SAIFERTEK BACKEND EXAM

Q1)

```
#Q1. List all customers.
cur.execute('select FirstName,LastName from customers')
res=cur.fetchall()
for record in res:
    print('FIRST NAME: ',record[0],',', 'LAST NAME: ',record[1])
    print()
```

```
FIRST NAME:  John , LAST NAME:  Doe

FIRST NAME:  Jane , LAST NAME:  Smith
```

Q2)

```
#Q2. Find all orders placed in January 2023.
cur.execute('select  * from Orders where MONTH(OrderDate)=1 and YEAR(OrderDate)=2023')
res2=cur.fetchall()
for r in res2:
    print('Order id:',r[0],',','Customer id:',r[1],',','OrderDate:',r[2])
    print()
```

```
Order id: 1 , Customer id: 1 , OrderDate: 2023-01-10

Order id: 2 , Customer id: 2 , OrderDate: 2023-01-12
```

Q3)

```
#Q3. Get the details of each order, including the customer name and email.
cur.execute('select oi.orderID, oi.productID, p.productName, c.FirstName, c.LastName, c.email from OrderItems oi\
            join Products p on oi.productID=p.ProductID join Orders o on oi.OrderID=o.OrderID\
            JOIN Customers c on o.CustomerID=c.CustomerID order by c.CustomerID asc;')
res3=cur.fetchall()
for r in res3:
    print('OrderID: ',r[0],',','ProductID: ',r[1],',','ProductName: ',r[2],',','User Name: ',r[3]+' '+r[4],',','User Email',r[5])
    print()
```

```
OrderID:  1 , ProductID:  3 , ProductName:  Headphones , User Name:  John Doe , User Email john.doe@example.com

OrderID:  1 , ProductID:  1 , ProductName:  Laptop , User Name:  John Doe , User Email john.doe@example.com

OrderID:  2 , ProductID:  3 , ProductName:  Headphones , User Name:  Jane Smith , User Email jane.smith@example.com

OrderID:  2 , ProductID:  2 , ProductName:  Smartphone , User Name:  Jane Smith , User Email jane.smith@example.com
```

Q4)

```
#Q4. List the products purchased in a specific order (e.g., OrderID = 1).
cur.execute('select oi.productID, p.productName, oi.quantity, p.price from OrderItems oi join Products p on oi.productid=p.productid')
res4=cur.fetchall()
for r in res4:
    print('ProductID: ',r[0],',','Product Name: ',r[1],',','Quantity: ',r[2],',','Price: ',r[3])
    print()
```

```
ProductID:  1 , Product Name:  Laptop , Quantity:  1 , Price:  1000

ProductID:  3 , Product Name:  Headphones , Quantity:  2 , Price:  100

ProductID:  2 , Product Name:  Smartphone , Quantity:  1 , Price:  600

ProductID:  3 , Product Name:  Headphones , Quantity:  1 , Price:  100
```

Q5)

```
#Q5. Calculate the total amount spent by each customer
cur.execute('select c.FirstName,c.LastName, sum(p.price*oi.Quantity) from orderitems oi\
            join products p on oi.productid=p.productid\
            join orders o on oi.orderid=o.orderid join customers c on o.customerid=c.customerid group by oi.orderid;')
res5=cur.fetchall()

for r in res5:
    print('Name of the customer: ',r[0]+' '+r[1],',','Total Amount Spent: ',r[2])
    print()
```

```
Name of the customer:  John Doe , Total Amount Spent:  1200

Name of the customer:  Jane Smith , Total Amount Spent:  700
```

Q6)

```
#Q6. Find the most popular product (the one that has been ordered the most).
cur.execute('select oi.productid, p.productname, sum(oi.quantity) as quan from orderitems oi\
            join products p on oi.productid=p.productid group by oi.productid order by quan desc limit 1')
res6=cur.fetchall()
for r in res6:
    print('Product Name: ',r[1],',','Quantity: ',r[2])
    print()
```

```
Product Name:  Headphones , Quantity:  3
```

Q7)

```
#Q7. Get the total number of orders and the total sales amount for each month in 2023.
cur.execute('select year(o.orderdate) as year, month(o.orderdate) as month, count(distinct o.orderid), sum(p.price * oi.quantity) from orders o\
            join orderitems oi on o.orderid = oi.orderid join products p on oi.productid = p.productid\
            where year(o.orderdate) = 2023 group by year(o.orderdate), month(o.orderdate) order by year, month;')
res7=cur.fetchall()
for r in res7:
    print('Year: ',r[0],',','Month: ',r[1],',','Numer of orders: ',r[2],',','Total amount in the month: ',r[3])
    print()
```

```
Year:  2023 , Month:  1 , Numer of orders:  2 , Total amount in the month:  1900
```

Q8)

```
#Q8.Find customers who have spent more than $1000.
cur.execute('select c.Firstname, c.LastName, oi.orderid, sum(oi.quantity*p.price) as pr  from customers c\
            join orders o on c.customerid=o.customerid join orderitems oi on oi.orderid=o.orderid\
            join products p on p.productid=oi.productid group by oi.orderid having pr>1000')
res8=cur.fetchall()
for r in res8:
    print('Name: ',r[0]+' '+r[1],',', 'Amount Spent: ',r[3])
    print()
```

```
Name:  John Doe , Amount Spent:  1200
```