

## 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_Quantity
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_Quantity
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_Quantity
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_Quantity  
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_Quantity
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 ER model. It reduced the complexity of the queries as well.

Lot of join operations had to be performed on AdventureWorks2017.