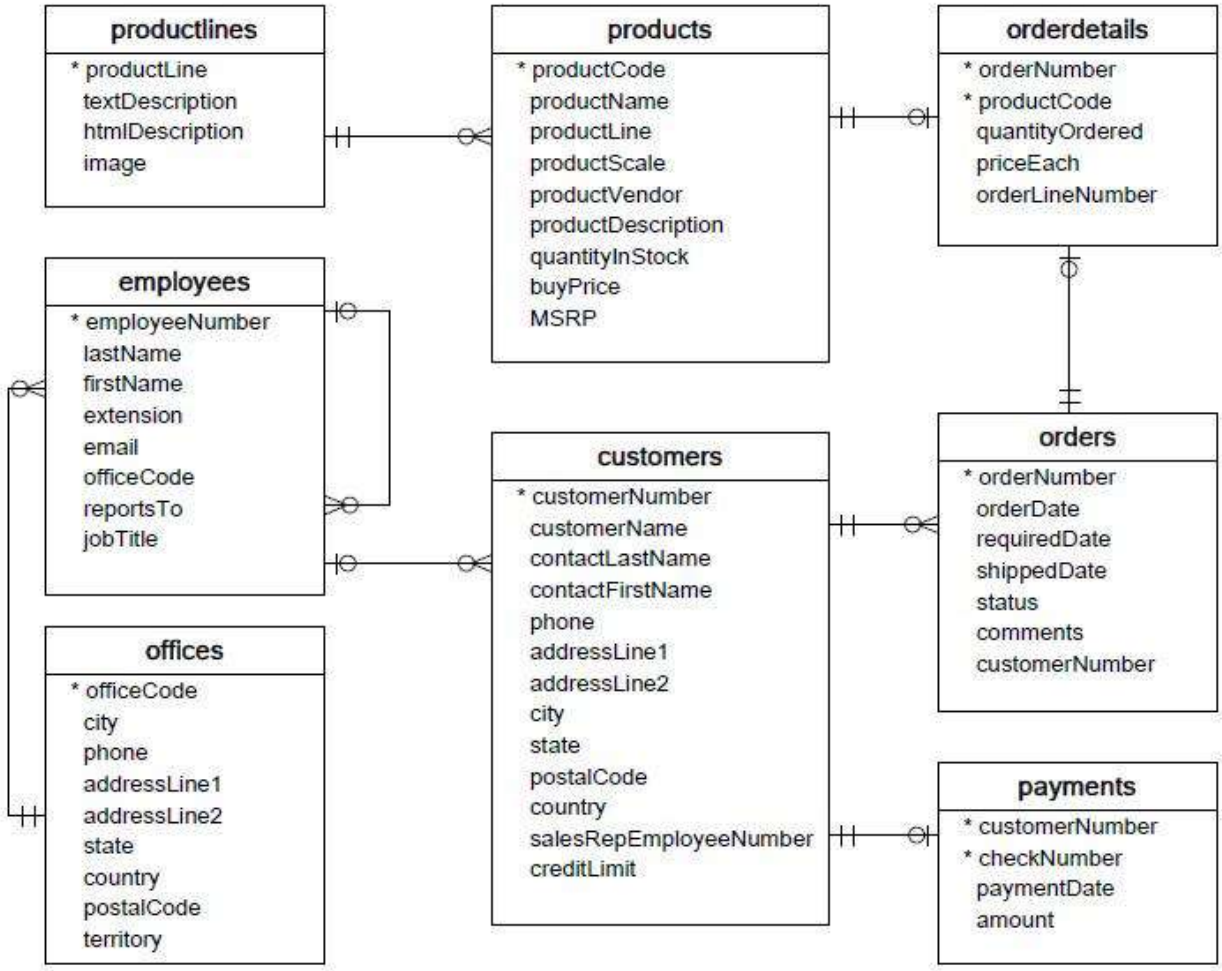
**WORKSHEET 3 SQL**

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.**

```
CREATE TABLE customers (
    customerNumber int(15) NOT NULL,
    customerName varchar(50) NOT NULL,
    contactLastName varchar(50) NOT NULL,
    contactFirstName varchar(50) NOT NULL,
    phone varchar(50) NOT NULL,
    addressLine1 varchar(50) NOT NULL,
    addressLine2 varchar(50) DEFAULT NULL,
    city varchar(50) NOT NULL,
    state varchar(50) DEFAULT NULL,
    postalCode varchar(15) DEFAULT NULL,
    country varchar(50) NOT NULL,
    salesRepEmployeeNumber int(11) DEFAULT NULL,
    creditLimit decimal(15,2) DEFAULT NULL, PRIMARY KEY (customerNumber),
    KEY salesRepEmployeeNumber (salesRepEmployeeNumber),
    FOREIGN KEY (salesRepEmployeeNumber)
    REFERENCES employees (employeeNumber)
);
```

2. Write SQL query to create table **orders.**

```
CREATE TABLE orders (
    orderNumber int(15) NOT NULL,
    orderDate date NOT NULL,
    requiredDate date NOT NULL,
    shippedDate date DEFAULT NULL,
    status varchar(20) NOT NULL,
    comments text,
    customerNumber int(15) NOT NULL,
    PRIMARY KEY (orderNumber),
    KEY customerNumber (customerNumber),
    FOREIGN KEY (customerNumber)
    REFERENCES customers (customerNumber)
);
```

3. Write SQL query to show all the columns data from the **orders** Table.

```
SELECT * FROM orders;
```

4. Write SQL query to show all the comments from the **orders** Table.

```
SELECT comments FROM orders;
```

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

```
SELECT orderDate, COUNT(orderNumber) AS Total number of orders
FROM orders
GROUP BY orderDate;
```

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

```
SELECT employeeNumber , lastName , firstName FROM employees;
```

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

```
SELECT orderNumber , customerName
FROM orders INNER JOIN customers
ON orders.customerNumber= customers.customerNumber;
```

8. Write a SQL query to show name of all the customers in one column and salesRepemployee name in another column.

```
SELECT customerName , CONCAT(firstName, lastName)
FROM employees INNER JOIN customers
ON Employees.employeeNumber = customers.salesRepEmployeeNumber;
```

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.

```
SELECT paymentDate, SUM(amount)
FROM payments
GROUP BY paymentDate;
```

10. Write a SQL query to show all the products productName, MSRP, productDescription from the **products** table.

```
SELECT productName, MSRP, productDescription FROM products;
```

11. Write a SQL query to print the productName, productDescription of the most ordered product.

```
SELECT productName, productDescription
FROM products INNER JOIN orderdetails
ON products.productCode = orderdetails.productCode
GROUP BY products.productCode
ORDER BY SUM(quantityOrdered) DESC
LIMIT 1;
```

12. Write a SQL query to print the city name where maximum number of orders were placed.

```
SELECT city
FROM orders INNER JOIN customers
ON orders.customerNumber = customers.customerNumber
GROUP BY city
ORDER BY COUNT(orderNumber) DESC
LIMIT 1;
```

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

```
SELECT state
FROM customers
GROUP BY state
ORDER BY COUNT(customerNumber) DESC
LIMIT 1;
```

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.

```
SELECT employeeNumber, CONCAT(firstName, LastName) AS fullName
FROM employees;
```

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

```
SELECT orderNumber, customerName, quantityOrdered * priceEach as total amount paid
FROM orderDetails INNER JOIN orders
ON orderDetails.orderNumber = orders.orderNumber
INNER JOIN customers
ON orders.customerNumber = customers.customerNumber;
```