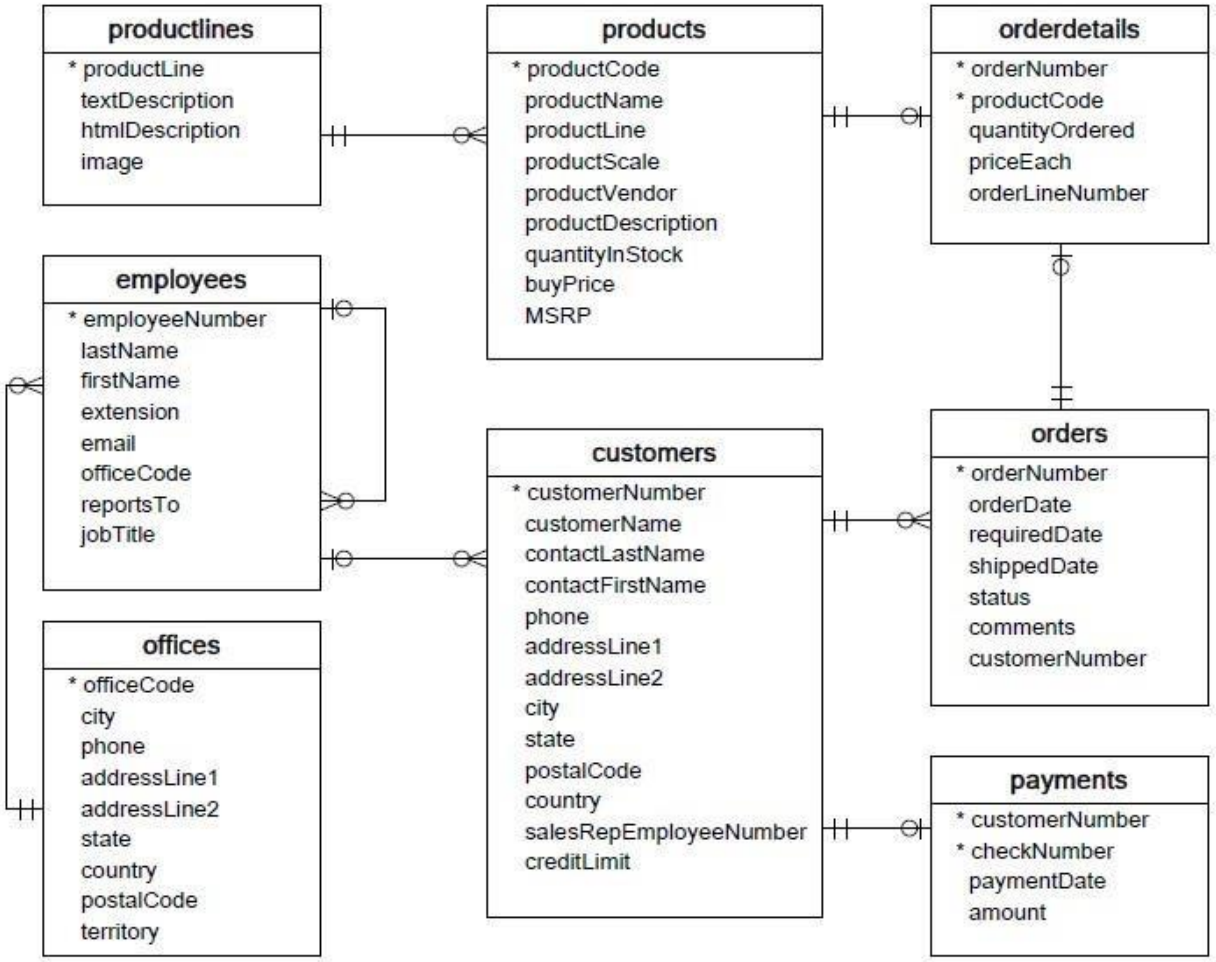
WORKSHEET 3 SQL

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.
  1. Write a SQL query to print the orderNumber, customer Name and total amount paid by the customer for that order (quantityOrdered × priceEach).
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- **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.**
2. Write SQL query to create table **Orders.**
3. Write SQL query to show all the columns data from the **Orders** Table.
4. Write SQL query to show all the comments from the **Orders** Table.
5. Write a SQL query to show orderDate and Total number of orders placed on that date, from **Orders** table.
6. Write a SQL query to show employeNumber, lastName, firstName of all the employees from **employees** table.
7. Write a SQL query to show all orderNumber, customerName of the person who placed the respective order.
8. Write a SQL query to show name of all the customers in one column and salerepemployee name inanother column.

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.
10. Write a SQL query to show all the products productName, MSRP, productDescription from the **products** table.
11. Write a SQL query to print the productName, productDescription of the most ordered product.
12. Write a SQL query to print the city name where maximum number of orders were placed.
13. Write a SQL query to get the name of the state having maximum number of customers.
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.
15. Write a SQL query to print the orderNumber, customer Name and total amount paid by the customer for that order (quantityOrdered × priceEach).

Answers:

1.
```
import sqlite3
db= sqlite3.connect('my.db')
cur= db.cursor()
cur.execute("CREATE TABLE Customers (customerNumber INT PRIMARY KEY ,customerName TEXT,contactLastName TEXT ,contactFirstName TEXT, phone INT, addressLine1 TEXT, addressLine2 TEXT, city TEXT, state TEXT, postalCode INT, country TEXT, salesRepEmployeeNumber INT, creditLimit INT)")
db.commit();
```

2.
```
import sqlite3
db= sqlite3.connect('my.db')
cur= db.cursor()
cur.execute("CREATE TABLE Orders (orderNumber INT PRIMARY KEY, orderDate DATE, requiredDate DATE, shippedDate DATE, status TEXT, comments TEXT, customerNumber INT)")
db.commit();
```

3.
```
res= cur.execute("SELECT * FROM Orders")
for row in res:
    print(row)
```

4.
```
res= cur.execute("SELECT comments FROM Orders")
for row in res:
    print(row)
```

5.
```
res= cur.execute("SELECT orderDate, COUNT(orderNumber) AS num_orders FROM orders GROUP BY orderDate")
res.fetchall()
```

6.
```
res= cur.execute("SELECT employeNumber, lastName, firstName FROM employees")
for row in res:
    print(row)
```

7.
```
res= cur.execute("SELECT Orders.orderNumber, Customers.customerName FROM Orders, Customers WHERE Orders.customerNumber = Customers.customerNumber")
res.fetchall()
```

8. res= cur.execute("SELECT Customers.customerName, employees.firstName,employees.lastName FROM Customers, employees WHERE Customers.salesRepEmployeeNumber = employees.EmployeeNumber")
   res.fetchall()

9. CREATE TABLE NAMED payments:
   cur= db.cursor()
   cur.execute("CREATE TABLE payments (checkNumber INT PRIMARY KEY, paymentDate TEXT,amount INT, customerNumber INT, foreign key (customerNumber) references Customers(customerNumber))")
   db.commit();
   with open('pay.csv','r') as file:
      r=0
      for row in file:
         cur.execute("INSERT INTO payments VALUES(?,?,?,?)", row.split(","))
         db.commit()
         r+=1
      print(r)

   res= cur.execute("SELECT paymentDate, SUM(amount) AS total_payment FROM payments GROUP BY paymentDate")
   res.fetchall()

10. res= cur.execute("SELECT productName, MSRP,productDescription FROM products")
    for row in res:
       print(row)

11. res= cur.execute("SELECT productName, productDescription FROM products ORDER BY COUNT(productCode)")
    res.fetchone()

12. res= cur.execute("SELECT city,COUNT(customerNumber) AS countofCus FROM Customers GROUP BY city ORDER BY countofCus desc")
    res.fetchone()

13. res= cur.execute("SELECT state,COUNT(customerNumber) AS countofCus FROM Customers GROUP BY state ORDER BY countofCus desc")
    res.fetchone()

14. res= cur.execute("SELECT EmployeeNumber, (firstName || ' ' ||lastName) AS fullName FROM employees")
    res.fetchall()