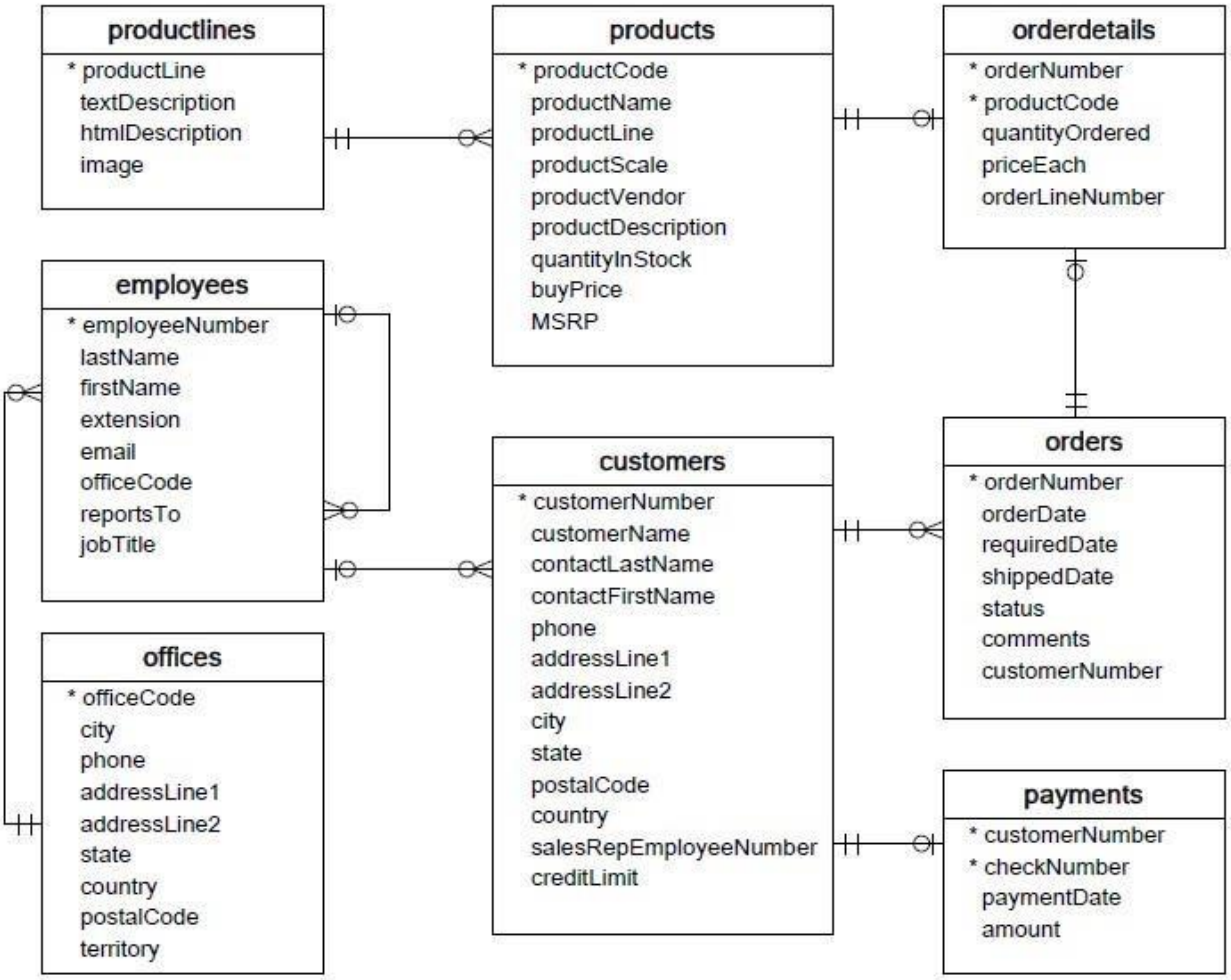
WORKSHEET 3 SQL

Refer the following ERD and answer all the questions in this worksheet. You have to write the queries using mysql for the required Operation.



- **Customers**: stores customer's data.
- **Products**: stores a list of scale model cars.
- **ProductLines**: stores a list of product line categories.
- **Orders**: stores sales orders placed by customers.
- **OrderDetails**: stores sales order line items for each sales order.
- **Payments**: stores payments made by customers based on their accounts.
- **Employees**: stores all employee information as well as the organization structure such as who reports to whom.
  - **Offices**: stores sales office data.

1. Write SQL query to create table **Customers.**

   Answer-

```
command = """CREATE TABLE Customers( customerNumber INTEGER PRIMARY KEY,
customerName VARCHAR(30),
contactLastName VARCHAR(15),
contactFirstName VARCHAR(15),
phone INTEGER(10),
addressLine1 VARCHAR(30),
addressLine2 VARCHAR(30),
city CHAR(20),
state CHAR(20),
```

```
postalCode INTEGER(6),
country CHAR(10),
salesRepEmployeeNumber INTEGER (30),
creditLimit INTEGER(10));"""

cursor.execute(command)
```

2. Write SQL query to create table **Orders.**
   Answer-

```
command = """CREATE TABLE Orders(
orderNumber INTEGER PRIMARY KEY,
orderDate DATE(10),
requiredDate DATE(10),
shippedDate DATE(10),
status CHAR(10),
comments VARCHAR(30),
customerNumber INTEGER (15),
FOREIGN KEY (customerNumber) REFERENCES Customers (customerNumber));"""

cursor.execute(command)
```

3. Write SQL query to show all the columns data from the **Orders** Table.
   Answer-

```
sql_command = """SELECT * FROM Orders;"""
select= cursor.execute(sql_command)
for i in select:
print(i)
```

4. Write SQL query to show all the comments from the **Orders** Table.
   Answer-

```
 sql_command = """SELECT comments FROM Orders;"""
select= cursor.execute(sql_command)
for i in select:
print(i)
```

5. Write a SQL query to show orderDate and Total number of orders placed on that date, from **Orders** table.
   Answer-

```
sql_command = """SELECT date(orderDate), COUNT(*) FROM Orders
GROUP BY date(orderDate);"""
select= cursor.execute(sql_command)
for i in select:
print(i)
```

6. Write a SQL query to show employeNumber, lastName, firstName of all the employees from **employees** table.
   Answer-

```
sql_command = """SELECT employeeNumber, lastName, firstName FROM Employees;"""
select= cursor.execute(sql_command)
for i in select:
print(i)
```

7. Write a SQL query to show all orderNumber, customerName of the person who placed the respective order.
   Answer-

```
 sql_command = """SELECT Orders.orderNumber, Customers.customerName FROM Orders, Customers
WHERE Orders.customerNumber = Customers.customerNumber;"""
select= cursor.execute(sql_command)
for i in select:
```

```
print(i)
```

8. Write a SQL query to show name of all the customers in one column and salerepemployee name in another column.
   Answer-
```
sql_command = """SELECT Customers.customerName, Employees.firstName
|| ' ' || lastName AS fullName FROM Customers, Employees
WHERE Customers.salesRepEmployeeNumber = Employees.employeeNumber;"""
select= cursor.execute(sql_command)
for i in select:
print(i)
```

9. Write a SQL query to show Date in one column and total payment amount of the payments made on that date from the **payments** table.
   Answer-
```
sql_command = """SELECT date(paymentDate), SUM(amount) FROM Payments
GROUP BY date(paymentDate);"""
select= cursor.execute(sql_command)
for i in select:
print(i)
```

10. Write a SQL query to show all the products productName, MSRP, productDescription from the **products** table.
    Answer-
```
sql_command = """SELECT productName, MSRP, productDescription FROM Products;"""
select= cursor.execute(sql_command)
for i in select:
print(i)
```

11. Write a SQL query to print the productName, productDescription of the most ordered product.
    Answer-
```
sql_command = """SELECT Products.productName,
Products.productDescription, SUM(OrderDetails.quantityOrdered) AS
quantityOrdered
FROM Products
INNER JOIN OrderDetails
ON OrderDetails.productCode = Products.productCode
GROUP BY OrderDetails.QuantityOrdered ;"""
select= cursor.execute(sql_command)
for i in select:
print(i)
```

12. Write a SQL query to print the city name where maximum number of orders were placed.
    Answer-
```
sql_command = """SELECT Customers.city,
SUM(OrderDetails.quantityOrdered) AS QuantityOrdered
FROM Customers
INNER JOIN OrderDetails, Orders
ON Customers.customerNumber = Orders.customerNumber and Orders.orderNumber =
OrderDetails.orderNumber
GROUP BY OrderDetails.QuantityOrdered ;"""
select= cursor.execute(sql_command)
for i in select:
print(i)
```

13. Write a SQL query to get the name of the state having maximum number of customers.

Answer-

```
sql_command = """SELECT State, COUNT(*) AS Max_Customer
FROM Customers
GROUP BY State
ORDER BY COUNT(*) DESC;"""
select= cursor.execute(sql_command)
for i in select:
print(i)
```

14. Write a SQL query to print the employee number in one column and Full name of the employee in the second column for all the employees.

    Answer-

```
sql_command = """SELECT employeeNumber, firstName || ' ' || lastName AS
fullName
FROM Employees ;"""
select= cursor.execute(sql_command)
for i in select:
print(i)
```

15. Write a SQL query to print the orderNumber, customer Name and total amount paid by the customer for that order (quantityOrdered × priceEach).

    Answer-

```
sql_command = """SELECT OrderDetails.orderNumber, Customers.CustomerName,
(OrderDetails.quantityOrdered * OrderDetails.priceEach) AS Amount
FROM OrderDetails
INNER JOIN Customers, Orders
ON Customers.customerNumber = Orders.customerNumber and OrderDetails.orderNumber =
Orders.orderNumber;"""
select= cursor.execute(sql_command)
for i in select:
print(i)
```