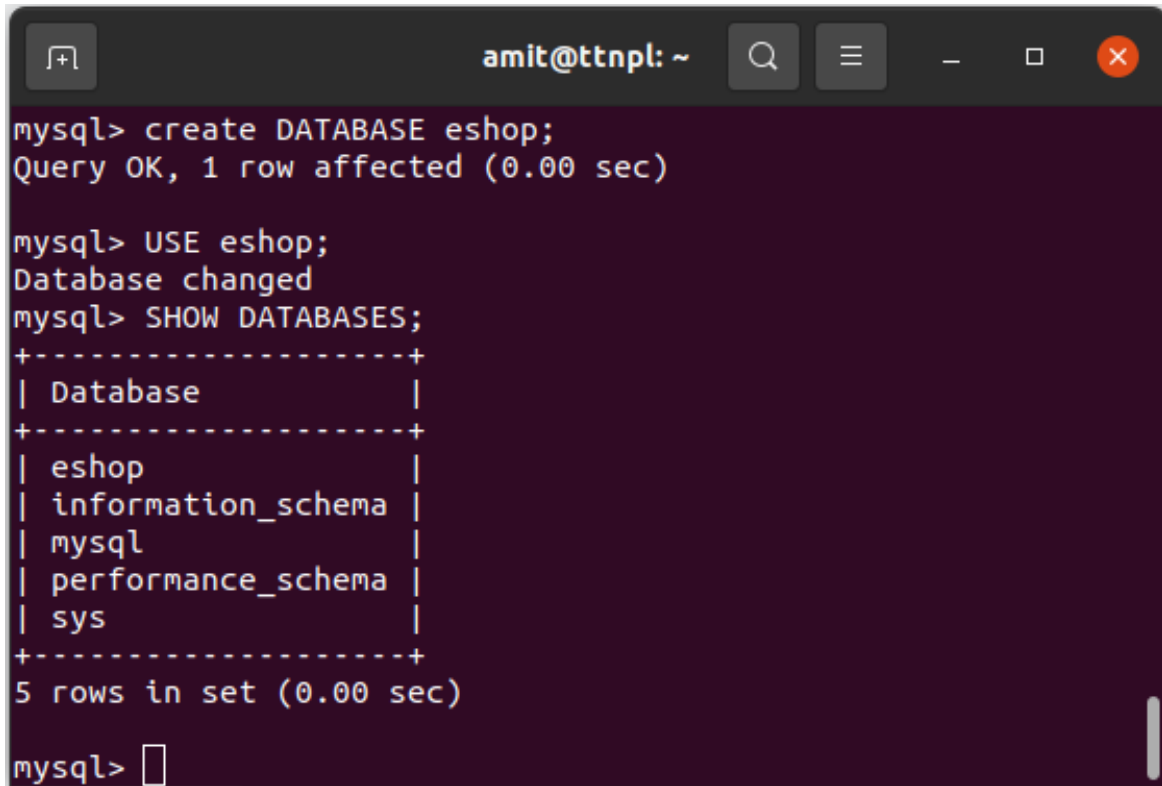


Problem Statement: There can be multiple customers, who can place multiple orders on the site. Now a sales person can handle these orders will distribute into multiple sales persons (One order will be assign to one salesperson only). So a sales person can have multiple orders of multiple customers

1. Create Database

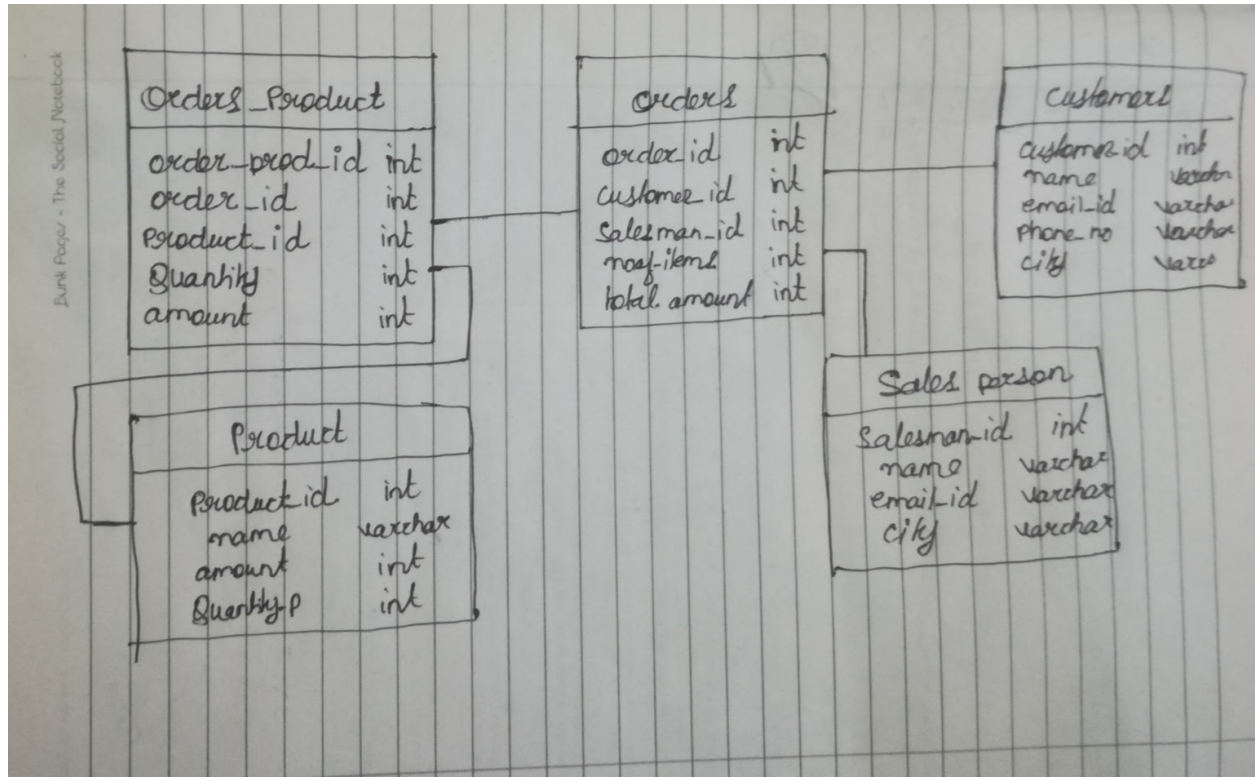


```
mysql> create DATABASE eshop;
Query OK, 1 row affected (0.00 sec)

mysql> USE eshop;
Database changed
mysql> SHOW DATABASES;
+-----+
| Database                |
+-----+
| eshop                    |
| information_schema      |
| mysql                   |
| performance_schema      |
| sys                     |
+-----+
5 rows in set (0.00 sec)

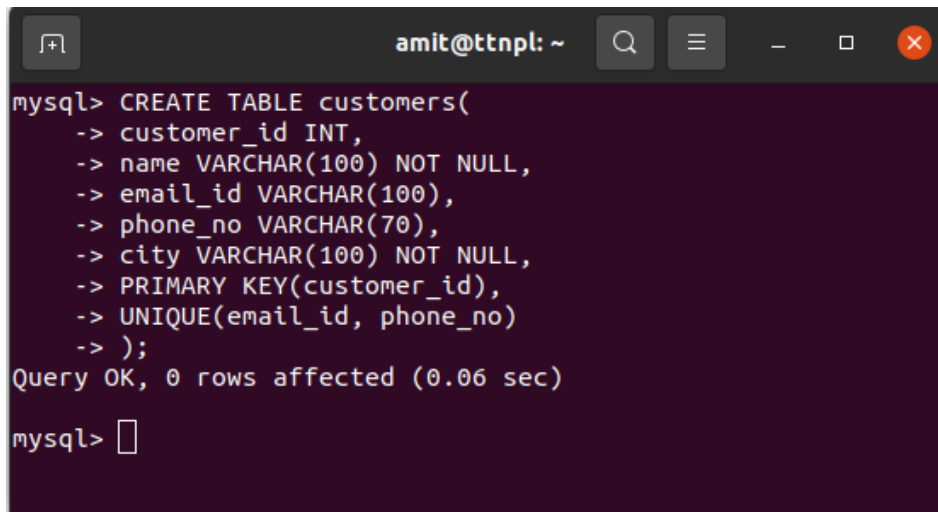
mysql> 
```

2. Design Schema



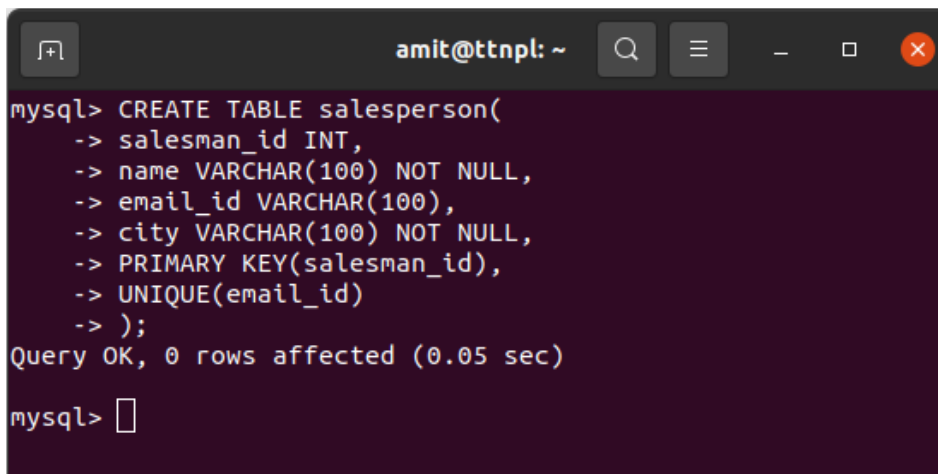
3. Create tables

Customers Table



```
mysql> CREATE TABLE customers(  
-> customer_id INT,  
-> name VARCHAR(100) NOT NULL,  
-> email_id VARCHAR(100),  
-> phone_no VARCHAR(70),  
-> city VARCHAR(100) NOT NULL,  
-> PRIMARY KEY(customer_id),  
-> UNIQUE(email_id, phone_no)  
-> );  
Query OK, 0 rows affected (0.06 sec)  
  
mysql> 
```

SalesPerson Table



```
mysql> CREATE TABLE salesperson(  
-> salesman_id INT,  
-> name VARCHAR(100) NOT NULL,  
-> email_id VARCHAR(100),  
-> city VARCHAR(100) NOT NULL,  
-> PRIMARY KEY(salesman_id),  
-> UNIQUE(email_id)  
-> );  
Query OK, 0 rows affected (0.05 sec)  
  
mysql> 
```

Order Table

```
mysql> CREATE TABLE orders(  
-> order_id INT,  
-> customerid INT,  
-> salesmanid INT,  
-> no_of_items INT NOT NULL,  
-> total_amount INT NOT NULL,  
-> PRIMARY KEY(order_id),  
-> FOREIGN KEY (customerid) REFERENCES customers(customer_id) ON DELETE CASCADE,  
-> FOREIGN KEY (salesmanid) REFERENCES salesperson(salesman_id) ON DELETE CASCADE  
-> );  
Query OK, 0 rows affected (0.05 sec)  
  
mysql> 
```

Product Table

```
mysql> CREATE TABLE product(  
-> product_id INT,  
-> name VARCHAR(100) NOT NULL,  
-> amount INT NOT NULL,  
-> quantity_p INT NOT NULL,  
-> PRIMARY KEY(product_id),  
-> UNIQUE(name)  
-> );  
Query OK, 0 rows affected (0.03 sec)  
  
mysql> 
```

OrdersProduct Table

```
amit@ttnpl: ~  
mysql> CREATE TABLE orders_product(  
-> order_prod_id INT,  
-> order_id INT,  
-> product_id INT,  
-> quantity INT NOT NULL,  
-> amount INT NOT NULL,  
-> PRIMARY KEY(order_id),  
-> FOREIGN KEY (order_id) REFERENCES orders(order_id) ON DELETE CASCADE,  
-> FOREIGN KEY (product_id) REFERENCES product(product_id) ON DELETE CASCADE  
-> );  
Query OK, 0 rows affected (0.04 sec)  
mysql> 
```

ALL TABLES

```
amit@ttnpl: ~  
^C  
mysql> SHOW TABLES;  
+-----+  
| Tables_in_eshop |  
+-----+  
| customers        |  
| orders           |  
| orders_product   |  
| product          |  
| salesperson      |  
+-----+  
5 rows in set (0.00 sec)  
mysql> 
```

4. Insert sample data

Customer TABLE

Customer TABLE

```
amit@ttnpl: ~  
mysql> SELECT * FROM customers;  
+-----+-----+-----+-----+-----+  
| customer_id | name   | email_id   | phone_no | city   |  
+-----+-----+-----+-----+-----+  
| 1 | Amit   | a@gmail.com | 8855478521 | Delhi |  
| 2 | Anuj   | an@gmail.com | 9854525478 | Up    |  
| 3 | Akash  | ak@gmail.com | 9887444558 | Bhopal |  
| 4 | Amar   | am@gmail.com | 8844775522 | Bihar |  
| 5 | Permil | p@gmail.com  | 9985632548 | Mumbai |  
+-----+-----+-----+-----+-----+  
5 rows in set (0.00 sec)  
  
mysql> 
```

Salesperson TABLE

```
mysql> INSERT INTO salesperson VALUES(21,'Mandeep','man@gmail.com','Delhi');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO salesperson VALUES(22,'Rahul','r@gmail.com','Bihar');
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO salesperson VALUES(23,'Nidhi','n@gmail.com','Punjab');
Query OK, 1 row affected (0.02 sec)

mysql> SELECT * FROM salesperson;
+-----+-----+-----+-----+
| salesman_id | name   | email_id      | city   |
+-----+-----+-----+-----+
|          21 | Mandeep | man@gmail.com | Delhi  |
|          22 | Rahul   | r@gmail.com   | Bihar  |
|          23 | Nidhi   | n@gmail.com   | Punjab |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> 
```

Orders TABLE

```
mysql> INSERT INTO orders VALUE(11,1,21,2,1000);
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO orders VALUE(12,2,22,1,4500);
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO orders VALUE(13,3,21,1,5000);
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO orders VALUE(14,2,23,1,500);
Query OK, 1 row affected (0.02 sec)

mysql> SELECT * FROM orders;
+-----+-----+-----+-----+-----+
| order_id | customerid | salesmanid | no_of_items | total_amount |
+-----+-----+-----+-----+-----+
|      11 |          1 |          21 |            2 |          1000 |
|      12 |          2 |          22 |            1 |          4500 |
|      13 |          3 |          21 |            1 |          5000 |
|      14 |          2 |          23 |            1 |           500 |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> 
```


5. Find the sales person have multiple orders.

```
mysql> SELECT *
-> FROM salesperson
-> WHERE
-> salesman_id IN(SELECT DISTINCT salesmanid
-> FROM orders o
-> WHERE EXISTS(SELECT * FROM orders b
-> WHERE b.salesmanid=o.salesmanid AND b.order_id<>o.order_id));
+-----+-----+-----+-----+
| salesman_id | name      | email_id      | city  |
+-----+-----+-----+-----+
|          21 | Mandeep  | man@gmail.com | Delhi |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql>
```

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

```
mysql> SELECT *
-> FROM
-> salesperson s RIGHT JOIN
-> orders o ON s.salesman_id = o.salesmanid;
```

salesman_id	name	email_id	city	order_id	customerid	salesmanid	no_of_items	total_amount
21	Mandeep	man@gmail.com	Delhi	11	1	21	2	1000
22	Rahul	r@gmail.com	Bihar	12	2	22	1	4500
21	Mandeep	man@gmail.com	Delhi	13	3	21	1	5000
23	Nidhi	n@gmail.com	Punjab	14	2	23	1	500

```
4 rows in set (0.01 sec)

mysql>
```

7. Create index

```
mysql> ALTER TABLE
-> orders
-> ADD INDEX
-> index_order(order_id);
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 INDEXES FROM orders;
```

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment	Visible	Expression
orders	0	PRIMARY	1	order_id	A	4	NULL	NULL	NULL	BTREE			YES	NULL
orders	1	customerid	1	customerid	A	3	NULL	NULL	YES	BTREE			YES	NULL
orders	1	salesmanid	1	salesmanid	A	3	NULL	NULL	YES	BTREE			YES	NULL
orders	1	index_order	1	order_id	A	4	NULL	NULL	NULL	BTREE			YES	NULL

```
4 rows in set (0.01 sec)

mysql>
mysql>
mysql>
mysql>
mysql>
mysql>
mysql> 
```

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

```
mysql> SELECT o.order_id AS "Order",s.name AS "Salesman",c.name AS  
-> "Customer" FROM orders o  
-> INNER JOIN customers c  
-> ON o.customerid = c.customer_id  
-> INNER JOIN salesperson s  
-> ON o.salesmanid=s.salesman_id;  
+-----+-----+-----+  
| Order | Salesman | Customer |  
+-----+-----+-----+  
| 11 | Mandeep | Amit |  
| 13 | Mandeep | Akash |  
| 12 | Rahul | Anuj |  
| 14 | Nidhi | Anuj |  
+-----+-----+-----+  
4 rows in set (0.00 sec)  
  
mysql> 
```