CREATE DATABASE TechShop;

USE TechShop;

CREATE TABLE Customers (

CustomerID INT PRIMARY KEY NOT NULL,

FirstName VARCHAR(50) NOT NULL,

LastName VARCHAR(50) NOT NULL,

Email VARCHAR(100) ,

Phone VARCHAR(15),

Address VARCHAR(200)

);

CREATE TABLE Products (

ProductID INT PRIMARY KEY,

ProductName VARCHAR(100),

Description TEXT,

Price DECIMAL(10, 2)

);

CREATE TABLE Orders (

OrderID INT PRIMARY KEY,

CustomerID INT,

OrderDate DATE,

TotalAmount DECIMAL(10, 2),

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)

);

CREATE TABLE Inventory (

InventoryID INT PRIMARY KEY,

ProductID INT,

QuantityInStock INT,

LastStockUpdate DATE,

FOREIGN KEY (ProductID) REFERENCES Products(ProductID)

);

INSERT INTO Customers VALUES

(1, 'Amit', 'Shah', 'amit@example.com', '9876543210', 'Delhi'),

(2, 'Neha', 'Rao', 'neha@example.com', '9876501234', 'Mumbai'),

(3, 'Raj', 'Mehta', 'raj@example.com', '9876556789', 'Chennai'),

(4, 'Sneha', 'Joshi', 'sneha@example.com', '9823456789', 'Pune'),

(5, 'Kunal', 'Verma', 'kunal@example.com', '9845678901', 'Hyderabad'),

(6, 'Anita', 'Patel', 'anita@example.com', '9888776655', 'Ahmedabad'),

(7, 'Mohit', 'Bansal', 'mohit@example.com', '9876123456', 'Kolkata'),

(8, 'Riya', 'Kapoor', 'riya@example.com', '9876987654', 'Delhi'),

(9, 'Arjun', 'Singh', 'arjun@example.com', '9856781234', 'Mumbai'),

(10, 'Divya', 'Agarwal', 'divya@example.com', '9843214567', 'Jaipur');

INSERT INTO Products VALUES

(101, 'Smartphone', 'Android phone with 6GB RAM', 15000.00),

(102, 'Laptop', '15-inch screen, 8GB RAM', 55000.00),

(103, 'Headphones', 'Wireless Bluetooth headphones', 2500.00),

(104, 'Smartwatch', 'Fitness tracking enabled', 4500.00),

(105, 'Tablet', '10-inch Android tablet', 12000.00),

(106, 'Power Bank', '10000mAh portable charger', 1500.00),

(107, 'Camera', 'DSLR with 24MP sensor', 40000.00),

(108, 'Keyboard', 'Mechanical keyboard', 2000.00),

(109, 'Mouse', 'Wireless mouse', 1000.00),

(110, 'Speaker', 'Bluetooth speaker', 3000.00);

INSERT INTO Orders VALUES

(1001, 1, '2024-04-01', 17500.00),

(1002, 2, '2024-04-02', 56000.00),

(1003, 3, '2024-04-03', 2500.00),

(1004, 4, '2024-04-04', 4500.00),

(1005, 5, '2024-04-05', 3000.00),

(1006, 6, '2024-04-06', 1500.00),

(1007, 7, '2024-04-07', 40000.00),

(1008, 8, '2024-04-08', 1000.00),

(1009, 9, '2024-04-09', 55000.00),

(1010, 10, '2024-04-10', 12000.00);

INSERT INTO OrderDetails VALUES

(1, 1001, 101, 1),

(2, 1002, 102, 1),

(3, 1003, 103, 1),

(4, 1004, 104, 1),

(5, 1005, 110, 1),

(6, 1006, 106, 1),

(7, 1007, 107, 1),

(8, 1008, 109, 1),

(9, 1009, 102, 1),

(10, 1010, 105, 1);

INSERT INTO Inventory VALUES

(1, 101, 20, '2024-03-15'),

(2, 102, 10, '2024-03-15'),

(3, 103, 25, '2024-03-15'),

(4, 104, 15, '2024-03-15'),

(5, 105, 12, '2024-03-15'),

(6, 106, 30, '2024-03-15'),

(7, 107, 5, '2024-03-15'),

(8, 108, 18, '2024-03-15'),

(9, 109, 22, '2024-03-15'),

(10, 110, 16, '2024-03-15');

SELECT FirstName, LastName, Email

FROM Customers;

SELECT OrderID, OrderDate, CustomerID

FROM Orders

WHERE OrderDate BETWEEN '2024-01-01' AND '2024-12-31';

SELECT CustomerID, FirstName, LastName

FROM Customers

WHERE CustomerID BETWEEN 1 AND 100;

ALTER TABLE Customers

MODIFY CustomerID INT AUTO\_INCREMENT PRIMARY KEY;

INSERT INTO Customers (FirstName, LastName, Email, Address)

VALUES ('John', 'Doe', 'john.doe@example.com', '123 Main Street');

SHOW CREATE TABLE Customers;

ALTER TABLE Customers

MODIFY CustomerID INT AUTO\_INCREMENT;

ALTER TABLE Products

MODIFY Price DECIMAL(10, 4)

UPDATE Products

SET Price = Price \* 1.10

WHERE ProductID > 0

DELETE FROM OrderDetails

WHERE OrderID = 1005;

DELETE FROM Orders

WHERE OrderID = 1005;

INSERT INTO Orders (OrderID, CustomerID, OrderDate, TotalAmount )

VALUES (2020, 1, '2024-04-09', 0.00 );

UPDATE Customers

SET Email = 'new.email@example.com',

Address = 'HEXAWARE CITY'

WHERE CustomerID = 1;

ALTER TABLE Orders

MODIFY TotalAmount DECIMAL(10, 4)

SELECT OrderDetails.OrderID, SUM(OrderDetails.Quantity \* Products.Price) AS TotalAmount

FROM OrderDetails, Products

WHERE OrderDetails.ProductID = Products.ProductID

GROUP BY OrderDetails.OrderID;

DELETE FROM OrderDetails

WHERE OrderID IN (

SELECT OrderID FROM Orders WHERE CustomerID = 2

);

DELETE FROM Orders

WHERE CustomerID = 2;

INSERT INTO Products (ProductID, ProductName, Description, Price)

VALUES (150, 'VR Headset', 'Virtual Reality Wearable', 299.99)

ALTER TABLE Orders ADD Status VARCHAR(20);

UPDATE Orders

SET Status = 'Shipped'

WHERE OrderID = 1005;

ALTER TABLE Customers ADD OrderCount INT ;

UPDATE Customers

SET OrderCount = (

SELECT COUNT(\*)

FROM Orders

WHERE Orders.CustomerID = Customers.CustomerID

)

WHERE CustomerID > 0;

SELECT o.OrderID, o.OrderDate, c.FirstName, c.LastName, c.Email

FROM Orders o

JOIN Customers c ON o.CustomerID = c.CustomerID;

SELECT p.ProductName, SUM(od.Quantity \* p.Price) AS TotalRevenue

FROM OrderDetails od

JOIN Products p ON od.ProductID = p.ProductID

GROUP BY p.ProductName;

SELECT DISTINCT c.FirstName, c.LastName, c.Email

FROM Customers c

JOIN Orders o ON c.CustomerID = o.CustomerID;

SELECT p.ProductName, SUM(od.Quantity) AS TotalOrdered

FROM OrderDetails od

JOIN Products p ON od.ProductID = p.ProductID

GROUP BY p.ProductName

ORDER BY TotalOrdered DESC

LIMIT 1;

ALTER TABLE Products ADD Category VARCHAR(50);

UPDATE Products

SET Category = 'Smartphones'

WHERE ProductID > 0 AND ProductName IN ('Smartphone', 'Tablet');

SELECT c.FirstName, c.LastName, AVG(o.TotalAmount) AS AvgOrderValue

FROM Customers c

JOIN Orders o ON c.CustomerID = o.CustomerID

GROUP BY c.CustomerID;

SELECT o.OrderID, c.FirstName, c.LastName, o.TotalAmount

FROM Orders o

JOIN Customers c ON o.CustomerID = c.CustomerID

ORDER BY o.TotalAmount DESC

LIMIT 1;

SELECT p.ProductName, COUNT(od.OrderDetailID) AS TimesOrdered

FROM OrderDetails od

JOIN Products p ON od.ProductID = p.ProductID

GROUP BY p.ProductName;

SELECT DISTINCT c.FirstName, c.LastName, c.Email

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 LIKE '%Phone%';

SELECT SUM(TotalAmount) AS Revenue

FROM Orders

WHERE OrderDate BETWEEN '2024-01-01' AND '2024-12-31';

SELECT FirstName, LastName, Email

FROM Customers

WHERE CustomerID NOT IN (

SELECT CustomerID FROM Orders

);

SELECT COUNT(\*) AS TotalProducts

FROM Products;

SELECT SUM(TotalAmount) AS TotalRevenue

FROM Orders;

SELECT AVG(Quantity) AS AvgQuantity

FROM OrderDetails

WHERE ProductID IN (

SELECT ProductID FROM Products

WHERE Category = 'Smartphones'

);

SELECT SUM(TotalAmount) AS CustomerRevenue

FROM Orders

WHERE CustomerID = 2;

SELECT FirstName, LastName, OrderCount

FROM (

SELECT c.FirstName, c.LastName, COUNT(o.OrderID) AS OrderCount

FROM Customers c

JOIN Orders o ON c.CustomerID = o.CustomerID

GROUP BY c.CustomerID

) AS customer\_orders

ORDER BY OrderCount DESC

LIMIT 1;

SELECT Category, TotalQty

FROM (

SELECT p.Category, SUM(od.Quantity) AS TotalQty

FROM Products p

JOIN OrderDetails od ON p.ProductID = od.ProductID

GROUP BY p.Category

) AS category\_totals

ORDER BY TotalQty DESC

LIMIT 1;

SELECT FirstName, LastName, TotalSpent

FROM (

SELECT 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

) AS spending

ORDER BY TotalSpent DESC

LIMIT 1;

SELECT (SELECT SUM(TotalAmount) FROM Orders) /

(SELECT COUNT(\*) FROM Orders) AS AvgOrderValue;

SELECT c.FirstName, c.LastName, (

SELECT COUNT(\*) FROM Orders o WHERE o.CustomerID = c.CustomerID

) AS OrderCount

FROM Customers c;