**AdventureWorks2017 SQL Queries Ashish Kumar**

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use AdventureWorks2017;

/\*1. What are the sales, product costs, profit,

number of orders & quantity ordered for internet sales by product category and ranked by sales?\*/

select DENSE\_RANK() OVER (order by sum (Sales.SalesOrderHeader.TotalDue) desc) as Ranking,

Production.ProductCategory.Name as ProductCategory,

sum(Sales.SalesOrderHeader.TotalDue) as Sales,

sum(Production.Product.StandardCost) as Product\_Cost,

sum(Production.Product.ListPrice - Production.Product.StandardCost) as Profit,

count(Sales.SalesOrderHeader.SalesOrderID) as NumberOfOrders,

sum(Sales.SalesOrderDetail.OrderQty) as OrderQuantity

from Sales.SalesOrderHeader

join Sales.SalesOrderDetail on Sales.SalesOrderHeader.SalesOrderID = Sales.SalesOrderDetail.SalesOrderID

join Sales.SpecialOfferProduct on Sales.SalesOrderDetail.SpecialOfferID = Sales.SpecialOfferProduct.SpecialOfferID

join Production.Product on Production.Product.ProductID = Sales.SpecialOfferProduct.ProductID

join Production.ProductSubcategory on Production.Product.ProductSubcategoryID = Production.ProductSubcategory.ProductSubcategoryID

join Production.ProductCategory on Production.ProductCategory.ProductCategoryID = Production.ProductSubcategory.ProductCategoryID

where OnlineOrderFlag=1

group by Production.ProductCategory.Name

order by Sales DESC;

/\*(4 rows affected)\*/

/\*2. What are the sales, product costs, profit, number of orders

& quantity ordered for reseller sales by product category and ranked by sales?\*/

select DENSE\_RANK() OVER (order by sum (Sales.SalesOrderHeader.TotalDue) desc) as Ranking,

Production.ProductCategory.Name as ProductCategory,

sum(Sales.SalesOrderHeader.TotalDue) as Sales,

sum(Production.Product.StandardCost) as Product\_Cost,

sum(Production.Product.ListPrice - Production.Product.StandardCost) as Profit,

count(Sales.SalesOrderHeader.SalesOrderID) as NumberOfOrders,

sum(Sales.SalesOrderDetail.OrderQty) as OrderQuantity

from Sales.SalesOrderHeader

join Sales.SalesOrderDetail on Sales.SalesOrderHeader.SalesOrderID = Sales.SalesOrderDetail.SalesOrderID

join Sales.SpecialOfferProduct on Sales.SalesOrderDetail.SpecialOfferID = Sales.SpecialOfferProduct.SpecialOfferID

join Production.Product on Production.Product.ProductID = Sales.SpecialOfferProduct.ProductID

join Production.ProductSubcategory on Production.Product.ProductSubcategoryID = Production.ProductSubcategory.ProductSubcategoryID

join Production.ProductCategory on Production.ProductCategory.ProductCategoryID = Production.ProductSubcategory.ProductCategoryID

where OnlineOrderFlag=0

group by Production.ProductCategory.Name

order by Sales DESC;

/\*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?\*/

select DENSE\_RANK() OVER (order by sum (Sales.SalesOrderHeader.TotalDue) desc) as Ranking,

Production.ProductCategory.Name as ProductCategory,

sum(Sales.SalesOrderHeader.TotalDue) as Sales,

sum(Production.Product.StandardCost) as Product\_Cost,

sum(Production.Product.ListPrice - Production.Product.StandardCost) as Profit,

count(Sales.SalesOrderHeader.SalesOrderID) as NumberOfOrders,

sum(Sales.SalesOrderDetail.OrderQty) as OrderQuantity

from Sales.SalesOrderHeader

join Sales.SalesOrderDetail on Sales.SalesOrderHeader.SalesOrderID = Sales.SalesOrderDetail.SalesOrderID

join Sales.SpecialOfferProduct on Sales.SalesOrderDetail.SpecialOfferID = Sales.SpecialOfferProduct.SpecialOfferID

join Production.Product on Production.Product.ProductID = Sales.SpecialOfferProduct.ProductID

join Production.ProductSubcategory on Production.Product.ProductSubcategoryID = Production.ProductSubcategory.ProductSubcategoryID

join Production.ProductCategory on Production.ProductCategory.ProductCategoryID = Production.ProductSubcategory.ProductCategoryID

group by Production.ProductCategory.Name

order by Sales DESC;

/\*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?\*/

select distinct pc.Name as Product\_Category, ps.Name as Product\_Subcategory,

pm.Name as Product\_Model,pd.Name as Product\_Name,

sum(sh.TotalDue) as Sales ,

sum(Pd.StandardCost) as ProductCost,

sum(pd.ListPrice - pd.StandardCost) as Profit,

count(sh.SalesOrderID) as NumberOfOrders,

sum(so.OrderQty) as OrderQuantity

from sales.SalesOrderDetail so

join Production.Product pd on so.ProductID = pd.ProductID

join Production.ProductSubcategory ps on pd.ProductSubcategoryID = ps.ProductSubcategoryID

join Production.ProductCategory pc on ps.ProductCategoryID=pc.ProductCategoryID

join Sales.SalesOrderHeader sh on so.SalesOrderID=sh.SalesOrderID

join Production.ProductModel pm on pm.ProductModelID = pd.ProductModelID

group by pc.Name,pd.ListPrice,so.UnitPrice,ps.name,pm.name,pd.name

order by sales desc;

/\*757 rows affected\*/

/\*5. What are the sales, product costs, profit, number of orders &

quantity ordered for both internet & reseller sales by country and ranked by sales?\*/

select DENSE\_RANK() OVER (order by sum (so.TotalDue) desc) as Ranking,

st.CountryRegionCode,

sum(so.TotalDue) as Sales,

sum(pd.StandardCost) as Product\_Cost,

sum(Pd.ListPrice - Pd.StandardCost) as Profit,

count(so.SalesOrderID) as Number\_of\_Orders,

sum(sc.OrderQty) as Order\_Quantity

from sales.SalesOrderDetail sc

join Production.Product pd on sc.ProductID=pd.ProductID

join Production.ProductSubcategory ps on pd.ProductSubcategoryID=ps.ProductSubcategoryID

join Production.ProductCategory pc on ps.ProductCategoryID=pc.ProductCategoryID

join Sales.SalesOrderHeader so on sc.SalesOrderID=so.SalesOrderID

join Sales.SalesTerritory st on st.TerritoryID=so.TerritoryID

group by st.CountryRegionCode

order by sales desc;

/\*6 rows affected\*/

/\*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?\*/

select DENSE\_RANK() OVER (order by sum (so.TotalDue) desc) as Ranking,

pe.City as France\_Cities,

sum(so.TotalDue) as Sales,

sum(pd.StandardCost) as Product\_Cost,

sum(Pd.ListPrice - Pd.StandardCost) as Profit,

count(so.SalesOrderID) as Number\_of\_Orders,

sum(sc.OrderQty) as Order\_Quantity

from sales.SalesOrderDetail sc

join Production.Product pd on sc.ProductID=pd.ProductID

join Production.ProductSubcategory ps on pd.ProductSubcategoryID=ps.ProductSubcategoryID

join Production.ProductCategory pc on ps.ProductCategoryID=pc.ProductCategoryID

join Sales.SalesOrderHeader so on sc.SalesOrderID=so.SalesOrderID

join Sales.SalesTerritory st on st.TerritoryID=so.TerritoryID

join Person.StateProvince sp on sp.CountryRegionCode=st.CountryRegionCode

join Person.Address pe on pe.StateProvinceID=sp.StateProvinceID

where st.Name='France'

group by pe.City

order by sales desc;

/\*(35 rows affected)\*/

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

select top 10 st.BusinessEntityID as Business\_Type, st.name as Reseller\_Name,

sum(sh.TotalDue) as Sales

from Sales.Store st

join Sales.SalesOrderHeader sh on st.SalesPersonID=sh.SalesPersonID

join Sales.SalesOrderDetail sc on sh.SalesOrderID=sc.SalesOrderID

join Production.Product pd on sc.ProductID=pd.ProductID

group by st.Name,st.BusinessEntityID

order by Sales;

/\*(10 rows affected)\*/

/\*8. What are the top ten (internet) customers ranked by sales?\*/

select top 10 DENSE\_RANK() OVER (order by sum (TotalDue) desc) as Ranking,

Concat\_ws(' ' ,pe.FirstName,pe.LastName) as Customers\_Name,

sum(totaldue) as Total\_Sales

from Sales.SalesOrderHeader as sh

inner join Sales.CreditCard as cc on sh.CreditCardID = cc.CreditCardID

inner join Sales.PersonCreditCard as pc on pc.CreditCardID = cc.CreditCardID

inner join Person.Person as pe on pe.BusinessEntityID = pc.BusinessEntityID

where sh.OnlineOrderFlag = 1

group by pe.firstname,pe.lastname

order by Total\_Sales desc;

/\*(10 rows affected)\*/

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

select pd.Occupation,

sum((so.OrderQty)\*((so.UnitPrice)-(so.unitprice\*so.UnitPriceDiscount))) as 'Sales',

sum(pp.StandardCost) as 'Product Cost',

sum(((pp.ListPrice)-((so.UnitPrice)-(so.unitprice\*so.UnitPriceDiscount)))\*(so.OrderQty)) as 'Profit',

sum(so.OrderQty) as 'Ordered Quantity',

count(so.OrderQty) as 'No of Orders'

from Sales.vPersonDemographics pd

join Person.Person p on p.BusinessEntityID=pd.BusinessEntityID

join Sales.PersonCreditCard pc on pc.BusinessEntityID=pd.BusinessEntityID

join Sales.CreditCard cc on cc.CreditCardID=pc.CreditCardID

join sales.SalesOrderHeader sh on sh.CreditCardID=cc.CreditCardID

join sales.SalesOrderDetail so on so.SalesOrderID=sh.SalesOrderID

join Production.Product pp on so.ProductID=pp.ProductID

where Occupation is not null

group by pd.Occupation

order by pd.Occupation desc;

/\*(5 rows affected)\*/

/\*10. What are the ranked sales of the sales people (employees)?\*/

select DENSE\_RANK() OVER (order by sum (so.TotalDue) desc) as Ranking,

concat\_ws(' ',p.firstname,p.lastname) as 'Employee Name',

sum(so.totaldue) as 'Sales'

from Sales.SalesOrderHeader as so

join Person.person as p on so.SalesPersonID=p.BusinessEntityID

group by p.lastname,p.firstname

order by'sales' desc;

/\*(17 rows affected)\*/

/\*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 spo.Category as Promotion\_Category,spo.type,spo.description as Promotion\_Name,

sum((so.OrderQty)\*((so.UnitPrice)-(so.unitprice\*so.UnitPriceDiscount))) as Sales,

sum(((pp.ListPrice)-((so.UnitPrice)-(so.unitprice\*so.UnitPriceDiscount)))\*(so.OrderQty)) as Profit,

sum((so.UnitPrice\*spo.DiscountPct)\*(so.OrderQty)) as Discounted\_amount,

100\*sum((so.UnitPrice\*spo.DiscountPct)\*(so.OrderQty))/sum((so.OrderQty)\*((so.UnitPrice)-(so.unitprice\*so.UnitPriceDiscount))) as '% of Sales'

from Sales.SalesOrderDetail so

join sales.SpecialOfferProduct sp on so.SpecialOfferID=sp.SpecialOfferID

join sales.SalesOrderHeader sh on so.SalesOrderID=sh.SalesOrderID

join Sales.SpecialOffer spo on spo.SpecialOfferID=sp.SpecialOfferID

join Production.Product pp on pp.ProductID=sp.ProductID

where sh.OnlineOrderFlag=0

group by spo.Category,spo.type,spo.description

order by sales desc;

/\*(12 rows affected)\*/

/\*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?\*/

select DENSE\_RANK() OVER (order by sum (TotalDue) desc) as Ranking,

st.CountryRegionCode,st.Name,st.[Group] as 'Group',

sum(sh.TotalDue) as Sales,

sum(pp.StandardCost) as Product\_Cost,

sum(pp.ListPrice - Pp.StandardCost) as Profit,

count(sh.SalesOrderID) as Number\_Of\_Orders,

sum(so.OrderQty) as Order\_Quantity

from Sales.SalesOrderDetail so

join sales.SalesOrderHeader sh on so.SalesOrderID=sh.SalesOrderID

join Sales.SalesTerritory st on st.TerritoryID=sh.TerritoryID

join Production.Product pp on pp.ProductID=so.ProductID

group by st.CountryRegionCode,st.Name,pp.StandardCost,st.[Group]

order by sales desc;

/\*920 rows affected)\*/

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

select sum(TotalDue) as Total\_Sales,

year(Orderdate) as Years, OnlineOrderFlag as Sales\_Channel

from Sales.SalesOrderHeader

where OnlineOrderFlag='1'

group by year(Orderdate),OnlineOrderFlag

order by years;

/\*(4 rows affected)\*/

/\*14. What are the total sales by month (& year)?\*/

select sum(TotalDue) as Total\_Sales,

month(Orderdate) as Months, year(Orderdate) as Years

from Sales.SalesOrderHeader

group by month(Orderdate),year(Orderdate)

order by years,months;

/\*(38 rows affected)\*/

/\*15Please explain (briefly) the differences between SQL queries used to answer the same questions between AdventureWorksDW2017 & AdventureWorks2017\*/

AdventureWorksDW2017 has facts and dimension table whereas AdventureWorks2017 has simplified tables like Sales, persons, address etc.