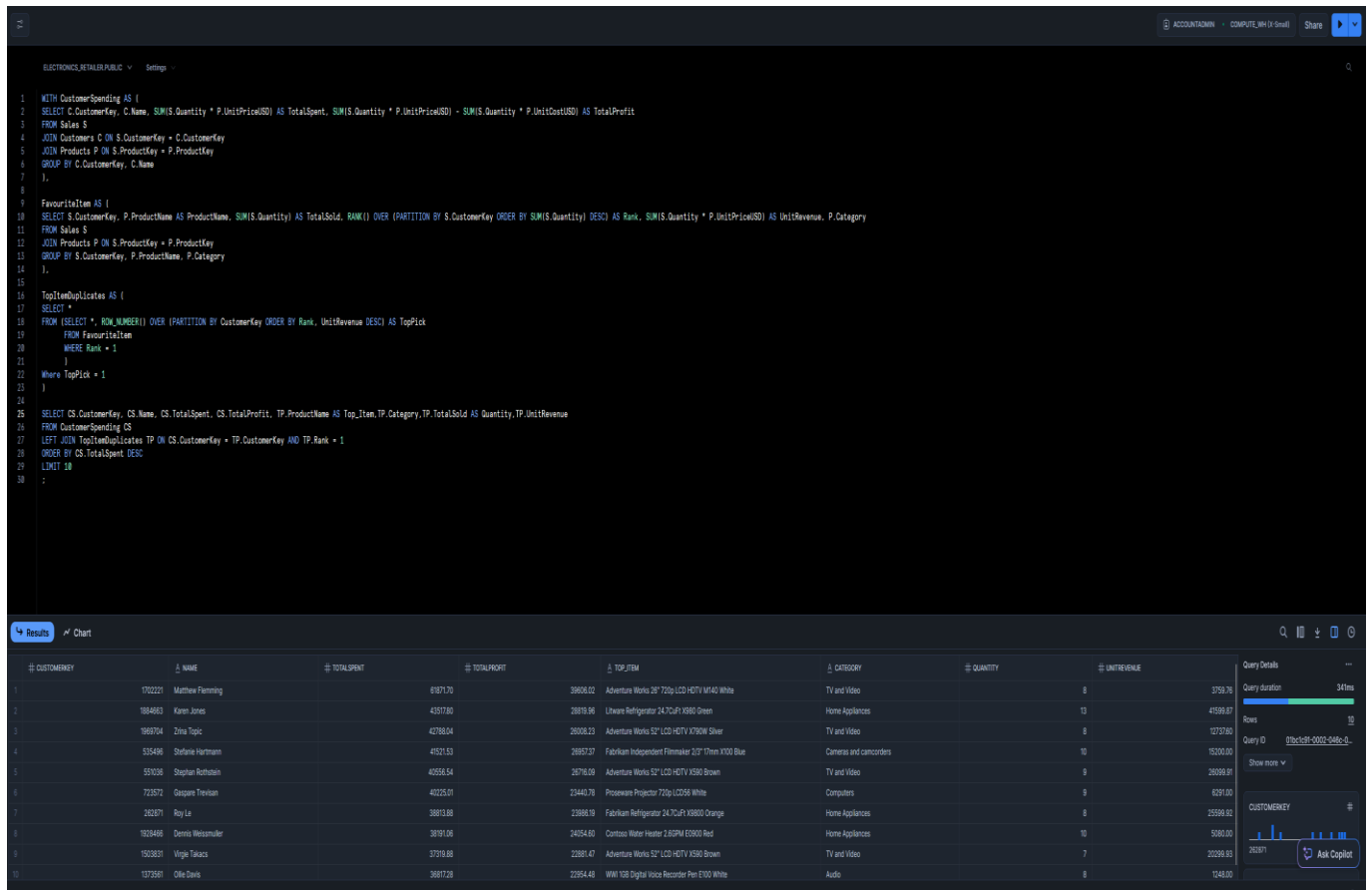


Logan Samples

05/02/2025

Query Examples

Top Customers



```
1 WITH CustomerSpending AS (
2 SELECT C.CustomerKey, C.Name, SUM(S.Quantity * P.UnitPriceUSD) AS TotalSpent, SUM(S.Quantity * P.UnitPriceUSD) - SUM(S.Quantity * P.UnitCostUSD) AS TotalProfit
3 FROM Sales S
4 JOIN Customers C ON S.CustomerKey = C.CustomerKey
5 JOIN Products P ON S.ProductKey = P.ProductKey
6 GROUP BY C.CustomerKey, C.Name
7 ),
8
9 FavouriteItem AS (
10 SELECT S.CustomerKey, P.ProductName AS ProductName, SUM(S.Quantity) AS TotalSold, RANK() OVER (PARTITION BY S.CustomerKey ORDER BY SUM(S.Quantity) DESC) AS Rank, SUM(S.Quantity * P.UnitPriceUSD) AS UnitRevenue, P.Category
11 FROM Sales S
12 JOIN Products P ON S.ProductKey = P.ProductKey
13 GROUP BY S.CustomerKey, P.ProductName, P.Category
14 ),
15
16 TopItemDuplicates AS (
17 SELECT
18 FROM (SELECT *, ROW_NUMBER() OVER (PARTITION BY CustomerKey ORDER BY Rank, UnitRevenue DESC) AS TopPick
19 FROM FavouriteItem
20 WHERE Rank = 1
21 )
22 Where TopPick = 1
23 )
24
25 SELECT CS.CustomerKey, CS.Name, CS.TotalSpent, CS.TotalProfit, TP.ProductName AS TopItem, TP.Category, TP.TotalSold AS Quantity, TP.UnitRevenue
26 FROM CustomerSpending CS
27 LEFT JOIN TopItemDuplicates TP ON CS.CustomerKey = TP.CustomerKey AND TP.Rank = 1
28 ORDER BY CS.TotalSpent DESC
29 LIMIT 10
30 ;
```

CUSTOMERKEY	NAME	TOTALSPENT	TOTALPROFIT	TOPITEM	CATEGORY	QUANTITY	UNITREVENUE
1702221	Matthew Fleming	61871.72	36836.02	Adventure Works 20" 720p LCD HDTV M140 White	TV and Video	8	3759.76
1884963	Karen Jones	41517.60	28819.96	Litware Refrigerator 24.7CuFt X380 Green	Home Appliances	13	4159.67
1968804	Ziva Topic	42786.04	26028.23	Adventure Works 52" LCD HDTV X700W Silver	TV and Video	8	12737.60
532466	Shelene Hartmann	41521.53	26827.27	Fabrikam Independent Filmmaker 3.2" 35mm X108 Blue	Cameras and camcorders	10	15330.00
551036	Stephen Rothstein	40556.54	26716.09	Adventure Works 52" LCD HDTV X306 Brown	TV and Video	9	28099.91
723572	Gaspere Trevelian	40225.01	23443.78	Proseware Projector 720p LCD56 White	Computers	9	6297.00
262671	Roy Le	38813.88	23986.19	Fabrikam Refrigerator 24.7CuFt X380 Orange	Home Appliances	8	15589.92
1628468	Dennis Holzmueller	38391.06	24554.60	Cortoso Water Heater 2.6GPM E2000 Red	Home Appliances	10	5000.00
1503637	Virgie Tacacs	37219.68	23351.47	Adventure Works 52" LCD HDTV X306 Brown	TV and Video	7	20296.63
1273591	Olke Davis	36817.28	22954.48	WM X38 Digital Voice Recorder Pen E700 White	Audio	8	1248.00

This query uses 3 temporary tables to find the top 10 customers, how much they spent, profit made from their transactions, item most bought, the quantity of that item purchased, how much total was spent buying those items and the category of the item. The first temporary table uses aggregate functions SUM to find the revenue and profit from each customer by joining the sales, customers, and products tables.

The second temporary table uses the window function RANK() to rank the products an individual customer has bought, not across all customers. Each customer will have a ranking of products based on how many units of that product they purchased. There are issues with this

method. If there is a tie with most purchased products, there will be multiple rank 1 products. This led me to create a 3rd table.

The top item duplicates table uses a sub-query along with another window function to sort out which items tied at the top spot had the most revenue. This window function goes through each customer's rank 1 products and puts the product with the most revenue at row number 1.

The query itself combines these temporary tables to find our desired information by joining tables with the customer key. AND clause is used to only join the tables by products that have rank 1.

Monthly Product Revenue

ACCOUNTADMINCOMPUTE_WH (X-Small)Share

ELECTRONICS_RETAILER.PUBLICSettingsCode Versions

```
1 WITH MonthlyProductRevenue AS (  
2   SELECT P.ProductName, P.ProductKey, P.Category, DATE_TRUNC('month', S.OrderDate) AS OrderMonth, SUM(S.Quantity * P.UnitPriceUSD) AS MonthlyRevenue  
3   FROM Sales S  
4   INNER JOIN Products P ON S.ProductKey = P.ProductKey  
5   GROUP BY P.ProductKey, P.ProductName, P.Category, OrderMonth  
6 )  
7  
8   SELECT ProductName,  
9     Category,  
10    OrderMonth AS Month, MonthlyRevenue,  
11    RANK() OVER (PARTITION BY OrderMonth ORDER BY MonthlyRevenue DESC) AS MonthlyRevenueRank,  
12    LAG(MonthlyRevenue) OVER(PARTITION BY ProductKey ORDER BY OrderMonth) AS PreviousMonthsRevenue,  
13    FIRST_VALUE(MonthlyRevenue) OVER (PARTITION BY ProductKey ORDER BY OrderMonth) AS FirstMonthRevenue,  
14    SUM(MonthlyRevenue) OVER (PARTITION BY ProductKey ORDER BY OrderMonth) AS TotalRevenue  
15 FROM MonthlyProductRevenue  
16 ORDER BY ProductKey, OrderMonth;
```

ResultsChart

	PRODUCTNAME	CATEGORY	MONTH	MONTHLYREVENUE	MONTHLYREVENUERANK	PREVIOUSMONTHSREVENUE	Query Details	
23	Contoso 512MB MP3 Player E51 Blue	Audio	2017-06-01	103.92	411		Query duration	443ms
24	Contoso 512MB MP3 Player E51 Blue	Audio	2017-12-01	64.95	764		Rows	103
25	Contoso 512MB MP3 Player E51 Blue	Audio	2018-01-01	25.98	671		Query ID	01b
26	Contoso 512MB MP3 Player E51 Blue	Audio	2018-02-01	25.98	776			25

Ask Copilot

I wanted to find the performance of products on a monthly basis. A temporary table was used to aggregate monthly revenue for each product. The first window function in this query ranks how revenue each product produced for each month. The LAG function was used to go through each product's monthly revenue and give the previous month's value. The FIRST_VALUE function gives the oldest monthly revenue for each product. The SUM window function calculates the running total for revenue of each product.

Product Performance

12

ACCOUNTADMIN | COMPUTE_WH (1: Small) | Share

ELECTRONICS_RETAILER_PUBLIC | Settings

1

2

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6

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10

```
1 SELECT P.ProductName, P.Category, S.OrderDate, SUM(S.Quantity) AS TotalSold, SUM(S.Quantity * P.UnitPriceUSD) AS UnitRevenue, SUM(S.Quantity * P.UnitPriceUSD - S.Quantity * P.UnitCostUSD) AS UnitProfit, C.Country, C.State
2 FROM Sales S
3 INNER JOIN Products P ON S.ProductKey = P.ProductKey
4 INNER JOIN Customers C ON S.CustomerKey = C.CustomerKey
5 WHERE YEAR(S.OrderDate) = 2016
6 GROUP BY P.ProductName, P.Category, S.OrderDate, C.Country, C.State
7 ORDER BY S.OrderDate, P.Category, P.ProductName
8 ;
9
10
```

Results | Chart

PRODUCTNAME

CATEGORY

ORDERDATE

TOTALSOLD

UNITREVENUE

UNITPROFIT

COUNTRY

STATE

1 A. Datum SLR Camera XT38 Silver Camera and camcorders 2016-01-01 2 854.00 571.06 United States California

2 A. Datum SLR Camera XT38 Gold Camera and camcorders 2016-01-01 5 3193.00 2096.30 Italy Napoli

3 Contoso General Carrying Case E554 Silver Camera and camcorders 2016-01-01 7 139.93 66.60 United States New York

4 Contoso Lens Adapter M450 White Camera and camcorders 2016-01-01 1 69.00 36.73 Canada Ontario

5 Contoso SLR Camera M140 Orange Camera and camcorders 2016-01-01 7 2254.00 1017.44 Canada Alberta

6 Contoso SLR Camera XT43 Silver Camera and camcorders 2016-01-01 4 2384.00 1727.68 Canada Texas

7 Contoso USB Cable M250 White Camera and camcorders 2016-01-01 1 25.00 13.50 United States

8 Fabrikam Thumbdrive 1GB 8.5mm K200 Blue Camera and camcorders 2016-01-01 8 6962.00 6006.08 Italy Napoli

9 Contoso Original Ktm Li-Ion Standard Battery E770 White Cell phones 2016-01-01 1 4.06 1.89 Italy Napoli

10 The Phone Company PGA Handheld 3.5 inch M810 Black Cell phones 2016-01-01 2 510.00 275.46 United Kingdom West Lancashire

Query Details

Query duration 939ms

Rows 6.9K

Query ID 0fbc1408-5002-51b4-9...

Show more

PRODUCTNAME

Contoso DVD Player M730 Gray 21

Contoso DVD 15-in...

Ask Copilot

This query selects quantity sold, profit, and revenue for each product in 2016 per location and time. This query is useful for tracking these attributes over time and location.

Other Examples Below

ACCOUNTADMINCOMPUTE_WH (X-Small)Share

Code Versions

ELECTRONICS_RETAILER.PUBLICSettings

1SELECT DATE, TIMEID month, S.OrderDate) AS SalesMonth, SUM(Quantity * P.UnitPriceUSD) AS Revenue

2FROM Sales S

3INNER JOIN Products P ON S.ProductKey = P.ProductKey

4GROUP BY SalesMonth

ResultsChart

SALESMONTHREVENUE

SALESMONTH	REVENUE
2016-01-01	649918.78
2016-02-01	891098.30
2016-03-01	338407.36
2016-04-01	110591.63
2016-05-01	
2016-06-01	
2016-07-01	
2016-08-01	
2016-09-01	
2016-10-01	

Query Details

Query duration1.4s

Rows83

Query ID01ba2780-0002-0001-0000-000000000000

Show details

Ask Copilot

ACCOUNTADMINCOMPUTE_WH (X-Small)Share

Code Versions

ELECTRONICS_RETAILER.PUBLICSettings

1SELECT P.ProductKey, S.Quantity, P.UnitCostUSD, P.UnitPriceUSD

2FROM Sales S

3INNER JOIN Products P ON S.ProductKey = P.ProductKey

4INNER JOIN Stores ST ON S.StoreKey = ST.StoreKey

5WHERE ST.COUNTRY != 'OnLine'

6ORDER BY ProductKey;

ResultsChart

SALESMONTHREVENUE

SALESMONTH	REVENUE
2016-01-01	649918.78
2016-02-01	891098.30
2016-03-01	338407.36
2016-04-01	110591.63

Query Details

Query duration1.4s

Rows83

Query ID01ba2780-0002-0001-0000-000000000000

Show details

Ask Copilot

ELECTRONICS_RETAILER.PUBLICSettingsCode Versions

```
1 SELECT P.ProductKey, S.Quantity, P.UnitCostUSD, P.UnitPriceUSD
2 FROM Sales S
3 INNER JOIN Products P ON S.ProductKey = P.ProductKey
4 INNER JOIN Stores ST ON S.StoreKey = ST.StoreKey
5 WHERE ST.COUNTRY = 'OnLine'
6 ORDER BY ProductKey;
```

ResultsChart

	SALESMONTH	REVENUE
1	2016-01-01	649918.78
2	2016-02-01	891098.30
3	2016-03-01	338407.36
4	2016-04-01	110591.63

Query Details

Query duration1.4s

Rows

Query ID01ba

Ask Copilot