Structured Query Language (SQL)

1. Write SQL query to create table Customers?

Answer:

```
Sql_cmd= "CREATE TABLE Customers
(
CustomerNumber INT 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)
)"
```

```
Import sqlite3
db1=sqlite3.connect("Any Base")
cur=db1.cursor()
```

```
# Execute statement
cur.execute(Sql_cmd)
```

ex: cur.execute(
"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),"
db1.commit()

Q2. Write SQL query to create table Orders?
Ans:

```
Sql_cmd="CREATE TABLE Orders(
OrderNo INT PRIMARY KEY,
OrderDate DATE(10),
RequiredDate(10),
ShippedDate(10),
Status CHAR(10),
Comments VARCHAR(30),
CustomerNo INTEGER(15),
FOREIGN KEY(CustomerNo) REFERENCES Customers (CustomerNo));"
cur.execute(sql_cmd)
```

Example:

```
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),)”

# Execute the statement
cur.execute (sql_command)
bd1.commit()
```

Q3. Write SQL query to show all the columns data from the Orders Table.

Ans:

```
for i in cur.execute(” SELECT * FROM Orders ”):
print(i)
```

Q4. Write SQL query to show all the comments from the OrdersTable?

Ans:

```
For I in  cur.execute(“Select Comments FROM Orders ”):
Print(I)
```

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

Ans:

```
for I in cur.execute(“ SELECT date(orderDate),COUNT(*) FROM Orders GROUP BY date(orderdate) ”):
print(I)
```

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

Ans:

```
For i in cur.execute(“SELECT EmployeeNo, LastName, FirstName FROM Employees”):
print(i)
```

Q7. Write a SQL query to show all orderNumber, customerName of the person who placed the respective order.

Ans:

For I in cur.execute(“SELECT Orders.orderNo, Customers.CustomerName FROM Orders,Customers WHERE Orders.CustomerNo = Customers.CustomerNo”)

Print(i)

Q 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)
select.fetchall()
```

Q 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.

Ans:

```
For I in cur.execute("Select date(PaymentDate ),SUM(Amount) FROM Payments GROUP BY date (PaymentDate)"):
Print(I)
```

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

Ans:

```
For i in cur.execute(" SELECT ProductName, MSRP, Product Description FROM Products"):
Print(i)
```

Q11. **Write a SQL query to print the productName, productDescription of the most ordered product.**
Ans:

```
For I in Cur.execute("
SELECT Products.ProductName, Products.ProductDescription, SUM(OrderDetails.QuantityOrdered)AS QuantityOrdered FROM Products INNERJOIN OrderDetails on OrderDetails.ProductCode=Products.ProductsCode GROUP BY OrderDetails.QuantityOrdered"
)

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.CustomerNo = Orders.CustomerNo and Orders.orderNo = OrderDetails.orderNo 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 EmployeeNo, 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.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)
```