**SQL Based Sales Dashboard Using Power BI**

**Business Request**

For: Steven Sales Manager

Request: Internet sales report improvement with visualizations

Product mix, volume by client

Compare sales against budgets

User Stories:

1. Sales Manager and Representative: follow which products have the highest volume and to which customers

Solution: Use Power BI dashboard

1. Sales Manager and Representative: Product and Client Volume over time (trends)

Solution: Use graphs and charts for visualizations

**SQL Commands**

-- DIM-DateTable Cleaning--

SELECT

[DateKey] ,

[FullDateAlternateKey] AS Date,

-- [DayNumberOfWeek]

[EnglishDayNameOfWeek] AS Day,

-- [SpanishDayNameOfWeek]

-- [FrenchDayNameOfWeek]

-- [DayNumberOfMonth]

-- [DayNumberOfYear]

[WeekNumberOfYear] AS WeekNr,

[EnglishMonthName] AS Month,

LEFT([EnglishMonthName], 3) AS MonthShort,

-- [SpanishMonthName]

-- [FrenchMonthName]

[MonthNumberOfYear] AS MonthNo,

[CalendarQuarter] AS Quarter,

[CalendarYear] AS Year

-- [CalendarSemester]

-- [FiscalQuarter]

-- [FiscalYear]

-- [FiscalSemester]

FROM

[AdventureWorksDW2019].[DBO].[DimDate]

WHERE

CalendarYear >= 2019

-- DIM\_Customers Table Cleaning--

SELECT c.CustomerKey AS CustomerKey,

-- ,[GeographyKey]

-- ,[CustomerAlternateKey]

-- ,[Title]

c.firstname AS [FirstName],

-- ,[MiddleName]

c.lastname AS [LastName],

c.firstname + ' ' +c.lastname AS [Full Name],

-- combined first and last names

-- ,[NameStyle]

-- ,[BirthDate]

-- ,[MaritalStatus]

-- ,[Suffix]

CASE c.Gender WHEN 'M' THEN 'Male' When 'F' THEN 'Female' End AS Gender,

-- ,[EmailAddress]

-- ,[YearlyIncome]

-- ,[TotalChildren]

-- ,[NumberChildrenAtHome]

-- ,[EnglishEducation]

-- ,[SpanishEducation]

-- ,[FrenchEducation]

-- ,[EnglishOccupation]

-- ,[SpanishOccupation]

-- ,[FrenchOccupation]

-- ,[HouseOwnerFlag]

-- ,[NumberCarsOwned]

-- ,[AddressLine1]

-- ,[AddressLine2]

-- ,[Phone]

c.datefirstpurchase AS DateFirstPurchase,

-- ,[CommuteDistance]

g.city AS [Customer City]

-- Column added from Geography Table

FROM dbo.dimcustomer AS c

LEFT JOIN dbo.dimgeography AS g

ON c.geographykey = g.geographykey

ORDER BY

CustomerKey ASC

-- Ordered by CustomerKey

-- DIM\_Product Table Cleaning --

SELECT

p.[ProductKey],

p.[ProductAlternateKey] AS ProductItemCode,

-- ,[ProductSubcategoryKey]

-- ,[WeightUnitMeasureCode]

-- ,[SizeUnitMeasureCode]

p.[EnglishProductName] AS [Product Name],

ps.EnglishProductSubcategoryName AS [Sub Category], -- Joined in from Sub Category Table

pc.EnglishProductCategoryName AS [Product Category], -- Joined in from Category Table

-- ,[SpanishProductName]

-- ,[FrenchProductName]

-- ,[StandardCost]

-- ,[FinishedGoodsFlag]

p.[Color] AS [Product Color],

-- ,[SafetyStockLevel]

-- ,[ReorderPoint]

-- ,[ListPrice]

p.[Size] AS [Product Size],

-- ,[SizeRange]

-- ,[Weight]

-- ,[DaysToManufacture]

p.[ProductLine] AS [Product Line],

-- ,[DealerPrice]

-- ,[Class]

-- ,[Style]

p.[ModelName] AS [Product Model Name],

-- ,[LargePhoto]

p.[EnglishDescription] AS [Product Description],

-- ,[FrenchDescription]

-- ,[ChineseDescription]

-- ,[ArabicDescription]

-- ,[HebrewDescription]

-- ,[ThaiDescription]

-- ,[GermanDescription]

-- ,[JapaneseDescription]

-- ,[TurkishDescription]

-- ,[StartDate]

-- ,[EndDate]

ISNULL (p.Status, 'Outdated') AS [Product Status]

FROM [dbo].[DimProduct] AS p

LEFT JOIN dbo.DimProductSubcategory AS ps

ON ps.ProductSubcategoryKey = p.ProductSubcategoryKey

LEFT JOIN dbo.DimProductCategory AS pc

ON ps.ProductCategoryKey = pc.ProductCategoryKey

ORDER BY

p.ProductKey ASC;

-- FACT\_InternetSales Table Cleaning --

SELECT [ProductKey]

,[OrderDateKey]

,[DueDateKey]

,[ShipDateKey]

,[CustomerKey]

-- ,[PromotionKey]

-- ,[CurrencyKey]

-- ,[SalesTerritoryKey]

,[SalesOrderNumber]

-- ,[SalesOrderLineNumber]

-- ,[RevisionNumber]

-- ,[OrderQuantity]

-- ,[UnitPrice]

-- ,[ExtendedAmount]

-- ,[UnitPriceDiscountPct]

-- ,[DiscountAmount]

-- ,[ProductStandardCost]

-- ,[TotalProductCost]

,[SalesAmount]

-- ,[TaxAmt]

-- ,[Freight]

-- ,[CarrierTrackingNumber]

-- ,[CustomerPONumber]

-- ,[OrderDate]

-- ,[DueDate]

-- ,[ShipDate]

FROM [dbo].[FactInternetSales]

WHERE

LEFT (OrderDateKey, 4) >= YEAR(GETDATE()) -2

-- Ensures two years of dates are returned dynamically

ORDER BY

OrderDateKey ASC