ASSIGNMENT 2:

create schema sales;

use sales;

CREATE TABLE Sales (

SaleID INT PRIMARY KEY,

Salesperson VARCHAR(50),

Region VARCHAR(50),

Product VARCHAR(50),

Quantity INT,

SaleAmount DECIMAL(10,2)

);

-- Step 2: Insert Sample Data

INSERT INTO Sales (SaleID, Salesperson, Region, Product, Quantity, SaleAmount) VALUES

(1, 'Alice', 'North', 'Laptop', 1, 1000.00),

(2, 'Bob', 'South', 'Mouse', 3, 75.00),

(3, 'Alice', 'North', 'Monitor', 2, 300.00),

(4, 'Charlie&','East', 'Keyboard', 1, 50.00),

(5, 'Bob','South', 'Monitor', 1, 150.00),

(6, 'Alice', 'North', 'Mouse', 2, 50.00),

(7, 'Charlie', 'East', 'Laptop', 2, 2000.00),

(8, 'David', 'West', 'Laptop', 1, 1100.00),

(9, 'David', 'West','Mouse', 4, 100.00),

(10, 'Eve', 'South', 'Monitor', 3, 450.00),

(11, 'Eve', 'South', 'Keyboard', 2, 100.00),

(12, 'Eve', 'South', 'Mouse', 1, 25.00),

(13, 'Alice', 'North', 'Keyboard', 1, 60.00),

(14, 'Bob', 'South', 'Laptop', 1, 1200.00),

(15, 'Charlie', 'East', 'Mouse', 2, 50.00);

-- 1. Find total quantity sold by each salesperson.

SELECT Salesperson, SUM(Quantity) AS TotalQuantity FROM Sales GROUP BY Salesperson;

-- 2. Find salespersons who sold more than 5 items in total.

SELECT Salesperson FROM Sales GROUP BY Salesperson HAVING SUM(Quantity) > 5;

-- 3. Find number of products sold by each salesperson.

SELECT Salesperson, COUNT(DISTINCT Product) AS ProductCount FROM Sales GROUP BY Salesperson;

-- 4. List regions where total sale amount exceeded $1000.

SELECT Region FROM Sales GROUP BY Region HAVING SUM(SaleAmount) > 1000;

-- 5. Show salespersons who made more than 2 sales transactions.

SELECT Salesperson FROM Sales GROUP BY Salesperson HAVING COUNT(SaleID) > 2;

-- 6. Find total sale amount by product, and show only products that made over $500 in sales.

SELECT Product, SUM(SaleAmount) AS TotalSales FROM Sales GROUP BY Product HAVING SUM(SaleAmount) > 500;

-- 7. Show the total quantity sold of each product in each region.

SELECT Region, Product, SUM(Quantity) AS TotalQuantity FROM Sales GROUP BY Region, Product;

-- 8. Find salespersons who sold more than 1 type of product.

SELECT Salesperson FROM Sales GROUP BY Salesperson HAVING COUNT(DISTINCT Product) > 1;

-- 9. Find the average quantity per product sold per region, where the average is greater than 1.

SELECT Region, Product, AVG(Quantity) AS AvgQuantity FROM Sales GROUP BY Region, Product HAVING AVG(Quantity) > 1;

-- 10. Show salespersons whose total sale amount is between $500 and $1500.

SELECT Salesperson, SUM(SaleAmount) AS TotalSales FROM Sales GROUP BY Salesperson HAVING SUM(SaleAmount) BETWEEN 500 AND 1500;

-- 11. List top-performing products (more than 3 units sold in total).

SELECT Product, SUM(Quantity) AS TotalQuantity FROM Sales GROUP BY Product HAVING SUM(Quantity) > 3;

-- 12. List salespersons who sold laptops.

SELECT DISTINCT Salesperson FROM Sales WHERE Product = 'Laptop';

-- 13. Find total sale amount per salesperson per region, only where it exceeds $500.

SELECT Salesperson, Region, SUM(SaleAmount) AS TotalSales FROM Sales GROUP BY Salesperson, Region HAVING SUM(SaleAmount) > 500;

-- 14. Find salespersons who sold at least 2 different products in a single region.

SELECT Salesperson, Region FROM Sales GROUP BY Salesperson, Region HAVING COUNT(DISTINCT Product) >= 2;

-- 15. Find products that were sold in more than one region.

SELECT Product FROM Sales GROUP BY Product HAVING COUNT(DISTINCT Region) > 1;

-- 16. Show total number of sales per product and hide products with fewer than 2 sales.

SELECT Product, COUNT(SaleID) AS SalesCount FROM Sales GROUP BY Product HAVING COUNT(SaleID) >= 2;

-- 17. Find region-wise total quantity sold by each salesperson.

SELECT Region, Salesperson, SUM(Quantity) AS TotalQuantity FROM Sales GROUP BY Region, Salesperson;

-- 18. Find salespersons who made more than 3 transactions and total sales amount is over $1000.

SELECT Salesperson FROM Sales GROUP BY Salesperson HAVING COUNT(SaleID) > 3 AND SUM(SaleAmount) > 1000;

-- 19. Find average sale amount per region and show only regions with average above $200.

SELECT Region, AVG(SaleAmount) AS AvgSale FROM Sales GROUP BY Region HAVING AVG(SaleAmount) > 200;

-- 20. List regions and products where more than 3 units were sold.

SELECT Region, Product, SUM(Quantity) AS TotalQuantity FROM Sales GROUP BY Region, Product HAVING SUM(Quantity) > 3;