

# DATA ANALYST

## Internship Task 8

### DESCRIPTION

The task focuses on analyzing sales data using SQL window functions in a database. It includes aggregating total sales per customer, ranking customers by region, calculating running totals, measuring monthly sales growth, and identifying top products per category. The goal is to extract meaningful business insights

### PREPARED BY

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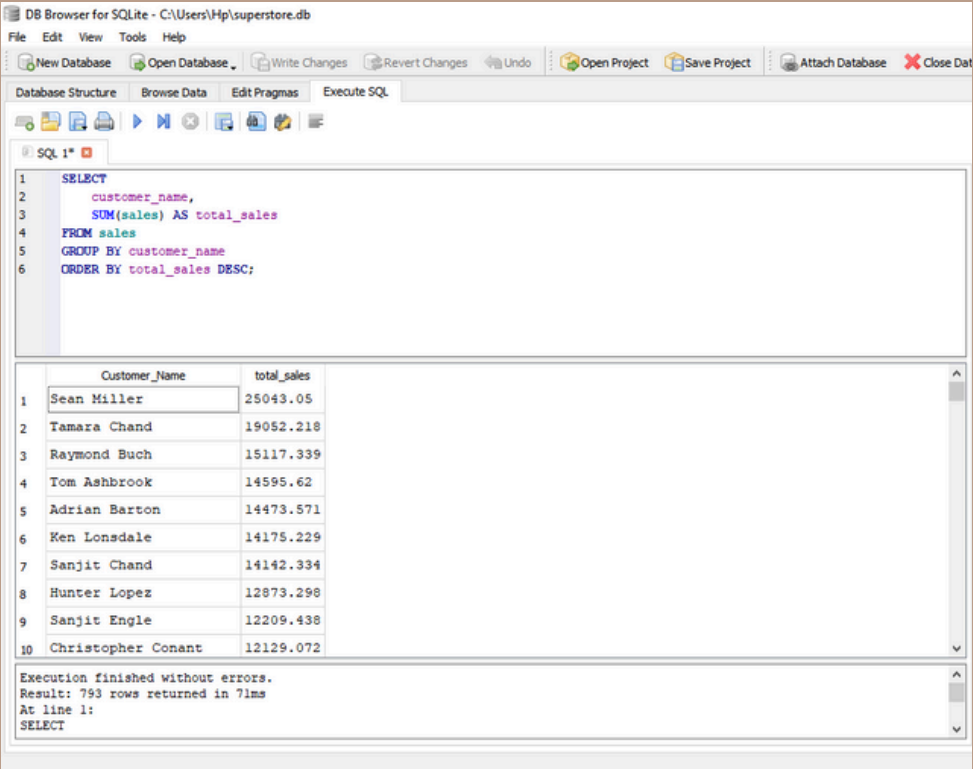
### MY WORK

I imported the cleaned Superstore dataset into a database and created the necessary table structure. I executed SQL queries to calculate total sales per customer and ranked customers by region using RANK and DENSE\_RANK window functions. I generated running totals to visualize cumulative sales trends, calculated month-over-month sales growth using LAG, and identified the top 3 products in each category. All results were verified, exported as CSV files, and analyzed for patterns. This process allowed me to understand regional performance, customer behavior, product trends, and overall sales dynamics within the dataset, providing actionable insights for business decisions.

### DATASET

[superstore\\_dataset](#)

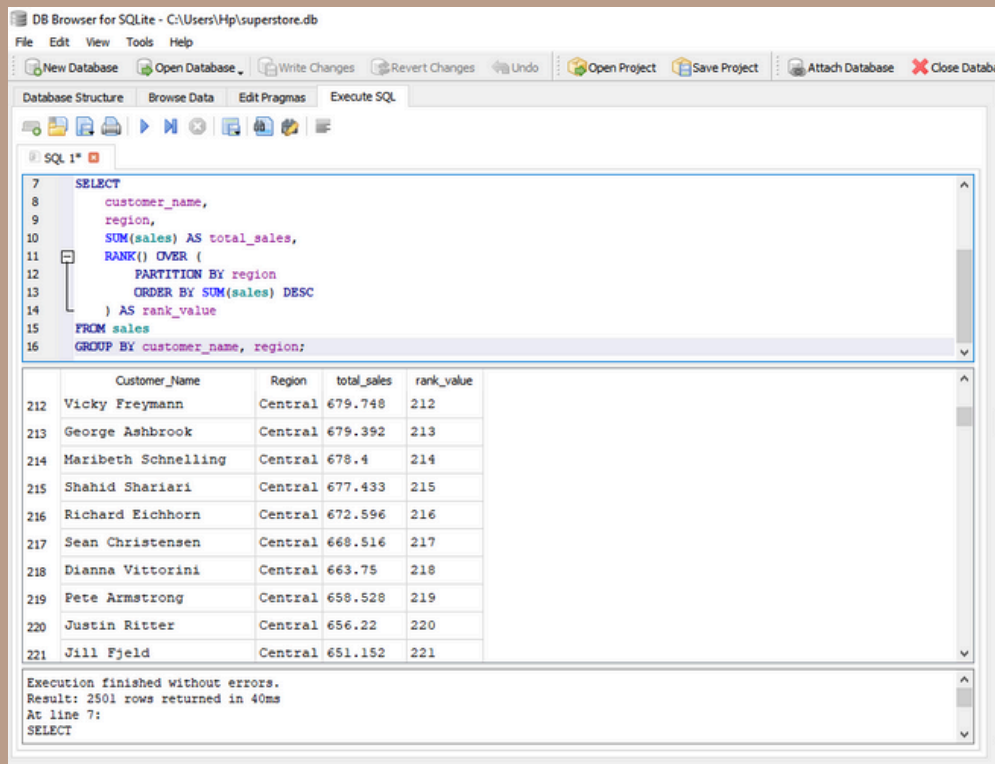
# TOTAL SALES PER CUSTOMER:



## output csv

Customers in certain regions contributed significantly higher sales, indicating key high-value clients. Overall, sales were concentrated among top-performing customers, highlighting the importance of focusing on loyal or repeat customers

# RANKING CUSTOMERS BY REGION :



The screenshot shows the DB Browser for SQLite interface. The SQL editor contains the following query:

```
7 SELECT
8     customer_name,
9     region,
10    SUM(sales) AS total_sales,
11    RANK() OVER (
12        PARTITION BY region
13        ORDER BY SUM(sales) DESC
14    ) AS rank_value
15 FROM sales
16 GROUP BY customer_name, region;
```

The results are displayed in a table with the following columns: Customer\_Name, Region, total\_sales, and rank\_value. The results are sorted by region and then by total sales in descending order.

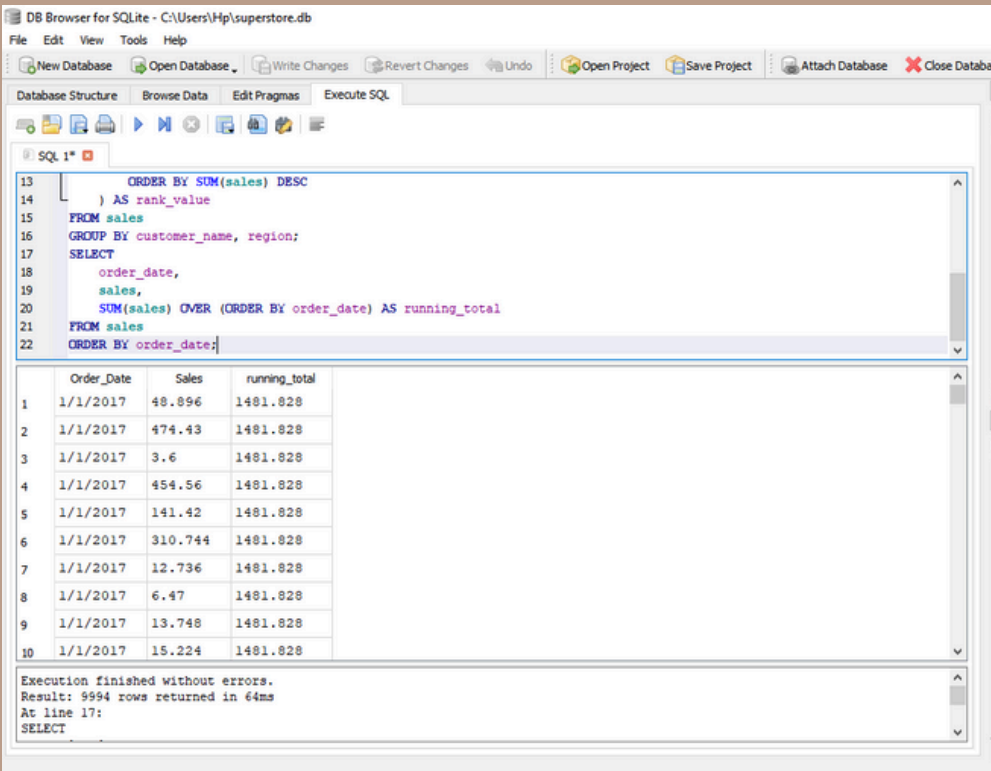
	Customer_Name	Region	total_sales	rank_value
212	Vicky Freymann	Central	679.748	212
213	George Ashbrook	Central	679.392	213
214	Maribeth Schnelling	Central	678.4	214
215	Shahid Shariari	Central	677.433	215
216	Richard Eichhorn	Central	672.596	216
217	Sean Christensen	Central	668.516	217
218	Dianna Vittorini	Central	663.75	218
219	Pete Armstrong	Central	658.528	219
220	Justin Ritter	Central	656.22	220
221	Jill Fjeld	Central	651.152	221

Execution finished without errors.  
Result: 2501 rows returned in 40ms  
At line 7:  
SELECT

## output csv

- Ranking showed that some customers consistently dominated sales in their regions. RANK and DENSE\_RANK comparisons revealed ties, emphasizing multiple top contributors in certain areas, which can guide regional marketing and sales strategies.

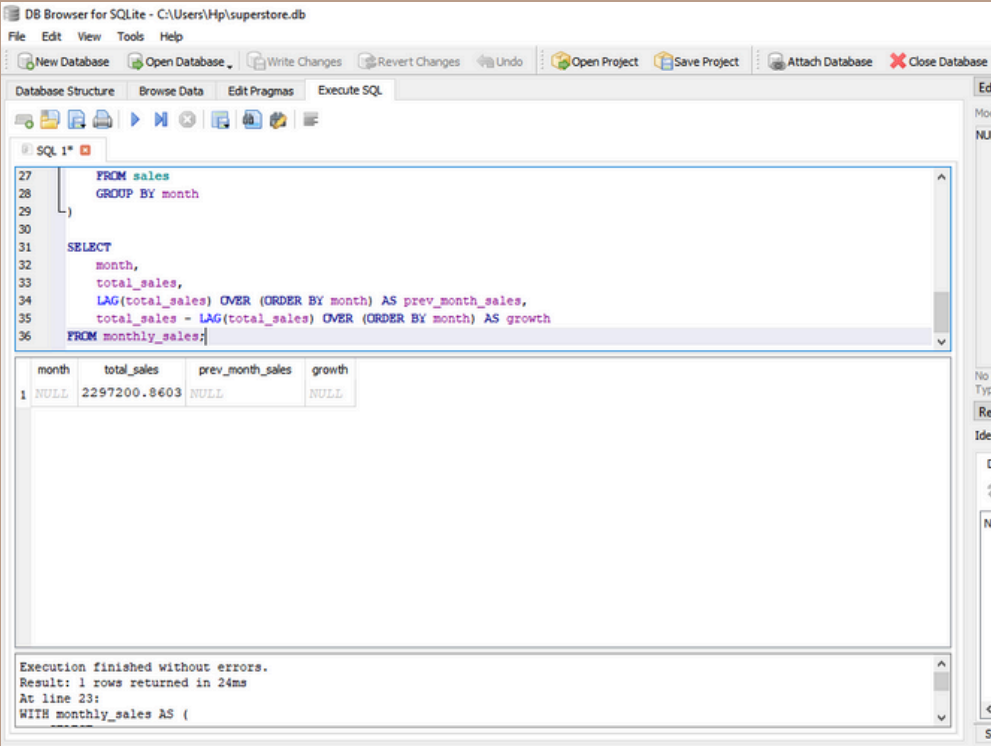
# RUNNING TOTAL :



## output csv

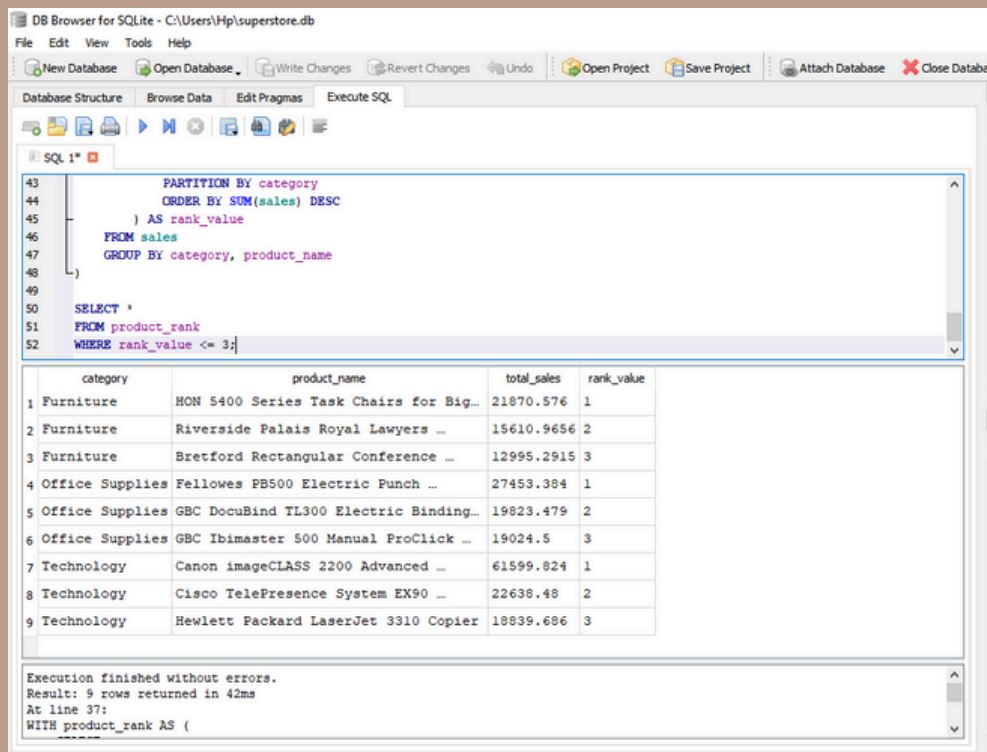
- Cumulative sales revealed seasonal peaks and consistent growth trends over time. This helped identify periods of high sales activity, supporting better inventory planning and sales forecasting

# MONTHLY GROWTH :



- Month-over-month growth calculation showed fluctuations in sales, identifying months with significant increases or decreases. This insight helps pinpoint trends, seasonal effects, and areas needing promotional focus.

# TOP 3 PRODUCTS PER CATEGORY :



The screenshot shows the DB Browser for SQLite interface. The SQL editor contains a query that partitions data by category, ranks products by total sales, and selects the top 3 products from each category. The results are displayed in a table with 4 columns: category, product\_name, total\_sales, and rank\_value. The results show the top 3 products for each of the 9 categories listed.

```
43      PARTITION BY category
44      ORDER BY SUM(sales) DESC
45      ) AS rank_value
46      FROM sales
47      GROUP BY category, product_name
48  )
49
50  SELECT *
51  FROM product_rank
52  WHERE rank_value <= 3;
```

	category	product_name	total_sales	rank_value
1	Furniture	HON 5400 Series Task Chairs for Big...	21870.576	1
2	Furniture	Riverside Palais Royal Lawyers ...	15610.9656	2
3	Furniture	Bretford Rectangular Conference ...	12995.2915	3
4	Office Supplies	Fellowes PB500 Electric Punch ...	27453.384	1
5	Office Supplies	GBC DocuBind TL300 Electric Binding...	19823.479	2
6	Office Supplies	GBC Ibimaster 500 Manual ProClick ...	19024.5	3
7	Technology	Canon imageCLASS 2200 Advanced ...	61599.824	1
8	Technology	Cisco TelePresence System EX90 ...	22638.48	2
9	Technology	Hewlett Packard LaserJet 3310 Copier	18839.686	3

Execution finished without errors.  
Result: 9 rows returned in 42ms  
At line 37:  
WITH product\_rank AS (

## output csv

- Certain products consistently drove the most revenue in their categories. Focusing on these high-performing products can optimize marketing, inventory, and cross-selling opportunities for maximum profitability.