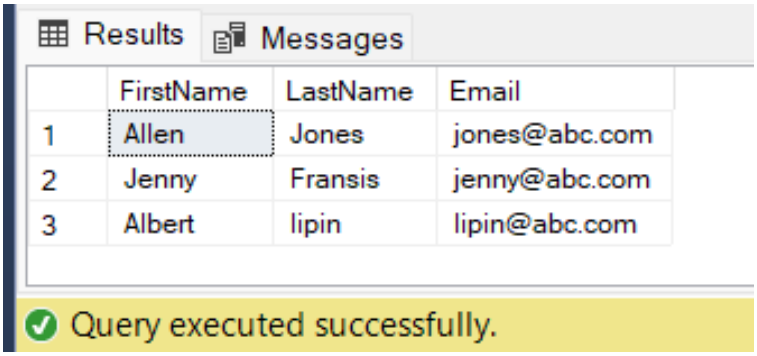
TASK 4. SUBQUERY AND ITS TYPE

1.Write an SQL query to find out which customers have not placed any orders.

```
select FirstName,LastName,Email from Customers
where CustomerID not in(select distinct CustomerID from Orders)
```

OUTPUT:



Results | Messages

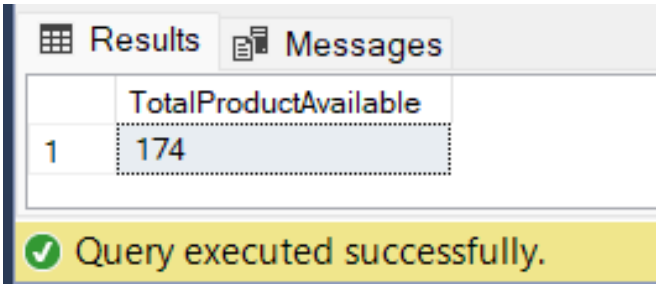
	FirstName	LastName	Email
1	Allen	Jones	jones@abc.com
2	Jenny	Fransis	jenny@abc.com
3	Albert	lipin	lipin@abc.com

Query executed successfully.

2. Write an SQL query to find the total number of products available for sale.

```
select sum(QuantityInStock) as 'TotalProductAvailable' from Inventory
```

OUTPUT:



Results | Messages

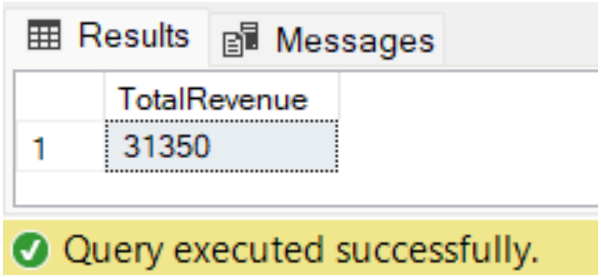
	TotalProductAvailable
1	174

Query executed successfully.

3. Write an SQL query to calculate the total revenue generated by TechShop.

```
select sum(TotalAmount) as 'TotalRevenue' FROM Orders
```

OUTPUT:



Results | Messages

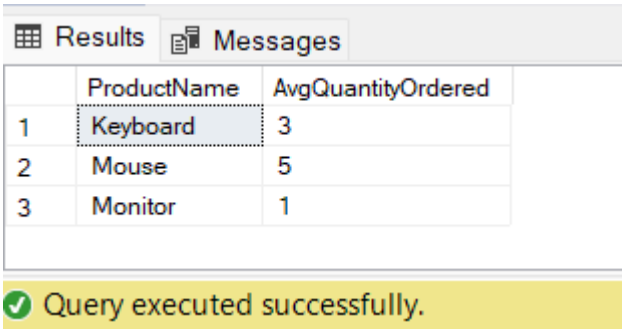
	TotalRevenue
1	31350

Query executed successfully.

4. Write an SQL query to calculate the average quantity ordered for products in a specific category. Allow users to input the category name as a parameter.

```
select ProductName,(select avg(Quantity) from OrderDetails
where ProductID = Products.ProductID) as AvgQuantityOrdered
from Products where Products.Category = 'Computer Peripherals'
```

OUTPUT:



Results | Messages

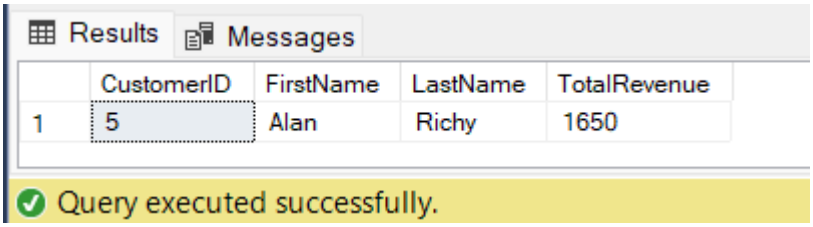
	ProductName	AvgQuantityOrdered
1	Keyboard	3
2	Mouse	5
3	Monitor	1

Query executed successfully.

5. Write an SQL query to calculate the total revenue generated by a specific customer. Allow users to input the customer ID as a parameter.

```
select Customers.CustomerID, Customers.FirstName, Customers.LastName,
(select sum(Orders.TotalAmount) from Orders
where Orders.CustomerID = Customers.CustomerID) as TotalRevenue
from Customers where Customers.CustomerID = 5
```

OUTPUT:



Results | Messages

	CustomerID	FirstName	LastName	TotalRevenue
1	5	Alan	Richy	1650

Query executed successfully.

6. Write an SQL query to find the customers who have placed the most orders. List their names and the number of orders they've placed.

```
select top 1  C.CustomerID, C.FirstName, C.LastName, count(O.OrderID) as OrderCount
from Customers C join Orders O on C.CustomerID = O.CustomerID
group by C.CustomerID, C.FirstName, C.LastName
order by OrderCount desc
```

OUTPUT:

Results | Messages

	CustomerID	FirstName	LastName	OrderCount
1	5	Alan	Richy	2

Query executed successfully.

7. Write an SQL query to find the most popular product category, which is the one with the highest total quantity ordered across all orders.

```
select top 1 Category, TotalQuantityOrdered
from (select Products.Category, sum(OrderDetails.Quantity) as TotalQuantityOrdered
from Products join OrderDetails  on Products.ProductID = OrderDetails.ProductID
group by Products.Category) as CategoryOrderCounts
order by TotalQuantityOrdered desc
```

OUTPUT:

Results | Messages

	Category	TotalQuantityOrdered
1	Computer Peripherals	9

Query executed successfully.

8. Write an SQL query to find the customer who has spent the most money (highest total revenue) on electronic gadgets. List their name and total spending.

```
select top 1 C.CustomerID,C.FirstName,C.LastName,
sum(O.TotalAmount) as TotalSpent
from Customers C join Orders O on C.CustomerID = O.CustomerID
group by C.CustomerID, C.FirstName, C.LastName
order by TotalSpent desc
```

OUTPUT:

Results | Messages

	CustomerID	FirstName	LastName	TotalSpent
1	1	John	smith	9350

Query executed successfully.

9. Write an SQL query to calculate the average order value (total revenue divided by the number of orders) for all customers.

```
select avg(TotalAmount) as AverageOrderValue
from Orders where TotalAmount is not null
```

OUTPUT:

Results | Messages

	AverageOrderValue
1	4478

Query executed successfully.

10. Write an SQL query to find the total number of orders placed by each customer and list their names along with the order count.

```
select FirstName, LastName,(select count(*) from Orders
where Orders.CustomerID = Customers.CustomerID)
as OrderCount from Customers
```

OUTPUT:

Results | Messages

	FirstName	LastName	OrderCount
1	John	smith	1
2	William	Smith	1
3	Scott	johnson	1
4	King	blake	1
5	Alan	Richy	2
6	David	Raj	1
7	Martin	Adams	1
8	Allen	Jones	0
9	Jenny	Fransis	0
10	Henry	Adams	1
11	Albert	lipin	0

Query executed successfully.