

Assignment 1

TechShop

Task 1: Database Design

1.

The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'DESKTOP-8QHILG6\SCS (83)' using 'northwind' as the database. The 'Object Explorer' pane on the left shows the server structure, including databases like 'master', 'model', 'msdb', and 'northwind'. The 'TechShop' database is selected. The 'Script' tab in the ribbon is active. The main pane displays T-SQL code for creating a database and three tables:

```
CREATE DATABASE TechShop;
USE TechShop;

CREATE TABLE Customers
(
    CustomerID INT PRIMARY KEY NOT NULL,
    FirstName VARCHAR(30) NOT NULL,
    LastName VARCHAR(30) NOT NULL,
    Email VARCHAR(30) NOT NULL,
    Phone VARCHAR(15) NOT NULL,
    Address VARCHAR(30) NOT NULL
);

CREATE TABLE Products
(
    ProductID INT PRIMARY KEY,
    ProductName VARCHAR(30) NOT NULL,
    Description VARCHAR(50),
    Price INT NOT NULL
);

CREATE TABLE Orders
```

Below the code, the message 'Commands completed successfully.' is displayed, along with the completion time: '2023-12-09T19:33:29.0704870+00:30'. The status bar at the bottom shows the connection details and the current date and time: '09-12-2023'. A green status bar at the bottom left indicates 'Query executed successfully.'

2.

The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'DESKTOP-8QHJLG6\TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio'. The Object Explorer on the left shows the database structure, including tables 'Customers', 'Products', 'Orders', and 'OrderDetails'. The 'TechShop' database is selected. The central pane displays the following T-SQL script:

```
CREATE TABLE Customers
(
    CustomerID int PRIMARY KEY,
    FirstName varchar(40) not null,
    LastName varchar(40) not null,
    Email varchar(30) not null,
    Phone varchar(15) not null,
    Address varchar(30) not null
);

CREATE TABLE Products
(
    ProductID int PRIMARY KEY,
    ProductName varchar(30) not null,
    Description varchar(50),
    Price int not null
);

CREATE TABLE Orders
(
    OrderID int PRIMARY KEY,
    CustomerID int,
    OrderDate date,
    TotalAmount int,
    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID)
);

CREATE TABLE OrderDetails
(
    OrderDetailID int PRIMARY KEY,
    OrderID int,
    ProductID int,
    Quantity int,
    FOREIGN KEY (OrderID) REFERENCES Orders(OrderID),
    FOREIGN KEY (ProductID) REFERENCES Products(ProductID)
);
```

The status bar at the bottom shows '100 %' completion, 'Query executed successfully.', and the execution time as 'Completion time: 2023-12-09T19:34:12.2871500+05:00'. The taskbar at the bottom right includes icons for File Explorer, Task View, Search, Start, and several pinned applications.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (B3) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Object Explorer

Assignment 1.sql - ~\8QHJLG6\SCS (B3)* # X

```
INSERT INTO Inventory (InventoryID, ProductID, QuantityInStock, LastStockUpdate) VALUES (301, 1, 50, '2023-12-01');
INSERT INTO Inventory (InventoryID, ProductID, QuantityInStock, LastStockUpdate) VALUES (302, 2, 20, '2023-12-02');
INSERT INTO Inventory (InventoryID, ProductID, QuantityInStock, LastStockUpdate) VALUES (303, 3, 30, '2023-12-03');
INSERT INTO Inventory (InventoryID, ProductID, QuantityInStock, LastStockUpdate) VALUES (304, 4, 15, '2023-12-04');
INSERT INTO Inventory (InventoryID, ProductID, QuantityInStock, LastStockUpdate) VALUES (305, 5, 10, '2023-12-05');
INSERT INTO Inventory (InventoryID, ProductID, QuantityInStock, LastStockUpdate) VALUES (306, 6, 25, '2023-12-06');
INSERT INTO Inventory (InventoryID, ProductID, QuantityInStock, LastStockUpdate) VALUES (307, 7, 10, '2023-12-07');
INSERT INTO Inventory (InventoryID, ProductID, QuantityInStock, LastStockUpdate) VALUES (308, 8, 35, '2023-12-08');
INSERT INTO Inventory (InventoryID, ProductID, QuantityInStock, LastStockUpdate) VALUES (309, 9, 18, '2023-12-09');
INSERT INTO Inventory (InventoryID, ProductID, QuantityInStock, LastStockUpdate) VALUES (310, 10, 22, '2023-12-10');

-- SQL query to retrieve the names and emails of all customers

=SELECT FirstName, LastName, Email
FROM Customers;]
```

Results Messages

	FirstName	LastName	Email
1	Rajesh	Mehra	raj12@gmail.com
2	Rohit	Kulkarni	rohit212@gmail.com
3	Ravi	Patil	ravi234@gmail.com
4	Sara	Khan	sara123@gmail.com
5	Ankit	Sharma	amit.sharma@gmail.com
6	Anil	Singh	anila_0@gmail.com
7	Rahul	Gupta	rahul_0@gmail.com
8	Priya	Yadav	priya_yadav@gmail.com
9	Rajesh	Mehra	raj_mehra@gmail.com
10	Neha	Shah	neha_shah@gmail.com

Query executed successfully.

DESKTOP-8QHJLG6 (16.0 RTM) | DESKTOP-8QHJLG6\SCS (B3) | TechShop | 00:00:00 | 10 rows

Ready

Breaking news
Get caught up

Search

Ln 104 Col 16 Ch 16 INS

19:35 09-12-2023

Task 2: Select, Where, Between, And, Like

1.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

```
File Edit View Query Project Tools Window Help
New Query Execute Quick Launch (Ctrl+Q) ×
Object Explorer Assignment 1.sql - 8QHJLG6\SCS (83)*
DESKTOP-8QHJLG6 (SQL Server 16)
Databases Security Server Objects Replication Always On High Availability Management Integration Services Catalogs SQL Server Agent (Agent XPs disabled)
TechShop
Assignment 1.sql - 8QHJLG6\SCS (83)*
-- SQL query to retrieve the names and emails of all customers
SELECT FirstName, LastName, Email
FROM Customers;

-- SQL query to list all orders with their order dates and corresponding customer names.
SELECT O.OrderID, O.OrderDate, C.FirstName, C.LastName
FROM Orders O
JOIN Customers C ON O.CustomerID=C.CustomerID;

-- SQL query to insert a new customer record into the "Customers" table. Include customer information such as name, email, and address.
INSERT INTO Customers VALUES ('11', 'Rohit', 'Kulkarni', 'krohit2000@gmail.com', '8055998766', 'Sangli, Maharashtra, India');
```

Results Messages

OrderID	OrderDate	FirstName	LastName
1	101	Raj	Patil
2	102	Rohit	Kulkarni
3	103	Ravi	Patil
4	104	Sara	Khan
5	105	Amrit	Sharma
6	106	Anita	Singh
7	107	Shivam	Gupta
8	108	Praveen	Yadav
9	109	Rakesh	Mehra
10	110	Neha	Shah

Query executed successfully.

DESKTOP-8QHJLG6 (16.0 RTM) | DESKTOP-8QHJLG6\SCS (83) | TechShop | 00:00:00 | 10 rows

Ready Breaking news Get caught up

Search Col 1 Ch 1 INS 19:35 09-12-2023

2.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

```
File Edit View Query Project Tools Window Help
New Query Execute Quick Launch (Ctrl+Q) ×
Object Explorer Assignment 1.sql - 8QHJLG6\SCS (83)*
DESKTOP-8QHJLG6 (SQL Server 16)
Databases Security Server Objects Replication Always On High Availability Management Integration Services Catalogs SQL Server Agent (Agent XPs disabled)
TechShop
Assignment 1.sql - 8QHJLG6\SCS (83)*
-- SQL query to insert a new customer record into the "Customers" table. Include customer information such as name, email, and address.
INSERT INTO Customers VALUES ('11', 'Rohit', 'Kulkarni', 'krohit2000@gmail.com', '8055998766', 'Sangli, Maharashtra, India');
SELECT * FROM Customers;

-- SQL query to update the prices of all electronic gadgets in the "Products" table by increasing them by 10%.
UPDATE Products
SET Price=Price*1.1;
SELECT * FROM Products;

-- SQL query to delete a specific order and its associated order details from the "Orders" and "OrderDetails" tables. Allow users to input the order ID as a parameter.
DECLARE @OrderIDToDelete int = 101;
DELETE FROM Orders WHERE OrderID = @OrderIDToDelete;
DELETE FROM OrderDetails WHERE OrderID = @OrderIDToDelete;
```

Results Messages

CustomerID	FirstName	LastName	Email	Phone	Address
1	Raj	Patil	raj12@gmail.com	23402742756	403,Pune, Maharashtra
2	Rohit	Kulkarni	rohit212@gmail.com	23563742756	103,Pune, Maharashtra
3	Ravi	Patil	ravi234@gmail.com	7447565576	Pune, Maharashtra
4	Sara	Khan	sara123@gmail.com	9876543210	Mumbai, Maharashtra
5	Amrit	Sharma	amrit.sharma@gmail.com	8765432109	Delhi, India
6	Amit	Sharma	amit.sharma123@gmail.com	9876543210	Mumbai, Maharashtra
7	Rahul	Dutta	rahul_dutta@gmail.com	9012345678	Chennai, Tamil Nadu
8	Praveen	Yadav	praveen_yadav@gmail.com	7654321098	Kolkata, West Bengal
9	Rejesh	Mehra	rejesh_mehra@gmail.com	6543210987	Ahmedabad, Gujarat
10	Neha	Shah	neha_shah@gmail.com	8901234567	Hyderabad, Telangana
11	Rohit	Kulkarni	krohit2000@gmail.com	8055998766	Sangli, Maharashtra, India

Query executed successfully.

DESKTOP-8QHJLG6 (16.0 RTM) | DESKTOP-8QHJLG6\SCS (83) | TechShop | 00:00:00 | 11 rows

Ready Breaking news Get caught up

Search Col 1 Ch 1 INS 19:36 09-12-2023

3.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

```
File Edit View Query Project Tools Window Help
New Query Execute
Assignment 1.sql --8QHJLG6\SCS (83)*
SELECT * FROM Customers;
--SQL query to update the prices of all electronic gadgets in the "Products" table by increasing them by 10%.
UPDATE Products
SET Price=Price*1.1;
SELECT * FROM Products;
--SQL query to delete a specific order and its associated order details from the "Orders" and "OrderDetails" tables. Allow users to input the order ID as a parameter.
DECLARE @OrderIDToDelete int = 101;
DELETE FROM Orders WHERE OrderID= @OrderIDToDelete;
DELETE FROM OrderDetails WHERE OrderID= @OrderIDToDelete;
SELECT * FROM Orders;
SELECT * FROM OrderDetails;
--SQL query to insert a new order into the "Orders" table. Include the customer ID, order date, and any other necessary information.
```

Results Messages

ProductID	ProductName	Description	Price
1	Smartphone X	High-end smartphone	878
2	Power Bank Pro	Portable power bank with 10000 mAh	1428
3	Wireless Earbuds	Noise-cancelling earbuds	163
4	Smartwatch	Fitness tracking smartwatch	218
5	Tablet	Portable tablet with HD display	548
6	Bluetooth Speaker	Waterproof portable speaker	86
7	Gaming Console	Next-gen gaming console	548
8	Digital Camera	High-resolution digital camera	768
9	External Hard Drive	1TB external hard drive	97
10	Smart TV	4K Ultra HD Smart TV	1098

Query executed successfully.

4.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

```
File Edit View Query Project Tools Window Help
New Query Execute
Assignment 1.sql --8QHJLG6\SCS (83)*
SELECT * FROM Products;
--SQL query to delete a specific order and its associated order details from the "Orders" and "OrderDetails" tables. Allow users to input the order ID as a parameter.
DECLARE @OrderIDToDelete int = 101;
DELETE FROM Orders WHERE OrderID= @OrderIDToDelete;
DELETE FROM OrderDetails WHERE OrderID= @OrderIDToDelete;
SELECT * FROM Orders;
SELECT * FROM OrderDetails;
--SQL query to insert a new order into the "Orders" table. Include the customer ID, order date, and any other necessary information.
INSERT INTO Orders (OrderID,CustomerID, OrderDate, TotalAmount) VALUES (111,11, '2023-12-15', 999.99);
```

Results Messages

OrderID	CustomerID	OrderDate	TotalAmount
1	102	2023-12-02	1449
2	103	2023-12-03	198
3	104	2023-12-04	198
4	105	2023-12-05	499
5	106	2023-12-06	79
6	107	2023-12-07	499
7	108	2023-12-08	699
8	109	2023-12-09	89

OrderDetailID	OrderID	ProductID	Quantity
1	202	102	2
2	203	102	3
3	204	103	4
4	205	104	5
5	206	105	6
6	207	105	7
7	208	106	8
8	209	107	9
9	210	108	10

Query executed successfully.

5.

```
Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio
File Edit View Project Tools Window Help
New Query Execute
Object Explorer
Connect Connect ...
DESKTOP-8QHJLG6 (SQL Server 16)
Databases Security Server Objects Replication Always On High Availability Management Integration Services Catalogs SQL Server Agent (Agent XPs disabled) XEvent Profiler
Assignment 1.sql (~ - 8QHJLG6\SCS (83))
DELETE FROM Orders WHERE OrderID= @OrderIDToDelete;
DELETE FROM OrderDetails WHERE OrderID = @OrderIDToDelete;
SELECT * FROM Orders;
SELECT * FROM OrderDetails;

--SQL query to insert a new order into the "Orders" table. Include the customer ID, order date, and any other necessary information.

INSERT INTO Orders (OrderID,CustomerID, OrderDate, TotalAmount) VALUES (111,11, '2023-12-15', 999.99);

/*SQL query to update the contact information (e.g., email and address) of a specific customer in the "Customers" table.
Allow users to input the customer ID and new contact information.*/
UPDATE Customers
100 %
Messages
(1 row affected)
Completion time: 2023-12-09T19:37:16.5878039+06:30
100 %
Query executed successfully.
Ready
Breaking news Get caught up
Search
INS
DESKTOP-8QHJLG6 (16.0 RTM) DESKTOP-8QHJLG6\SCS (83) TechShop 00:00:00 0 rows
19:37 09-12-2023
```

6.

```
Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio
File Edit View Project Tools Window Help
New Query Execute
Object Explorer
Connect Connect ...
DESKTOP-8QHJLG6 (SQL Server 16)
Databases Security Server Objects Replication Always On High Availability Management Integration Services Catalogs SQL Server Agent (Agent XPs disabled) XEvent Profiler
Assignment 1.sql (~ - 8QHJLG6\SCS (83))
INSERT INTO Orders (OrderID,CustomerID, OrderDate, TotalAmount) VALUES (111,11, '2023-12-15', 999.99);

/*SQL query to update the contact information (e.g., email and address) of a specific customer in the "Customers" table.
Allow users to input the customer ID and new contact information.*/
UPDATE Customers
SET Email='rkulkarni0507@gmail.com', Address='Solapur,India'
WHERE CustomerID=11;
SELECT * FROM Customers;

--an SQL query to recalculate and update the total cost of each order in the "Orders" table based on the prices and quantities in the "OrderDetails" table.

100 %
Messages
CustomerID FirstName LastName Email Phone Address
1 Raj Patel raj12@gmail.com 234567890123456789 Mumbai, Maharashtra
2 Ravi Patel ravi23@gmail.com 9876543210987654321098 103,Pune, Maharashtra
3 Ravi Patel ravi34@gmail.com 7447565576 Pune, Maharashtra
4 Sara Khan sara123@gmail.com 9876543210 Mumbai, Maharashtra
5 Amit Sharma amit.sharma@gmail.com 8765432109 Delhi, India
6 Anita Singh anita_12@gmail.com 7890123456 Bangalore, Karnataka
7 Rahul Gupta rahul_gupta@gmail.com 9012345678 Chennai, Tamil Nadu
8 Priya Yadav priya_yadav@gmail.com 7654321098 Kolkata, West Bengal
9 Rajesh Mehta raj_mehta@gmail.com 6543210987 Ahmedabad, Gujarat
10 Neha Shah neha_shah@gmail.com 8901234567 Hyderabad, Telangana
11 Rohit Kumar rkumar0507@gmail.com 8056998765 Solapur, India
100 %
Query executed successfully.
Ready
Breaking news Get caught up
Search
INS
DESKTOP-8QHJLG6 (16.0 RTM) DESKTOP-8QHJLG6\SCS (83) TechShop 00:00:00 11 rows
19:37 09-12-2023
```

7.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

File Edit View Project Tools Window Help

New Query Task List Object Explorer

Assignment 1.sql (~-8QHJLG6\SCS (83))

```
SELECT * FROM Customers;
--an SQL query to recalculate and update the total cost of each order in the "Orders" table based on the prices and quantities in the "OrderDetails" table.
UPDATE Orders
SET TotalAmount = TotalAmount*Quantity
FROM OrderDetails OD
JOIN Orders O ON OD.OrderID=O.OrderID;

/*SQL query to delete all orders and their associated order details for a specific customer from the "Orders" and "OrderDetails" tables.
Allow users to input the customer ID as a parameter.*/
DELETE FROM OrderDetails
```

100 %

Messages

(? rows affected)

Completion time: 2023-12-09T19:37:41.8498019+00:30

Ready

Breaking news Get caught up

Search

DESKTOP-8QHJLG6 (16.0 RTM) DESKTOP-8QHJLG6\SCS (83) TechShop 00:00:00 0 rows

19:37 09-12-2023

8.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

File Edit View Project Tools Window Help

New Query Task List Object Explorer

Assignment 1.sql (~-8QHJLG6\SCS (83))

```
FROM OrderDetails OD
JOIN Orders O ON OD.OrderID=O.OrderID;

/*SQL query to delete all orders and their associated order details for a specific customer from the "Orders" and "OrderDetails" tables.
Allow users to input the customer ID as a parameter.*/
DELETE FROM OrderDetails
FROM OrderDetails OD
JOIN Orders O ON O.OrderID = OD.OrderID
WHERE O.CustomerID = 10;
SELECT * FROM OrderDetails;
```

100 %

Results

OrderDetailID	OrderID	ProductID	Quantity
1	205	103	2
2	204	103	3
3	204	103	4
4	205	104	5
5	206	105	6
6	207	105	7
7	208	106	8
8	209	107	9
9	210	108	1

Messages

Query executed successfully.

Ready

Breaking news Get caught up

Search

DESKTOP-8QHJLG6 (16.0 RTM) DESKTOP-8QHJLG6\SCS (83) TechShop 00:00:00 9 rows

19:37 09-12-2023

9.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

```
File Edit View Project Tools Window Help
New Query Execute
WHERE O.CustomerID = 10;
SELECT * FROM OrderDetails;

--DELETE FROM Orders
WHERE CustomerID = 10;
SELECT * FROM Orders;

--SQL query to insert a new electronic gadget product into the "Products" table, including product name, category, price, and any other relevant details.
INSERT INTO Products (ProductID, ProductName, Price) VALUES (11, 'Smartwatch', 1299.00);
SELECT * FROM Products;

-- SQL query to update the status of a specific order in the "Orders" table (e.g., from "Pending" to "Shipped"). Allow users to input the order ID and the new status.
```

Results Messages

OrderID	CustomerID	OrderDate	TotalAmount
102	1	2023-12-02	1449
103	3	2023-12-03	149
104	4	2023-12-04	199
105	5	2023-12-05	499
106	6	2023-12-06	79
107	7	2023-12-07	499
108	8	2023-12-08	699
109	9	2023-12-09	89
111	11	2023-12-15	999

Query executed successfully.

Ready Breaking news Get caught up

DESKTOP-8QHJLG6 (16.0 RTM) DESKTOP-8QHJLG6\SCS (83) TechShop 00:00:00 9 rows

19:38 09-12-2023

10.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

```
--SQL query to insert a new electronic gadget product into the "Products" table, including product name, category, price, and any other relevant details.
INSERT INTO Products (ProductID, ProductName, Price) VALUES (11, 'Smartwatch', 1299.00);
SELECT * FROM Products;

-- SQL query to update the status of a specific order in the "Orders" table (e.g., from "Pending" to "Shipped"). Allow users to input the order ID and the new status.
ALTER TABLE Orders
ADD OrderStatus varchar(10);

UPDATE Orders
SET OrderStatus = 'Shipped'
```

Results Messages

ProductID	ProductName	Description	Price
1	Smartphone X	High-end smartphone	876
2	Laptop Pro	Powerful laptop with SSD	1428
3	Wireless Earbuds	Noise-cancelling earbuds	163
4	Smartwatch	Fitness tracking smartwatch	218
5	Tablet	Portable tablet with HD display	548
6	Bluetooth Speaker	Waterproof portable speaker	86
7	Gaming Console	Next-gen gaming console	548
8	Digital Camera	High-resolution digital camera	768
9	External Hard Drive	1TB external hard drive	97
10	Smart TV	4K Ultra HD SmartTV	1098
11	Smartwatch	NULL	1299

Query executed successfully.

Ready Breaking news Get caught up

DESKTOP-8QHJLG6 (16.0 RTM) DESKTOP-8QHJLG6\SCS (83) TechShop 00:00:00 11 rows

19:38 09-12-2023

11.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

```
-- SQL query to update the status of a specific order in the "Orders" table (e.g., from "Pending" to "Shipped"). Allow users to input the order ID and the new status.  
ALTER TABLE Orders  
ADD OrderStatus varchar(10);  
  
UPDATE Orders  
SET OrderStatus = 'Shipped'  
WHERE OrderID = 102;  
SELECT * FROM Orders;  
  
-- SQL query to calculate and update the number of orders placed by each customer in the "Customers" table based on the data in the "Orders" table.  
ALTER TABLE Customers  
ADD NumberOfOrdersPlaced int;
```

Results

OrderID	CustomerID	OrderDate	TotalAmount	OrderStatus
102	3	2023-12-02	1449	Shipped
2	103	2023-12-03	149	NULL
3	104	2023-12-04	199	NULL
4	105	2023-12-05	499	NULL
5	106	2023-12-06	79	NULL
6	107	2023-12-07	499	NULL
7	108	2023-12-08	999	NULL
8	109	2023-12-09	89	NULL
9	111	2023-12-15	999	NULL

Query executed successfully.

12.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

```
-- SQL query to calculate and update the number of orders placed by each customer in the "Customers" table based on the data in the "Orders" table.  
ALTER TABLE Customers  
ADD NumberOfOrdersPlaced int;  
  
UPDATE Customers  
SET NumberOfOrdersPlaced = (SELECT COUNT(OrderID)  
FROM Orders  
WHERE Customers.CustomerID=Orders.CustomerID  
);  
SELECT * FROM Customers;  
SELECT * FROM Orders;
```

Messages

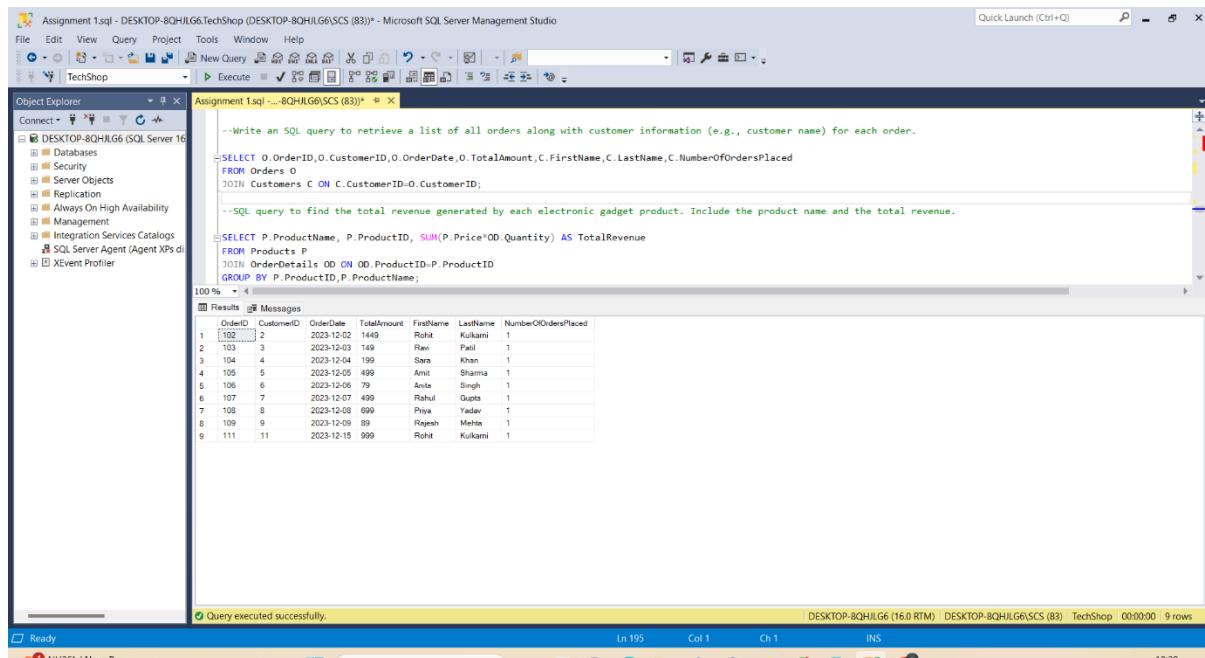
(1) row affected

Completion time: 2023-12-09T19:39:32.0866098+06:30

Query executed successfully.

Task 3: Aggregate functions, Having, Order By, Group By

1.

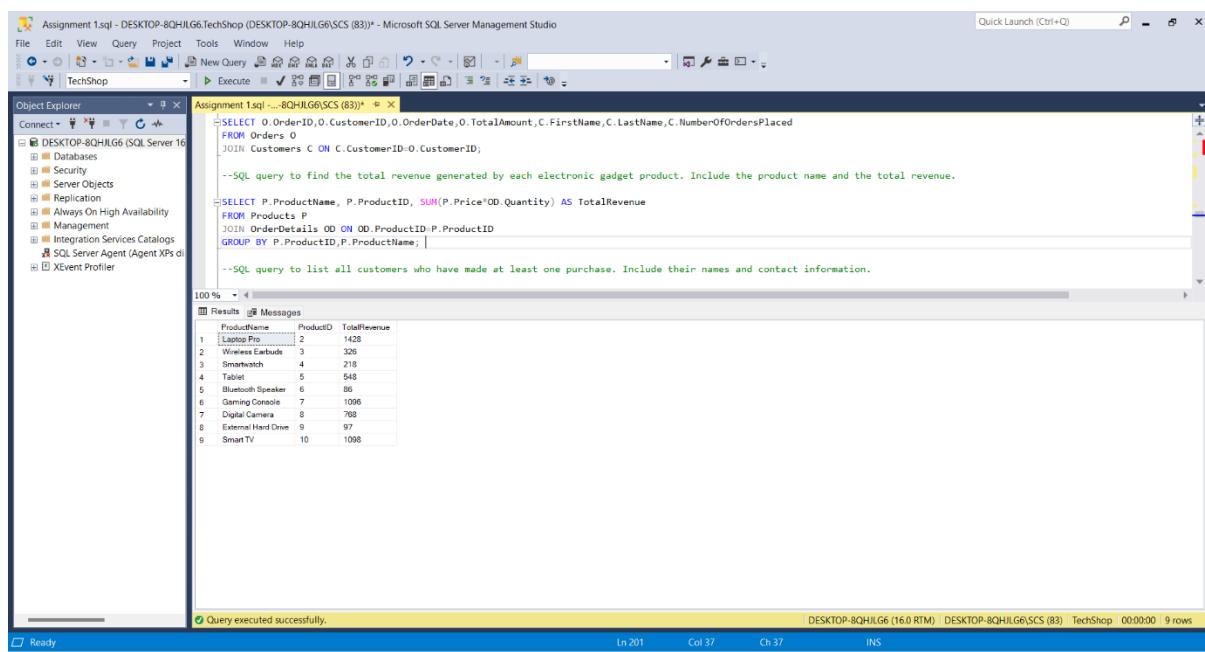


--Write an SQL query to retrieve a list of all orders along with customer information (e.g., customer name) for each order.
--SQL query to find the total revenue generated by each electronic gadget product. Include the product name and the total revenue.
--SQL query to list all customers who have made at least one purchase. Include their names and contact information.

OrderID	CustomerID	OrderDate	TotalAmount	FirstName	LastName	NumberofOrdersPlaced
1	102	2023-12-02	1449	Rohit	Kukarni	1
2	3	2023-12-03	149	Revi	Pali	1
3	104	2023-12-04	204	Suresh	Kumar	1
4	105	2023-12-05	499	Amit	Sharma	1
5	106	2023-12-06	79	Anita	Singh	1
6	107	2023-12-07	499	Rahul	Gupta	1
7	108	2023-12-08	999	Priya	Yadav	1
8	109	2023-12-09	89	Rejesh	Mehra	1
9	111	2023-12-15	999	Rohit	Kukarni	1

Query executed successfully.

2.



--Write an SQL query to retrieve a list of all orders along with customer information (e.g., customer name) for each order.
--SQL query to find the total revenue generated by each electronic gadget product. Include the product name and the total revenue.
--SQL query to list all customers who have made at least one purchase. Include their names and contact information.

ProductName	ProductID	TotalRevenue
Laptop Pro	2	1428
Wireless Earbuds	3	326
Smartwatch	4	218
Tablet	5	548
Bluetooth Speaker	6	96
Gaming Console	7	1096
Digital Camera	8	763
External Hard Drive	9	97
Smart TV	10	1098

Query executed successfully.

3.

The screenshot shows the Microsoft SQL Server Management Studio interface. In the Object Explorer, a connection to 'DESKTOP-8QHJLG6(TechShop)' is selected. Three queries are open in the main pane:

```
--SELECT P.ProductName, P.ProductID, SUM(OD.Quantity) AS TotalRevenue  
FROM Products P  
JOIN Order-Details OD ON OD.ProductID=P.ProductID  
GROUP BY P.ProductID,P.ProductName;  
  
--SQL query to list all customers who have made at least one purchase. Include their names and contact information.  
  
SELECT FirstName,LastName,Phone  
FROM Customers  
WHERE NumberOfOrdersPlaced>0;
```

The third query's results are displayed in a table:

FirstName	LastName	Phone
Rohit	Kulkarni	23903742756
Ravi	Puri	7445655078
Sara	Khan	9876543210
Amit	Sharma	8765432109
Anita	Singh	7890123456
Rahul	Gupta	9012345678
Priya	Yadav	7654321098
Rajesh	Mehra	6543210987
Rohit	Kulkarni	8055998766

At the bottom, a message indicates: 'Query executed successfully.'

4.

The screenshot shows the Microsoft SQL Server Management Studio interface. In the Object Explorer, a connection to 'DESKTOP-8QHJLG6(TechShop)' is selected. Two queries are open in the main pane:

```
WHERE NumberOfOrdersPlaced>0;  
  
--SQL query to find the most popular electronic gadget, which is the one with the highest total quantity ordered. Include the product name and the total quantity ordered.  
SELECT TOP 1 P.ProductName,P.ProductID, SUM(OD.Quantity) AS TotalQuantityOrdered  
FROM Products P  
JOIN Order-Details OD ON OD.ProductID=P.ProductID  
GROUP BY P.ProductName,P.ProductID  
ORDER BY TotalQuantityOrdered DESC;]  
  
--an SQL query to retrieve a list of electronic gadgets along with their corresponding categories.  
  
SELECT ProductName,Description
```

The second query's results are displayed in a table:

ProductName	ProductID	TotalQuantityOrdered
WirelessEarbuds	3	2

At the bottom, a message indicates: 'Query executed successfully.'

5.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

File Edit View Project Tools Window Help

New Query Execute

Object Explorer

Assignment 1.sql - DESKTOP-8QHJLG6\SCS (83)*

```
JOIN Order-Details OD ON OD.ProductID=P.ProductID
GROUP BY P.ProductName,P.ProductID
ORDER BY TotalQuantityOrdered DESC;

--an SQL query to retrieve a list of electronic gadgets along with their corresponding categories.

--SQL query to calculate the average order value for each customer. Include the customer's name and their average order value.

SELECT C.CustomerID,C.FirstName,C.LastName, AVG(TotalAmount/Quantity) AS AverageOrderValue
FROM Customers C
```

Results Messages

ProductID	ProductName	Description
1	Smartphone X	High-end smartphone
2	Laptop Pro	Powerful laptop with SSD
3	Wireless Earbuds	Noise-cancelling earbuds
4	Smartwatch	Fitness tracking smartwatch
5	Tablet	Portable tablet with HD display
6	Bluetooth Speaker	Waterproof portable speaker
7	Gaming Console	Next-gen gaming console
8	Digital Camera	High-resolution digital camera
9	External Hard Drive	1TB external hard drive
10	Smart TV	4K Ultra HD Smart TV
11	Smartwatch	NULL

Query executed successfully.

DESKTOP-8QHJLG6 (16.0 RTM) DESKTOP-8QHJLG6\SCS (83) TechShop 00:00:00 11 rows

Ready

NH361 / Nava Pu... Closed road

Search

In 220 Col 15 Ch 15 INS

19:40 09-12-2023

6.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

File Edit View Project Tools Window Help

New Query Execute

Object Explorer

Assignment 1.sql - DESKTOP-8QHJLG6\SCS (83)*

```
--SQL query to calculate the average order value for each customer. Include the customer's name and their average order value.

SELECT C.CustomerID,C.FirstName,C.LastName, AVG(TotalAmount/Quantity) AS AverageOrderValue
FROM Customers C
JOIN Orders O ON O.CustomerID=C.CustomerID
JOIN Order-Details OD ON OD.OrderID=O.OrderID
GROUP BY C.CustomerID,C.FirstName,C.LastName;

--SQL query to find the order with the highest total revenue. Include the order ID, customer information, and the total revenue.

SELECT TOP 1 O.OrderID, C.CustomerID,C.FirstName,C.LastName, SUM(TotalAmount/Quantity) AS HighestTotalRevenue
FROM Customers C
JOIN Orders O ON O.CustomerID= C.CustomerID
```

Results Messages

CustomerID	FirstName	LastName	AverageOrderValue
1	Rohit	Kumar	2173
2	Pankaj	Patel	40
3	Sara	Khan	199
4	Amil	Sharma	748
5	Anita	Singh	79
6	Rahul	Gupta	499
7	Priya	Yadav	699

Query executed successfully.

DESKTOP-8QHJLG6 (16.0 RTM) DESKTOP-8QHJLG6\SCS (83) TechShop 00:00:00 7 rows

Ready

NH361 / Nava Pu... Closed road

Search

In 228 Col 46 Ch 46 INS

19:40 09-12-2023

7.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

```
--SQL query to find the order with the highest total revenue. Include the order ID, customer information, and the total revenue.  
--  
--SELECT TOP 1 O.OrderID, C.CustomerID, C.FirstName, C.LastName,  
FROM Customers C  
JOIN Orders O ON C.CustomerID = O.CustomerID  
JOIN OrderDetails OD ON OD.OrderID = O.OrderID  
GROUP BY O.OrderID, C.CustomerID, C.FirstName, C.LastName  
ORDER BY HighestTotalRevenue DESC;
```

--SQL query to list electronic gadgets and the number of times each product has been ordered.

OrderID	CustomerID	FirstName	LastName	HighestTotalRevenue
1	102	Rohit	Kulkarni	4347

Query executed successfully.

Ready NH361 / Nava Pu... Search 19:40 09-12-2023

8.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

```
ORDER BY HighestTotalRevenue DESC;
```

--SQL query to list electronic gadgets and the number of times each product has been ordered.

```
--  
--SELECT P.ProductID, P.ProductName, COUNT(OD.OrderID) AS OrderCount  
FROM Products P  
LEFT JOIN OrderDetails OD ON OD.ProductID = P.ProductID  
GROUP BY P.ProductID, P.ProductName  
ORDER BY OrderCount DESC;
```

--SQL query to find customers who have purchased a specific electronic gadget product. Allow users to input the product name as a parameter.

```
DECLARE @ProductName varchar(100)  
SET @ProductName='Gaming Console'
```

ProductID	ProductName	OrderCount
1	Laptop Pro	1
2	Wireless Earbuds	1
3	Smartwatch	1
4	Tablet	1
5	Bluetooth Speaker	1
6	Gaming Console	1
7	Digital Camera	1
8	External Hard Drive	1
9	Smart TV	1
10	Smartwatch	0
11	Smartphone X	0

Query executed successfully.

Ready NH361 / Nava Pu... Search 19:40 09-12-2023

9.

The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar reads "Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio". The Object Explorer on the left shows a connection to "DESKTOP-8QHJLG6 (SQL Server 16)". The main window displays a query results grid and a message bar at the bottom.

Query Results

Index	FirstName	LastName	ProductName	OrderID	ProductID
1	Rohit	Kukarni	Laptop Pro	102	2
2	Rohit	Kukarni	Wireless Earbuds	102	3
3	Ravi	Patil	Smartwatch	103	4
4	Sara	Khan	Tablet	104	5
5	Amrit	Sharma	Bluetooth Speaker	105	6
6	Ananya	Singh	Gaming Console	105	7
7	Armaan	Singh	Digital Camera	106	8
8	Rohul	Gupta	External Hard Drive	107	9
9	Priya	Yadav	Smart TV	108	10

Message Bar

Query executed successfully.

Bottom Taskbar

Ready NH361 / Nava Pu... DESKTOP-8QHJLG6 (16.0 RTM) DESKTOP-8QHJLG6\SCS (83) TechShop 00:00:00 09-12-2023 19:41

10.

Assignment 1.sql - DESKTOP-8QHJLG6\TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

New Query Execute Save All Refresh Stop Stop All

Object Explorer

Connect - DESKTOP-8QHJLG6 (SQL Server 16)

- Databases
- Security
- Server Objects
- Replication
- Always On High Availability
- Integration Services Catalogs
- SQL Server Agent (Agent XPs disabled)
- XEvent Profiler

Assignment 1.sql (Assignment 1.sql) -

```
--SQL query to calculate the total revenue generated by all orders placed within a specific time period. Allow users to input the start and end dates as parameters.

DECLARE @StartDate DATE
DECLARE @EndDate DATE
SET @StartDate = '2023-12-02'
SET @EndDate = '2023-12-06'
SELECT SUM(O.TotalAmount*OD.Quantity) AS RevenueGenerated
FROM Orders O
JOIN OrderDetails OD ON OD.OrderID=O.OrderID
WHERE OrderDate > @StartDate AND OrderDate < @EndDate;
--SQL query to find out which customers have not placed any orders.
```

Results Messages

RevenueGenerated
3272

Query executed successfully.

Ready 24°C Partly cloudy

Search

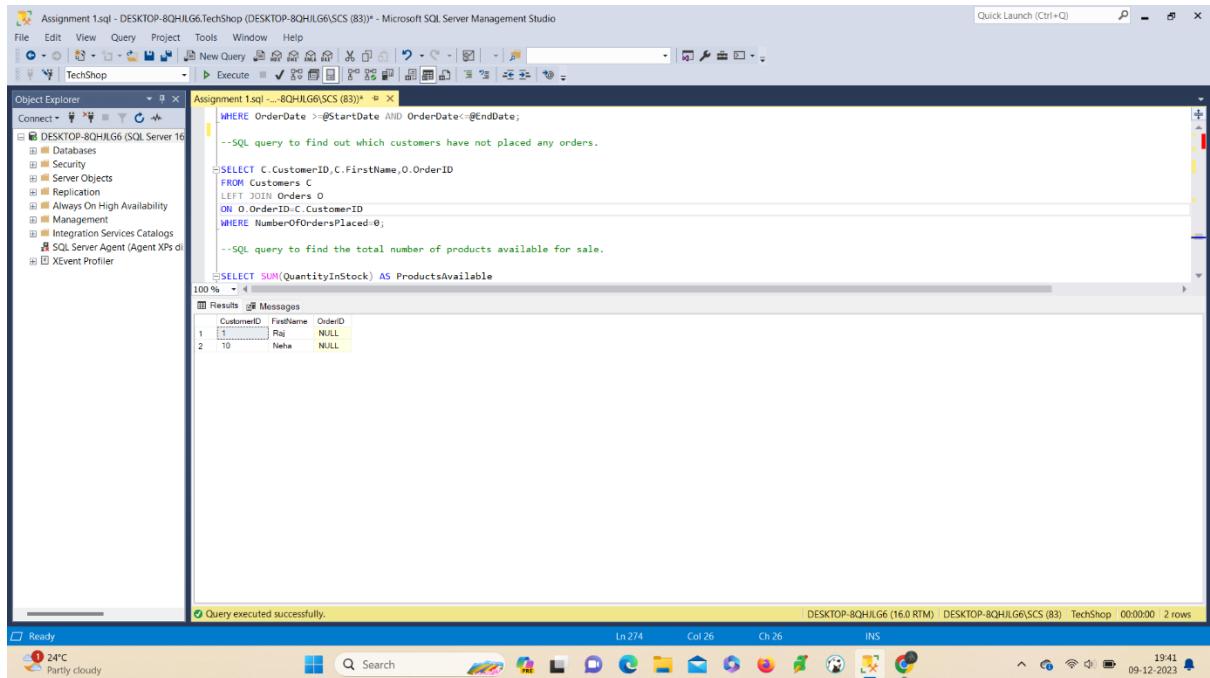
DESKTOP-8QHJLG6 (16.0 RTM) | DESKTOP-8QHJLG6\SCS (83) | TechShop | 00:00:00 | 1 rows

In 268 Col 1 Ch 1 INS

19:41 09-12-2023

Task 4: Subquery and its Types

1.



Assignment 1.sql - DESKTOP-8QHILG6.TechShop (DESKTOP-8QHILG6\SCS (83)) - Microsoft SQL Server Management Studio

```
WHERE OrderDate > @StartDate AND OrderDate < @EndDate;
--SQL query to find out which customers have not placed any orders.
SELECT C.CustomerID,C.FirstName,O.OrderID
FROM Customers C
LEFT JOIN Orders O
ON O.OrderID=C.CustomerID
WHERE NumberofOrdersPlaced=0;
--SQL query to find the total number of products available for sale.
SELECT SUM(QuantityInStock) AS ProductsAvailable
```

CustomerID	FirstName	OrderID
1	Raj	NULL
2	Neha	NULL

Query executed successfully.

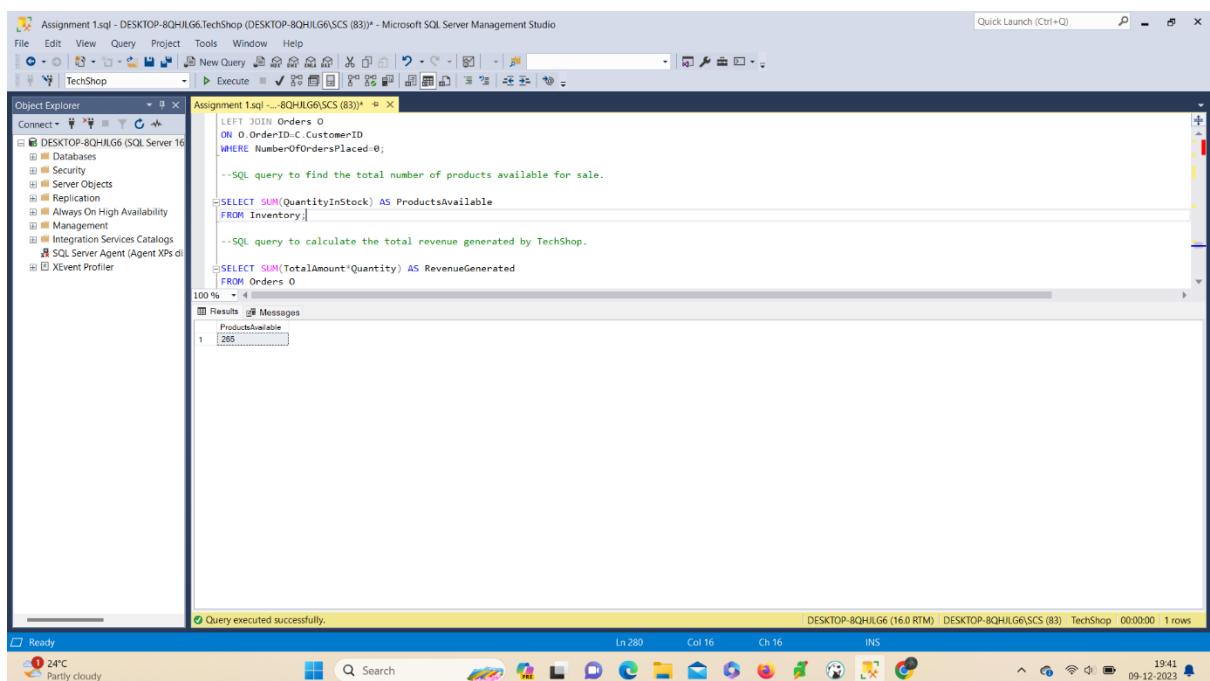
DESKTOP-8QHILG6 (16.0 RTM) | DESKTOP-8QHILG6\SCS (83) | TechShop | 00:00:00 | 2 rows

Ready 24°C Partly cloudy

In 274 Col 26 Ch 26 INS

19:41 09-12-2023

2.



Assignment 1.sql - DESKTOP-8QHILG6.TechShop (DESKTOP-8QHILG6\SCS (83)) - Microsoft SQL Server Management Studio

```
LEFT JOIN Orders O
ON O.OrderID=C.CustomerID
WHERE NumberofOrdersPlaced=0;
--SQL query to find the total number of products available for sale.
SELECT SUM(QuantityInStock) AS ProductsAvailable
FROM Inventory;
--SQL query to calculate the total revenue generated by TechShop.
SELECT SUM(TotalAmount*Quantity) AS RevenueGenerated
FROM Orders O
```

ProductAvailable
265

Query executed successfully.

DESKTOP-8QHILG6 (16.0 RTM) | DESKTOP-8QHILG6\SCS (83) | TechShop | 00:00:00 | 1 rows

Ready 24°C Partly cloudy

In 280 Col 16 Ch 16 INS

19:41 09-12-2023

3.

```
--SQL query to calculate the total revenue generated by TechShop.  
SELECT SUM(TotalAmount*Quantity) AS RevenueGenerated  
FROM Orders O  
JOIN OrderDetails OD  
ON OD.OrderID=O.OrderID;  
  
--SQL query to calculate the average quantity ordered for products in a specific category. Allow users to input the category name as a parameter.  
DECLARE @ProductCategory varchar(20);  
SET @ProductCategory = 'Laptop Pro';  
SELECT P.ProductName,P.ProductID,AVG(OD.Quantity) AS AverageQuantityOrdered  
FROM OrderDetails OD  
JOIN Products P ON P.ProductID=OD.ProductID  
WHERE P.ProductName=@ProductCategory  
GROUP BY P.ProductID,P.ProductName;
```

Query executed successfully.

4.

```
--SQL query to calculate the average quantity ordered for products in a specific category. Allow users to input the category name as a parameter.  
DECLARE @ProductCategory varchar(20);  
SET @ProductCategory = 'Laptop Pro';  
SELECT P.ProductName,P.ProductID,AVG(OD.Quantity) AS AverageQuantityOrdered  
FROM OrderDetails OD  
JOIN Products P ON P.ProductID=OD.ProductID  
WHERE P.ProductName=@ProductCategory  
GROUP BY P.ProductID,P.ProductName;  
  
-- SQL query to calculate the total revenue generated by a specific customer. Allow users to input the customer ID as a parameter.
```

Query executed successfully.

5.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

```
GROUP BY P.ProductID,P.ProductName;

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

DECLARE @CustomerID int
SET @CustomerID='3';
SELECT C.CustomerID, SUM(O.TotalAmount*OD.Quantity) AS RevenueByCustomer
FROM Order_O
JOIN Order_Details OD ON OD.OrderID=O.OrderID
JOIN Customers C ON C.CustomerID=O.CustomerID
WHERE C.CustomerID=@CustomerID
GROUP BY C.CustomerID]
```

Results Messages

CustomerID	RevenueByCustomer
3	149

Query executed successfully.

Ready 24°C Partly cloudy

DESKTOP-8QHJLG6 (16.0 RTM) DESKTOP-8QHJLG6\SCS (83) TechShop 00:00:00 19:42 09-12-2023

6.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

```
JOIN Customers C ON C.CustomerID=O.CustomerID
WHERE C.CustomerID=@CustomerID
GROUP BY C.CustomerID;

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

SELECT FirstName,LastName,COUNT(NumberOfOrdersPlaced) AS OrdersPlaced
FROM Customers
GROUP BY FirstName,LastName
ORDER BY OrdersPlaced DESC;
```

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

Results Messages

FirstName	LastName	OrdersPlaced
Rohit	Kukani	2
2	Praveen	1
3	Raj	1
4	Ravi	1
5	Neha	1
6	Anita	1
7	Anita	1
8	Priya	1
9	Rahul	1
10	Sara	1

Query executed successfully.

Ready 24°C Partly cloudy

DESKTOP-8QHJLG6 (16.0 RTM) DESKTOP-8QHJLG6\SCS (83) TechShop 00:00:00 19:42 09-12-2023

7.

The screenshot shows the Microsoft SQL Server Management Studio interface. In the Object Explorer, a connection to 'DESKTOP-8QHJLG6 (SQL Server 16)' is selected. Two queries are open in the main pane:

```
Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio
File Edit View Project Tools Window Help
New Query Execute
Assignment 1.sql - DESKTOP-8QHJLG6\SCS (83)*
--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 P.ProductID,P.ProductName,SUM(OD.Quantity) AS NumberOfOrders
FROM Products P
JOIN OrderDetails OD ON OD.ProductID=P.ProductID
GROUP BY P.ProductID,P.ProductName
ORDER BY NumberOfOrders DESC;

-- 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*OD.Quantity) AS MoneySpent
FROM Customers C
JOIN Orders O ON O.CustomerID=C.CustomerID
JOIN OrderDetails OD ON OD.OrderID=O.OrderID
GROUP BY C.CustomerID,C.FirstName,C.LastName;
```

The results pane shows the output of the second query:

CustomerID	FirstName	LastName	MoneySpent
2	Rohit	Kulkarni	4347

At the bottom, a message indicates: "Query executed successfully." The status bar shows: DESKTOP-8QHJLG6 (16.0 RTM) | DESKTOP-8QHJLG6\SCS (83) | TechShop | 00:00:00 | 1 rows.

8.

The screenshot shows the Microsoft SQL Server Management Studio interface. In the Object Explorer, a connection to 'DESKTOP-8QHJLG6 (SQL Server 16)' is selected. Two queries are open in the main pane:

```
Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio
File Edit View Project Tools Window Help
New Query Execute
Assignment 1.sql - DESKTOP-8QHJLG6\SCS (83)*
JOIN OrderDetails OD ON OD.ProductID=P.ProductID
GROUP BY P.ProductID,P.ProductName
ORDER BY NumberOfOrders DESC;

-- 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*OD.Quantity) AS MoneySpent
FROM Customers C
JOIN Orders O ON O.CustomerID=C.CustomerID
JOIN OrderDetails OD ON OD.OrderID=O.OrderID
GROUP BY C.CustomerID,C.FirstName,C.LastName;
```

The results pane shows the output of the second query:

CustomerID	FirstName	LastName	MoneySpent
2	Rohit	Kulkarni	4347

At the bottom, a message indicates: "Query executed successfully." The status bar shows: DESKTOP-8QHJLG6 (16.0 RTM) | DESKTOP-8QHJLG6\SCS (83) | TechShop | 00:00:00 | 1 rows.

9.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

File Edit View Project Tools Window Help

New Query Execute

Object Explorer

Assignment 1.sql - 8QHJLG6\SCS (83)*

```
JOIN OrderDetails OD ON OD.OrderID=O.OrderID
GROUP BY C.CustomerID,C.FirstName,C.LastName;
```

--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;
```

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

```
SELECT C.CustomerID,C.FirstName,C.LastName,COUNT(O.OrderID) AS OrderCount
FROM Customers C
JOIN Orders O ON O.CustomerID=C.CustomerID;
```

Results Messages

AverageOrderValue
517

Query executed successfully.

DESKTOP-8QHJLG6 (16.0 RTM) DESKTOP-8QHJLG6\SCS (83) TechShop 00:00:00 1 rows

Ready 24°C Partly cloudy Search

In 336 Col 13 Ch 13 INS 19:42 09-12-2023

10.

Assignment 1.sql - DESKTOP-8QHJLG6.TechShop (DESKTOP-8QHJLG6\SCS (83)) - Microsoft SQL Server Management Studio

File Edit View Project Tools Window Help

New Query Execute

Object Explorer

Assignment 1.sql - 8QHJLG6\SCS (83)*

```
FROM Orders;
```

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

```
SELECT C.CustomerID,C.FirstName,C.LastName,COUNT(O.OrderID) AS OrderCount
FROM Customers C
JOIN Orders O ON O.CustomerID=C.CustomerID
GROUP BY C.CustomerID,C.FirstName,C.LastName;
```

Results Messages

CustomerID	FirstName	LastName	OrderCount
1	Rohit	Kulkarni	1
2	Priti	Patel	1
3	Sara	Khan	1
4	Amrit	Sharma	1
5	Anita	Singh	1
6	Rahul	Gupta	1
7	Priya	Yadav	1
8	Rajesh	Mehra	1
9	Rohit	Kulkarni	1

Query executed successfully.

DESKTOP-8QHJLG6 (16.0 RTM) DESKTOP-8QHJLG6\SCS (83) TechShop 00:00:00 9 rows

Ready 24°C Partly cloudy Search

In 344 Col 1 Ch 1 INS 19:42 09-12-2023