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Course: SQL

Database: RetailAB

Tables: Address, Customers, DateTable, Products, Regions, Returns, Salesdata, Segment, Shipmode,

Q 1. Print invoice details like OrderId, OrderDate, ShipDate, UpdatedDate, ShipMode, Region, City, State, Country, PostalCode, ProductName, Category, Sub-Category, CustomerName, Segment, Sales, Quantity, Discount, Profit, returned.

```
Create view vw_SalesReport as
 select a.OrderId,i.date OrderDate ,j.Date ShipDate
       ,a.UpdatedDate,h.ShipMode,f.Region
       ,c.City,c.State,c.Country,c.PostalCode
       ,e.ProductName,e.Category, e.[Sub-Category]
        ,a.OrderDateKey,a.ShipDateKey
        ,g.Segment
        ,a.Sales,a.Quantity,a.Discount,a.Profit
        .b.returned
        ,i.[Year] OrderYr ,i.QtrNum OrderQtrNum,i.QtrName OrderQtrName,i.[Month] OrderMonth,i.[MonthName] OrderMonthName
        i.WeekNum OrderWeekNum ,i.WeekName OrderWeekName ,i.[Day] OrderDay,i.WeekDayNum OrderWeekDayNum,i.WeekDayName OrderWeekDayName
        ,j.[Year] ShipYr ,j.QtrNum ShipQtrNum,j.QtrName ShipQtrName,j.[Month] ShipMonth,j.[MonthName] ShipMonthName
        ,j.WeekNum ShipWeekNum,j.WeekDayName ShipWeekName,j.[Day] ShipDay,j.WeekDayNum ShipWeekDayNum,j.WeekDayName ShipWeekDayName
 left outer Join [Returns] b on a.OrderId=b.OrderId
 inner join [address] c on c.AddressId=a.AddressId
 inner join customers d on d.CustomerId=a.CustomerId
 inner join products e on e.ProductId =a.ProductId
 inner join Regions f on f.RegionId=a.RegionId
 inner join segment g on g.SegmentId=a.SegmentId
 inner join shipmode h on h.ShipModeId=a.ShipModeId
 inner join DateTable i on i.DateKey=a.OrderDateKey
 inner join DateTable j on j.DateKey=a.ShipDateKey
  --select * from vw_SalesReport;
```

Q 2. Find total sales orders, customers, products, regions, segments, ship modes, sales, quantity, discount, profit summary by sales and sales return.

```
use RetailAB;
Alter view vw_SaleSummary as
select 'Total Sales' Type,
                                         count(*) Records, count(distinct a.OrderId) Orders , count(distinct a.CustomerName) Customers, count(distinct a.ProductName) Products
      , count (distinct a.Region) Regions, count(distinct a.Segment) Segments, count(distinct a.ShipMode) ShopModes
, sum(a.Quantity) Quantity, Round(sum(a.Sales),2) Sales , Round(Sum(a.discount),2) Discount, Round(Sum(a.Profit),2) Profit
from vw SalesReport a --where isnull(a.returned.'')<>'Yes'
select 'Total Return Sale' Type,count(*) Records, count(distinct a.OrderId) Orders , count(distinct a.CustomerName) Customers, count(distinct a.ProductName) Products , count(distinct a.Region) Regions, count(distinct a.Segment) Segments, count(distinct a.ShipMode) ShopModes
             sum(a.Quantity) Quantity, Round(sum(a.Sales),2) Sales , Round(Sum(a.discount),2) Discount, Round(Sum(a.Profit),2) Profit
from vw_SalesReport a where a.returned='Yes
select 'Net Sales' Type,count(*) Records, count(distinct a.OrderId) Orders , count(distinct a.CustomerName) Customers, count(distinct a.ProductName) Products
       , count(distinct a.Region) Regions, count(distinct a.Segment) Segments, count(distinct a.ShipMode) ShopModes
, sum(a.Quantity) Quantity, Round(sum(a.Sales),2) Sales , Round(Sum(a.discount),2) Discount, Round(Sum(a.Profit),2) Profit
from vw_SalesReport a where isnull(a.returned,'')<>'Yes';
select * from vw_SaleSummary;
go
v 4
ults 🕅 Messages

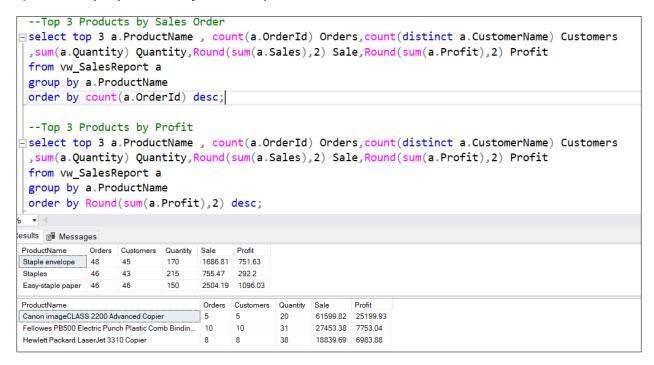
        Quantity
        Sales
        Discount
        Profit

        37873
        2297200.86
        1561.09
        286397.02

        3053
        180504.28
        114.74
        23232.36

        34820
        2116696.58
        1446.35
        263164.66
```

Q 3. Find top 3 products by sale and profit.



Q 4. Find category wise top 3 products by sale.

```
--Categorywise Top 3 products by Sale
 WITH Top3Products AS (
      SELECT a.Category, a.Productname, Round(sum(a.Sales),2) Sales,Round(sum(a.Profit),2) Profit,
               ROW_NUMBER() OVER(PARTITION BY category ORDER BY Round(sum(a.Sales),2) DESC) AS rn
      FROM vw SalesReport a
      group by a.Category, a.Productname
 SELECT Category, Productname, Sales, Profit
 FROM Top3Products
 WHERE rn <= 3
 Order by Category, Sales desc;
 ▼ 4
esults 🗐 Messages
Category
            Productname
                                                 Sales
                                                         Profit
           HON 5400 Series Task Chairs for Big and Tall
                                                 21870 58 0
Furniture
           Riverside Palais Royal Lawyers Bookcase, Royale C... 15610.97 -669.54
           Bretford Rectangular Conference Table Tops
                                                 12995.29 -327.23
Furniture
Office Supplies Fellowes PB500 Electric Punch Plastic Comb Bindi... 27453.38 7753.04
Office Supplies GBC DocuBind TL300 Electric Binding System
                                                 19823.48 2233.51
Office Supplies GBC Ibimaster 500 Manual ProClick Binding System 19024.5 760.98
           Canon imageCLASS 2200 Advanced Copier
                                                 61599.82 25199.93
          Cisco TelePresence System EX90 Videoconferenci... 22638.48 -1811.08
Technology
Technology Hewlett Packard LaserJet 3310 Copier
                                               18839.69 6983.88
```

Q 5. Find category wise top 3 products by profit.

```
--Categorywise Top 3 products by Profit
⊟WITH Top3Products AS (
       SELECT a.Category, a.Productname, Round(sum(a.Sales),2) Sales,Round(sum(a.Profit),2) Profit,
                 ROW_NUMBER() OVER(PARTITION BY category ORDER BY Round(sum(a.Profit),2) DESC) AS rn
       FROM vw_SalesReport a
       group by a.Category, a.Productname
 SELECT Category, Productname, Sales, Profit
 FROM Top3Products
 WHERE rn <= 3
 Order by Category, Profit desc;
esults 📳 Messages
Category
            Productname
                                                  Sales
                                                           Profit
Furniture Hon Deluxe Fabric Upholstered Stacking Chairs, Ro... 10637.53 1927.44
             Global Deluxe High-Back Manager's Chair 8665.19 1558.59
                                                   6483.8 1540.7
Furniture
            Hon Pagoda Stacking Chairs
Office Supplies Fellowes PB500 Electric Punch Plastic Comb Bindi... 27453.38 7753.04
Office Supplies | Ibico EPK-21 Electric Binding System
                                                   15875.92 3345.28
Office Supplies Honeywell Enviracaire Portable HEPA Air Cleaner fo... 11304.44 3247.02
          Canon imageCLASS 2200 Advanced Copier 61599.82 25199.93
Technology
            Canon imagetta 2200 ....

Hewlett Packard LaserJet 3310 Copier 18839.69 0903.00

- Copier 11619.83 4570.93
Technology
Technology Canon PC1060 Personal Laser Copier
```

Q 6. Find top 3 customers by sale and profit.

```
-- Top 3 Customers by Orders
select top 3 a.CustomerName , count(a.OrderId) Orders,count(distinct a.CustomerName) Customers
   ,sum(a.Quantity) Quantity,Round(sum(a.Sales),2) Sale,Round(sum(a.Profit),2) Profit
   from vw_SalesReport a
   group by a.CustomerName
  order by count(a.OrderId) desc;
   -- Top 3 Customers by Profit
 select top 3 a.CustomerName , count(a.OrderId) Orders,count(distinct a.CustomerName) Customers
   ,sum(a.Quantity) Quantity,Round(sum(a.Sales),2) Sale,Round(sum(a.Profit),2) Profit
  from vw_SalesReport a
  group by a.CustomerName
  order by Round(sum(a.Profit),2) desc;
% ▼ ∢
Results 🗐 Messages
 CustomerName Orders Customers Quantity Sale

        William Brown
        37
        1
        146
        6160.1
        714.33

        Paul Prost
        34
        1
        138
        7252.61
        1495.09

        John Lee
        34
        1
        143
        9799.92
        228.91

                                                           Profit
                                               7252.61 1495.09
 CustomerName Orders Customers Quantity Sale

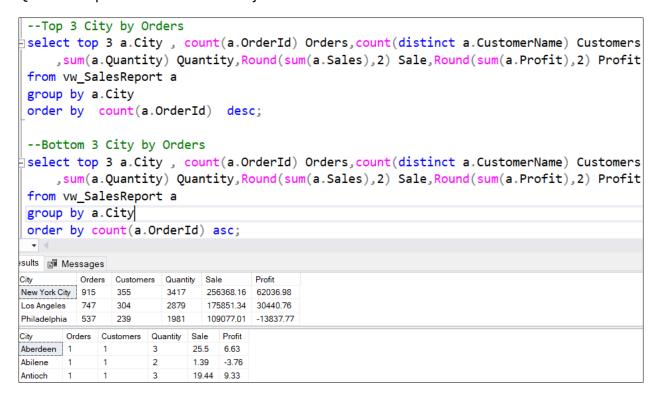
        Tamara Chand
        12
        1
        42
        19052.22
        8981.32

        Raymond Buch
        18
        1
        71
        15117.34
        6976.1

        Raymond Buch
        18
        1
        71
        15117.34
        6976.1

        Sanjit Chand
        22
        1
        87
        14142.33
        5757.41
```

Q 7. Find top and bottom 3 cities by sales orders.



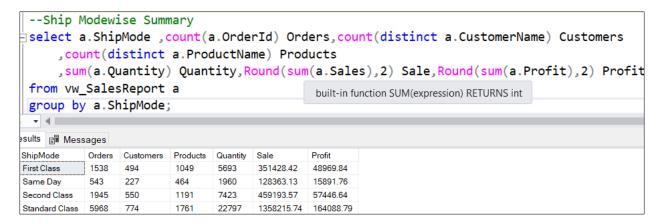
Q 8. Find Region wise sales summary.

```
--Regionwise Sales Summary
select a.Region ,count(a.OrderId) Orders,count(distinct a.CustomerName) Customers, count(distinct a.ProductName) Products
 ,sum(a.Quantity) Quantity,Round(sum(a.Sales),2) Sale,Round(sum(a.Profit),2) Profit
 from vw_SalesReport a
 group by a.region
 · •
sults Messages
Region Orders Customers Products Quantity Sale

        Central
        2323
        629
        1295
        8780
        501239.89
        39706.36

                             10618
                                   678781.24 91522.78
South 1620 512
                            6209
                                    391721.91 46749.43
                     1042
                            12266 725457.82 108418.45
West
      3203 686
                     1503
```

Q 9. Find ship mode wise sales summary.



Q 10. Find segment wise sales summary.

```
--Segmentwise Sales Summary

select a.Segment _count(a.OrderId) Orders_count(distinct a.CustomerName) Customers
    __count(distinct a.ProductName) Products
    __sum(a.Quantity) Quantity_Round(sum(a.Sales),2) Sale_Round(sum(a.Profit),2) Profit
from vw_SalesReport a
group by a.Segment;

segment Orders Customers Products Quantity Sale Profit
Consumer 5191 409 1704 19521 1161401.34 134119.21
Corporate 3020 236 1444 11608 706146.37 91979.13
Home Office 1783 148 1106 6744 429653.15 60298.68
```

Q 11. Find category wise sales summary.

```
--Categorywise Sales Summary
≒select a.Category ,count(a.OrderId) Orders,count(distinct a.CustomerName) Customers
      ,count(distinct a.ProductName) Products
      ,sum(a.Quantity) Quantity,Round(sum(a.Sales),2) Sale,Round(sum(a.Profit),2) Profit
 from vw SalesReport a
 group by a.Category;
  ▼ 4 III
esults 🗐 Messages
          Orders Customers Products Quantity Sale
                                            Profit
         2121 707
                                            18451.27
                       380
                             8028 741999.8
Furniture
Office Supplies 6026 788
                              22906 719047.03 122490.8
Technology
         1847 687
                       412 6939 836154.03 145454.95
```

Q 12. Find category wise sales summary.

```
-- Categorywise Sales Summary
select a.Category ,count(a.OrderId) Orders,count(distinct a.CustomerName) Customers
      ,count(distinct a.ProductName) Products
      ,sum(a.Quantity) Quantity,Round(sum(a.Sales),2) Sale,Round(sum(a.Profit),2) Profit
 from vw SalesReport a
 group by a.Category;
 ▼ 4 III
Results 🗐 Messages
           Orders Customers Products Quantity Sale
          2121 707
                       380
                              8028 741999.8 18451.27
Furniture
Office Supplies 6026 788
                               22906 719047.03 122490.8
Technology
           1847 687
                               6939 836154.03 145454.95
```

Q 13. Find category, subcategory wise sales summary.

```
--Category Subcategorywise Sales Summary
select a.Category ,a.[Sub-Category],count(a.OrderId) Orders
       ,count(distinct a.CustomerName) Customers, count(distinct a.ProductName) Products
       ,sum(a.Quantity) Quantity,Round(sum(a.Sales),2) Sale,Round(sum(a.Profit),2) Profit
 from vw_SalesReport a
 group by a.Category,a.[Sub-Category];
esults 🗐 Messages
            Sub-Category Orders Customers Products Quantity Sale
                                                            Profit
Category
           Bookcases
                      228
                            195
                                     50
                                             868
                                                    114880
                                                             -3472.56
                      617
                                                    328449.1 26590.17
Furniture
           Chairs
                            407
                                     88
                                             2356
                                 186
                      957 528
                                                   91705.16 13059.14
            Furnishings
                                             3563
Furniture
                      957 528 186 3563 91705.16 13059.14
319 261 56 1241 206965.53 -17725.48
                                         1729
Office Supplies Appliances 466 356 97
                                                  107532.16 18138.01
                      796
                            494
                                     157
                                             3000
Office Supplies Art
                                                    27118 79
                                                            6527 79
Office Supplies Binders
                      1523
                            650
                                     211
                                             5974
                                                    203412.73 30221.76
Office Supplies Envelopes
                                                            6964.18
                      254
                            206
                                     44
                                             906
                                                    16476.4
Office Supplies Fasteners
                      217
                                            914
                            191
                                     34
                                                   3024 28
                                                            949 52
                                     70 1400 12486.31 5546.25
Office Supplies Labels
                      364 281
                      1370 611 277
Office Supplies Paper
                                             5178 78479.21 34053.57
                      846 514
Office Supplies Storage
                                    132 3158 223843.61 21278.83
                      190 160
                                     36
                                             647
                                                   46673.54 -1189.1
Office Supplies Supplies
                      775 474 147 2976
68 64 13 234
115 99 63 440
           Accessories
                                                    167380.32 41936.64
Technology
                                                    149528.03 55617.82
 Technology
            Copiers
Technology
                                                    189238.63 3384.76
            Machines
                   889 511 189 3289 330007.05 44515.73
          Phones
Technology
```

Q 14. Find shipping day wise sales summary.

```
--Shiping Daywise Sales Summary
   select DateDiff(day, cast(a.OrderDate as date),a.ShipDate) ShipDays
                       , \ count (a.OrderId) \ Orders, count (distinct \ a.CustomerName) \ Customers, \ count (distinct \ a.ProductName) \ Products \ Annual Customers 
                       ,sum(a.Quantity) Quantity,Round(sum(a.Sales),2) Sale,Round(sum(a.Profit),2) Profit
    from vw_SalesReport a
    group by DateDiff(day, cast(a.OrderDate as date),a.ShipDate)
   order by DateDiff(day, cast(a.OrderDate as date),a.ShipDate);
 sults 📶 Messages
ShipDays Orders Customers Products Quantity Sale
0 519 217 444 1864 1249
                                                                                                                                         124907.69 15385.97
                             369
                                                                                                               1384
                                                                                                                                          67975.33 7541.23
                                                   162
                                                                                    336
                              1336 461
                                                                                    946
                                                                                                               4995
                                                                                                                                          368693.53 53196.08
                                                                                                              3807
                                                                                                                                       204448.09 26791.07
                              1004 365
                                                                                    752
                              2770 651

        1205
        426
        855
        4554
        240653.91
        33314.44

        621
        249
        516
        2402
        164635.97
        20313.16

        2
        1
        2
        10
        80.36
        25.52
```