

Database Assignment

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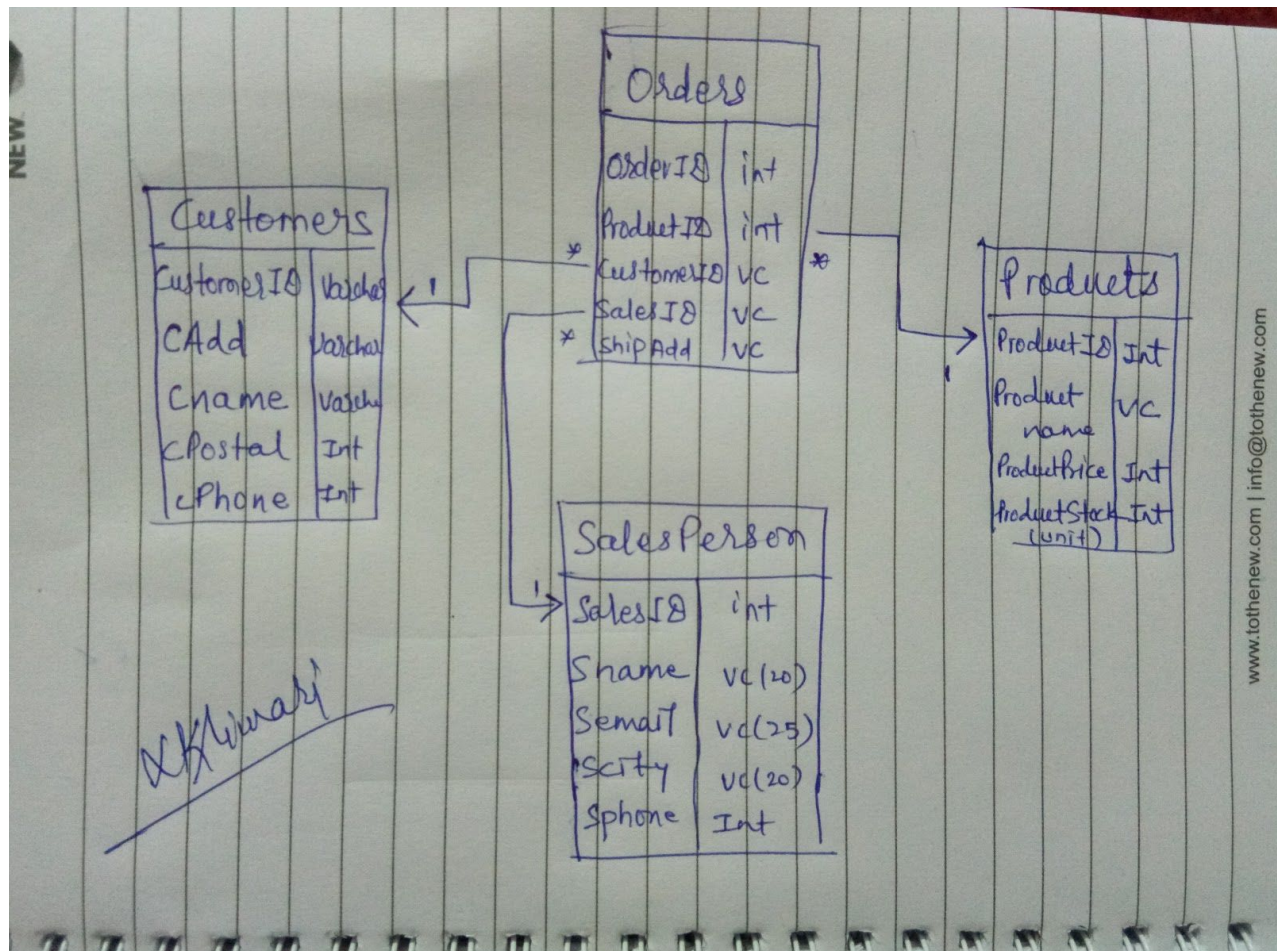
1. Create Database

```
Activities Terminal Wed 14:57
mysql> create database bootcamp
-- ;
Query OK, 1 row affected (0.00 sec)

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

mysql>
```

2. Design Schema



3. Create tables

Customer table

```
Activities Terminal Wed 16:15
Terminal
File Edit View Search Terminal Help
mysql> create table Customers(customerID int(50) NOT NULL AUTO_INCREMENT, customerName varchar(30), customerAddress varchar(30), customerPostalCode varchar(10), customerPhone int(10), primary key(customerID));
Query OK, 0 rows affected (0.35 sec)

mysql> show tables;
+-----+
| Tables_in_bootcamp |
+-----+
| Customers           |
+-----+
1 row in set (0.00 sec)

mysql> desc Customers;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| customerID | int(50) | NO | PRI | NULL | auto_increment |
| customerName | varchar(30) | YES | | NULL | |
| customerAddress | varchar(30) | YES | | NULL | |
| customerPostalCode | varchar(10) | YES | | NULL | |
| customerPhone | int(10) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)

mysql>
```

SalesPerson table

```
Activities Terminal Wed 16:22
Terminal
File Edit View Search Terminal Help
mysql> create table Salesperson(SalesPersonID int(5), SalesPersonName varchar(30), SalesPersonEmail varchar(30), SalesPersonCity varchar(15), SalesPersonPhone int(10), primary key(SalesPersonID));
Query OK, 0 rows affected (0.36 sec)

mysql> show tables;
+-----+
| Tables_in_bootcamp |
+-----+
| Customers           |
| Salesperson          |
+-----+
2 rows in set (0.00 sec)

mysql> desc Salesperson;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| SalesPersonID | int(5) | NO | PRI | NULL | |
| SalesPersonName | varchar(30) | YES | | NULL | |
| SalesPersonEmail | varchar(30) | YES | | NULL | |
| SalesPersonCity | varchar(15) | YES | | NULL | |
| SalesPersonPhone | int(10) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

Product table

```
Activities Terminal Wed 16:27
Terminal
File Edit View Search Terminal Help

mysql> create table Products(ProductID int(10) NOT NULL AUTO_INCREMENT, ProductName varchar(30), ProductPrice int(5), ProductsUnitAvlbl int(5),
primary key(ProductID));
Query OK, 0 rows affected (0.29 sec)

mysql> show tables;
+-----+
| Tables_in_bootcamp |
+-----+
| Customers           |
| Products             |
| Salesperson          |
+-----+
3 rows in set (0.00 sec)

mysql> desc Products;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| ProductID      | int(10)       | NO   | PRI | NULL    | auto_increment |
| ProductName    | varchar(30)   | YES  |     | NULL    |                |
| ProductPrice   | int(5)        | YES  |     | NULL    |                |
| ProductsUnitAvlbl | int(5)       | YES  |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

Order table

```
Activities Terminal Wed 16:44
Terminal
File Edit View Search Terminal Help

mysql> create table Orders(OrderID int(10) NOT NULL AUTO_INCREMENT, ProductID int(10), customerID int(10), SalesPersonID int(5), ShippingAddress
s varchar(50), primary key(OrderID), FOREIGN KEY(ProductID) REFERENCES Products(ProductID), FOREIGN KEY(CustomerID) REFERENCES Customers(custom
erID), FOREIGN KEY(SalesPersonID) REFERENCES Salesperson(SalesPersonID));
Query OK, 0 rows affected (0.44 sec)

mysql> show tables;
+-----+
| Tables_in_bootcamp |
+-----+
| Customers           |
| Orders              |
| Products             |
| Salesperson          |
+-----+
4 rows in set (0.00 sec)

mysql> desc Orders;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra          |
+-----+-----+-----+-----+-----+-----+
| OrderID        | int(10)       | NO   | PRI | NULL    | auto_increment |
| ProductID      | int(10)       | YES  | MUL | NULL    |                |
| customerID     | int(10)       | YES  | MUL | NULL    |                |
| SalesPersonID  | int(5)        | YES  | MUL | NULL    |                |
| ShippingAddress | varchar(50)   | YES  |     | NULL    |                |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

4. Insert sample data

```
Activities Terminal Wed 17:21
Terminal
File Edit View Search Terminal Help
mysql> select * from Customers;
+-----+-----+-----+-----+-----+
| customerID | customerName | customerAddress | customerPostalCode | customerPhone |
+-----+-----+-----+-----+-----+
| 1 | Akshay | Delhi | 201503 | 1234567890 |
| 2 | Abhimanyu | Dehradun | 201305 | 987654321 |
| 3 | Dipesh | Noida | 201805 | 415263789 |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from Products;
+-----+-----+-----+-----+
| ProductID | ProductName | ProductPrice | ProductsUnitAvl |
+-----+-----+-----+-----+
| 1 | Boat Headphone | 3550 | 15 |
| 2 | Dell Keyboard | 1125 | 25 |
| 3 | Armani Jacket | 5690 | 20 |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from Salesperson;
+-----+-----+-----+-----+-----+
| SalesPersonID | SalesPersonName | SalesPersonEmail | SalesPersonCity | SalesPersonPhone |
+-----+-----+-----+-----+-----+
| 1 | Nipun | xyz@gmail.com | Delhi | 475869230 |
| 2 | Nitish | abc@gmail.com | Noida | 718934560 |
| 3 | Aashish | def@gmail.com | Dehradun | 41526378 |
+-----+-----+-----+-----+-----+
3 rows in set (0.01 sec)

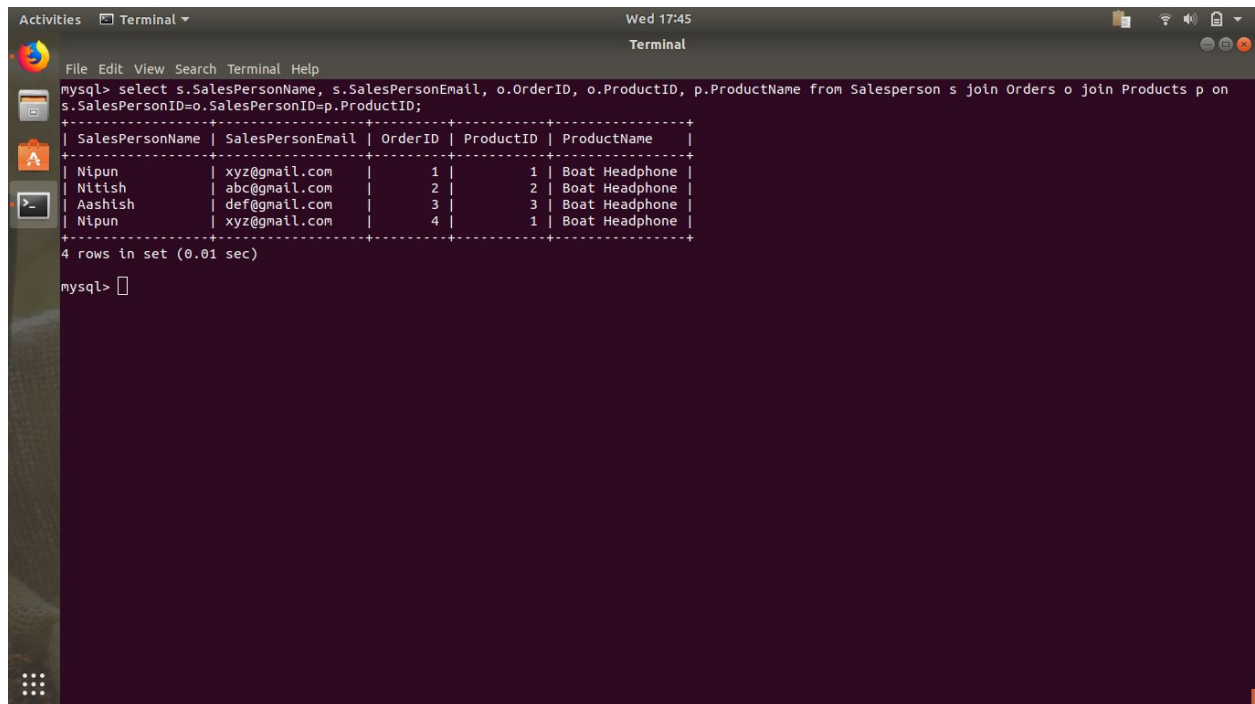
mysql> select * from Orders;
+-----+-----+-----+-----+-----+
| OrderID | ProductID | customerID | SalesPersonID | ShippingAddress |
+-----+-----+-----+-----+-----+
| 1 | 1 | 1 | 1 | Govindpuram |
| 2 | 2 | 2 | 2 | Bilaspur |
| 3 | 3 | 3 | 3 | Sector-168, Noida |
+-----+-----+-----+-----+-----+
```

5. Find the sales person have multiple orders.

```
Activities Terminal Wed 17:38
Terminal
File Edit View Search Terminal Help
mysql> select SalesPersonID, Count(OrderID) AS TotalOrders FROM Orders Where SalesPersonID = SalesPersonID GROUP BY SalesPersonID Order BY Count
t(OrderID) desc limit 1;
+-----+-----+
| SalesPersonID | TotalOrders |
+-----+-----+
| 1 | 2 |
+-----+-----+
1 row in set (0.00 sec)

mysql>
```


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

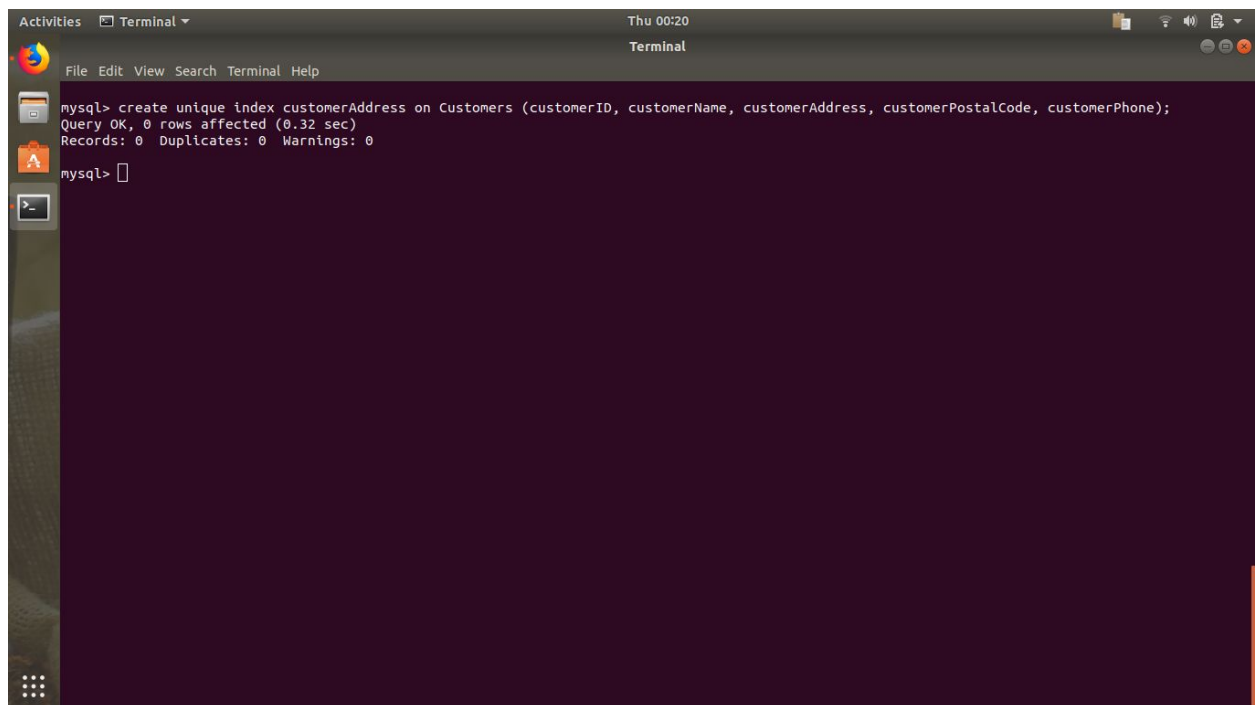


A terminal window titled 'Terminal' showing a MySQL query and its results. The query is: `mysql> select s.SalesPersonName, s.SalesPersonEmail, o.OrderID, o.ProductID, p.ProductName from Salesperson s join Orders o join Products p on s.SalesPersonID=o.SalesPersonID=p.ProductID;` The results are displayed in a table with 5 columns: SalesPersonName, SalesPersonEmail, OrderID, ProductID, and ProductName. There are 4 rows of data. Below the table, it says '4 rows in set (0.01 sec)'. The terminal prompt is `mysql>`.

```
mysql> select s.SalesPersonName, s.SalesPersonEmail, o.OrderID, o.ProductID, p.ProductName from Salesperson s join Orders o join Products p on
s.SalesPersonID=o.SalesPersonID=p.ProductID;
+-----+-----+-----+-----+-----+
| SalesPersonName | SalesPersonEmail | OrderID | ProductID | ProductName |
+-----+-----+-----+-----+-----+
| Nipun           | xyz@gmail.com    | 1       | 1         | Boat Headphone |
| Nitish          | abc@gmail.com    | 2       | 2         | Boat Headphone |
| Aashish         | def@gmail.com    | 3       | 3         | Boat Headphone |
| Nipun           | xyz@gmail.com    | 4       | 1         | Boat Headphone |
+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql>
```

7. Create index.



A terminal window titled 'Terminal' showing a MySQL command to create an index. The command is: `mysql> create unique index customerAddress on Customers (customerID, customerName, customerAddress, customerPostalCode, customerPhone);` The output shows 'Query OK, 0 rows affected (0.32 sec)' and 'Records: 0 Duplicates: 0 Warnings: 0'. The terminal prompt is `mysql>`.

```
mysql> create unique index customerAddress on Customers (customerID, customerName, customerAddress, customerPostalCode, customerPhone);
Query OK, 0 rows affected (0.32 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>
```

8. How to show index on a table.

```
Activities Terminal Thu 00:22
Terminal
File Edit View Search Terminal Help
mysql> show index from Customers;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Customers | 0 | PRIMARY | 1 | customerID | A | 3 | NULL | NULL | | BTREE |
| Customers | 0 | customerAddress | 1 | customerID | A | 3 | NULL | NULL | | BTREE |
| Customers | 0 | customerAddress | 2 | customerName | A | 3 | NULL | NULL | YES | BTREE |
| Customers | 0 | customerAddress | 3 | customerAddress | A | 3 | NULL | NULL | YES | BTREE |
| Customers | 0 | customerAddress | 4 | customerPostalCode | A | 3 | NULL | NULL | YES | BTREE |
| Customers | 0 | customerAddress | 5 | customerPhone | A | 3 | NULL | NULL | YES | BTREE |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
6 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.

```
Activities Terminal Thu 00:35
Terminal
File Edit View Search Terminal Help
mysql> select s.SalesPersonName, c.customerName, o.OrderID from Salesperson s, Orders o, Customers c where s.SalesPersonID = o.SalesPersonID AND c.customerID = o.customerID;
+-----+-----+-----+
| SalesPersonName | customerName | OrderID |
+-----+-----+-----+
| Nipun | Akshay | 1 |
| Nitish | Abhimanyu | 2 |
| Aashish | Dipesh | 3 |
| Nipun | Abhimanyu | 4 |
+-----+-----+-----+
4 rows in set (0.02 sec)

mysql>
```