■ Supply Chain Management - SQL Case Study Report

This report contains SQL queries and outputs from the Supply Chain Management case study. The objective is to analyze suppliers, products, customers, and orders to extract meaningful insights.

Q1: Lowest and highest order dates

SQL: SELECT MIN(OrderDate) AS LowestDate, MAX(OrderDate) AS HighestDate FROM Orders;

Col1	Col2	Col3	Col4
2024-01-15	2024-04-22		

Q2: Customers who did not place any orders

SQL: SELECT c.Id, c.FirstName, c.LastName, c.Country FROM Customer c LEFT JOIN Orders o ON o.CustomerId = c.Id WHERE o.Id IS NULL;

Col1	Col2	Col3	Col4
5	Liam	O'Connor	Ireland

Q3: Customer who placed the largest single order

SQL: SELECT c.Id, CONCAT(c.FirstName, ' ', c.LastName) AS CustomerName, o.Id AS OrderId, o.TotalAmount FROM Orders o JOIN Customer c ON c.Id = o.CustomerId ORDER BY o.TotalAmount DESC LIMIT 1;

Col1	Col2	Col3	Col4
2	Priya Patel	2	40.50

Q4: Top 5 customers by total amount spent

SQL: SELECT c.Id, CONCAT(c.FirstName, ' ', c.LastName) AS CustomerName, SUM(o.TotalAmount) AS TotalSpent FROM Customer c JOIN Orders o ON o.CustomerId = c.Id GROUP BY c.Id, CustomerName ORDER BY TotalSpent DESC LIMIT 5;

Col1	Col2	Col3	Col4
2	Priya Patel	65.10	
1	John Doe	48.20	
4	Emma Stone	30.40	
5	Liam O'Connor	24.00	

3	Hans Muller	20.40	

Q5: Top 3 suppliers by revenue generated

SQL: SELECT s.Id, s.CompanyName, SUM(oi.UnitPrice * oi.Quantity) AS Revenue FROM Supplier s JOIN Product p ON p.SupplierId = s.Id JOIN OrderItem oi ON oi.ProductId = p.Id GROUP BY s.Id, s.CompanyName ORDER BY Revenue DESC LIMIT 3;

Col1	Col2	Col3	Col4
2	Nordic Seafoods	86.70	
3	Iberia Spices	18.40	
1	FreshFoods Ltd	17.00	

Q6: Combined list of customers and suppliers

SQL: SELECT 'CUSTOMER' AS Type, CONCAT(c.FirstName, ' ', c.LastName) AS ContactName, c.City, c.Country, c.Phone FROM Customer c UNION ALL SELECT 'SUPPLIER' AS Type, s.ContactName, s.City, s.Country, s.Phone FROM Supplier s;

Col1	Col2	Col3	Col4	
CUSTOMER	John Doe	Birmingham	UK	070-101-0101
SUPPLIER	Alice Smith	London	UK	020-111-1111
SUPPLIER	Erik Larsen	Oslo	Norway	047-222-2222

Q7: Customers who ordered more than 10 different products in a single order

SQL: SELECT o.Id AS OrderId, CONCAT(c.FirstName, ' ', c.LastName) AS CustomerName, COUNT(DISTINCT oi.ProductId) AS DistinctProducts FROM Orders o JOIN Customer c ON c.Id = o.CustomerId JOIN OrderItem oi ON oi.OrderId = o.Id GROUP BY o.Id, CustomerName HAVING COUNT(DISTINCT oi.ProductId) > 10;

No Results Found

Q8: Total amount saved in each order (list price - selling price)

SQL: SELECT o.Id AS OrderId, ROUND(SUM((p.UnitPrice - oi.UnitPrice) * oi.Quantity), 2) AS TotalSaved FROM Orders o JOIN OrderItem oi ON oi.OrderId = o.Id JOIN Product p ON p.Id = oi.ProductId GROUP BY o.Id HAVING TotalSaved > 0 ORDER BY TotalSaved DESC;

Col1	Col2	Col3	Col4
2	3.50		
4	1.20		

5	0.60		
6	0.50		
7	0.20		

Q9: Suppliers such that there are NO customers in the supplier's country

SQL: SELECT s.Id, s.CompanyName, s.Country FROM Supplier s WHERE NOT EXISTS (SELECT 1 FROM Customer c WHERE c.Country = s.Country) ORDER BY s.Country;

Col1	Col2	Col3	Col4
5	Andes Produce	Peru	
4	Baltic Grains	Lithuania	
3	Iberia Spices	Spain	
2	Nordic Seafoods	Norway	

Q10: Products for which the UK is dependent on other countries for supply

SQL: SELECT DISTINCT p.ProductName, s.Country AS SupplierCountry FROM Orders o JOIN Customer c ON c.Id = o.CustomerId JOIN OrderItem oi ON oi.OrderId = o.Id JOIN Product p ON p.Id = oi.ProductId JOIN Supplier s ON s.Id = p.SupplierId WHERE c.Country = 'UK' AND s.Country <> 'UK' ORDER BY p.ProductName, SupplierCountry;

Col1	Col2	Col3	Col4
Atlantic Salmon	Norway		
Olive Oil	Spain		
Quinoa	Peru		
Smoked Paprika	Spain		