AdventureWorks2017 solutions for the queries

1) What are the sales, product costs, profit, number of orders & quantity ordered for internet sales by product category and ranked by sales?

```
select PC.[Name] as Product_Category,
count(SD.[SalesOrderID]) as No_Of_Orders,
concat('$',sum([LineTotal])) as Sales_amount,
concat('$',sum([StandardCost])) as Total_product_cost,
concat('$',sum([LineTotal]-[StandardCost])) as Total_Profit,
sum([OrderQty]) as Total_Order_Quanity
from [Sales].[SalesOrderDetail] SD
join [Production].[Product] P on P.[ProductID]=SD.[ProductID]
join [Production].[ProductSubcategory] PSC on
PSC.[ProductSubcategoryID]=P.[ProductSubcategoryID]
join [Production].[ProductCategory] PC on PC.[ProductCategoryID]=PSC.[ProductCategoryID]
join [Sales].[SalesOrderHeader] SH on SH.SalesOrderID=SD.SalesOrderID
where SH.OnlineOrderFlag=1
group by PC.[Name]
order by sum([LineTotal]) desc;
```

2) What are the sales, product costs, profit, number of orders & quantity ordered for reseller sales by product category and ranked by sales?

```
select PC.[Name] as Product_Category,
count(SD.[SalesOrderID]) as No_Of_Orders,
concat('$',sum([LineTotal])) as Sales_amount,
concat('$',sum([StandardCost])) as Total_product_cost,
concat('$',sum([LineTotal]-[StandardCost])) as Total_Profit,
```

```
sum([OrderQty]) as Total_Order_Quanity

from [Sales].[SalesOrderDetail] SD

join [Production].[Product] P on P.[ProductID]=SD.[ProductID]

join [Production].[ProductSubcategory] PSC on
PSC.[ProductSubcategoryID]=P.[ProductSubcategoryID]

join [Production].[ProductCategory] PC on PC.[ProductCategoryID]=PSC.[ProductCategoryID]

join [Sales].[SalesOrderHeader] SH on SH.SalesOrderID=SD.SalesOrderID

where SH.OnlineOrderFlag=0

group by PC.[Name]

order by sum([LineTotal]) 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 PC.[Name] as Product_Category,

count(SD.[SalesOrderID]) as No_Of_Orders,

concat('$',sum([LineTotal])) as Sales_amount,

concat('$',sum([StandardCost])) as Total_product_cost,

concat('$',sum([LineTotal]-[StandardCost])) as Total_Profit,

sum([OrderQty]) as Total_Order_Quanity

from [Sales].[SalesOrderDetail] SD

join [Production].[Product] P on P.[ProductID]=SD.[ProductID]

join [Production].[ProductSubcategory] PSC on
PSC.[ProductSubcategoryID]=P.[ProductSubcategoryID]

join [Production].[ProductCategory] PC on PC.[ProductCategoryID]=PSC.[ProductCategoryID]

join [Sales].[SalesOrderHeader] SH on SH.SalesOrderID=SD.SalesOrderID

group by PC.[Name]

order by sum([LineTotal]) 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 PC.[Name] as Product_Category,
count(so.[SalesOrderID]) as No_Of_Orders,
concat('$',sum([LineTotal])) as Sales_amount,
concat('$',sum([StandardCost])) as Total_product_cost,
concat('$',sum([LineTotal]-[StandardCost])) as Total_Profit,
sum([OrderQty]) as Total_Order_Quanity
from [Sales].[SalesOrderHeader] as so
join [Sales].[SalesOrderDetail] od on od.SalesOrderID = so.SalesOrderID
join [Production].[Product] p on p.ProductID = od.ProductID
join [Production].[ProductSubcategory] ps on ps.ProductSubcategoryID =
p.ProductSubcategoryID
join [Production].[ProductCategory] pc on pc.ProductCategoryID = pc.ProductCategoryID
join [Production].[ProductModel] pm on pm.ProductModelID = p.ProductModelID
where pc.Name = 'Accessories'
group by pc.Name
order by sum(LineTotal) desc;
```

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 concat('$', sum(LineTotal)) as Sales,
concat('$', sum(StandardCost)) as ProductCost,
concat('$', sum((LineTotal) - (StandardCost))) as Profit,
sum(od.OrderQty) as NoOfOrders, st.CountryRegionCode
from [Sales].[SalesOrderHeader] as so
```

```
join [Sales].[SalesOrderDetail] od on od.SalesOrderID = so.SalesOrderID
join [Production].[Product] p on p.ProductID = od.ProductID
join [Sales].[SalesTerritory] st on st.TerritoryID = so.TerritoryID
group by st.CountryRegionCode
order by sum(LineTotal) desc;
```

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 concat('$', sum(LineTotal)) as Sales,
concat('$', sum(StandardCost)) as ProductCost,
concat('$', sum((LineTotal) - (StandardCost))) as Profit,
sum(od.OrderQty) as NoOfOrders, st.CountryRegionCode
from [Sales].[SalesOrderHeader] as so
join [Sales].[SalesOrderDetail] od on od.SalesOrderID = so.SalesOrderID
join [Production].[Product] p on p.ProductID = od.ProductID
join [Sales].[SalesTerritory] st on st.TerritoryID = so.TerritoryID
where st.CountryRegionCode = 'FR'
group by st.CountryRegionCode
order by sum(LineTotal) desc;
```

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

```
SELECT top 10 ST.Name,[BusinessEntityID], SUM(SOD.LineTotal) as Total_Sales
FROM  [Sales].[SalesOrderHeader] SOH
join  [Sales].[SalesOrderDetail] SOD on SOD.[SalesOrderID]=SOH.[SalesOrderID]
join Sales.Store ST on SOH.SalesPersonID = ST.SalesPersonID
GROUP BY  st.Name,[BusinessEntityID],  sod.LineTotal
```

```
ORDER BY  Total_Sales desc;
```

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

```
Select top 10 FirstName, Lastname ,
CONCAT('$' , SUM(LineTotal)) as Sales
from [Person].[Person]
join [Sales].[Customer] on [Person].[Person].BusinessEntityID = [Sales].[Customer].PersonID
join [Sales].[SalesOrderHeader] on  [Sales].[Customer].CustomerID =
[Sales].[SalesOrderHeader].CustomerID
join Sales.SalesOrderDetail on Sales.SalesOrderHeader.SalesOrderID =
Sales.SalesOrderDetail.SalesOrderID
where OnlineOrderFlag = 1
group by FirstName, Lastname
order by SUM(LineTotal) desc;
```

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

```
select   occ.Occupation, concat('$',sum([LineTotal])) as Sales_amount,
concat('$',sum([StandardCost])) as Total_product_cost,
concat('$',sum([LineTotal]-[StandardCost])) as Total_Profit  ,
count(sod.[SalesOrderID]) as No_Of_Orders,
sum([OrderQty]) as Total_Order_Quanity
from   Sales.SalesOrderDetail sod, Production.Product prod,
Sales.SalesOrderHeader soh,Production.ProductSubcategory psc,
Production.ProductCategory pc,  Person.Person per,
Sales.Customer cust, Sales.vPersonDemographics occ
where  sod.SalesOrderID=soh.SalesOrderID and
```

```
prod.ProductSubcategoryID=psc.ProductSubcategoryID
and psc.ProductCategoryID=pc.ProductCategoryID and
sod.ProductID=prod.ProductID  and
soh.CustomerID = cust.CustomerID and
cust.CustomerID = per.BusinessEntityID and
per.BusinessEntityID = occ.BusinessEntityID and
soh.OnlineOrderFlag in (0,1)
group by   occ.Occupation;
```

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

```
SELECT  SalesPersonID,  concat('$',SUM([LineTotal])) as Total_Sales,
DENSE_RANK() over(order by SUM([LineTotal]) desc) as rnk
FROM  Sales.SalesOrderHeader soh
join [Sales].[SalesOrderDetail] SOD on SOD.SalesOrderID=soh.SalesOrderID
WHERE   SalesPersonID is not null
GROUP BY  SalesPersonID
ORDER BY  Total_Sales desc;
```

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 concat('$',sum([LineTotal])) as Sales_amount, Sales.SalesOrderDetail.unitpricediscount as
Discount,
concat('$',sum([LineTotal]-[StandardCost])) as Total_Profit,
Sales.SpecialOffer.DiscountPct as Promotional_Sales_Percent,
Sales.SpecialOffer.Category as Sales_Offer_Category, Sales.SpecialOffer.Type as Offer_Type,
Sales.SpecialOffer.Description as Offer_Desc
```

```
from sales.SalesOrderHeader

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

inner join Production.Product on Sales.SalesOrderDetail.ProductID =
Production.Product.ProductID

inner join Sales.SpecialOffer on Sales.SalesOrderDetail.SpecialOfferID =
Sales.SpecialOffer.SpecialOfferID

where Sales.SalesOrderHeader.OnlineOrderFlag = 0

group by Sales.SpecialOffer.Category, Sales.SpecialOffer.Type, Sales.SpecialOffer.Description,

Sales.SpecialOffer.DiscountPct,Sales.SalesOrderDetail.unitpricediscount

order by sum([LineTotal])  desc;
```

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 [Sales].[SalesTerritory].Name as TerritoryName,

[Sales].[SalesTerritory].[Group] as TerritoryGroup,

[Person].[CountryRegion].Name as CountryRegion,

CONCAT('$',SUM(LineTotal)) as Sales,

CONCAT('$',SUM([StandardCost])) as TotalProductCost ,

CONCAT('$',SUM(LineTotal - StandardCost)) as TotalProfit,

COUNT(Sales.SalesOrderDetail.SalesOrderID) as NoOfOrders,

SUM(OrderQty) as OrderedQuantity

from [Sales].[SalesOrderDetail]

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

join [Production].[Product] on  [Production].[Product].[ProductID] =
[Sales].[SalesOrderDetail].ProductID

join [Sales].[SalesTerritory]on [Sales].[SalesOrderHeader].TerritoryID =
[Sales].[SalesTerritory].TerritoryID
```

```
join [Person].[CountryRegion] on [Sales].[SalesTerritory].CountryRegionCode =
[Person].[CountryRegion].CountryRegionCode

group by [Sales].[SalesTerritory].Name,

[Sales].[SalesTerritory].[Group],

[Person].[CountryRegion].Name

order by SUM(LineTotal)desc ;
```

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

```
select OnlineOrderFlag, year(OrderDate) as year, sum(TotalDue) as Total_Sales

from Sales.SalesOrderHeader

group by rollup (year(OrderDate), OnlineOrderFlag);
```

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

```
select datename(month,sales.SalesOrderHeader.OrderDate) as Month,

year(sales.SalesOrderHeader.OrderDate) as Year,sum(TotalDue) as Total_Sales

from Sales.SalesOrderHeader

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

group by
year(sales.SalesOrderHeader.OrderDate),datename(month,sales.SalesOrderHeader.OrderDate)

order by year(sales.SalesOrderHeader.OrderDate),
datename(month,sales.SalesOrderHeader.OrderDate);
```

AdventureWorks2017DW solutions for the queries

1) What are the sales, product costs, profit, number of orders & quantity ordered for internet sales by product category and ranked by sales?

```
select pc.EnglishProductCategoryName as Product_Category,
concat('$',sum(fis.SalesAmount)) as Sales,
concat('$', sum(fis.ProductStandardCost)) as ProductStandardCost,
concat('$', sum((fis.SalesAmount) - (fis.ProductStandardCost))) as Profit,
count(fis.SalesOrderNumber) as No_of_orders,
sum(fis.OrderQuantity) as Total_OrderQuantity
from [dbo].[FactInternetSales] as fis
join [dbo].[DimProduct] p on p.ProductKey = fis.ProductKey
join [dbo].[DimProductSubcategory] ps on ps.ProductSubcategoryKey =
p.ProductSubcategoryKey
join [dbo].[DimProductCategory] pc on pc.ProductCategoryKey = ps.ProductCategoryKey
group by pc.EnglishProductCategoryName
order by sum(fis.SalesAmount) desc;
```

2) What are the sales, product costs, profit, number of orders & quantity ordered for reseller sales by product category and ranked by sales?

```
select pc.EnglishProductCategoryName as Product_Category,
concat('$',sum(frs.SalesAmount)) as Sales,
concat('$', sum(frs.ProductStandardCost)) as ProductStandardCost,
concat('$', sum((frs.SalesAmount) - (frs.ProductStandardCost))) as Profit,
count(frs.SalesOrderNumber) as No_of_orders,
sum(frs.OrderQuantity) as Total_OrderQuantity
```

```
from [dbo].[FactResellerSales] as frs

join [dbo].[DimProduct] p on p.ProductKey = frs.ProductKey

join [dbo].[DimProductSubcategory] ps on ps.ProductSubcategoryKey =
p.ProductSubcategoryKey

join [dbo].[DimProductCategory] pc on pc.ProductCategoryKey = ps.ProductCategoryKey

group by pc.EnglishProductCategoryName

order by sum(frs.SalesAmount) 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 pc.EnglishProductCategoryName as Product_Category,

count(fis.SalesOrderNumber)+count(frs.SalesOrderNumber),

concat('$',sum(fis.SalesAmount)+sum(frs.SalesAmount)) as Sales,

concat('$', sum(fis.ProductStandardCost)+sum(frs.ProductStandardCost)) as
ProductStandardCost,

concat('$', sum((fis.SalesAmount) - (fis.ProductStandardCost))+ sum((frs.SalesAmount) -
(frs.ProductStandardCost))) as Profit,

sum(fis.OrderQuantity)+ sum(frs.OrderQuantity) as OrderQuantity

from [dbo].[DimProduct] as p

left join [dbo].[FactInternetSales] fis on p.ProductKey = fis.ProductKey

left join [dbo].[FactResellerSales] frs on p.ProductKey = frs.ProductKey

join [dbo].[DimProductSubcategory] ps on ps.ProductSubcategoryKey =
p.ProductSubcategoryKey

join [dbo].[DimProductCategory] pc on pc.ProductCategoryKey = ps.ProductCategoryKey

group by pc.EnglishProductCategoryName

order by sum(fis.SalesAmount) + sum(frs.SalesAmount) 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 pc.EnglishProductCategoryName as Product_Category,

concat('$',sum(fis.SalesAmount)+sum(frs.SalesAmount)) as Sales,

concat('$', sum(fis.ProductStandardCost)+sum(frs.ProductStandardCost)) as
ProductStandardCost,

concat('$', sum((fis.SalesAmount) - (fis.ProductStandardCost))+ sum(frs.SalesAmount) -
sum(frs.ProductStandardCost)) as Profit,

sum(fis.OrderQuantity)+ sum(frs.OrderQuantity) as OrderQuantity,
ps.EnglishProductSubcategoryName,

p.ModelName,p.EnglishProductName

from [dbo].[DimProduct] as p

join [dbo].[FactInternetSales] fis on p.ProductKey = fis.ProductKey

join [dbo].[FactResellerSales] frs on p.ProductKey = frs.ProductKey

join [dbo].[DimProductSubcategory] ps on ps.ProductSubcategoryKey =
p.ProductSubcategoryKey

join [dbo].[DimProductCategory] pc on pc.ProductCategoryKey = ps.ProductCategoryKey

where pc.EnglishProductCategoryName = 'Accessories'

group by pc.EnglishProductCategoryName,ps.EnglishProductSubcategoryName, p.ModelName,
p.EnglishProductName

order by sum(fis.SalesAmount)+sum(frs.SalesAmount);
```

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 st.SalesTerritoryCountry as Sales_territory_country,

count(fis.SalesOrderNumber)+count(frs.SalesOrderNumber),

concat('$',sum(fis.SalesAmount)+sum(frs.SalesAmount)) as Sales,

concat('$', sum(fis.ProductStandardCost)+sum(frs.ProductStandardCost)) as
ProductStandardCost,

concat('$', sum(((fis.SalesAmount) - (fis.ProductStandardCost)))+ sum((frs.SalesAmount) -
(frs.ProductStandardCost))) as Profit,
```

```
sum(fis.OrderQuantity)+ sum(frs.OrderQuantity) as OrderQuantity
from [dbo].[DimSalesTerritory] as st
join [dbo].[FactInternetSales] fis on st.SalesTerritoryKey = fis.SalesTerritoryKey
join [dbo].[FactResellerSales] frs on st.SalesTerritoryKey = frs.SalesTerritoryKey
group by st.SalesTerritoryCountry
order by sum(fis.SalesAmount)+sum(frs.SalesAmount);
```

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 st.SalesTerritoryCountry as Sales_territory_country,
concat('$',sum(fis.SalesAmount)+sum(frs.SalesAmount)) as Sales,
concat('$', sum(fis.ProductStandardCost)+sum(frs.ProductStandardCost)) as
ProductStandardCost,
concat('$', sum((fis.SalesAmount) - (fis.ProductStandardCost))+ sum(frs.SalesAmount) -
sum(frs.ProductStandardCost)) as Profit,
sum(fis.OrderQuantity)+ sum(frs.OrderQuantity) as OrderQuantity
from [dbo].[DimSalesTerritory] as st
join [dbo].[FactInternetSales] fis on st.SalesTerritoryKey = fis.SalesTerritoryKey
join [dbo].[FactResellerSales] frs on st.SalesTerritoryKey = frs.SalesTerritoryKey
where st.SalesTerritoryCountry = 'France'
group by st.SalesTerritoryCountry
order by sum(fis.SalesAmount)+sum(frs.SalesAmount);
```

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

```
select top 10 [ResellerName],[BusinessType], [SalesAmount]
from [dbo].[DimReseller] R
join [dbo].[FactResellerSales] FRS on FRS.ResellerKey=R.ResellerKey
```

```
order by [SalesAmount] Desc;
```

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

```
Select top 10 c.FirstName, c.Lastname ,
CONCAT('$' , SUM(fis.SalesAmount)) as Sales
from [dbo].[FactInternetSales] as fis
join [dbo].[DimCustomer] c on c.CustomerKey = fis.CustomerKey
group by c.FirstName, c.Lastname
order by SUM(fis.SalesAmount) desc;
```

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

```
select c.EnglishOccupation as Customer_Occupation, concat('$',sum(fis.SalesAmount)) as Sales,
concat('$', sum(fis.ProductStandardCost)) as ProductStandardCost,
concat('$', sum((fis.SalesAmount) - (fis.ProductStandardCost))) as Profit,
sum(fis.OrderQuantity) as OrderQuantity
from [dbo].[DimCustomer] as c, [dbo].[FactInternetSales] as fis
where fis.CustomerKey = c.CustomerKey
group by c.EnglishOccupation;
```

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

```
Select   concat(E.firstname,' ',E.lastname) as Name,
sum(frs.salesamount) as Total_Sales ,
DENSE_RANK() over( order by sum(salesamount) desc) as rn
from   FactResellerSales as frs
inner join   DimEmployee as E on   frs.EmployeeKey=E.EmployeeKey
```

```
group by   E.FirstName, E.LastName

order by  Total_Sales desc;
```

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 concat('$',sum(frs.SalesAmount)) as Total_Sales, concat('$',sum(frs.DiscountAmount)) as Total_discount,

concat('$', sum((frs.SalesAmount) - (frs.ProductStandardCost))) as Profit,

sum(p.DiscountPct) as Discount_percentage, p.EnglishPromotionName as Promotion_name,

p.EnglishPromotionType as Promotion_type, p.EnglishPromotionCategory as Promotion_category

from [dbo].[FactResellerSales] as frs

join [dbo].[DimPromotion] p on p.PromotionKey = frs.PromotionKey

group by p.EnglishPromotionName, p.EnglishPromotionType, p.EnglishPromotionCategory

order by sum(frs.SalesAmount) desc;
```

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

concat('$',sum(fis.SalesAmount)) as Sales, concat('$', sum(fis.ProductStandardCost)) as ProductStandardCost,

concat('$', sum((fis.SalesAmount) - (fis.ProductStandardCost))) as Profit,

sum(fis.OrderQuantity) as OrderQuantity,concat('$',sum(frs.SalesAmount)) as Sales, concat('$', sum(frs.ProductStandardCost)) as ProductStandardCost,

concat('$', sum((frs.SalesAmount) - (frs.ProductStandardCost))) as Profit,

sum(frs.OrderQuantity) as OrderQuantity

from [dbo].[DimSalesTerritory] as st
```

```
join [dbo].[FactInternetSales] fis on fis.SalesTerritoryKey = st.SalesTerritoryKey
join [dbo].[FactResellerSales] frs on frs.SalesTerritoryKey = st.SalesTerritoryKey
group by st.SalesTerritoryGroup, st.SalesTerritoryCountry, st.SalesTerritoryRegion
order by sum(fis.SalesAmount), sum(frs.SalesAmount);
```

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

```
select   fsq.calendaryear as 'Year',
sum(fis.salesamount) as Internet_Sales,
sum(frs.salesamount) as Reseller_Sales,
sum(fis.salesamount)+sum(frs.salesamount) as Total_Sales
from   FactSalesQuota as fsq
join   DimEmployee as de on   fsq.EmployeeKey=de.EmployeeKey
join   FactResellerSales as frs  on   de.EmployeeKey=frs.EmployeeKey
join   DimProduct as p on   frs.ProductKey=p.ProductKey
join   FactInternetSales as fis on   fis.ProductKey=p.ProductKey
group by   fsq.CalendarYear order by  Total_Sales desc;
```

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

```
select  year(fsq.Date) as Year,
DATENAME(MONTH, fsq.Date) as Month,
sum(fis.salesamount)+sum(frs.salesamount) as Total_Sales
from   FactSalesQuota as fsq
join   DimEmployee as de on   fsq.EmployeeKey=de.EmployeeKey
join   FactResellerSales as frs  on   de.EmployeeKey=frs.EmployeeKey
join   DimProduct as dp on   frs.ProductKey=dp.ProductKey
join   FactInternetSales as fis  on   fis.ProductKey=dp.ProductKey
```

group by fsq.Date order by Total_Sales desc;

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

AdventureWorks2017 and AdventureWorksDW2017 depict the same business processes. AdventureWorks2017 has more entity and relationships than that of AdventureWorksDW2017. In AdventureWorksDW2017, the dimensions are denormalized and the facts are normalized.

The AdventureWorksDW2017 which is a dimensional model, was simpler, easier to navigate, and more understandable than the AdventureWorks2017. It reduced the complexity of the queries as well.

Lot of join operations had to be performed on AdventureWorks2017 in order to query the results where as AdventureWorksDW2017 had few tables with compact and useful data together which was easier to work with than that of AdventureWorks2017 .

In AdventureWorks2017, there is a process- and application-specific design where as AdventureWorksDW2017 has a data- and subject area–driven design. AdventureWorksDW2017 has fewer tables, is more understandable, and is less process-focused.

For example, to calculate the computed column Profit two tables were considered in AdventureWorks2017 i.e Product table for StandardProductCost and SalesOrderDetail table for LineTotal where as AdventureWorksDW2017 has one fact table FactInternetSales which has both SalesAmount and TotalProductCost and hence it was easier to calculate the profit in AdventureWorksDW2017.