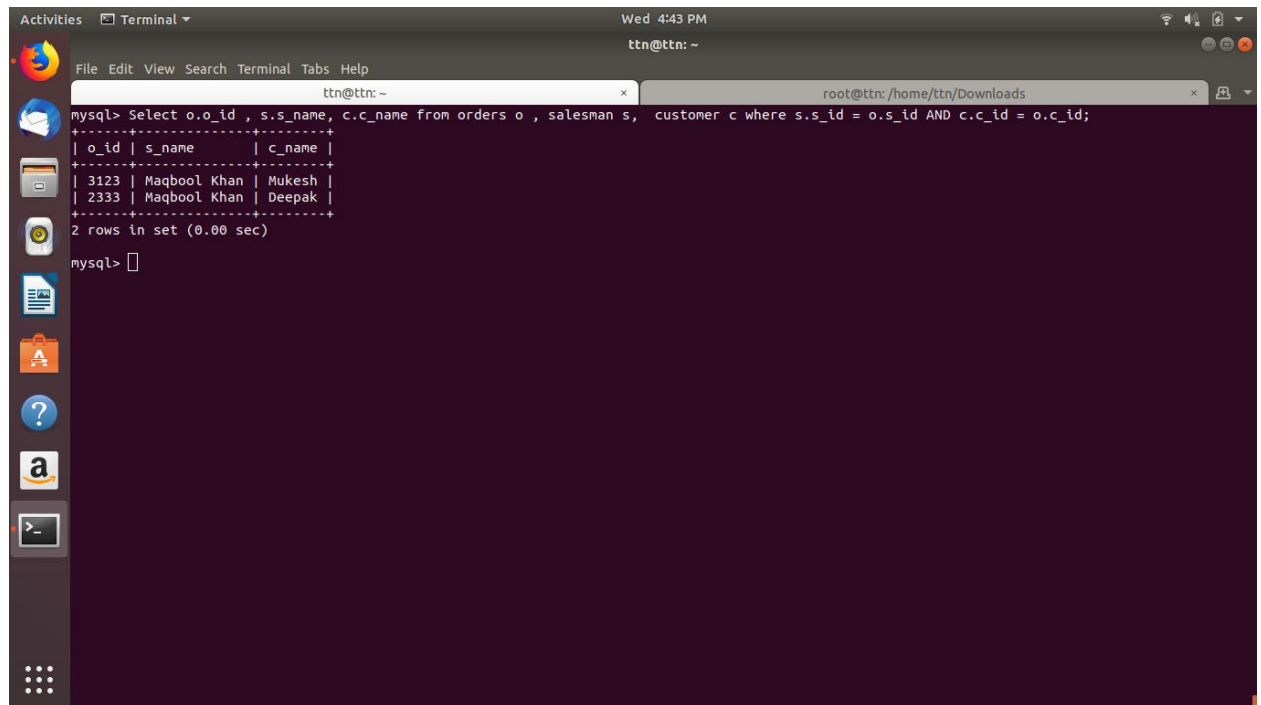
```
mysql> show INDEX from customer;
```

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment
customer	0	PRIMARY	1	c_id	A	4			NULL	BTREE	
customer	1	salesman_id	1	salesman_id	A	3			NULL	BTREE	
customer	1	index1	1	c_id	A	4			NULL	BTREE	
customer	1	index2	1	c_id	A	4			NULL	BTREE	

```
4 rows in set (0.00 sec)

mysql>
```

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



The screenshot shows a Linux desktop environment with a terminal window open. The terminal displays a MySQL query and its results. The query is: `mysql> Select o.o_id , s.s_name, c.c_name from orders o , salesman s, customer c where s.s_id = o.s_id AND c.c_id = o.c_id;`. The results are displayed in a table format with three columns: `o_id`, `s_name`, and `c_name`. The results show two rows: one for order 3123 with salesman Maqbool Khan and customer Mukesh, and another for order 2333 with salesman Maqbool Khan and customer Deepak. The terminal also shows the message `2 rows in set (0.00 sec)`. The terminal window has a menu bar with `File`, `Edit`, `View`, `Search`, `Terminal`, `Tabs`, and `Help`. The status bar at the top shows the time as `Wed 4:43 PM` and the user as `ttn@ttn: ~`. The desktop background is dark purple, and the left sidebar contains various application icons.

```
mysql> Select o.o_id , s.s_name, c.c_name from orders o , salesman s, customer c where s.s_id = o.s_id AND c.c_id = o.c_id;
+-----+-----+-----+
| o_id | s_name | c_name |
+-----+-----+-----+
| 3123 | Maqbool Khan | Mukesh |
| 2333 | Maqbool Khan | Deepak |
+-----+-----+-----+
2 rows in set (0.00 sec)

mysql>
```