2100030871-Backend

Tables in the database are shown below:

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Description and the data in each table:

1.Customers table:

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2.Products table:

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3. Orders table:

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4.Orderitems table

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**Sample Queries:**

1. **List all customers.**

**SELECT \* FROM Customers;**

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1. **Find all orders placed in January 2023.**

**SELECT \* FROM Orders WHERE OrderDate BETWEEN '2023-01-01' AND '2023-01-31';**

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1. **Get the details of each order, including the customer name and email.**

**SELECT o.OrderID,o.CustomerID,o.OrderDate,c.FirstName,c.LastName,c.Email,c.DateOfBirth from Orders o JOIN Customers c ON o.CustomerID = c.CustomerID;**

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1. **List the products purchased in a specific order (e.g., OrderID = 1).**

**SELECT p.ProductID, p.ProductName, p.Price, oi.Quantity FROM OrderItems oi JOIN Products p ON oi.ProductID = p.ProductID WHERE oi.OrderID = 1;**

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1. **Calculate the total amount spent by each customer.**

**SELECT c.CustomerID, c.FirstName, c.LastName, c.Email, SUM(p.Price \* oi.Quantity) AS TotalAmountSpent FROM Customers c**

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

**JOIN OrderItems oi ON o.OrderID = oi.OrderID**

**JOIN Products p ON oi.ProductID = p.ProductID**

**GROUP BY c.CustomerID, c.FirstName, c.LastName, c.Email;**

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1. **Find the most popular product (the one that has been ordered the most).**

**SELECT p.ProductID, p.ProductName, COUNT(oi.OrderItemID) AS TotalOrders FROM Products p JOIN OrderItems oi ON p.ProductID = oi.ProductID GROUP BY p.ProductID, p.ProductName ORDER BY TotalOrders DESC LIMIT 1;**

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1. **Get the total number of orders and the total sales amount for each month in 2023.**

**SELECT DATE\_FORMAT(o.OrderDate, '%Y-%m') AS Month, COUNT(o.OrderID) AS TotalOrders, SUM(p.Price \* oi.Quantity) AS TotalSalesAmount FROM Orders o**

**JOIN OrderItems oi ON o.OrderID = oi.OrderID**

**JOIN Products p ON oi.ProductID = p.ProductID**

**WHERE YEAR(o.OrderDate) = 2023 GROUP BY DATE\_FORMAT(o.OrderDate, '%Y-%m') ORDER BY Month;**

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1. **Find customers who have spent more than $1000.**

**SELECT c.CustomerID, c.FirstName, c.LastName, c.Email, SUM(p.Price \*oi.Quantity) AS TotalSpent FROM Customers c**

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

**JOIN OrderItems oi ON o.OrderID = oi.OrderID**

**JOIN Products p ON oi.ProductID = p.ProductID**

**GROUP BY c.CustomerID, c.FirstName, c.LastName, c.Email HAVING TotalSpent > 1000;**

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