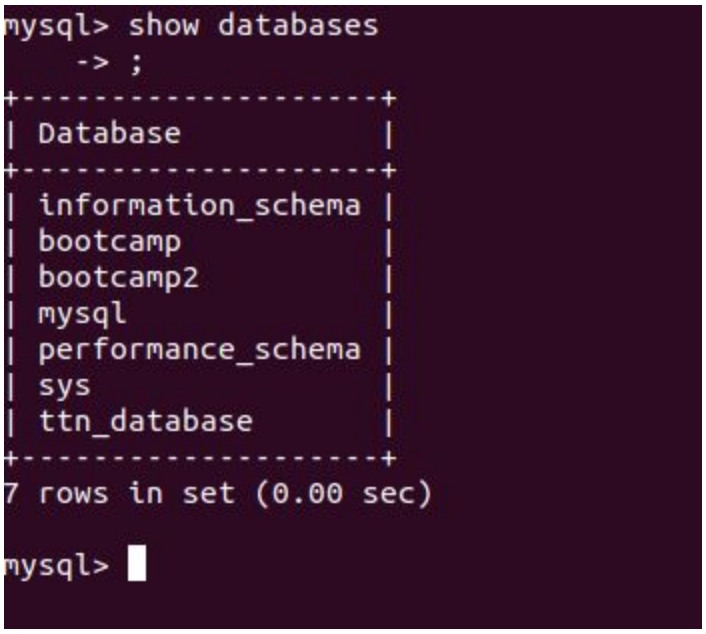
Database Assignment 6th feb

Q.1 Create Database

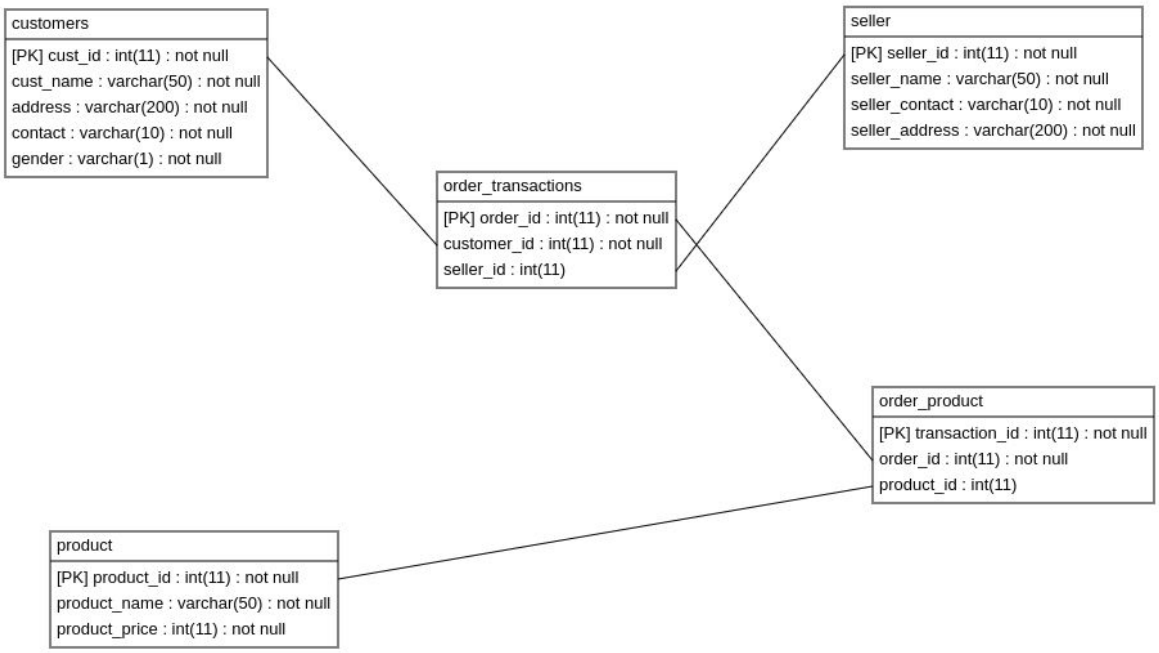
Ans-> we setup mysql using the help guide provided to us and then use mysql console to create a database using

```
create ttn_database;
show databases;
```



Q.2 Design Schema

Ans- > we have designed the schema using following schema which satisfy normalization and data would be non redundant after creating all the tables and applying tight constraints, we generated the er diagram using a tool.



Q.3 Create tables

Ans -> we created the tables using following DDL commands ->

```
CREATE TABLE `customers` (
  `cust_id` int(11) NOT NULL AUTO_INCREMENT,
  `cust_name` varchar(50) NOT NULL,
  `address` varchar(200) NOT NULL,
  `contact` varchar(10) NOT NULL,
  `gender` varchar(1) NOT NULL,
   PRIMARY KEY (`cust_id`)

)
```

```
CREATE TABLE `seller` (
  `seller_id` int(11) NOT NULL AUTO_INCREMENT,
  `seller_name` varchar(50) NOT NULL,
  `seller_contact` varchar(10) NOT NULL,
```

```
  `seller_address` varchar(200) NOT NULL,
  PRIMARY KEY (`seller_id`),
  KEY `seller_name` (`seller_name`)
)
```

```
CREATE TABLE `product` (
  `product_id` int(11) NOT NULL AUTO_INCREMENT,
  `product_name` varchar(50) NOT NULL,
  `product_price` int(11) NOT NULL,
  PRIMARY KEY (`product_id`)
)
```

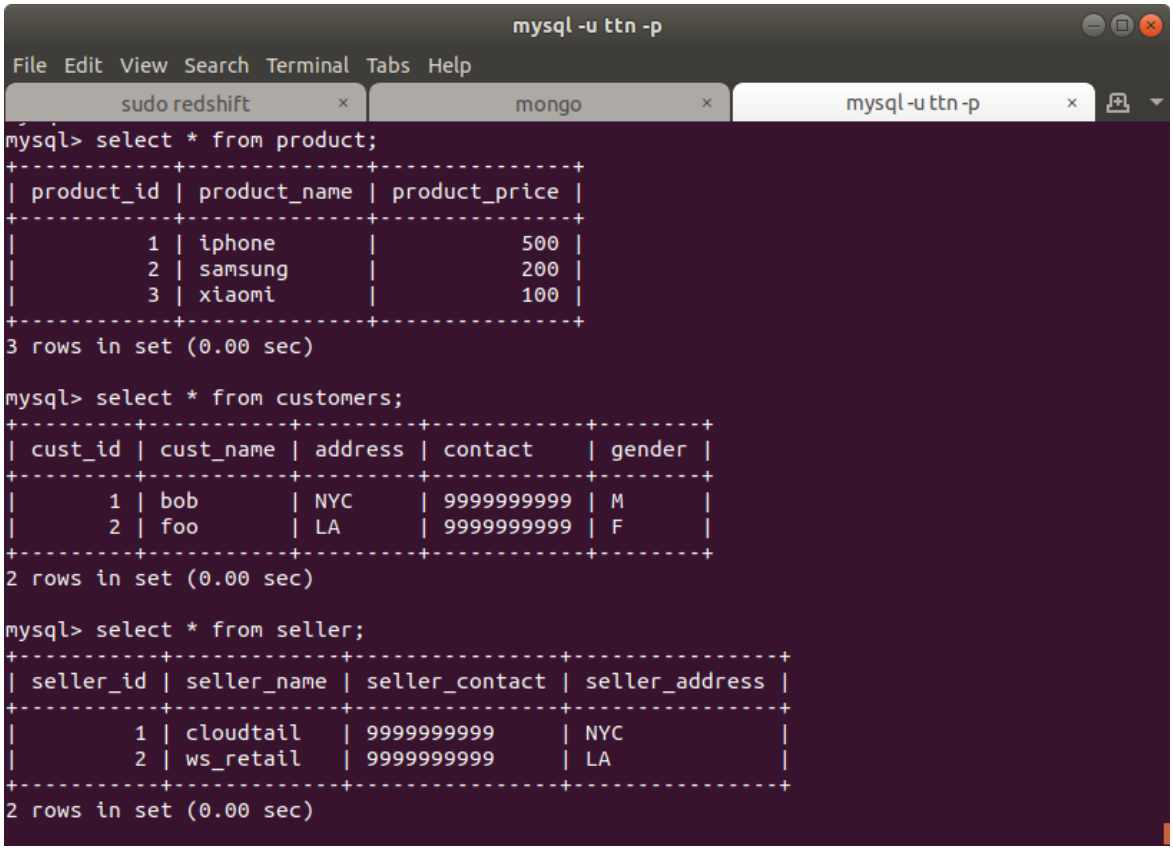
```
CREATE TABLE `order_transactions` (
  `order_id` int(11) NOT NULL AUTO_INCREMENT,
  `customer_id` int(11) NOT NULL,
  `seller_id` int(11) DEFAULT NULL,
  PRIMARY KEY (`order_id`),
  UNIQUE KEY `uc_transactions` (`order_id`,`seller_id`),
  KEY `seller_id` (`seller_id`),
  KEY `order_transactions_ibfk_1` (`customer_id`),
  KEY `order_index` (`order_id`),
  CONSTRAINT `order_transactions_ibfk_1` FOREIGN KEY (`customer_id`)
REFERENCES `customers` (`cust_id`),
  CONSTRAINT `order_transactions_ibfk_3` FOREIGN KEY (`seller_id`)
REFERENCES `seller` (`seller_id`)
)
```

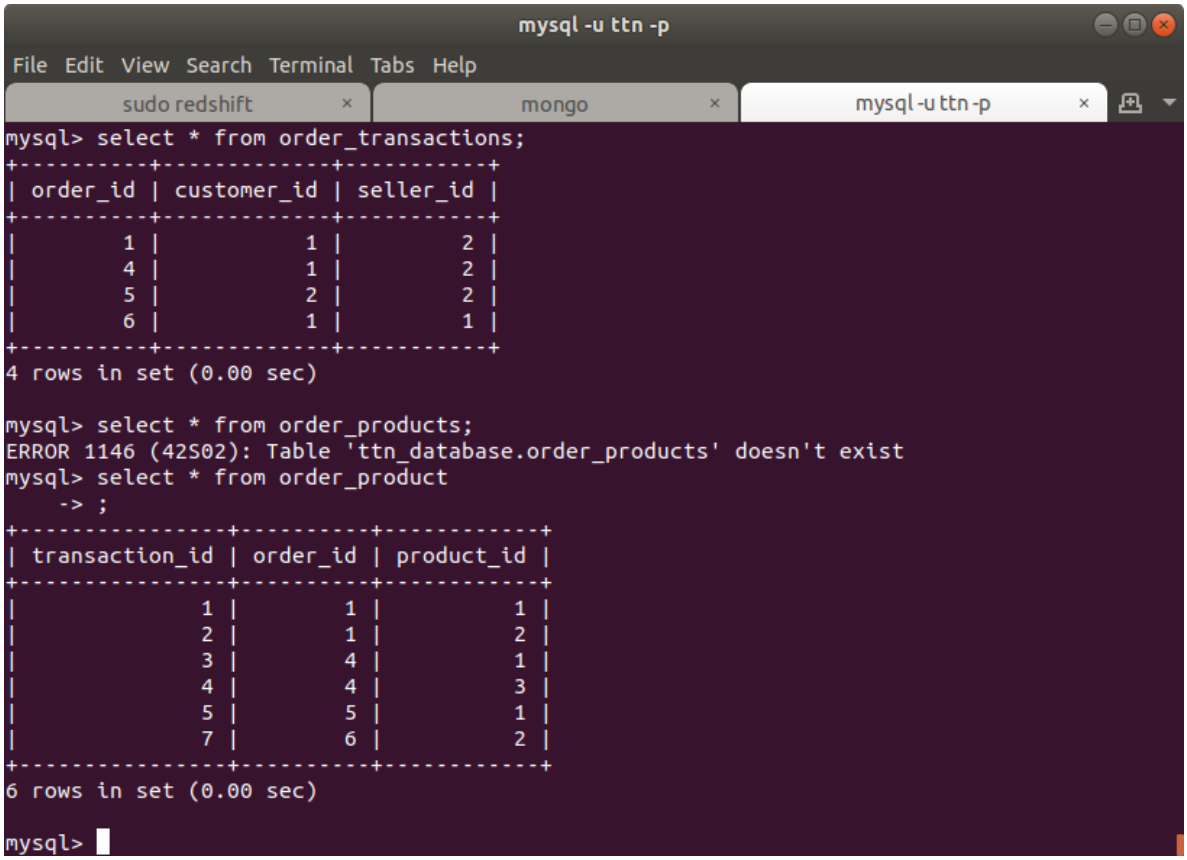
```
 CREATE TABLE `order_product` (
  `transaction_id` int(11) NOT NULL AUTO_INCREMENT,
  `order_id` int(11) NOT NULL,
  `product_id` int(11) DEFAULT NULL,
  PRIMARY KEY (`transaction_id`),
  UNIQUE KEY `uc_op` (`order_id`,`product_id`),
  KEY `product_id` (`product_id`),
  CONSTRAINT `fk_order_transactions` FOREIGN KEY (`order_id`) REFERENCES
`order_transactions` (`order_id`),
  CONSTRAINT `order_product_ibfk_1` FOREIGN KEY (`product_id`) REFERENCES
```

```
`product` (`product_id`)
)
```

Q.4 Insert sample data

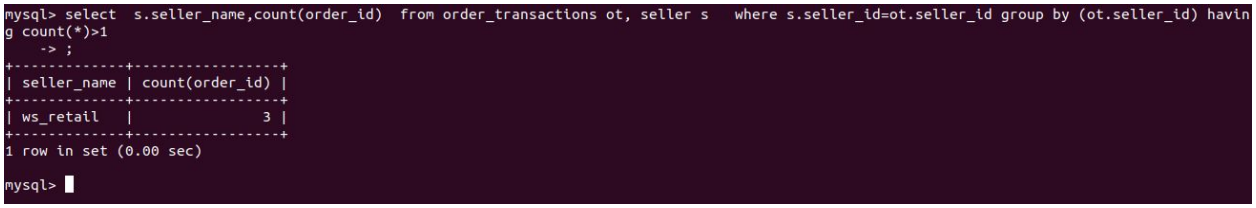
Ans -> let’s insert sample data into tables, I have pasted two parts of screenshot in this question on the next page -->


mysql -u ttn -p
File Edit View Search Terminal Tabs Help
sudo redshift
mongo
mysql -u ttn -p
mysql> select * from product;
+------------+--------------+---------------+
| product_id | product_name | product_price |
+------------+--------------+---------------+
1	iphone	500
2	samsung	200
3	xiaomi	100
+------------+--------------+---------------+
3 rows in set (0.00 sec)
mysql> select * from customers;
+---------+-----------+---------+------------+--------+
| cust_id | cust_name | address | contact | gender |
+---------+-----------+---------+------------+--------+
| 1 | bob | NYC | 9999999999 | M |
| 2 | foo | LA | 9999999999 | F |
+---------+-----------+---------+------------+--------+
2 rows in set (0.00 sec)
mysql> select * from seller;
+-----------+-------------+----------------+----------------+
| seller_id | seller_name | seller_contact | seller_address |
+-----------+-------------+----------------+----------------+
| 1 | cloudtail | 9999999999 | NYC |
| 2 | ws_retail | 9999999999 | LA |
+-----------+-------------+----------------+----------------+
2 rows in set (0.00 sec)



Q.5 Find the sales person have multiple orders.

Ans-> select s.seller_name,count(order_id) from order_transactions ot, seller s where s.seller_id=ot.seller_id group by (ot.seller_id) having count(*)>1



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

Ans->

```
select s.seller_name,s.seller_id, ord.order_id, ord.customer_id from seller s,
```

```
order_transactions ord where  s.seller_id=ord.seller_id;
```

```
mysql> select s.seller_name,s.seller_id, ord.order_id, ord.customer_id from seller s, order_transactions ord where  s.seller_id=ord.seller_id;
+-------------+-----------+----------+-------------+
| seller_name | seller_id | order_id | customer_id |
+-------------+-----------+----------+-------------+
| cloudtail   |         1 |        6 |           1 |
| ws_retail   |         2 |        1 |           1 |
| ws_retail   |         2 |        4 |           1 |
| ws_retail   |         2 |        5 |           2 |
+-------------+-----------+----------+-------------+
4 rows in set (0.00 sec)

mysql>
```

Q.7 Create index

Ans-> we created index on seller name exist on seller table with the following command

```
  create index seller_name on seller(seller_name);
```

```
mysql> create index seller_name on seller(seller_name);
Query OK, 0 rows affected (0.32 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

Q.8 How to show index on a table

Ans->

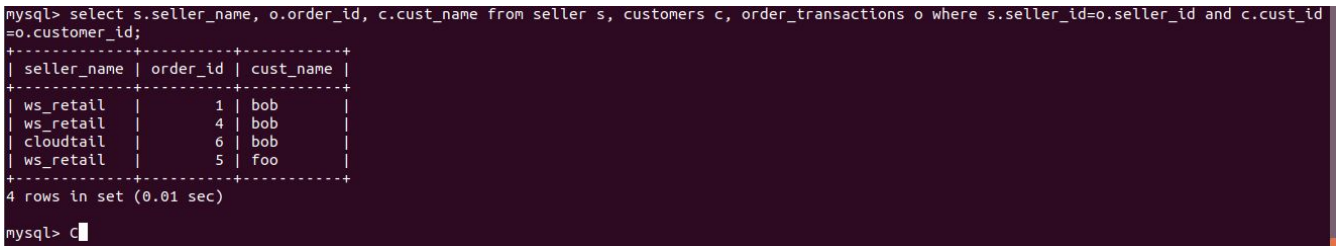
```
show index from seller;
```

```
mysql> show index from seller;
+--------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---
------------+
| Table  | Non_unique | Key_name    | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | In
dex_comment |
+--------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---
------------+
| seller |          0 | PRIMARY     |            1 | seller_id   | A         |           2 |     NULL | NULL   |      | BTREE      |         |
            |
| seller |          1 | seller_name |            1 | seller_name | A         |           2 |     NULL | NULL   |      | BTREE      |         |
            |
+--------+------------+-------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---
------------+
2 rows in set (0.00 sec)

mysql>
```

Q.9 Find the order number, salesperson name, along with the customer to whom that order belongs to

```
select s.seller_name, o.order_id, c.cust_name from seller s, customers c,
order_transactions o where s.seller_id=o.seller_id and c.cust_id=o.customer_id;
```



```
mysql> select s.seller_name, o.order_id, c.cust_name from seller s, customers c, order_transactions o where s.seller_id=o.seller_id and c.cust_id
=o.customer_id;
+-------------+----------+-----------+
| seller_name | order_id | cust_name |
+-------------+----------+-----------+
| ws_retail   |        1 | bob       |
| ws_retail   |        4 | bob       |
| cloudtail   |        6 | bob       |
| ws_retail   |        5 | foo       |
+-------------+----------+-----------+
4 rows in set (0.01 sec)

mysql> c
```