**ADVENTURE WORKS DW**

--1. What are the sales, product costs, profit, number of orders & quantity ordered for internet sales by product

-- category and ranked by sales?

SELECT prodcat.EnglishProductCategoryName,

SUM(fis.UnitPrice\*fis.OrderQuantity) Sales,

SUM(fis.ProductStandardCost) ProductCosts,

(SUM(fis.UnitPrice\*fis.OrderQuantity)-SUM(fis.ProductStandardCost)) AS 'Profit',

COUNT(fis.SalesOrderNumber) AS 'Number of Orders',

SUM(fis.OrderQuantity) AS 'Quantity ordered',

RANK() OVER(ORDER BY SUM(fis.UnitPrice\*fis.OrderQuantity) DESC) AS 'Rank'

from FactInternetSales fis

JOIN DimProduct dp ON dp.ProductKey=fis.ProductKey

JOIN DimProductSubcategory subcat ON subcat.ProductSubcategoryKey = dp.ProductSubcategoryKey

JOIN DimProductCategory prodcat ON prodcat.ProductCategoryKey = subcat.ProductCategoryKey

GROUP BY prodcat.EnglishProductCategoryName;

-- 2. What are the sales, product costs, profit, number of orders & quantity ordered for reseller sales by product

-- category and ranked by sales?

SELECT prodcat.EnglishProductCategoryName,

SUM(fis.UnitPrice\*fis.OrderQuantity) Sales,

SUM(fis.ProductStandardCost) ProductCosts,

(SUM(fis.UnitPrice\*fis.OrderQuantity)-SUM(fis.ProductStandardCost)) AS 'Profit',

COUNT(fis.SalesOrderNumber) AS 'Number of Orders',

SUM(fis.OrderQuantity) AS 'Quantity ordered',

RANK() OVER(ORDER BY SUM(fis.UnitPrice\*fis.OrderQuantity) DESC) AS 'Rank'

from FactResellerSales fis

JOIN DimProduct dp ON dp.ProductKey=fis.ProductKey

JOIN DimProductSubcategory subcat ON subcat.ProductSubcategoryKey = dp.ProductSubcategoryKey

JOIN DimProductCategory prodcat ON prodcat.ProductCategoryKey = subcat.ProductCategoryKey

GROUP BY prodcat.EnglishProductCategoryName;

-- 3. What are the sales, product costs, profit, number of orders & quantity ordered for both internet & reseller sales

-- by product category and ranked by sales?

with cte as (

select ProductKey,UnitPrice, ProductStandardCost, SalesOrderNumber, OrderQuantity, DiscountAmount from FactInternetSales

union

select ProductKey, UnitPrice, ProductStandardCost, SalesOrderNumber, OrderQuantity, DiscountAmount from FactResellerSales

)

SELECT prodcat.EnglishProductCategoryName,

SUM(cte.UnitPrice\*cte.OrderQuantity) Sales,

SUM(cte.ProductStandardCost) ProductCosts,

(SUM(cte.UnitPrice\*cte.OrderQuantity)-SUM(cte.ProductStandardCost)) AS 'Profit',

COUNT(cte.SalesOrderNumber) AS 'Number of Orders',

SUM(cte.OrderQuantity) AS 'Quantity ordered',

RANK() OVER(ORDER BY SUM(cte.UnitPrice\*cte.OrderQuantity) DESC) AS 'Rank'

from cte

JOIN DimProduct dp ON dp.ProductKey=cte.ProductKey

JOIN DimProductSubcategory subcat ON subcat.ProductSubcategoryKey = dp.ProductSubcategoryKey

JOIN DimProductCategory prodcat ON prodcat.ProductCategoryKey = subcat.ProductCategoryKey

GROUP BY prodcat.EnglishProductCategoryName;

-- 4. What are the sales, product costs, profit, number of orders & quantity ordered for product category Accessories

-- broken-down by Product Hierarchy (Category, Subcategory, Model & Product) for both internet & reseller sales?

with cte as (

select ProductKey,UnitPrice, ProductStandardCost, SalesOrderNumber, OrderQuantity, DiscountAmount from FactInternetSales

union

select ProductKey, UnitPrice, ProductStandardCost, SalesOrderNumber, OrderQuantity, DiscountAmount from FactResellerSales

)

SELECT prodcat.EnglishProductCategoryName, subcat.EnglishProductSubcategoryName, dp.ModelName,dp.EnglishProductName,

SUM(cte.UnitPrice\*cte.OrderQuantity) Sales,

SUM(cte.ProductStandardCost) ProductCosts,

(SUM(cte.UnitPrice\*cte.OrderQuantity)-SUM(cte.ProductStandardCost)) AS 'Profit',

COUNT(cte.SalesOrderNumber) AS 'Number of Orders',

SUM(cte.OrderQuantity) AS 'Quantity ordered',

RANK() OVER(ORDER BY SUM(cte.UnitPrice\*cte.OrderQuantity) DESC) AS 'Rank'

from cte

JOIN DimProduct dp ON dp.ProductKey=cte.ProductKey

JOIN DimProductSubcategory subcat ON subcat.ProductSubcategoryKey = dp.ProductSubcategoryKey

JOIN DimProductCategory prodcat ON prodcat.ProductCategoryKey = subcat.ProductCategoryKey

WHERE prodcat.EnglishProductCategoryName='Accessories'

GROUP BY prodcat.EnglishProductCategoryName, subcat.EnglishProductSubcategoryName, dp.ModelName,dp.EnglishProductName;

-- 5. What are the sales, product costs, profit, number of orders & quantity ordered for both internet & reseller sales

-- by country and ranked by sales?

with cte as (

select ProductKey,UnitPrice, ProductStandardCost, SalesOrderNumber, OrderQuantity, SalesTerritoryKey from FactInternetSales

union

select ProductKey, UnitPrice, ProductStandardCost, SalesOrderNumber, OrderQuantity, SalesTerritoryKey from FactResellerSales

)

SELECT st.SalesTerritoryCountry,

SUM(cte.UnitPrice\*cte.OrderQuantity) Sales,

SUM(cte.ProductStandardCost) ProductCosts,

(SUM(cte.UnitPrice\*cte.OrderQuantity)-SUM(cte.ProductStandardCost)) AS 'Profit',

COUNT(cte.SalesOrderNumber) AS 'Number of Orders',

SUM(cte.OrderQuantity) AS 'Quantity ordered',

RANK() OVER(ORDER BY SUM(cte.UnitPrice\*cte.OrderQuantity) DESC) AS 'Rank'

from cte

JOIN DimProduct dp ON dp.ProductKey=cte.ProductKey

JOIN DimSalesTerritory st ON st.SalesTerritoryKey=cte.SalesTerritoryKey

GROUP BY st.SalesTerritoryCountry;

-- 6. What are the sales, product costs, profit, number of orders & quantity ordered for France by city and ranked by

-- sales for both internet & reseller sales?

with cte as (

select ProductKey,UnitPrice, ProductStandardCost, SalesOrderNumber, OrderQuantity, SalesTerritoryKey from FactInternetSales

union

select ProductKey, UnitPrice, ProductStandardCost, SalesOrderNumber, OrderQuantity, SalesTerritoryKey from FactResellerSales

)

SELECT dg.City,

SUM(cte.UnitPrice\*cte.OrderQuantity) Sales,

SUM(cte.ProductStandardCost) ProductCosts,

(SUM(cte.UnitPrice\*cte.OrderQuantity)-SUM(cte.ProductStandardCost)) AS 'Profit',

COUNT(cte.SalesOrderNumber) AS 'Number of Orders',

SUM(cte.OrderQuantity) AS 'Quantity ordered',

RANK() OVER(ORDER BY SUM(cte.UnitPrice\*cte.OrderQuantity) DESC) AS 'Rank'

from cte

JOIN DimProduct dp ON dp.ProductKey=cte.ProductKey

JOIN DimSalesTerritory st ON st.SalesTerritoryKey=cte.SalesTerritoryKey

JOIN DimGeography dg ON dg.SalesTerritoryKey=st.SalesTerritoryKey

WHERE st.SalesTerritoryCountry='France'

GROUP BY dg.City;

-- 7. What are the top ten resellers by reseller hierarchy (business type, reseller name) ranked by sales?

SELECT top 10 dimre.BusinessType,

dimre.ResellerName,

SUM(fis.UnitPrice\*fis.OrderQuantity) Sales,

RANK() OVER(ORDER BY SUM(fis.UnitPrice\*fis.OrderQuantity) DESC) AS 'Rank'

FROM FactResellerSales fis

JOIN DimReseller dimre ON dimre.ResellerKey=fis.ResellerKey

GROUP BY dimre.BusinessType,

dimre.ResellerName;

-- 8. What are the top ten (internet) customers ranked by sales?

SELECT TOP 10 c.LastName,

c.FirstName,

SUM(fis.UnitPrice\*fis.OrderQuantity) Sales,

RANK() OVER(ORDER BY SUM(fis.UnitPrice\*fis.OrderQuantity) DESC) AS 'Rank'

FROM FactInternetSales fis

JOIN DimCustomer c ON c.CustomerKey=fis.CustomerKey

GROUP BY c.LastName,

c.FirstName;

-- 9. What are the sales, product costs, profit, number of orders & quantity ordered by Customer Occupation?

-- InternetSales Assumed

SELECT c.EnglishOccupation,

SUM(fis.UnitPrice\*fis.OrderQuantity) Sales,

SUM(fis.ProductStandardCost) ProductCosts,

(SUM(fis.UnitPrice\*fis.OrderQuantity)-SUM(fis.ProductStandardCost)) AS 'Profit',

COUNT(fis.SalesOrderNumber) AS 'Number of Orders',

SUM(fis.OrderQuantity) AS 'Quantity ordered',

RANK() OVER(ORDER BY SUM(fis.UnitPrice\*fis.OrderQuantity) DESC) AS 'Rank'

from FactInternetSales fis

JOIN DimProduct dp ON dp.ProductKey=fis.ProductKey

JOIN DimCustomer c ON c.CustomerKey=fis.CustomerKey

GROUP BY c.EnglishOccupation;

-- 10. What are the ranked sales of the sales people (employees)?

-- ResellerSales Assumed

SELECT fis.EmployeeKey,

e.LastName,

e.FirstName,

SUM(fis.UnitPrice\*fis.OrderQuantity) Sales,

RANK() OVER(ORDER BY SUM(fis.UnitPrice\*fis.OrderQuantity) DESC) AS 'Rank'

FROM FactResellerSales fis

JOIN DimEmployee e ON e.EmployeeKey=fis.EmployeeKey

GROUP BY e.LastName,

e.FirstName,

fis.EmployeeKey;

-- 11. What are the sales, discount amounts (promotion discounts), profit and promotion % of sales for Reseller Sales

-- by Promotion Hierarchy (Category, Type & Name) – sorted descending by sales.?

SELECT dimprom.EnglishPromotionCategory, dimprom.EnglishPromotionType, dimprom.EnglishPromotionName,

SUM(fis.UnitPrice\*fis.OrderQuantity) Sales,

SUM(DiscountPct \* fis.UnitPrice\*fis.OrderQuantity) AS Discount,

(SUM(fis.UnitPrice\*fis.OrderQuantity)-SUM(fis.TotalProductCost)) AS 'Profit',

SUM((fis.UnitPrice\*fis.OrderQuantity)/100) AS 'Promotion %',

RANK() OVER(ORDER BY SUM(fis.UnitPrice\*fis.OrderQuantity) DESC) AS 'Rank'

from FactResellerSales fis

JOIN DimProduct dp ON dp.ProductKey=fis.ProductKey

JOIN DimPromotion dimprom ON dimprom.PromotionKey = fis.PromotionKey

GROUP BY dimprom.EnglishPromotionCategory, dimprom.EnglishPromotionType, dimprom.EnglishPromotionName;

-- 12. What are the sales, product costs, profit, number of orders & quantity ordered by Sales Territory Hierarchy

-- (Group, Country, region) and ranked by sales for both internet & reseller sales?

with cte as (

select ProductKey, UnitPrice, TotalProductCost, SalesOrderNumber, OrderQuantity, ProductStandardCost, SalesTerritoryKey from FactInternetSales

union

select ProductKey, UnitPrice, TotalProductCost, SalesOrderNumber, OrderQuantity, ProductStandardCost, SalesTerritoryKey from FactResellerSales

)

SELECT st.SalesTerritoryGroup, st.SalesTerritoryCountry, st.SalesTerritoryRegion,

SUM(cte.UnitPrice\*cte.OrderQuantity) Sales,

SUM(cte.ProductStandardCost) ProductCosts,

(SUM(cte.UnitPrice\*cte.OrderQuantity)-SUM(cte.TotalProductCost)) AS 'Profit',

COUNT(cte.SalesOrderNumber) AS 'Number of Orders',

SUM(cte.OrderQuantity) AS 'Quantity ordered',

RANK() OVER(ORDER BY SUM(cte.UnitPrice\*cte.OrderQuantity) DESC) AS 'Rank'

from cte

JOIN DimProduct dp ON dp.ProductKey=cte.ProductKey

JOIN DimSalesTerritory st on cte.SalesTerritoryKey = st.SalesTerritoryKey

GROUP BY st.SalesTerritoryGroup, st.SalesTerritoryCountry, st.SalesTerritoryRegion;

-- 13. What are the sales by year by sales channels (internet, reseller & total)?

SELECT YEAR(fis.OrderDate) AS years,

SUM(fis.UnitPrice\*fis.OrderQuantity) AS SalesInternet,

SUM(frs.UnitPrice\*frs.OrderQuantity) AS SalesReseller,

sum(fis.UnitPrice\*fis.OrderQuantity+frs.UnitPrice\*frs.OrderQuantity) AS Total

FROM dbo.FactInternetSales fis

JOIN dbo.FactResellerSales frs ON frs.ProductKey=fis.ProductKey

JOIN DimProduct dp ON dp.ProductKey=fis.ProductKey

WHERE YEAR(fis.OrderDate)=YEAR(frs.OrderDate)

GROUP BY YEAR(fis.OrderDate);

-- 14. What are the total sales by month (& year)?

with cte as (

select ProductKey, UnitPrice, OrderQuantity, OrderDate from FactInternetSales

union

select ProductKey, UnitPrice, OrderQuantity, OrderDate from FactResellerSales

)

SELECT DATENAME(MONTH, cte.OrderDate) AS 'Month',

YEAR(cte.OrderDate) AS 'Year',

SUM(cte.UnitPrice\*cte.OrderQuantity) AS 'Sales'

FROM cte

GROUP BY YEAR(cte.OrderDate), DATENAME(MONTH, cte.OrderDate)

order by YEAR(cte.OrderDate) desc;