SQL Assignment-3

1. Write SQL query to create table Customers.

Answer:

```
# SQL command to create table and columns in stores database
sql_command = """CREATE TABLE Customers(
CustomerNo 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));"""

# execute the statement
cursor.execute(sql_command)
```

ADDING VALUES IN TABLE CUSTOMER

```
# SQL command to insert the data in the table
sql_command = """INSERT INTO Customers VALUES
(1, "Rishabh Bansal", "Bansal", "Rishabh",  0000000000,"Road No. 72",
"Karkardooma", "East Delhi","Delhi", 110032, "INDIA", 101, 1000000),
(2, "Swati Juneja", "Juneja", "Swati",  1111111111, "ISBM", "Jagraon Bridge",
"Ludhiana", "Punjab", 141008, "INDIA", 102, 1200000),
(3, "Arti Aggarwal", "Aggarwal", "Arti", 2222222222, "Road No 202", "Dwarka",
"South Delhi",  "Delhi", 110075, "INDIA", 103, 3000000),
(4, "Vidyut Thakur", "Thakur", "Vidyut", 3333333333, "Preet Nagar", "Akalsar
Road", "Moga","Punjab", 142001, "INDIA", 104, 5000000),
(5, "Rishabh Rathore", "Rathore", "Rishabh", 4444444444, "Cross Road",
"Indiranagar", "Bengaluru","Karnataka", 560038, "INDIA", 105, 2000000),
(6, "Mahima Chaudhary", "Chaudhary", "Mahima", 5555555555, "Budhpur",
"Alipur", "North Delhi", "Delhi", 110036, "INDIA", 106, 1800000),
```

(7, "Ritika Bansal", "Bansal", "Ritika", 6666666666, "Santhusapet"," Bengaluru North", "Bengaluru","Karnataka", 560053, "INDIA", 107, 20000000),
(8, "Juhi Taneja", "Taneja", "Juhi", 7777777777,"Shahibabad", "Anand Vihar", "Ghaziabad", "UP", 201005, "INDIA", 108, 7000000),
(9, "Sunita Chaudhary", "Chaudhary", "Sunita", 8888888888, "Sant Namdev Path", "Gokhale Road", "Thane", "Maharashtra", 400601, "INDIA", 109, 4000000),
(10, "Rudra Khurana", "Khurana", "Rudra", 9999999999, "B Block Road", "Preet Vihar", "East Delhi", "Delhi", 110092, "INDIA", 110, 1400000),
(11, "Vaibhav Aggarwal", "Aggarwal", "Vaibhav", 9125111111, "LPU", "Phagwara", "Kapurthala", "Punjab", 144401, "INDIA", 111, 50000000),
(12, "Mitali Bansal", "Bansal", "Mitali", 5252525252, "Shivaji Park", "Punjabi Bagh", "West Delhi", "Delhi", 110026, "INDIA", 112, 1500000),
(13, "Rishabh Rathore", "Rathore", "Rishabh", 8899995522, "Vijay Nagar Main Road", "Vijay Nagar", "Bengaluru", "Karnataka", 560040, "INDIA", 113, 25000000);"""

 # execute the statement
cursor**.**execute(sql_command)

2. Write SQL query to create table Orders.

Answer:

 # SQL command to create table and columns in stores database
sql_command **=** """CREATE TABLE Orders(
orderNo INTEGER PRIMARY KEY,
orderdate DATE(10),
requireddate DATE(10),
shippeddate DATE(10),
status CHAR(10),
comments VARCHAR(30),
CustomerNo INTEGER (15),
FOREIGN KEY (CustomerNo) REFERENCES Customers (CustomerNo));"""

 # execute the statement
cursor**.**execute(sql_command)

ADDING VALUES IN TABLE ORDERS

```
sql_command = """INSERT INTO Orders VALUES
(1, "2022-10-10", "2022-10-10", "2022-10-10", "Shipped", "Good", 1),
(2, "2022-10-10", "2022-10-10", "2022-10-10", "Dispatched", "Nice", 2),
(3, "2022-10-10", "2022-10-10", "2022-10-10", "In Transit", "Not Good", 3),
(4, "2022-10-10", "2022-10-10", "2022-10-10", "Delivered", "Awesome", 4),
(5, "2022-10-10", "2022-10-11", "2022-10-11", "Dispatched", "Perfect", 5),
(6, "2022-10-10", "2022-10-11", "2022-10-11", "In Transit", "Wrong Product",  6),
(7, "2022-10-11", "2022-10-11", "2022-10-11", "Shipped", "Defective", 7),
(8, "2022-10-11", "2022-10-11", "2022-10-11", "Dispatched", "Good", 8),
(9, "2022-10-11", "2022-10-11", "2022-10-11", "Dispatched", "Amazing", 9),
(10, "2022-10-11", "2022-10-12", "2022-10-12", "In Transit", "Bad", 10),
(11, "2022-10-11", "2022-10-12", "2022-10-12", "Delivered", "Good Quality", 11),
(12, "2022-10-11", "2022-10-13", "2022-10-12", "Dispatched", "Good Taste", 12),
(13, "2022-10-11", "2022-10-13", "2022-10-12", "Delivered", "Fast", 13);"""

# execute the statement
cursor.execute(sql_command)

# To save the changes in the files. Never skip this. If we skip this, nothing will be saved in the database.
conn.commit()
```

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

Answer:

```
# SQL command to select all the columns data from table "Orders"
sql_command = """SELECT * FROM  Orders;"""
select= cursor.execute(sql_command)
for i in select:
    print(i)
```

OUTPUT:

```
(1, '2022-10-10', '2022-10-10', '2022-10-10', 'Shipped', 'Good', 1)
(2, '2022-10-10', '2022-10-10', '2022-10-10', 'Dispatched', 'Nice', 2)
(3, '2022-10-10', '2022-10-10', '2022-10-10', 'In Transit', 'Not Good', 3)
(4, '2022-10-10', '2022-10-10', '2022-10-10', 'Delivered', 'Awesome', 4)
(5, '2022-10-10', '2022-10-11', '2022-10-11', 'Dispatched', 'Perfect', 5)
(6, '2022-10-10', '2022-10-11', '2022-10-11', 'In Transit', 'Wrong Product', 6)
(7, '2022-10-11', '2022-10-11', '2022-10-11', 'Shipped', 'Defective', 7)
```

(8, '2022-10-11', '2022-10-11', '2022-10-11', 'Dispatched', 'Good', 8)
(9, '2022-10-11', '2022-10-11', '2022-10-11', 'Dispatched', 'Amazing', 9)
(10, '2022-10-11', '2022-10-12', '2022-10-12', 'In Transit', 'Bad', 10)
(11, '2022-10-11', '2022-10-12', '2022-10-12', 'Delivered', 'Good Quality', 11)
(12, '2022-10-11', '2022-10-13', '2022-10-12', 'Dispatched', 'Good Taste', 12)
(13, '2022-10-11', '2022-10-13', '2022-10-12', 'Delivered', 'Fast', 13)

4. Write SQL query to show all the comments from the OrdersTable.

Answer:

```
# SQL command to select all the comments from the "Orders" Table
sql_command = """SELECT comments FROM  Orders;"""
select= cursor.execute(sql_command)
for i in select:
    print(i)
```

OUTPUT:

('Good',)
('Nice',)
('Not Good',)
('Awesome',)
('Perfect',)
('Wrong Product',)
('Defective',)
('Good',)
('Amazing',)
('Bad',)
('Good Quality',)
('Good Taste',)
('Fast',)

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

Answer:

```
# SQL command to show all orderDate and Total No from the "Orders" Table
sql_command = """SELECT  date(orderdate), COUNT(*) FROM Orders GROUP
BY date(orderdate);"""
select= cursor.execute(sql_command)
```

```
for i in select:
    print(i)
```

OUTPUT:

```
('2022-10-10', 6)
('2022-10-11', 7)
```

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

Answer:

```
sql_command = """SELECT  EmployeeNo, LastName, FirstName FROM Employees;"""
select= cursor.execute(sql_command)
for i in select:
    print(i)
```

OUTPUT:

```
(101, 'Verma', 'Aman')
(102, 'Dutta', 'Tina')
(103, 'Kapoor', 'Meesha')
(104, 'Kumar', 'Varun')
(105, 'Dutt', 'Kamal')
(106, 'Rana', 'Dev')
```

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

Answer:

```
sql_command = """SELECT  Orders.orderNo, Customers.CustomerName FROM Orders, Customers
WHERE Orders.CustomerNo = Customers.CustomerNo;"""
select= cursor.execute(sql_command)
for i in select:
    print(i)
```

OUTPUT:

(1, 'Rishabh Bansal')
(2, 'Swati Juneja')
(3, 'Arti Aggarwal')
(4, 'Vidyut Thakur')
(5, 'Rishabh Rathore')
(6, 'Mahima Chaudhary')
(7, 'Ritika Bansal')
(8, 'Juhi Taneja')
(9, 'Sunita Chaudhary')
(10, 'Rudra Khurana')
(11, 'Vaibhav Aggarwal')
(12, 'Mitali Bansal')
(13, 'Rishabh Rathore')

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.EmployeeNo;"""
select= cursor.execute(sql_command)
for i in select:
    print(i)
```

OUTPUT:

('Rishabh Bansal', 'Aman Verma')
('Swati Juneja', 'Tina Dutta')
('Arti Aggarwal', 'Meesha Kapoor')
('Vidyut Thakur', 'Varun Kumar')
('Rishabh Rathore', 'Kamal Dutt')
('Mahima Chaudhary', 'Dev Rana')

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)
```

OUTPUT:

```
('2022-10-10', 40000)
('2022-10-11', 80000)
('2022-10-12', 80000)
```

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)
```

OUTPUT:

```
('Horlicks Health Drinks', 450, 'Sweet malted milk hot drink powder')
('Bournvita Health Drinks', 420, 'Malted chocolate drink mix')
('Surf Excel Detergent', 320, 'First detergent powder of India and Pakistan')
('Amul Fresh Milk', 50, 'Hygienic liquid milk')
('Mother Dairy Fresh Milk', 48, 'Wholesome and healthy')
('Pepsodent Toothpaste', 100, 'American brand of toothpaste with the minty flavor d
erived from sassafras')
```

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)
```

OUTPUT:

```
('Horlicks Health Drinks', 'Sweet malted milk hot drink powder', 20.0)
('Surf Excel Detergent', 'First detergent powder of India and Pakistan', 20.0)
('Amul Fresh Milk', 'Hygienic liquid milk', 100.0)
('Pepsodent Toothpaste', 'American brand of toothpaste with the minty flavor
derived from sassafras', 750.0)
```

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.CustomerNo = Orders.CustomerNo and Orders.orderNo =
OrderDetails.orderNo
GROUP BY OrderDetails.QuantityOrdered ;"""
select= cursor.execute(sql_command)
for i in select:
    print(i)
```

OUTPUT:

('East Delhi', 20.0)
('South Delhi', 20.0)
('Moga', 100.0)
('North Delhi', 750.0)

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)
```

OUTPUT:

('Delhi', 5)
('Punjab', 3)
('Karnataka', 3)
('UP', 1)
('Maharashtra', 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.

Answer:

```
sql_command = """SELECT EmployeeNo, FirstName || ' ' || LastName AS
FullName
FROM Employees ;"""
select= cursor.execute(sql_command)
for i in select:
    print(i)
```

OUTPUT:

(101, 'Aman Verma')
(102, 'Tina Dutta')
(103, 'Meesha Kapoor')
(104, 'Varun Kumar')
(105, 'Kamal Dutt')
(106, 'Dev Rana')

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.orderNo, Customers.CustomerName,
(OrderDetails.QuantityOrdered  * OrderDetails.PriceEach) AS Amount
FROM OrderDetails
INNER JOIN Customers, Orders
ON Customers.CustomerNo = Orders.CustomerNo and OrderDetails.orderNo =
Orders.orderNo;"""
select= cursor.execute(sql_command)
for i in select:
   print(i)
```

OUTPUT:

(1, 'Rishabh Bansal', 4000)
(2, 'Swati Juneja', 3000)
(3, 'Arti Aggarwal', 1900)
(4, 'Vidyut Thakur', 2500)
(5, 'Rishabh Rathore', 2400)
(6, 'Mahima Chaudhary', 71250)