# TECHSHOP ASSIGNMENT DOCUMENTATION

**Database Tables:**

1. Customers:
- CustomerID (Primary Key)
- FirstName
- LastName
- Email
- Phone
- Address

2. Products:
- ProductID (Primary Key)
- ProductName
- Description
- Price

3. Orders:
- OrderID (Primary Key)
- CustomerID (Foreign Key referencing Customers)
- OrderDate
- TotalAmount

4. OrderDetails:
- OrderDetailID (Primary Key)
- OrderID (Foreign Key referencing Orders)
- ProductID (Foreign Key referencing Products)
- Quantity

5. Inventory
- InventoryID (Primary Key)
- ProductID (Foreign Key referencing Products)
- QuantityInStock
- LastStockUpdate

**Task 1- Database Design:**

1. Create the database named "TechShop"

techshopquery.sql...ANTHINI\nisha (53))

```
DROP DATABASE IF EXISTS TechShop;
CREATE DATABASE TechShop;
USE TechShop;
```

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Messages

```
Commands completed successfully.

Completion time: 2025-03-31T15:15:08.6190419+05:30
```

2. Define the schema for the Customers, Products, Orders, OrderDetails and Inventory tables based on the provided schema.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- Create Customers table
CREATE TABLE Customers (
    CustomerID INT IDENTITY(1,1) PRIMARY KEY,
    FirstName NVARCHAR(50) NOT NULL,
    LastName NVARCHAR(50) NOT NULL,
    Email NVARCHAR(100) UNIQUE NOT NULL,
    Phone NVARCHAR(15) UNIQUE NOT NULL,
    Address NVARCHAR(255) NOT NULL
);
GO
```

techshopquery.sql...ANTHINI\nisha (53))*

```sql
-- Create Products table
CREATE TABLE Products (
    ProductID INT IDENTITY(1,1) PRIMARY KEY,
    ProductName NVARCHAR(100) NOT NULL,
    Description NVARCHAR(255),
    Price DECIMAL(10,2) NOT NULL CHECK (Price > 0)
);
GO
-- Create Orders table
CREATE TABLE Orders (
    OrderID INT IDENTITY(1,1) PRIMARY KEY,
    CustomerID INT NOT NULL,
    OrderDate DATETIME DEFAULT GETDATE(),
    TotalAmount DECIMAL(10,2) DEFAULT 0,
    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID) ON DELETE CASCADE
);
GO
-- Create OrderDetails table
CREATE TABLE OrderDetails (
    OrderDetailID INT IDENTITY(1,1) PRIMARY KEY,
    OrderID INT NOT NULL,
    ProductID INT NOT NULL,
    Quantity INT NOT NULL CHECK (Quantity > 0),
    FOREIGN KEY (OrderID) REFERENCES Orders(OrderID) ON DELETE CASCADE,
    FOREIGN KEY (ProductID) REFERENCES Products(ProductID) ON DELETE CASCADE
);
GO
-- Create Inventory table
CREATE TABLE Inventory (
    InventoryID INT IDENTITY(1,1) PRIMARY KEY,
    ProductID INT NOT NULL UNIQUE,
    QuantityInStock INT NOT NULL CHECK (QuantityInStock >= 0),
    LastStockUpdate DATETIME DEFAULT GETDATE(),
    FOREIGN KEY (ProductID) REFERENCES Products(ProductID) ON DELETE CASCADE
);
```

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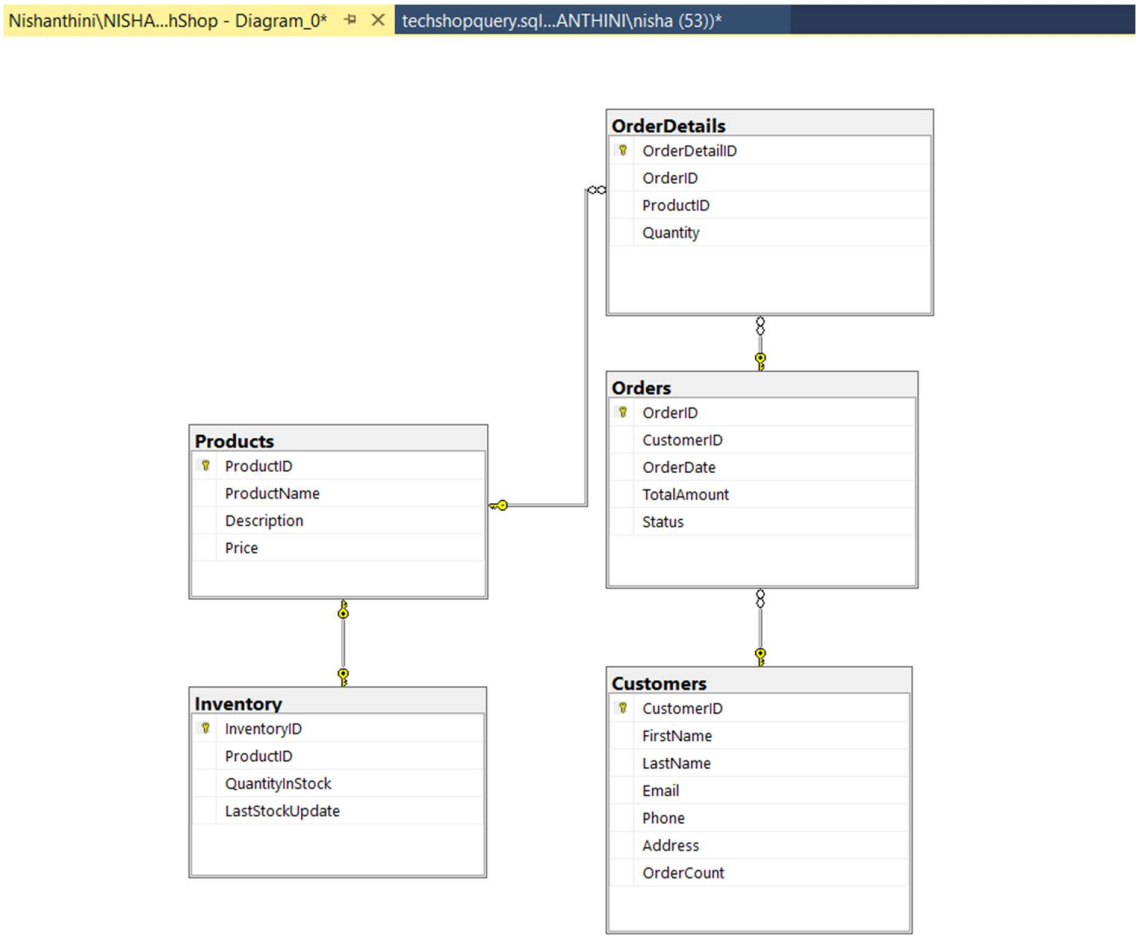
Messages

```
Commands completed successfully.

Completion time: 2025-03-31T15:15:08.6190419+05:30
```

3. Create an ERD (Entity Relationship Diagram) for the database.




4. Create appropriate Primary Key and Foreign Key constraints for referential integrity.

This question is already done in qn:2

5. Insert at least 10 sample records into each of the following tables.

a. Customers

b. Products

c. Orders

d. OrderDetails

e. Inventory

techshopquery.sql...ANTHINI\nisha (53))*

```sql
-- Insert sample Customers
INSERT INTO Customers (FirstName, LastName, Email, Phone, Address) VALUES
('Rohith', 'Kumar', 'rohith.kumar@email.com', '9876543210', 'Hyderabad, Telangana'),
('Sandeep', 'Reddy', 'sandeep.reddy@email.com', '9876543211', 'Bangalore, Karnataka'),
('Gani', 'Sheikh', 'gani.sheikh@email.com', '9876543212', 'Chennai, Tamil Nadu'),
('Nikila', 'M', 'nikila.m@email.com', '9876543213', 'Mumbai, Maharashtra'),
('Vicky', 'Raj', 'vicky.raj@email.com', '9876543214', 'Pune, Maharashtra'),
('Nivedha', 'S', 'nivedha.s@email.com', '9876543215', 'Coimbatore, Tamil Nadu'),
('Yogesh', 'Naidu', 'yogesh.naidu@email.com', '9876543216', 'Delhi'),
('Harini', 'Rao', 'harini.rao@email.com', '9876543217', 'Kolkata, West Bengal'),
('Harish', 'Patel', 'harish.patel@email.com', '9876543218', 'Ahmedabad, Gujarat'),
('Prabha', 'Devi', 'prabha.devi@email.com', '9876543219', 'Jaipur, Rajasthan');
GO
-- Insert sample Products
INSERT INTO Products (ProductName, Description, Price) VALUES
('Smartphone', 'Latest Android smartphone', 19999.00),
('Laptop', 'High-performance laptop', 59999.00),
('Smartwatch', 'Fitness and health tracking smartwatch', 4999.00),
('Headphones', 'Noise-cancelling over-ear headphones', 2999.00),
('Tablet', '10-inch Android tablet', 14999.00),
('Bluetooth Speaker', 'Portable wireless speaker', 1999.00),
('Gaming Console', 'Next-gen gaming console', 39999.00),
('Power Bank', '10000mAh power bank', 999.00),
('Wireless Mouse', 'Ergonomic wireless mouse', 799.00),
('Keyboard', 'Mechanical gaming keyboard', 2499.00);
GO
```

techshopquery.sql...ANTHINI\nisha (53))*

```sql
-- Insert sample Orders
INSERT INTO Orders (CustomerID, OrderDate, TotalAmount) VALUES
(1, '2025-03-20', 22998.00),
(2, '2025-03-21', 999.00),
(3, '2025-03-19', 19999.00),
(4, '2025-03-18', 8498.00),
(5, '2025-03-22', 59999.00),
(6, '2025-03-17', 4999.00),
(7, '2025-03-16', 14999.00),
(8, '2025-03-23', 2999.00),
(9, '2025-03-15', 39999.00),
(10, '2025-03-14', 799.00);
GO
-- Insert sample OrderDetails
INSERT INTO OrderDetails (OrderID, ProductID, Quantity) VALUES
(1, 1, 1),  -- Rohith bought a Smartphone
(2, 8, 1),  -- Sandeep bought a Power Bank
(3, 2, 1),  -- Gani bought a Laptop
(4, 4, 2),  -- Nikila bought 2 Headphones
(5, 3, 1),  -- Vicky bought a Smartwatch
(6, 5, 1),  -- Nivedha bought a Tablet
(7, 6, 1),  -- Yogesh bought a Bluetooth Speaker
(8, 7, 1),  -- Harini bought a Gaming Console
(9, 9, 1),  -- Harish bought a Wireless Mouse
(10, 10, 1); -- Prabha bought a Keyboard
GO
```

```sql
-- Insert sample Inventory Data
INSERT INTO Inventory (ProductID, QuantityInStock, LastStockUpdate) VALUES
(1, 50, '2025-03-10'),
(2, 30, '2025-03-11'),
(3, 20, '2025-03-12'),
(4, 100, '2025-03-13'),
(5, 25, '2025-03-14'),
(6, 40, '2025-03-15'),
(7, 15, '2025-03-16'),
(8, 80, '2025-03-17'),
(9, 60, '2025-03-18'),
(10, 35, '2025-03-19');
GO
```


techshopquery.sql...ANTHINI\nisha (53))*

```sql
-- Display all Customers
SELECT * FROM Customers;

-- Display all Products
SELECT * FROM Products;

-- Display all Orders
SELECT * FROM Orders;

-- Display all OrderDetails
SELECT * FROM OrderDetails;

-- Display all Inventory
SELECT * FROM Inventory;
```

| | CustomerID | FirstName | LastName | Email | Phone | Address |
|---|---|---|---|---|---|---|
| 1 | 1 | Rohith | Kumar | rohith.kumar@email.com | 9876543210 | Hyderabad, Telangana |
| 2 | 2 | Sandeep | Reddy | sandeep.reddy@email.com | 9876543211 | Bangalore, Karnataka |
| 3 | 3 | Gani | Sheikh | gani.sheikh@email.com | 9876543212 | Chennai, Tamil Nadu |
| 4 | 4 | Nikila | M | nikila.m@email.com | 9876543213 | Mumbai, Maharashtra |
| 5 | 5 | Vicky | Raj | vicky.raj@email.com | 9876543214 | Pune, Maharashtra |
| 6 | 6 | Nivedha | S | nivedha.s@email.com | 9876543215 | Coimbatore, Tamil Nadu |
| 7 | 7 | Yogesh | Naidu | yogesh.naidu@email.com | 9876543216 | Delhi |
| 8 | 8 | Harini | Rao | harini.rao@email.com | 9876543217 | Kolkata, West Bengal |
| 9 | 9 | Harish | Patel | harish.patel@email.com | 9876543218 | Ahmedabad, Gujarat |
| 10 | 10 | Prabha | Devi | prabha.devi@email.com | 9876543219 | Jaipur, Rajasthan |

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Results Messages

| | ProductID | ProductName | Description | Price |
|---|---|---|---|---|
| 1 | 1 | Smartphone | Latest Android smartphone | 19999.00 |
| 2 | 2 | Laptop | High-performance laptop | 59999.00 |
| 3 | 3 | Smartwatch | Fitness and health tracking smartwatch | 4999.00 |
| 4 | 4 | Headphones | Noise-cancelling over-ear headphones | 2999.00 |
| 5 | 5 | Tablet | 10-inch Android tablet | 14999.00 |
| 6 | 6 | Bluetooth Speaker | Portable wireless speaker | 1999.00 |
| 7 | 7 | Gaming Console | Next-gen gaming console | 39999.00 |
| 8 | 8 | Power Bank | 10000mAh power bank | 999.00 |
| 9 | 9 | Wireless Mouse | Ergonomic wireless mouse | 799.00 |
| 10 | 10 | Keyboard | Mechanical gaming keyboard | 2499.00 |

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Results Messages

| | OrderID | CustomerID | OrderDate | TotalAmount |
|---|---|---|---|---|
| 1 | 1 | 1 | 2025-03-20 00:00:00.000 | 22998.00 |
| 2 | 2 | 2 | 2025-03-21 00:00:00.000 | 999.00 |
| 3 | 3 | 3 | 2025-03-19 00:00:00.000 | 19999.00 |
| 4 | 4 | 4 | 2025-03-18 00:00:00.000 | 8498.00 |
| 5 | 5 | 5 | 2025-03-22 00:00:00.000 | 59999.00 |
| 6 | 6 | 6 | 2025-03-17 00:00:00.000 | 4999.00 |
| 7 | 7 | 7 | 2025-03-16 00:00:00.000 | 14999.00 |
| 8 | 8 | 8 | 2025-03-23 00:00:00.000 | 2999.00 |
| 9 | 9 | 9 | 2025-03-15 00:00:00.000 | 39999.00 |
| 10 | 10 | 10 | 2025-03-14 00:00:00.000 | 799.00 |

Query executed successfully.

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Results Messages

| | OrderDetailID | OrderID | ProductID | Quantity |
|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 8 | 1 |
| 3 | 3 | 3 | 2 | 1 |
| 4 | 4 | 4 | 4 | 2 |
| 5 | 5 | 5 | 3 | 1 |
| 6 | 6 | 6 | 5 | 1 |
| 7 | 7 | 7 | 6 | 1 |
| 8 | 8 | 8 | 7 | 1 |
| 9 | 9 | 9 | 9 | 1 |
| 10 | 10 | 10 | 10 | 1 |

Query executed successfully.

100 %

Results Messages

| | InventoryID | ProductID | QuantityInStock | LastStockUpdate |
|---|---|---|---|---|
| 1 | 1 | 1 | 50 | 2025-03-10 00:00:00.000 |
| 2 | 2 | 2 | 30 | 2025-03-11 00:00:00.000 |
| 3 | 3 | 3 | 20 | 2025-03-12 00:00:00.000 |
| 4 | 4 | 4 | 100 | 2025-03-13 00:00:00.000 |
| 5 | 5 | 5 | 25 | 2025-03-14 00:00:00.000 |
| 6 | 6 | 6 | 40 | 2025-03-15 00:00:00.000 |
| 7 | 7 | 7 | 15 | 2025-03-16 00:00:00.000 |
| 8 | 8 | 8 | 80 | 2025-03-17 00:00:00.000 |
| 9 | 9 | 9 | 60 | 2025-03-18 00:00:00.000 |
| 10 | 10 | 10 | 35 | 2025-03-19 00:00:00.000 |

Query executed successfully.

**Task 2- Select, Where, Between, AND, LIKE:**

1. Write an SQL query to retrieve the names and emails of all customers.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 1 Retrieve the names and emails of all customers
PRINT 'Displaying all customer names and emails:';
SELECT FirstName, LastName, Email FROM Customers;
GO
```

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Results | Messages

| | FirstName | LastName | Email |
|---|---|---|---|
| 1 | Rohith | Kumar | rohith.kumar@email.com |
| 2 | Sandeep | Reddy | sandeep.reddy@email.com |
| 3 | Gani | Sheikh | gani.sheikh@email.com |
| 4 | Nikila | M | nikila.m@email.com |
| 5 | Vicky | Raj | vicky.raj@email.com |
| 6 | Nivedha | S | nivedha.s@email.com |
| 7 | Yogesh | Naidu | yogesh.naidu@email.com |
| 8 | Harini | Rao | harini.rao@email.com |
| 9 | Harish | Patel | harish.patel@email.com |
| 10 | Prabha | Devi | prabha.devi@email.com |

Query executed successfully.

2. Write an SQL query to list all orders with their order dates and corresponding customer names.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 2 List all orders with their order dates and corresponding customer names
PRINT 'Listing all orders with customer names:';
SELECT O.OrderID, O.OrderDate, C.FirstName, C.LastName
FROM Orders O
JOIN Customers C ON O.CustomerID = C.CustomerID;
GO
```

100 %

Results | Messages

| | OrderID | OrderDate | FirstName | LastName |
|---|---|---|---|---|
| 1 | 1 | 2025-03-20 00:00:00.000 | Rohith | Kumar |
| 2 | 2 | 2025-03-21 00:00:00.000 | Sandeep | Reddy |
| 3 | 3 | 2025-03-19 00:00:00.000 | Gani | Sheikh |
| 4 | 4 | 2025-03-18 00:00:00.000 | Nikila | M |
| 5 | 5 | 2025-03-22 00:00:00.000 | Vicky | Raj |
| 6 | 6 | 2025-03-17 00:00:00.000 | Nivedha | S |
| 7 | 7 | 2025-03-16 00:00:00.000 | Yogesh | Naidu |
| 8 | 8 | 2025-03-23 00:00:00.000 | Harini | Rao |
| 9 | 9 | 2025-03-15 00:00:00.000 | Harish | Patel |
| 10 | 10 | 2025-03-14 00:00:00.000 | Prabha | Devi |

Query executed successfully.

3. Write an SQL query to insert a new customer record into the "Customers" table. Include customer information such as name, email, and address.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 3 Insert a new customer record
PRINT 'Inserting a new customer...';
INSERT INTO Customers (FirstName, LastName, Email, Phone, Address)
VALUES ('Raj', 'Sharma', 'raj.sharma@email.com', '9876543220', 'Chennai, Tamil Nadu');

-- Verify the insert
PRINT 'New customer inserted. Displaying updated customer list:';
SELECT * FROM Customers;
GO
```

100 %

Results | Messages

| | CustomerID | FirstName | LastName | Email | Phone | Address |
|---|---|---|---|---|---|---|
| 1 | 1 | Rohith | Kumar | rohith.kumar@email.com | 9876543210 | Hyderabad, Telangana |
| 2 | 2 | Sandeep | Reddy | sandeep.reddy@email.com | 9876543211 | Bangalore, Karnataka |
| 3 | 3 | Gani | Sheikh | gani.sheikh@email.com | 9876543212 | Chennai, Tamil Nadu |
| 4 | 4 | Nikila | M | nikila.m@email.com | 9876543213 | Mumbai, Maharashtra |
| 5 | 5 | Vicky | Raj | vicky.raj@email.com | 9876543214 | Pune, Maharashtra |
| 6 | 6 | Nivedha | S | nivedha.s@email.com | 9876543215 | Coimbatore, Tamil Nadu |
| 7 | 7 | Yogesh | Naidu | yogesh.naidu@email.com | 9876543216 | Delhi |
| 8 | 8 | Harini | Rao | harini.rao@email.com | 9876543217 | Kolkata, West Bengal |
| 9 | 9 | Harish | Patel | harish.patel@email.com | 9876543218 | Ahmedabad, Gujarat |
| 10 | 10 | Prabha | Devi | prabha.devi@email.com | 9876543219 | Jaipur, Rajasthan |
| 11 | 11 | Raj | Sharma | raj.sharma@email.com | 9876543220 | Chennai, Tamil Nadu |

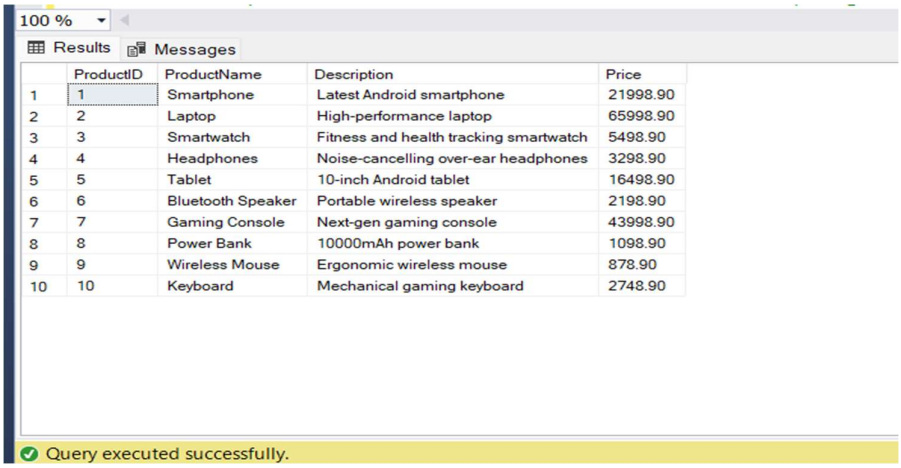
Query executed successfully.

4. Write an SQL query to update the prices of all electronic gadgets in the "Products" table by increasing them by 10%.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 4 Update prices of all electronic gadgets by increasing them by 10%
PRINT 'Updating product prices by 10%...';
UPDATE Products
SET Price = Price * 1.10;

-- Verify price update
PRINT 'Prices updated successfully. Displaying updated products list:';
SELECT * FROM Products;
GO
```




| | ProductID | ProductName | Description | Price |
|---|---|---|---|---|
| 1 | 1 | Smartphone | Latest Android smartphone | 21998.90 |
| 2 | 2 | Laptop | High-performance laptop | 65998.90 |
| 3 | 3 | Smartwatch | Fitness and health tracking smartwatch | 5498.90 |
| 4 | 4 | Headphones | Noise-cancelling over-ear headphones | 3298.90 |
| 5 | 5 | Tablet | 10-inch Android tablet | 16498.90 |
| 6 | 6 | Bluetooth Speaker | Portable wireless speaker | 2198.90 |
| 7 | 7 | Gaming Console | Next-gen gaming console | 43998.90 |
| 8 | 8 | Power Bank | 10000mAh power bank | 1098.90 |
| 9 | 9 | Wireless Mouse | Ergonomic wireless mouse | 878.90 |
| 10 | 10 | Keyboard | Mechanical gaming keyboard | 2748.90 |

5. Write an 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.

techshopquery.sql...ANTHINI\nisha (53))*

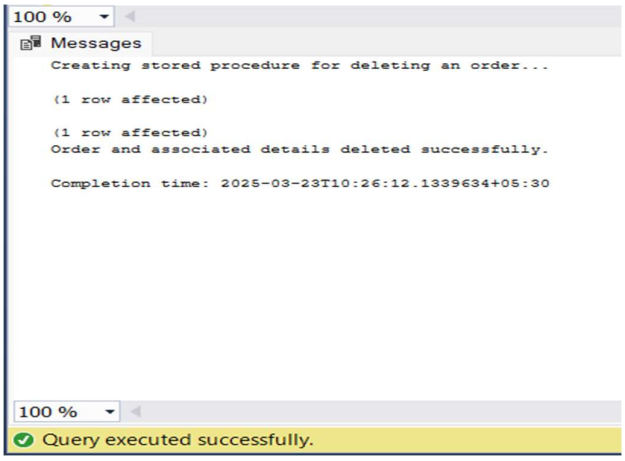
```sql
-- 5 Delete a specific order and its associated order details (Using Stored Procedure)
PRINT 'Creating stored procedure for deleting an order...';
GO
CREATE OR ALTER PROCEDURE DeleteOrderAndDetails
    @OrderID INT
AS
BEGIN
    -- Check if the OrderID exists before attempting to delete
    IF NOT EXISTS (SELECT 1 FROM Orders WHERE OrderID = @OrderID)
    BEGIN
        PRINT 'Error: Order ID does not exist.';
        RETURN;
    END

    -- Step 1: Delete associated order details first
    DELETE FROM OrderDetails WHERE OrderID = @OrderID;

    -- Step 2: Delete the order
    DELETE FROM Orders WHERE OrderID = @OrderID;

    PRINT 'Order and associated details deleted successfully.';
END;
GO

-- EXECUTE: Run this command to delete an order
EXEC DeleteOrderAndDetails @OrderID = 3;
GO
SELECT * FROM OrderDetails;
```



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

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 6 Insert a new order into the "Orders" table
PRINT 'Inserting a new order...';
INSERT INTO Orders (CustomerID, OrderDate, TotalAmount)
VALUES (2, GETDATE(), 0);

-- Verify the insert
PRINT 'New order inserted. Displaying updated orders list:';
SELECT * FROM Orders;
GO
```

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Results | Messages

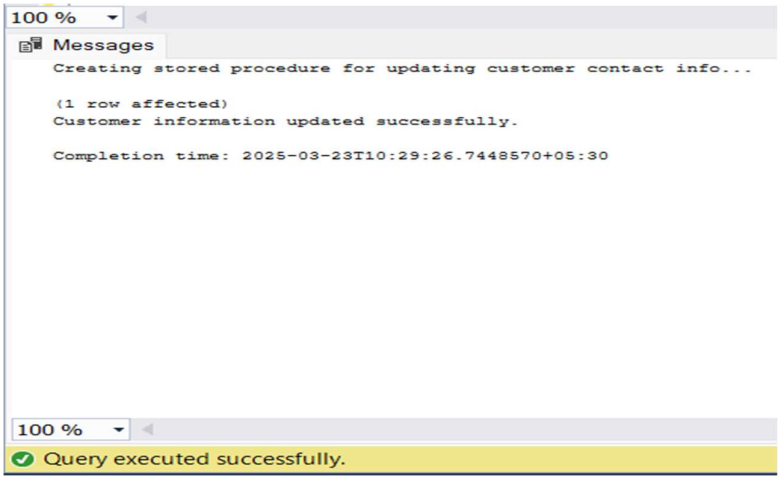
| | OrderID | CustomerID | OrderDate | TotalAmount |
|---|---|---|---|---|
| 1 | 1 | 1 | 2025-03-20 00:00:00.000 | 22998.00 |
| 2 | 2 | 2 | 2025-03-21 00:00:00.000 | 999.00 |
| 3 | 4 | 4 | 2025-03-18 00:00:00.000 | 8498.00 |
| 4 | 5 | 5 | 2025-03-22 00:00:00.000 | 59999.00 |
| 5 | 6 | 6 | 2025-03-17 00:00:00.000 | 4999.00 |
| 6 | 7 | 7 | 2025-03-16 00:00:00.000 | 14999.00 |
| 7 | 8 | 8 | 2025-03-23 00:00:00.000 | 2999.00 |
| 8 | 9 | 9 | 2025-03-15 00:00:00.000 | 39999.00 |
| 9 | 10 | 10 | 2025-03-14 00:00:00.000 | 799.00 |
| 10 | 11 | 2 | 2025-03-23 10:27:52.230 | 0.00 |

Query executed successfully.

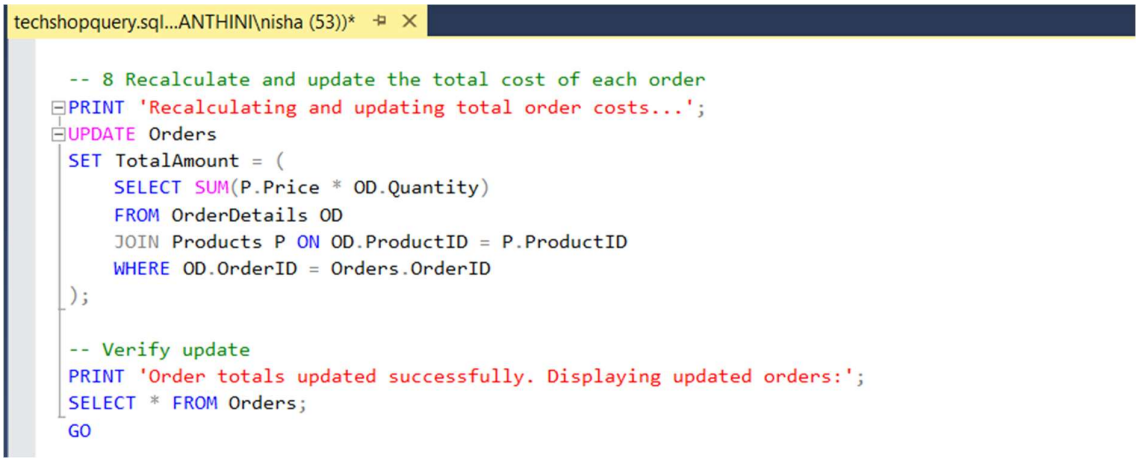
7. Write an SQL query to update the contact information (e.g., email and address) of a specific customer in the "Customers" table. Allow users to input the customer ID and new contact information.

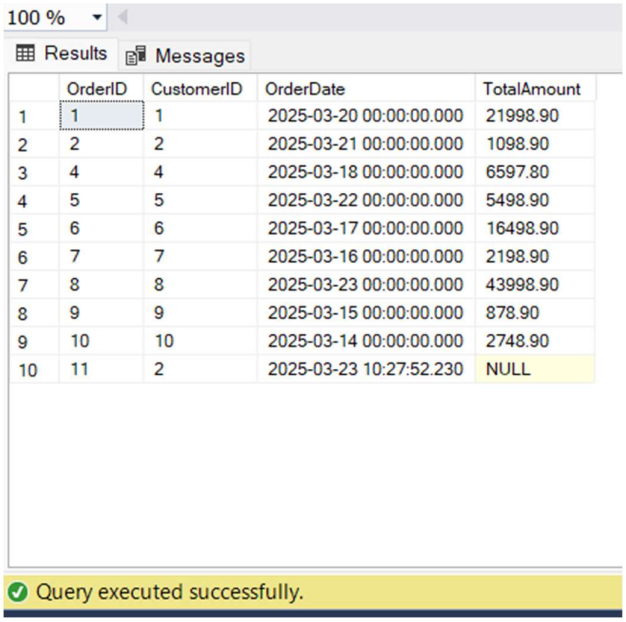
techshopquery.sql...ANTHINI\nisha (53))*

```
-- 7 Update the contact information of a specific customer (Using Stored Procedure)
PRINT 'Creating stored procedure for updating customer contact info...';
GO
CREATE OR ALTER PROCEDURE UpdateCustomerInfo
    @CustomerID INT,
    @NewEmail NVARCHAR(100),
    @NewAddress NVARCHAR(255)
AS
BEGIN
    -- Check if Customer exists before updating
    IF NOT EXISTS (SELECT 1 FROM Customers WHERE CustomerID = @CustomerID)
    BEGIN
        PRINT 'Error: Customer ID does not exist.';
        RETURN;
    END

    UPDATE Customers
    SET Email = @NewEmail, Address = @NewAddress
    WHERE CustomerID = @CustomerID;

    PRINT 'Customer information updated successfully.';
END;
GO

-- EXECUTE: Run this command to update a customer's contact details
EXEC UpdateCustomerInfo @CustomerID = 5, @NewEmail = 'stjoseph@email.com', @NewAddress = 'Chennai, TamilNadu';
GO
```




8. Write 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.



9. Write an 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.

techshopquery.sql...ANTHINI\nisha (53))*

```sql
-- 9 Delete all orders and associated order details for a specific customer (Using Stored Procedure)
PRINT 'Creating stored procedure for deleting all orders for a customer...';
GO
CREATE OR ALTER PROCEDURE DeleteCustomerOrders
    @CustomerID INT
AS
BEGIN
    -- Check if Customer exists before deleting orders
    IF NOT EXISTS (SELECT 1 FROM Orders WHERE CustomerID = @CustomerID)
    BEGIN
        PRINT 'Error: Customer has no orders.';
        RETURN;
    END

    DELETE FROM OrderDetails WHERE OrderID IN (SELECT OrderID FROM Orders WHERE CustomerID = @CustomerID);
    DELETE FROM Orders WHERE CustomerID = @CustomerID;

    PRINT 'Orders and order details for the customer deleted successfully.';
END;
GO

-- EXECUTE: Run this command to delete all orders for a customer
EXEC DeleteCustomerOrders @CustomerID = 4;
GO
```

techshopquery.sql...ANTHINI\nisha (53))*

```sql
-- EXECUTE: Run this command to delete all orders for a customer
EXEC DeleteCustomerOrders @CustomerID = 4;
GO
-- Display orders along with order details using a JOIN
PRINT 'Displaying all remaining orders with their order details:';
SELECT
    O.OrderID,
    O.CustomerID,
    O.OrderDate,
    O.TotalAmount,
    OD.OrderDetailID,
    OD.ProductID,
    OD.Quantity
FROM Orders O
LEFT JOIN OrderDetails OD ON O.OrderID = OD.OrderID
ORDER BY O.OrderID;
GO
```

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Results | Messages

| | OrderID | CustomerID | OrderDate | TotalAmount | OrderDetailID | ProductID | Quantity |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 1 | 2025-03-20 00:00:00.000 | 21998.90 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2025-03-21 00:00:00.000 | 1098.90 | 2 | 8 | 1 |
| 3 | 5 | 5 | 2025-03-22 00:00:00.000 | 5498.90 | 5 | 3 | 1 |
| 4 | 6 | 6 | 2025-03-17 00:00:00.000 | 16498.90 | 6 | 5 | 1 |
| 5 | 7 | 7 | 2025-03-16 00:00:00.000 | 2198.90 | 7 | 6 | 1 |
| 6 | 8 | 8 | 2025-03-23 00:00:00.000 | 43998.90 | 8 | 7 | 1 |
| 7 | 9 | 9 | 2025-03-15 00:00:00.000 | 878.90 | 9 | 9 | 1 |
| 8 | 10 | 10 | 2025-03-14 00:00:00.000 | 2748.90 | 10 | 10 | 1 |
| 9 | 11 | 2 | 2025-03-23 10:27:52.230 | NULL | NULL | NULL | NULL |

Query executed successfully.

10. Write an SQL query to insert a new electronic gadget product into the "Products" table, including product name, category, price, and any other relevant details.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 10 Insert a new electronic gadget into the "Products" table
PRINT 'Inserting a new product...';
INSERT INTO Products (ProductName, Description, Price)
VALUES ('Wireless Earbuds', 'Bluetooth 5.0 wireless earbuds with noise cancellation', 3499.00);

-- Verify insert
PRINT 'New product added. Displaying updated products list:';
SELECT * FROM Products;
GO
```

100 %

Results | Messages

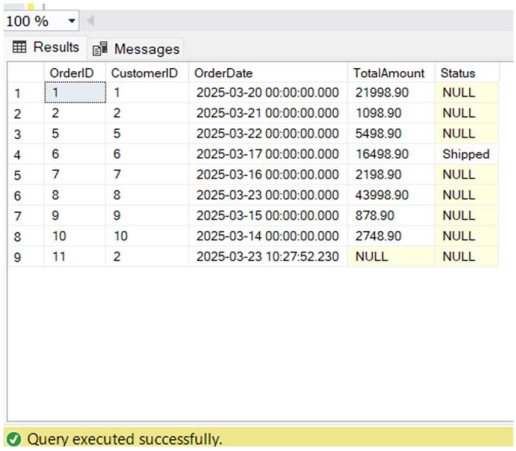
| | ProductID | ProductName | Description | Price |
|---|---|---|---|---|
| 1 | 1 | Smartphone | Latest Android smartphone | 21998.90 |
| 2 | 2 | Laptop | High-performance laptop | 65998.90 |
| 3 | 3 | Smartwatch | Fitness and health tracking smartwatch | 5498.90 |
| 4 | 4 | Headphones | Noise-cancelling over-ear headphones | 3298.90 |
| 5 | 5 | Tablet | 10-inch Android tablet | 16498.90 |
| 6 | 6 | Bluetooth Speaker | Portable wireless speaker | 2198.90 |
| 7 | 7 | Gaming Console | Next-gen gaming console | 43998.90 |
| 8 | 8 | Power Bank | 10000mAh power bank | 1098.90 |
| 9 | 9 | Wireless Mouse | Ergonomic wireless mouse | 878.90 |
| 10 | 10 | Keyboard | Mechanical gaming keyboard | 2748.90 |
| 11 | 11 | Wireless Earbuds | Bluetooth 5.0 wireless earbuds with noise cancel... | 3499.00 |

Query executed successfully.

11. Write an 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.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 11 Update the status of a specific order
-- Ensure 'Status' column exists
IF NOT EXISTS (SELECT * FROM INFORMATION_SCHEMA.COLUMNS WHERE TABLE_NAME = 'Orders' AND COLUMN_NAME = 'Status')
BEGIN
    ALTER TABLE Orders ADD Status NVARCHAR(20) DEFAULT 'Pending';
END
GO

PRINT 'Creating stored procedure for updating order status...';
GO
CREATE OR ALTER PROCEDURE UpdateOrderStatus
    @OrderID INT,
    @NewStatus NVARCHAR(20)
AS
BEGIN
    UPDATE Orders
    SET Status = @NewStatus
    WHERE OrderID = @OrderID;

    PRINT 'Order status updated successfully.';
END;
GO

-- EXECUTE: Run this command to update order status
EXEC UpdateOrderStatus @OrderID = 6, @NewStatus = 'Shipped';
GO
SELECT * FROM Orders;
```



100 %

Results | Messages

| | OrderID | CustomerID | OrderDate | TotalAmount | Status |
|---|---|---|---|---|---|
| 1 | 1 | 1 | 2025-03-20 00:00:00.000 | 21998.90 | NULL |
| 2 | 2 | 2 | 2025-03-21 00:00:00.000 | 1098.90 | NULL |
| 3 | 5 | 5 | 2025-03-22 00:00:00.000 | 5498.90 | NULL |
| 4 | 6 | 6 | 2025-03-17 00:00:00.000 | 16498.90 | Shipped |
| 5 | 7 | 7 | 2025-03-16 00:00:00.000 | 2198.90 | NULL |
| 6 | 8 | 8 | 2025-03-23 00:00:00.000 | 43998.90 | NULL |
| 7 | 9 | 9 | 2025-03-15 00:00:00.000 | 878.90 | NULL |
| 8 | 10 | 10 | 2025-03-14 00:00:00.000 | 2748.90 | NULL |
| 9 | 11 | 2 | 2025-03-23 10:27:52.230 | NULL | NULL |

Query executed successfully.

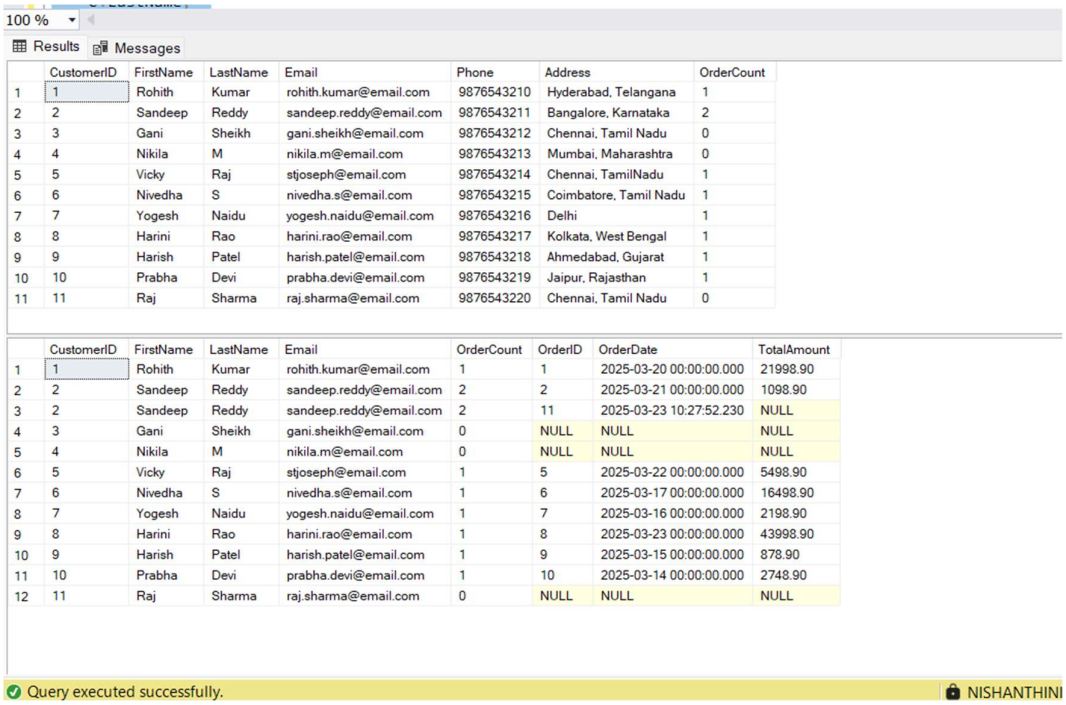
12. Write an SQL query to calculate and update the number of orders placed by each customer in the "Customers" table based on the data in the "Orders" table.

techshopquery.sql...ANTHINI\nisha (53))*

```sql
-- 12 Calculate and update the number of orders placed by each customer
-- Ensure 'OrderCount' column exists
IF NOT EXISTS (SELECT * FROM INFORMATION_SCHEMA.COLUMNS WHERE TABLE_NAME = 'Customers' AND COLUMN_NAME = 'OrderCount')
BEGIN
    ALTER TABLE Customers ADD OrderCount INT DEFAULT 0;
END
GO

PRINT 'Creating stored procedure for updating order counts...';
GO
CREATE OR ALTER PROCEDURE UpdateCustomerOrderCount
AS
BEGIN
    UPDATE Customers
    SET OrderCount = (
        SELECT COUNT(*) FROM Orders WHERE Orders.CustomerID = Customers.CustomerID
    );

    PRINT 'Order counts updated successfully.';
END;
GO

-- EXECUTE: Run this command to update order counts for all customers
EXEC UpdateCustomerOrderCount;
GO
-- Display updated Customers table with OrderCount
PRINT 'Displaying updated Customers table with OrderCount:';
SELECT CustomerID, FirstName, LastName, Email, Phone, Address, OrderCount FROM Customers;
GO
```

techshopquery.sql...ANTHINI\nisha (53))*

```sql
-- Display Customers and their orders using a JOIN
PRINT 'Displaying Customers and their respective orders:';
SELECT
    C.CustomerID,
    C.FirstName,
    C.LastName,
    C.Email,
    C.OrderCount,
    O.OrderID,
    O.OrderDate,
    O.TotalAmount
FROM Customers C
LEFT JOIN Orders O ON C.CustomerID = O.CustomerID
ORDER BY C.CustomerID;
GO
```



100 %

Results Messages

| | CustomerID | FirstName | LastName | Email | Phone | Address | OrderCount |
|---|---|---|---|---|---|---|---|
| 1 | 1 | Rohith | Kumar | rohith.kumar@email.com | 9876543210 | Hyderabad, Telangana | 1 |
| 2 | 2 | Sandeep | Reddy | sandeep.reddy@email.com | 9876543211 | Bangalore, Karnataka | 2 |
| 3 | 3 | Gani | Sheikh | gani.sheikh@email.com | 9876543212 | Chennai, Tamil Nadu | 0 |
| 4 | 4 | Nikila | M | nikila.m@email.com | 9876543213 | Mumbai, Maharashtra | 0 |
| 5 | 5 | Vicky | Raj | stjoseph@email.com | 9876543214 | Chennai, TamilNadu | 1 |
| 6 | 6 | Nivedha | S | nivedha.s@email.com | 9876543215 | Coimbatore, Tamil Nadu | 1 |
| 7 | 7 | Yogesh | Naidu | yogesh.naidu@email.com | 9876543216 | Delhi | 1 |
| 8 | 8 | Harini | Rao | harini.rao@email.com | 9876543217 | Kolkata, West Bengal | 1 |
| 9 | 9 | Harish | Patel | harish.patel@email.com | 9876543218 | Ahmedabad, Gujarat | 1 |
| 10 | 10 | Prabha | Devi | prabha.devi@email.com | 9876543219 | Jaipur, Rajasthan | 1 |
| 11 | 11 | Raj | Sharma | raj.sharma@email.com | 9876543220 | Chennai, Tamil Nadu | 0 |

| | CustomerID | FirstName | LastName | Email | OrderCount | OrderID | OrderDate | TotalAmount |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | Rohith | Kumar | rohith.kumar@email.com | 1 | 1 | 2025-03-20 00:00:00.000 | 21998.90 |
| 2 | 2 | Sandeep | Reddy | sandeep.reddy@email.com | 2 | 2 | 2025-03-21 00:00:00.000 | 1098.90 |
| 3 | 2 | Sandeep | Reddy | sandeep.reddy@email.com | 2 | 11 | 2025-03-23 10:27:52.230 | NULL |
| 4 | 3 | Gani | Sheikh | gani.sheikh@email.com | 0 | NULL | NULL | NULL |
| 5 | 4 | Nikila | M | nikila.m@email.com | 0 | NULL | NULL | NULL |
| 6 | 5 | Vicky | Raj | stjoseph@email.com | 1 | 5 | 2025-03-22 00:00:00.000 | 5498.90 |
| 7 | 6 | Nivedha | S | nivedha.s@email.com | 1 | 6 | 2025-03-17 00:00:00.000 | 16498.90 |
| 8 | 7 | Yogesh | Naidu | yogesh.naidu@email.com | 1 | 7 | 2025-03-16 00:00:00.000 | 2198.90 |
| 9 | 8 | Harini | Rao | harini.rao@email.com | 1 | 8 | 2025-03-23 00:00:00.000 | 43998.90 |
| 10 | 9 | Harish | Patel | harish.patel@email.com | 1 | 9 | 2025-03-15 00:00:00.000 | 878.90 |
| 11 | 10 | Prabha | Devi | prabha.devi@email.com | 1 | 10 | 2025-03-14 00:00:00.000 | 2748.90 |
| 12 | 11 | Raj | Sharma | raj.sharma@email.com | 0 | NULL | NULL | NULL |

Query executed successfully. NISHANTHINI

**Task 3- Aggregate functions, Having, Order By, GroupBy and Joins:**

1. Write an SQL query to retrieve a list of all orders along with customer information (e.g., customer name) for each order.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 1 Retrieve a list of all orders along with customer information (e.g., customer name) for each order
PRINT 'Displaying all orders with customer information:';
SELECT
    O.OrderID,
    O.OrderDate,
    O.TotalAmount,
    C.CustomerID,
    C.FirstName + ' ' + C.LastName AS CustomerName,
    C.Email,
    C.Phone
FROM Orders O
JOIN Customers C ON O.CustomerID = C.CustomerID
ORDER BY O.OrderDate DESC;
GO
```

100 %

Results Messages

| | OrderID | OrderDate | TotalAmount | CustomerID | CustomerName | Email | Phone |
|---|---|---|---|---|---|---|---|
| 1 | 11 | 2025-03-23 10:27:52.230 | NULL | 2 | Sandeep Reddy | sandeep.reddy@email.com | 9876543211 |
| 2 | 8 | 2025-03-23 00:00:00.000 | 43998.90 | 8 | Harini Rao | harini.rao@email.com | 9876543217 |
| 3 | 5 | 2025-03-22 00:00:00.000 | 5498.90 | 5 | Vicky Raj | stjoseph@email.com | 9876543214 |
| 4 | 2 | 2025-03-21 00:00:00.000 | 1098.90 | 2 | Sandeep Reddy | sandeep.reddy@email.com | 9876543211 |
| 5 | 1 | 2025-03-20 00:00:00.000 | 21998.90 | 1 | Rohith Kumar | rohith.kumar@email.com | 9876543210 |
| 6 | 6 | 2025-03-17 00:00:00.000 | 16498.90 | 6 | Nivedha S | nivedha.s@email.com | 9876543215 |
| 7 | 7 | 2025-03-16 00:00:00.000 | 2198.90 | 7 | Yogesh Naidu | yogesh.naidu@email.com | 9876543216 |
| 8 | 9 | 2025-03-15 00:00:00.000 | 878.90 | 9 | Harish Patel | harish.patel@email.com | 9876543218 |
| 9 | 10 | 2025-03-14 00:00:00.000 | 2748.90 | 10 | Prabha Devi | prabha.devi@email.com | 9876543219 |

2. Write an SQL query to find the total revenue generated by each electronic gadget product. Include the product name and the total revenue.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 2 Find the total revenue generated by each electronic gadget product
PRINT 'Displaying total revenue generated by each product:';
SELECT
    P.ProductID,
    P.ProductName,
    SUM(P.Price * OD.Quantity) AS TotalRevenue
FROM OrderDetails OD
JOIN Products P ON OD.ProductID = P.ProductID
GROUP BY P.ProductID, P.ProductName
ORDER BY TotalRevenue DESC;
GO
```

100 %

Results | Messages

| | ProductID | ProductName | TotalRevenue |
|---|---|---|---|
| 1 | 7 | Gaming Console | 43998.90 |
| 2 | 1 | Smartphone | 21998.90 |
| 3 | 5 | Tablet | 16498.90 |
| 4 | 3 | Smartwatch | 5498.90 |
| 5 | 10 | Keyboard | 2748.90 |
| 6 | 6 | Bluetooth Speaker | 2198.90 |
| 7 | 8 | Power Bank | 1098.90 |
| 8 | 9 | Wireless Mouse | 878.90 |

Query executed successfully.

3. Write an SQL query to list all customers who have made at least one purchase. Include their names and contact information.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 3 List all customers who have made at least one purchase
PRINT 'Displaying customers who have made at least one purchase:';
SELECT
    C.CustomerID,
    C.FirstName + ' ' + C.LastName AS CustomerName,
    C.Email,
    C.Phone,
    COUNT(O.OrderID) AS NumberOfOrders
FROM Customers C
JOIN Orders O ON C.CustomerID = O.CustomerID
GROUP BY C.CustomerID, C.FirstName, C.LastName, C.Email, C.Phone
HAVING COUNT(O.OrderID) > 0
ORDER BY NumberOfOrders DESC;
GO
```

100 %

Results | Messages

| | CustomerID | CustomerName | Email | Phone | NumberOfOrders |
|---|---|---|---|---|---|
| 1 | 2 | Sandeep Reddy | sandeep.reddy@email.com | 9876543211 | 2 |
| 2 | 5 | Vicky Raj | stjoseph@email.com | 9876543214 | 1 |
| 3 | 6 | Nivedha S | nivedha.s@email.com | 9876543215 | 1 |
| 4 | 7 | Yogesh Naidu | yogesh.naidu@email.com | 9876543216 | 1 |
| 5 | 8 | Harini Rao | harini.rao@email.com | 9876543217 | 1 |
| 6 | 9 | Harish Patel | harish.patel@email.com | 9876543218 | 1 |
| 7 | 10 | Prabha Devi | prabha.devi@email.com | 9876543219 | 1 |
| 8 | 1 | Rohith Kumar | rohith.kumar@email.com | 9876543210 | 1 |

4. Write an 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.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 4 Find the most popular electronic gadget (highest total quantity ordered)
PRINT 'Displaying the most popular electronic gadget based on total quantity ordered:';
SELECT TOP 1
    P.ProductID,
    P.ProductName,
    SUM(OD.Quantity) AS TotalQuantityOrdered
FROM OrderDetails OD
JOIN Products P ON OD.ProductID = P.ProductID
GROUP BY P.ProductID, P.ProductName
ORDER BY TotalQuantityOrdered DESC;
GO
```

100 %

Results | Messages

| | ProductID | ProductName | TotalQuantityOrdered |
|---|---|---|---|
| 1 | 3 | Smartwatch | 1 |

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

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 5 Retrieve a list of electronic gadgets along with their corresponding categories
PRINT 'Displaying electronic gadgets along with their categories:';
SELECT
    P.ProductID,
    P.ProductName,
    P.Description
FROM Products P
ORDER BY P.ProductName;
GO
```

100 %

Results | Messages

| | ProductID | ProductName | Description |
|---|---|---|---|
| 1 | 6 | Bluetooth Speaker | Portable wireless speaker |
| 2 | 7 | Gaming Console | Next-gen gaming console |
| 3 | 4 | Headphones | Noise-cancelling over-ear headphones |
| 4 | 10 | Keyboard | Mechanical gaming keyboard |
| 5 | 2 | Laptop | High-performance laptop |
| 6 | 8 | Power Bank | 10000mAh power bank |
| 7 | 1 | Smartphone | Latest Android smartphone |
| 8 | 3 | Smartwatch | Fitness and health tracking smartwatch |
| 9 | 5 | Tablet | 10-inch Android tablet |
| 10 | 11 | Wireless Earbuds | Bluetooth 5.0 wireless earbuds with noise cancel... |
| 11 | 9 | Wireless Mouse | Ergonomic wireless mouse |

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

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 6 Calculate the average order value for each customer
PRINT 'Displaying average order value per customer:';
SELECT
    C.CustomerID,
    C.FirstName + ' ' + C.LastName AS CustomerName,
    AVG(O.TotalAmount) AS AvgOrderValue
FROM Customers C
JOIN Orders O ON C.CustomerID = O.CustomerID
GROUP BY C.CustomerID, C.FirstName, C.LastName
ORDER BY AvgOrderValue DESC;
GO
```

100 %

Results | Messages

| | CustomerID | CustomerName | AvgOrderValue |
|---|---|---|---|
| 1 | 8 | Harini Rao | 43998.900000 |
| 2 | 1 | Rohith Kumar | 21998.900000 |
| 3 | 6 | Nivedha S | 16498.900000 |
| 4 | 5 | Vicky Raj | 5498.900000 |
| 5 | 10 | Prabha Devi | 2748.900000 |
| 6 | 7 | Yogesh Naidu | 2198.900000 |
| 7 | 2 | Sandeep Reddy | 1098.900000 |
| 8 | 9 | Harish Patel | 878.900000 |

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

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 7 Find the order with the highest total revenue
PRINT 'Displaying the order with the highest total revenue:';
SELECT TOP 1
    O.OrderID,
    O.OrderDate,
    O.TotalAmount,
    C.CustomerID,
    C.FirstName + ' ' + C.LastName AS CustomerName,
    C.Email
FROM Orders O
JOIN Customers C ON O.CustomerID = C.CustomerID
ORDER BY O.TotalAmount DESC;
GO
```

100 %

Results | Messages

| | OrderID | OrderDate | TotalAmount | CustomerID | CustomerName | Email |
|---|---|---|---|---|---|---|
| 1 | 8 | 2025-03-23 00:00:00.000 | 43998.90 | 8 | Harini Rao | harini.rao@email.com |

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

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 8 List electronic gadgets and the number of times each product has been ordered
PRINT 'Displaying electronic gadgets and the number of times they have been ordered:';
SELECT
    P.ProductID,
    P.ProductName,
    COUNT(OD.OrderID) AS NumberOfTimesOrdered
FROM OrderDetails OD
JOIN Products P ON OD.ProductID = P.ProductID
GROUP BY P.ProductID, P.ProductName
ORDER BY NumberOfTimesOrdered DESC;
GO
```

100 %

Results | Messages

| | ProductID | ProductName | NumberOfTimesOrdered |
|---|---|---|---|
| 1 | 1 | Smartphone | 1 |
| 2 | 3 | Smartwatch | 1 |
| 3 | 5 | Tablet | 1 |
| 4 | 6 | Bluetooth Speaker | 1 |
| 5 | 7 | Gaming Console | 1 |
| 6 | 8 | Power Bank | 1 |
| 7 | 9 | Wireless Mouse | 1 |
| 8 | 10 | Keyboard | 1 |

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

techshopquery.sql...ANTHINI\nisha (53))*

```sql
-- 9 Find customers who have purchased a specific electronic gadget product (Dynamic Input)
PRINT 'Creating stored procedure to find customers who purchased a specific product...';
GO
CREATE OR ALTER PROCEDURE GetCustomersByProduct
    @ProductName NVARCHAR(100)
AS
BEGIN
    PRINT 'Retrieving customers who have purchased: ' + @ProductName;

    SELECT DISTINCT
        C.CustomerID,
        C.FirstName + ' ' + C.LastName AS CustomerName,
        C.Email,
        C.Phone
    FROM Customers C
    JOIN Orders O ON C.CustomerID = O.CustomerID
    JOIN OrderDetails OD ON O.OrderID = OD.OrderID
    JOIN Products P ON OD.ProductID = P.ProductID
    WHERE P.ProductName = @ProductName;
END;
GO

-- EXECUTE: Run this command to get customers who bought a specific product
EXEC GetCustomersByProduct @ProductName = 'Smartphone';
GO
```

100 %

Results | Messages

| | CustomerID | CustomerName | Email | Phone |
|---|---|---|---|---|
| 1 | 1 | Rohith Kumar | rohith.kumar@email.com | 9876543210 |

10. Write an 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.

techshopquery.sql...ANTHINI\nisha (53))*

```sql
-- 10 Calculate total revenue generated by orders placed within a specific time period (Dynamic Input)
PRINT 'Creating stored procedure to calculate total revenue in a given time period...';
GO
CREATE OR ALTER PROCEDURE GetTotalRevenueByDateRange
    @StartDate DATE,
    @EndDate DATE
AS
BEGIN
    PRINT 'Calculating total revenue from ' + CAST(@StartDate AS NVARCHAR) + ' to ' + CAST(@EndDate AS NVARCHAR);

    SELECT
        SUM(TotalAmount) AS TotalRevenue
    FROM Orders
    WHERE OrderDate BETWEEN @StartDate AND @EndDate;
END;
GO

-- EXECUTE: Run this command to get revenue for a date range
EXEC GetTotalRevenueByDateRange @StartDate = '2025-03-01', @EndDate = '2025-03-31';
GO
```

100 %

Results | Messages

| | TotalRevenue |
|---|---|
| 1 | 94921.20 |

**Task 4- Subquery and its type:**

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

```
techshopquery.sql...ANTHINI\nisha (53))*
-- 1 Find customers who have NOT placed any orders
PRINT 'Displaying customers who have not placed any orders:';
SELECT
    C.CustomerID,
    C.FirstName + ' ' + C.LastName AS CustomerName,
    C.Email,
    C.Phone
FROM Customers C
LEFT JOIN Orders O ON C.CustomerID = O.CustomerID
WHERE O.OrderID IS NULL;
GO
```

100 %

Results | Messages

| | CustomerID | CustomerName | Email | Phone |
|---|---|---|---|---|
| 1 | 3 | Gani Sheikh | gani.sheikh@email.com | 9876543212 |
| 2 | 4 | Nikila M | nikila.m@email.com | 9876543213 |
| 3 | 11 | Raj Sharma | raj.sharma@email.com | 9876543220 |

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

```
techshopquery.sql...ANTHINI\nisha (53))*
-- 2 Find the total number of products available for sale
PRINT 'Displaying total number of products available for sale:';
SELECT COUNT(ProductID) AS TotalProducts FROM Products;
GO
```

100 %

Results | Messages

| | TotalProducts |
|---|---|
| 1 | 11 |

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

```
techshopquery.sql...ANTHINI\nisha (53))*
-- 3 Calculate the total revenue generated by TechShop
PRINT 'Displaying total revenue generated by TechShop:';
SELECT SUM(TotalAmount) AS TotalRevenue FROM Orders;
GO
```

100 %

Results | Messages

| | TotalRevenue |
|---|---|
| 1 | 94921.20 |

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.

```
techshopquery.sql...ANTHINI\nisha (53))*
-- 4 Calculate the average quantity ordered for products in a specific category (Dynamic Input)
PRINT 'Creating stored procedure to get average quantity ordered for a specific category...';
GO
CREATE OR ALTER PROCEDURE GetAverageQuantityByCategory
    @CategoryName NVARCHAR(100)
AS
BEGIN
    PRINT 'Retrieving average quantity ordered for category: ' + @CategoryName;

    SELECT
        COALESCE(AVG(OD.Quantity), 0) AS AvgQuantityOrdered
    FROM OrderDetails OD
    JOIN Products P ON OD.ProductID = P.ProductID
    WHERE P.Description = @CategoryName;
END;
GO

-- EXECUTE: Run this command to get average quantity for a category
EXEC GetAverageQuantityByCategory @CategoryName = 'Smartphone';
GO
```

100 %

Results | Messages

| | AvgQuantityOrdered |
|---|---|
| 1 | 0 |

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.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 5 Calculate the total revenue generated by a specific customer (Dynamic Input)
PRINT 'Creating stored procedure to calculate total revenue for a specific customer...';
GO
CREATE OR ALTER PROCEDURE GetTotalRevenueByCustomer
    @CustomerID INT
AS
BEGIN
    PRINT 'Calculating total revenue for Customer ID: ' + CAST(@CustomerID AS NVARCHAR);

    SELECT
        C.CustomerID,
        C.FirstName + ' ' + C.LastName AS CustomerName,
        SUM(O.TotalAmount) AS TotalRevenue
    FROM Customers C
    JOIN Orders O ON C.CustomerID = O.CustomerID
    WHERE C.CustomerID = @CustomerID
    GROUP BY C.CustomerID, C.FirstName, C.LastName;
END;
GO

-- EXECUTE: Run this command to get revenue for a customer
EXEC GetTotalRevenueByCustomer @CustomerID = 5;
GO
```

100 %

Results | Messages

| | CustomerID | CustomerName | TotalRevenue |
|---|---|---|---|
| 1 | 5 | Vicky Raj | 5498.90 |

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.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 6 Find the customers who have placed the most orders
PRINT 'Displaying customers who have placed the most orders:';
SELECT TOP 5
    C.CustomerID,
    C.FirstName + ' ' + C.LastName AS CustomerName,
    COUNT(O.OrderID) AS NumberOfOrders
FROM Customers C
JOIN Orders O ON C.CustomerID = O.CustomerID
GROUP BY C.CustomerID, C.FirstName, C.LastName
ORDER BY NumberOfOrders DESC;
GO
```

100 %

Results | Messages

| | CustomerID | CustomerName | NumberOfOrders |
|---|---|---|---|
| 1 | 2 | Sandeep Reddy | 2 |
| 2 | 1 | Rohith Kumar | 1 |
| 3 | 8 | Harini Rao | 1 |
| 4 | 7 | Yogesh Naidu | 1 |
| 5 | 6 | Nivedha S | 1 |

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.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 7 Find the most popular product category (highest total quantity ordered)
PRINT 'Displaying the most popular product category based on total quantity ordered:';
SELECT TOP 1
    P.Description AS Category,
    SUM(OD.Quantity) AS TotalQuantityOrdered
FROM OrderDetails OD
JOIN Products P ON OD.ProductID = P.ProductID
GROUP BY P.Description
ORDER BY TotalQuantityOrdered DESC;
GO
```

100 % — Results | Messages

| | Category | TotalQuantityOrdered |
|---|---|---|
| 1 | 10-inch Android tablet | 1 |

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.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 8 Find the customer who has spent the most money (highest total revenue)
PRINT 'Displaying the customer who has spent the most money:';
SELECT TOP 1
    C.CustomerID,
    C.FirstName + ' ' + C.LastName AS CustomerName,
    SUM(O.TotalAmount) AS TotalSpending
FROM Customers C
JOIN Orders O ON C.CustomerID = O.CustomerID
GROUP BY C.CustomerID, C.FirstName, C.LastName
ORDER BY TotalSpending DESC;
GO
```

100 % — Results | Messages

| | CustomerID | CustomerName | TotalSpending |
|---|---|---|---|
| 1 | 8 | Harini Rao | 43998.90 |

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

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 9 Calculate the average order value for all customers
PRINT 'Displaying the average order value for all customers:';
SELECT
    SUM(TotalAmount) / NULLIF(COUNT(OrderID), 0) AS AverageOrderValue
FROM Orders;
GO
```

100 % — Results | Messages

| | AverageOrderValue |
|---|---|
| 1 | 10546.800000 |

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.

techshopquery.sql...ANTHINI\nisha (53))*

```
-- 10 Find the total number of orders placed by each customer
PRINT 'Displaying the total number of orders placed by each customer:';
SELECT
    C.CustomerID,
    C.FirstName + ' ' + C.LastName AS CustomerName,
    COUNT(O.OrderID) AS TotalOrders
FROM Customers C
LEFT JOIN Orders O ON C.CustomerID = O.CustomerID
GROUP BY C.CustomerID, C.FirstName, C.LastName
ORDER BY TotalOrders DESC;
GO
```

100 % — Results | Messages

| | CustomerID | CustomerName | TotalOrders |
|---|---|---|---|
| 1 | 2 | Sandeep Reddy | 2 |
| 2 | 1 | Rohith Kumar | 1 |
| 3 | 5 | Vicky Raj | 1 |
| 4 | 6 | Nivedha S | 1 |
| 5 | 7 | Yogesh Naidu | 1 |
| 6 | 8 | Harini Rao | 1 |
| 7 | 9 | Harish Patel | 1 |
| 8 | 10 | Prabha Devi | 1 |
| 9 | 11 | Raj Sharma | 0 |
| 10 | 3 | Gani Sheikh | 0 |
| 11 | 4 | Nikila M | 0 |