blinkit Analysis

SQL PROJECT
ON BLINKIT SALES ANALYSIS

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INTRODUCTION

⭐Blinkit is a quick-commerce company delivering groceries and essentials in minutes.

⭐ This project uses SQL to analyze sales data across products, outlets, and customers.

⭐ It focuses on KPIs like **Total Sales, Average Sales, Items Sold, and Customer Ratings**.

⭐ Raw sales data is transformed into **actionable insights for business decisions**.

⭐ The study highlights **trends, patterns, and key drivers of Blinkit’s performance**.

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SQL

OBJECTIVE

⭐ To identify **top-performing products and item categories**.
⭐ To analyze **sales distribution across outlets and locations**.
⭐ To measure the effect of **fat content, outlet size, and establishment year** on sales.
⭐ To study **regional trends** across Tier 1, Tier 2, and Tier 3 markets.
⭐ To deliver insights that improve **sales, marketing, and customer satisfaction**.

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BUSINESS REQUIREMENT

1. **Total Sales**: The overall revenue generated from all items sold.
2. **Average Sales**: The average revenue per sale.
3. **Number of Items**: The total count of different items sold.
4. **Average Rating**: The average customer rating for items sold.

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BUSINESS REQUIREMENT

1. Total Sales by Fat Content:

Objective: Analyze the impact of fat content on total sales.

Additional KPI Metrics: Assess how other KPIs (Average Sales, Number of Items, Average Rating) vary with fat content.

2. Total Sales by Item Type:

Objective: Identify the performance of different item types in terms of total sales.

Additional KPI Metrics: Assess how other KPIs (Average Sales, Number of Items, Average Rating) vary with fat content.

3. Fat Content by Outlet for Total Sales:

Objective: Compare total sales across different outlets segmented by fat content.

Additional KPI Metrics: Assess how other KPIs (Average Sales, Number of Items, Average Rating) vary with fat content.

4. Total Sales by Outlet Establishment:

Objective: Evaluate how the age or type of outlet establishment influences total sales.

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BUSINESS REQUIREMENT

5. Percentage of Sales by Outlet Size:

Objective: Analyze the correlation between outlet size and total sales.

6. Sales by Outlet Location:

Objective: Assess the geographic distribution of sales across different locations.

7. All Metrics by Outlet Type:

Objective: Provide a comprehensive view of all key metrics (Total Sales, Average Sales, Number of Items, Average Rating) broken down by different outlet types.

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CREATE TABLE

```
DROP TABLE IF EXISTS blinkit_sales;

CREATE TABLE blinkit_sales (

    id SERIAL ,    -- auto-generated unique id

    item_identifier VARCHAR,

    item_fat_content VARCHAR,

    item_type VARCHAR,

    outlet_establishment_year INT,

    outlet_identifier VARCHAR,

    outlet_location_type VARCHAR,

    outlet_size VARCHAR,

    outlet_type VARCHAR,

    item_visibility FLOAT,

    item_weight FLOAT,

    total_sales FLOAT,

    rating FLOAT

);
```

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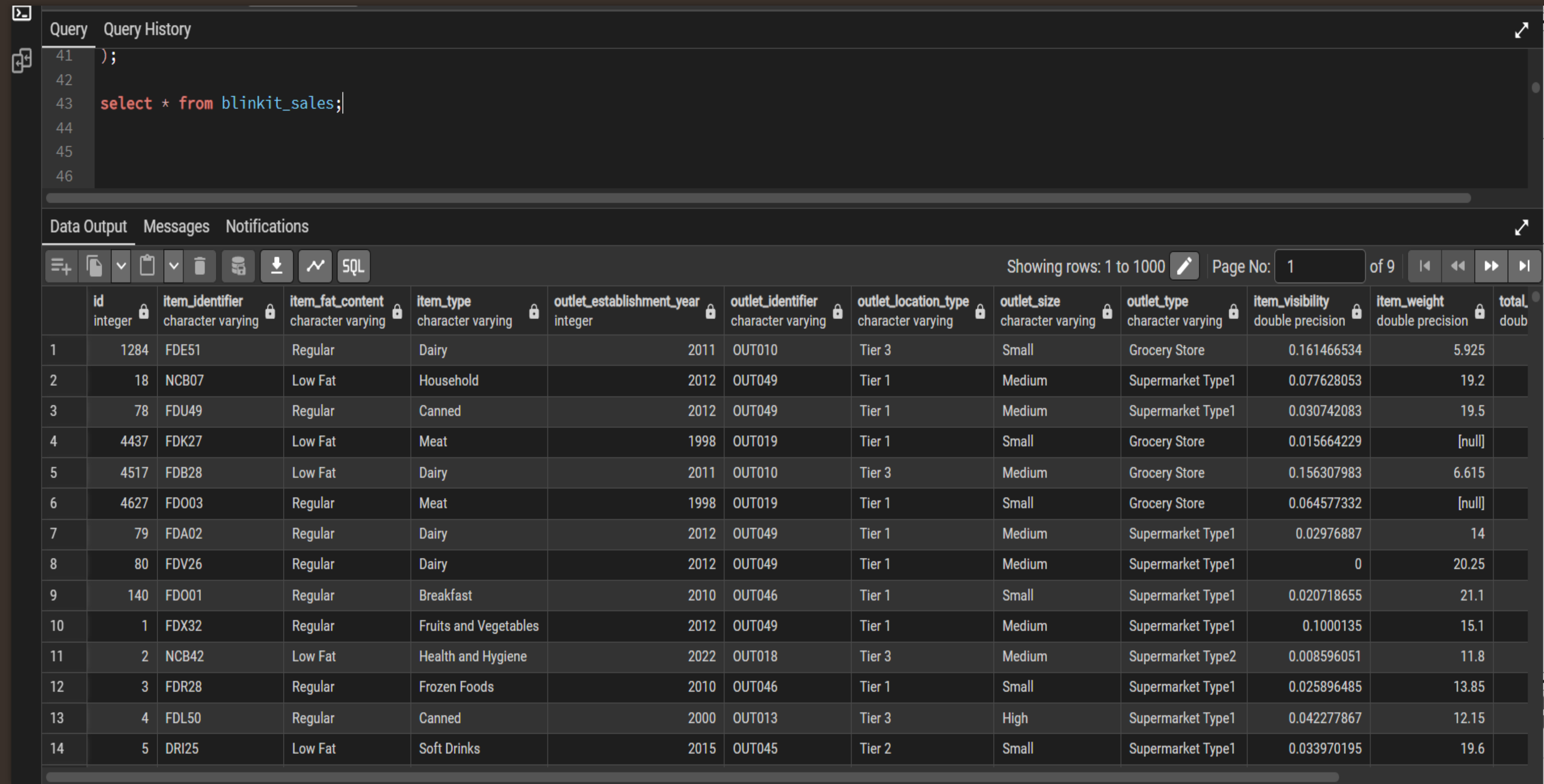
TABLE



```
);

select * from blinkit_sales;
```

	id integer	item_identifier character varying	item_fat_content character varying	item_type character varying	outlet_establishment_year integer	outlet_identifier character varying	outlet_location_type character varying	outlet_size character varying	outlet_type character varying	item_visibility double precision	item_weight double precision	total_ doub
1	1284	FDE51	Regular	Dairy	2011	OUT010	Tier 3	Small	Grocery Store	0.161466534	5.925	
2	18	NCB07	Low Fat	Household	2012	OUT049	Tier 1	Medium	Supermarket Type1	0.077628053	19.2	
3	78	FDU49	Regular	Canned	2012	OUT049	Tier 1	Medium	Supermarket Type1	0.030742083	19.5	
4	4437	FDK27	Low Fat	Meat	1998	OUT019	Tier 1	Small	Grocery Store	0.015664229	[null]	
5	4517	FDB28	Low Fat	Dairy	2011	OUT010	Tier 3	Medium	Grocery Store	0.156307983	6.615	
6	4627	FDO03	Regular	Meat	1998	OUT019	Tier 1	Small	Grocery Store	0.064577332	[null]	
7	79	FDA02	Regular	Dairy	2012	OUT049	Tier 1	Medium	Supermarket Type1	0.02976887	14	
8	80	FDV26	Regular	Dairy	2012	OUT049	Tier 1	Medium	Supermarket Type1	0	20.25	
9	140	FDO01	Regular	Breakfast	2010	OUT046	Tier 1	Small	Supermarket Type1	0.020718655	21.1	
10	1	FDX32	Regular	Fruits and Vegetables	2012	OUT049	Tier 1	Medium	Supermarket Type1	0.1000135	15.1	
11	2	NCB42	Low Fat	Health and Hygiene	2022	OUT018	Tier 3	Medium	Supermarket Type2	0.008596051	11.8	
12	3	FDR28	Regular	Frozen Foods	2010	OUT046	Tier 1	Small	Supermarket Type1	0.025896485	13.85	
13	4	FDL50	Regular	Canned	2000	OUT013	Tier 3	High	Supermarket Type1	0.042277867	12.15	
14	5	DRI25	Low Fat	Soft Drinks	2015	OUT045	Tier 2	Small	Supermarket Type1	0.033970195	19.6	

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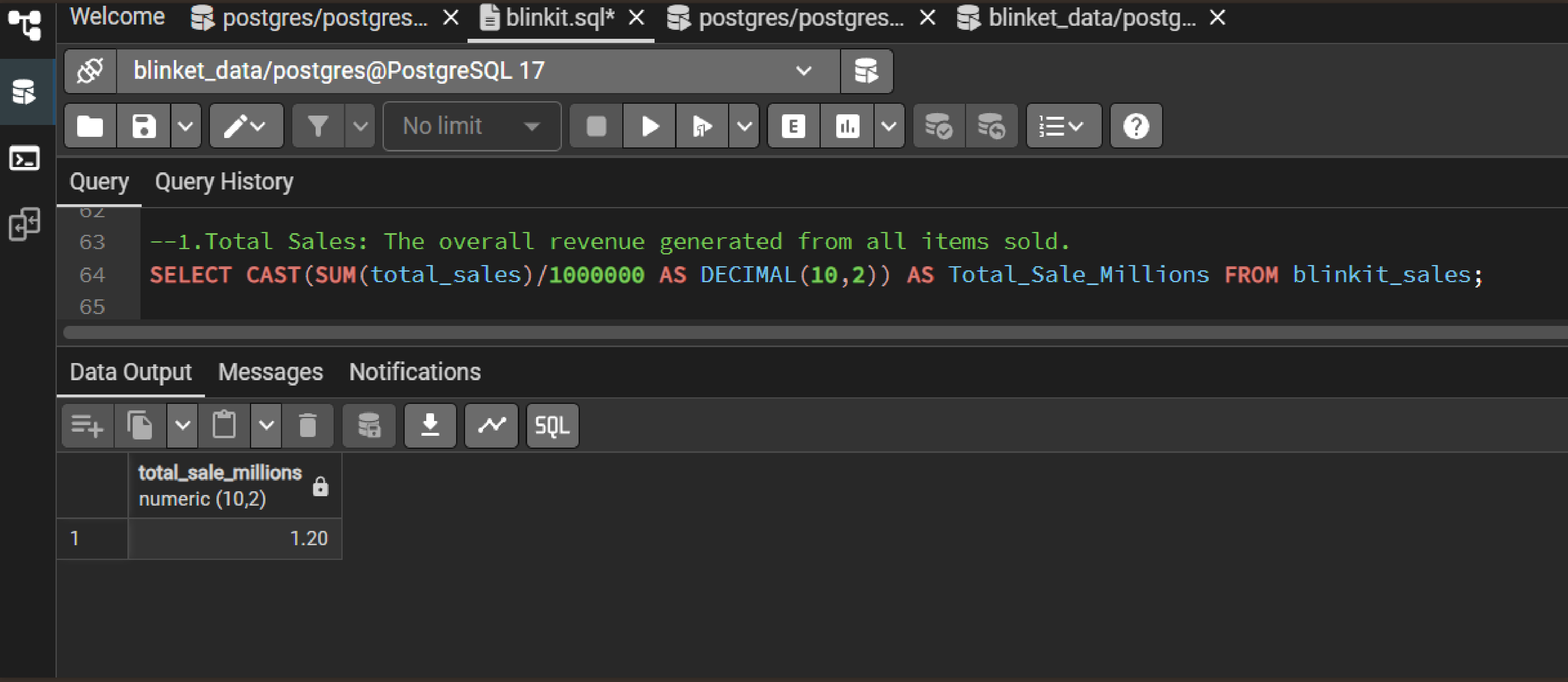
Total Sales: The overall revenue generated from all items sold.



blinket_data/postgres@PostgreSQL 17

```sql
--1.Total Sales: The overall revenue generated from all items sold.
SELECT CAST(SUM(total_sales)/1000000 AS DECIMAL(10,2)) AS Total_Sale_Millions FROM blinkit_sales;
```

	total_sale_millions numeric (10,2)
1	1.20

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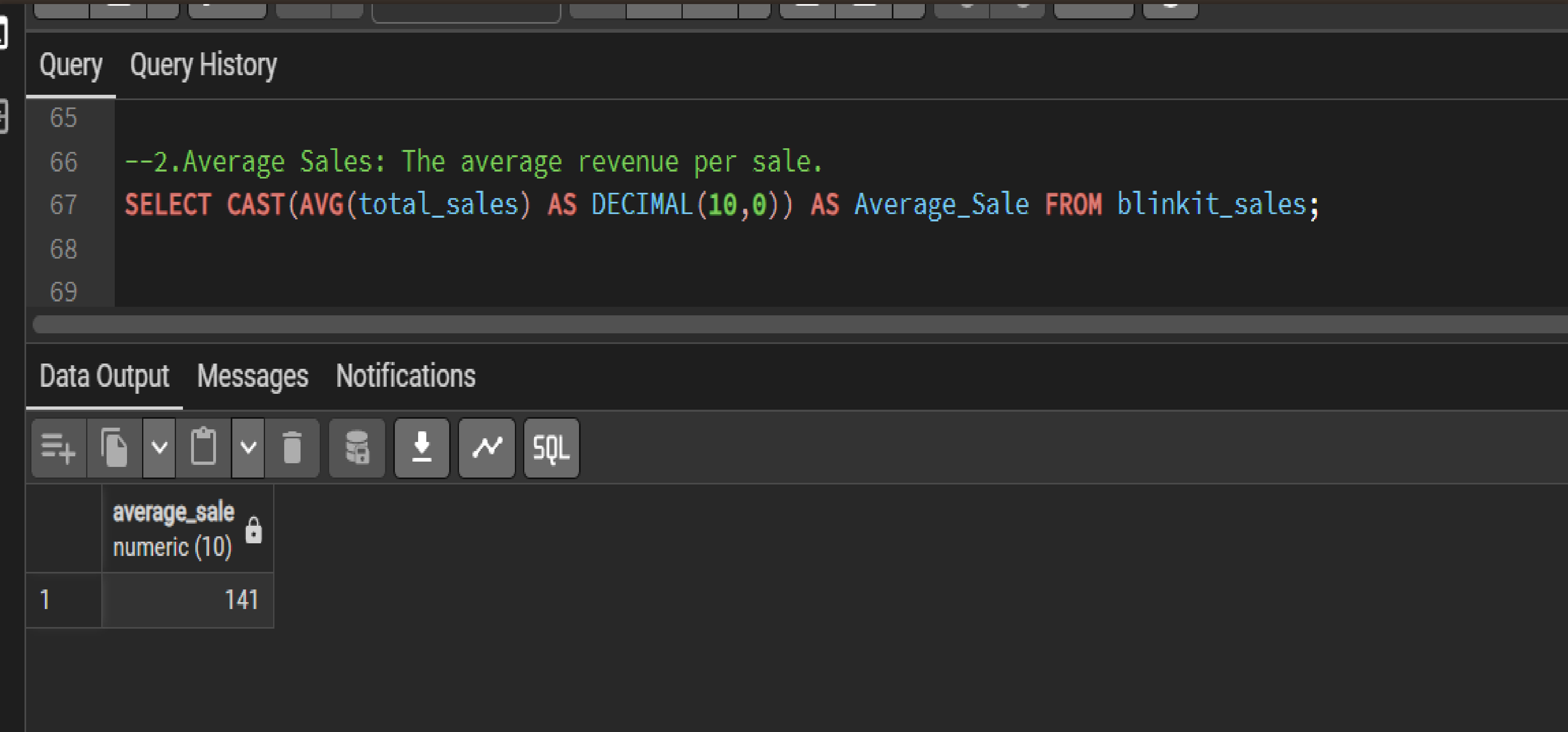
Average Sales: The average revenue per sale.



```sql
--2.Average Sales: The average revenue per sale.
SELECT CAST(AVG(total_sales) AS DECIMAL(10,0)) AS Average_Sale FROM blinkit_sales;
```

	average_sale numeric (10)
1	141

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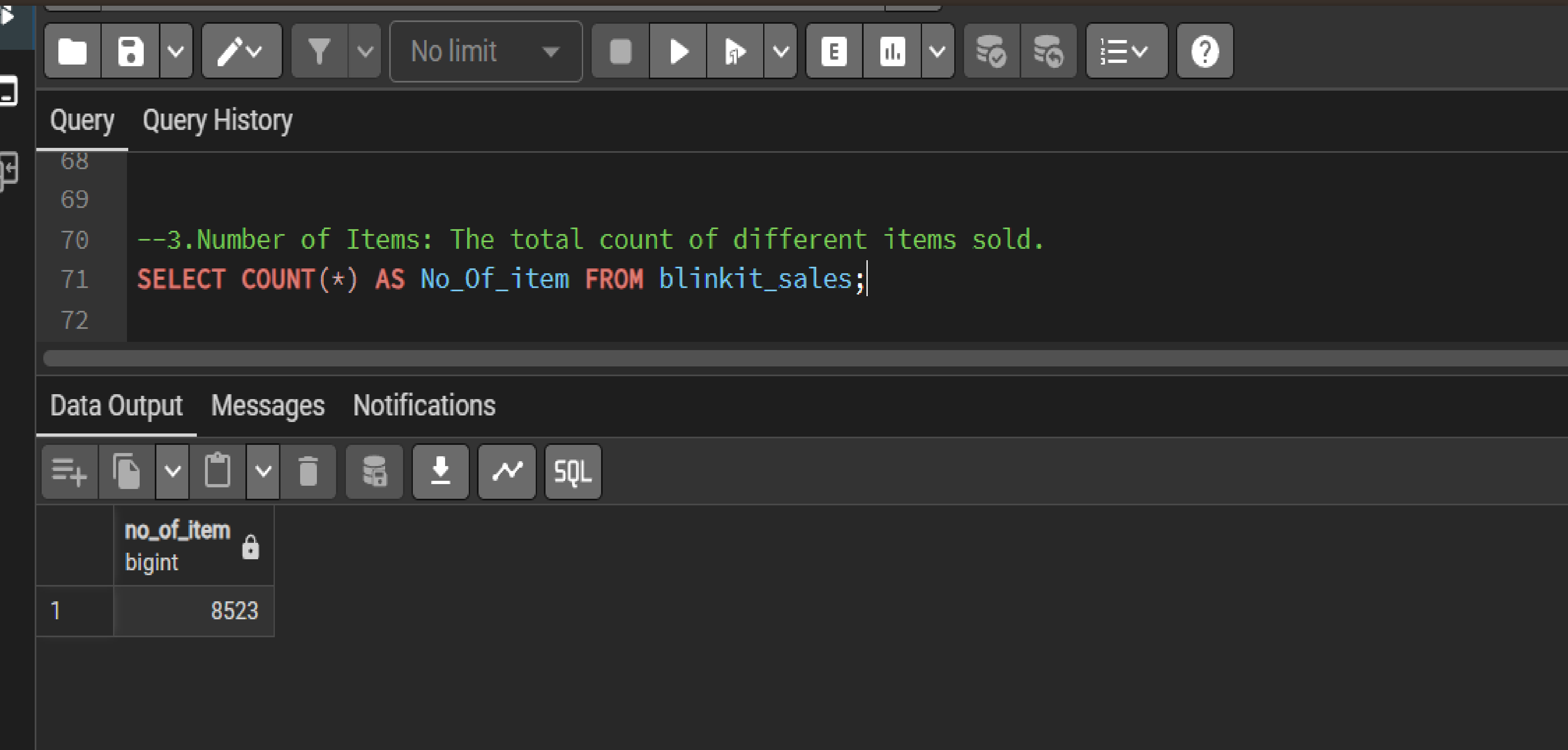
Number of Items: The total count of different items sold.



```sql
--3.Number of Items: The total count of different items sold.
SELECT COUNT(*) AS No_Of_item FROM blinkit_sales;
```

```
   no_of_item
   bigint
1        8523
```

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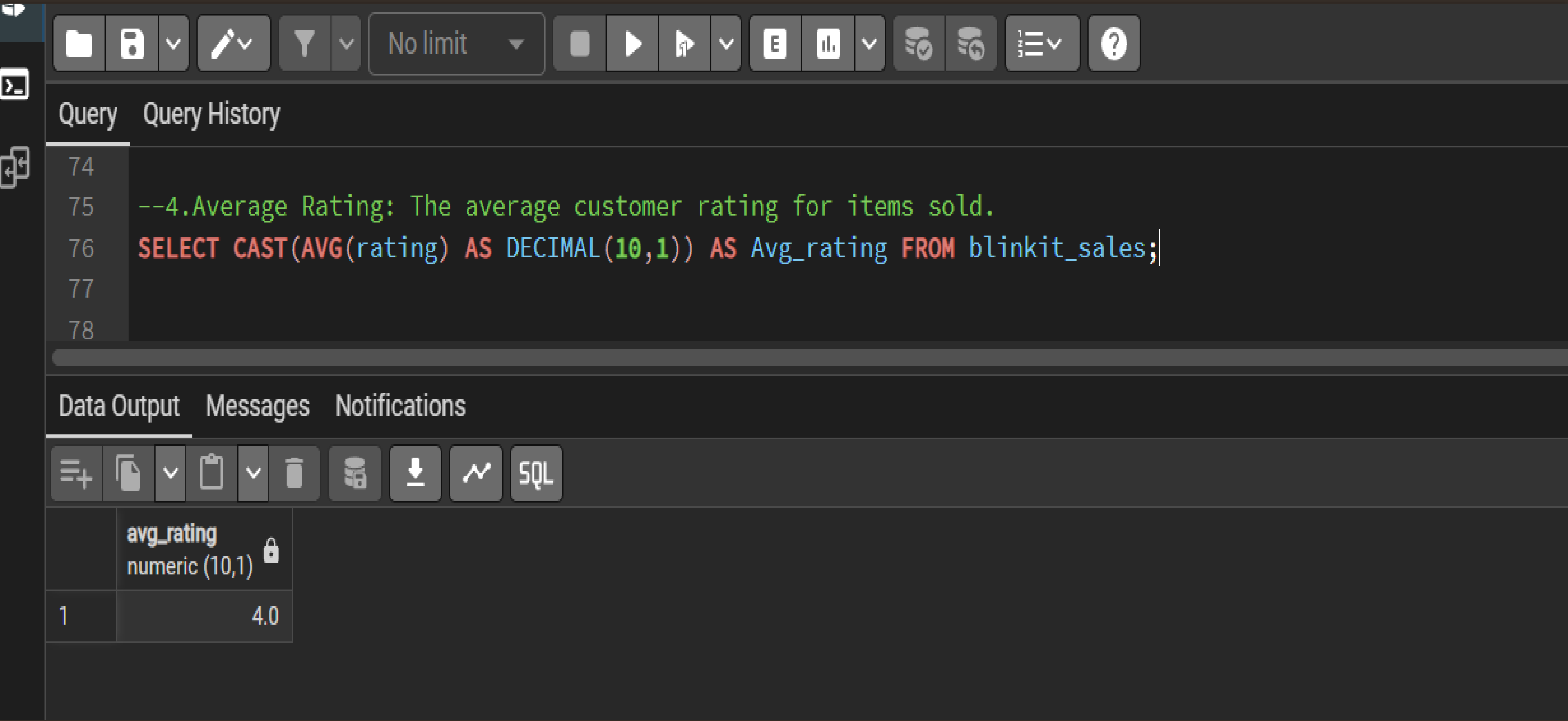
Average Rating: The average customer rating for items sold.



```sql
--4.Average Rating: The average customer rating for items sold.
SELECT CAST(AVG(rating) AS DECIMAL(10,1)) AS Avg_rating FROM blinkit_sales;
```

```
   avg_rating
   numeric (10,1)
1           4.0
```

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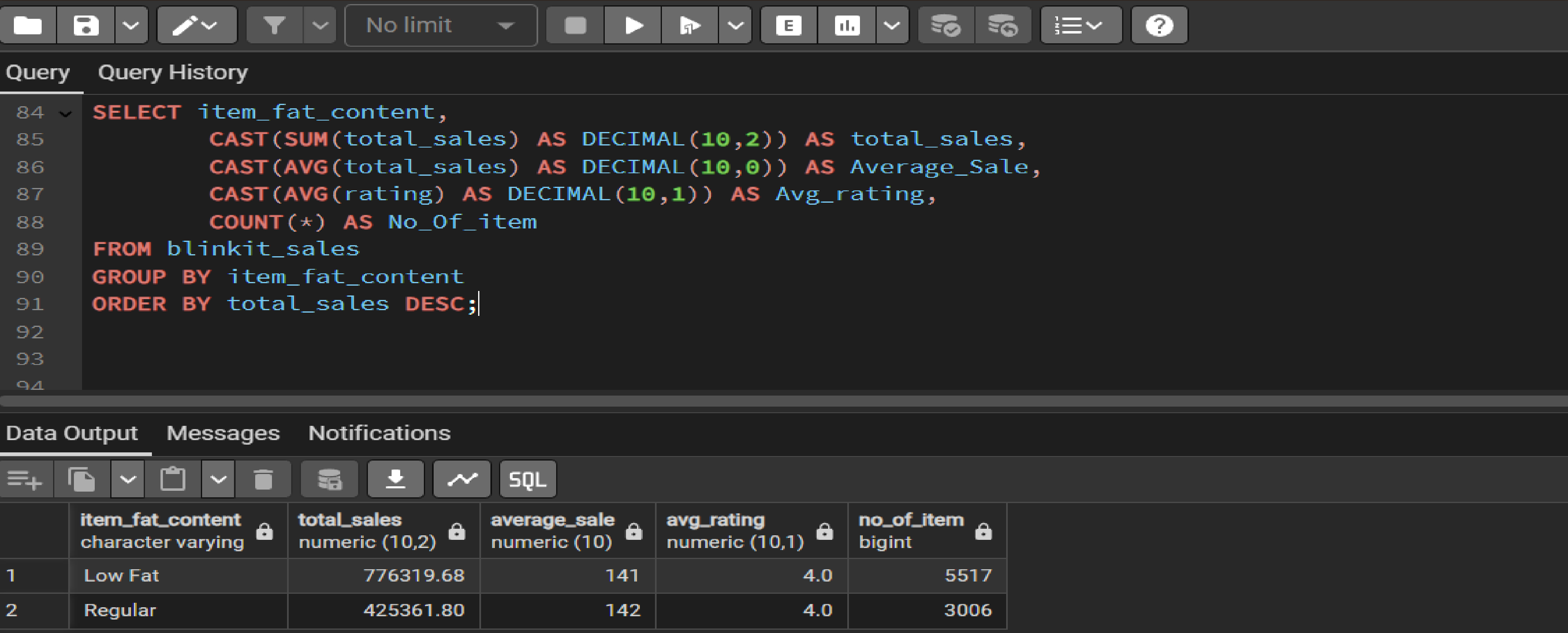
Total Sales by Fat Content:

Objective: Analyze the impact of fat content on total sales.

Additional KPI Metrics: Assess how other KPIs (Average Sales, Number of Items, Average Rating) vary with fat content.



```sql
SELECT item_fat_content,
        CAST(SUM(total_sales) AS DECIMAL(10,2)) AS total_sales,
        CAST(AVG(total_sales) AS DECIMAL(10,0)) AS Average_Sale,
        CAST(AVG(rating) AS DECIMAL(10,1)) AS Avg_rating,
        COUNT(*) AS No_Of_item
FROM blinkit_sales
GROUP BY item_fat_content
ORDER BY total_sales DESC;
```

	item_fat_content character varying	total_sales numeric (10,2)	average_sale numeric (10)	avg_rating numeric (10,1)	no_of_item bigint
1	Low Fat	776319.68	141	4.0	5517
2	Regular	425361.80	142	4.0	3006

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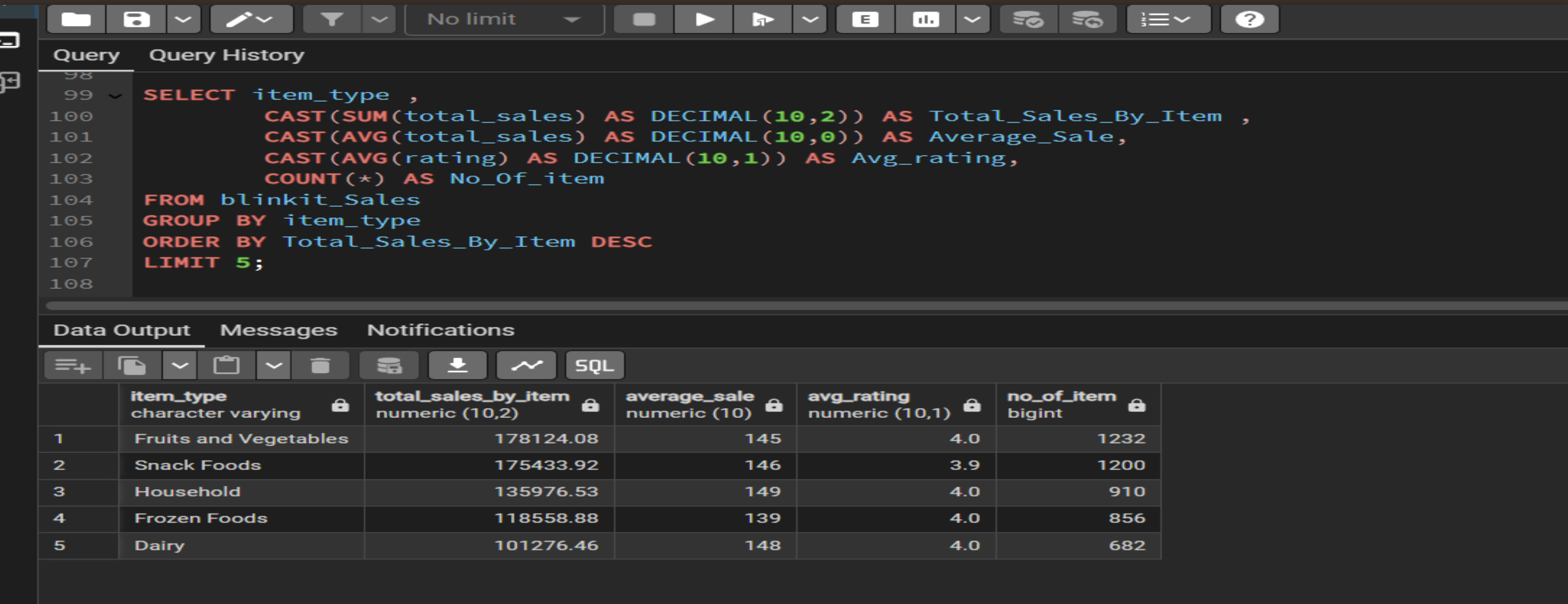
Total Sales by Item Type:

Objective: Identify the performance of different item types in terms of total sales.

Additional KPI Metrics: Assess how other KPIs (Average Sales, Number of Items, Average Rating) vary with fat content.



```sql
SELECT item_type ,
        CAST(SUM(total_sales) AS DECIMAL(10,2)) AS Total_Sales_By_Item ,
        CAST(AVG(total_sales) AS DECIMAL(10,0)) AS Average_Sale,
        CAST(AVG(rating) AS DECIMAL(10,1)) AS Avg_rating,
        COUNT(*) AS No_Of_item
FROM blinkit_Sales
GROUP BY item_type
ORDER BY Total_Sales_By_Item DESC
LIMIT 5;
```

	item_type character varying	total_sales_by_item numeric (10,2)	average_sale numeric (10)	avg_rating numeric (10,1)	no_of_item bigint
1	Fruits and Vegetables	178124.08	145	4.0	1232
2	Snack Foods	175433.92	146	3.9	1200
3	Household	135976.53	149	4.0	910
4	Frozen Foods	118558.88	139	4.0	856
5	Dairy	101276.46	148	4.0	682

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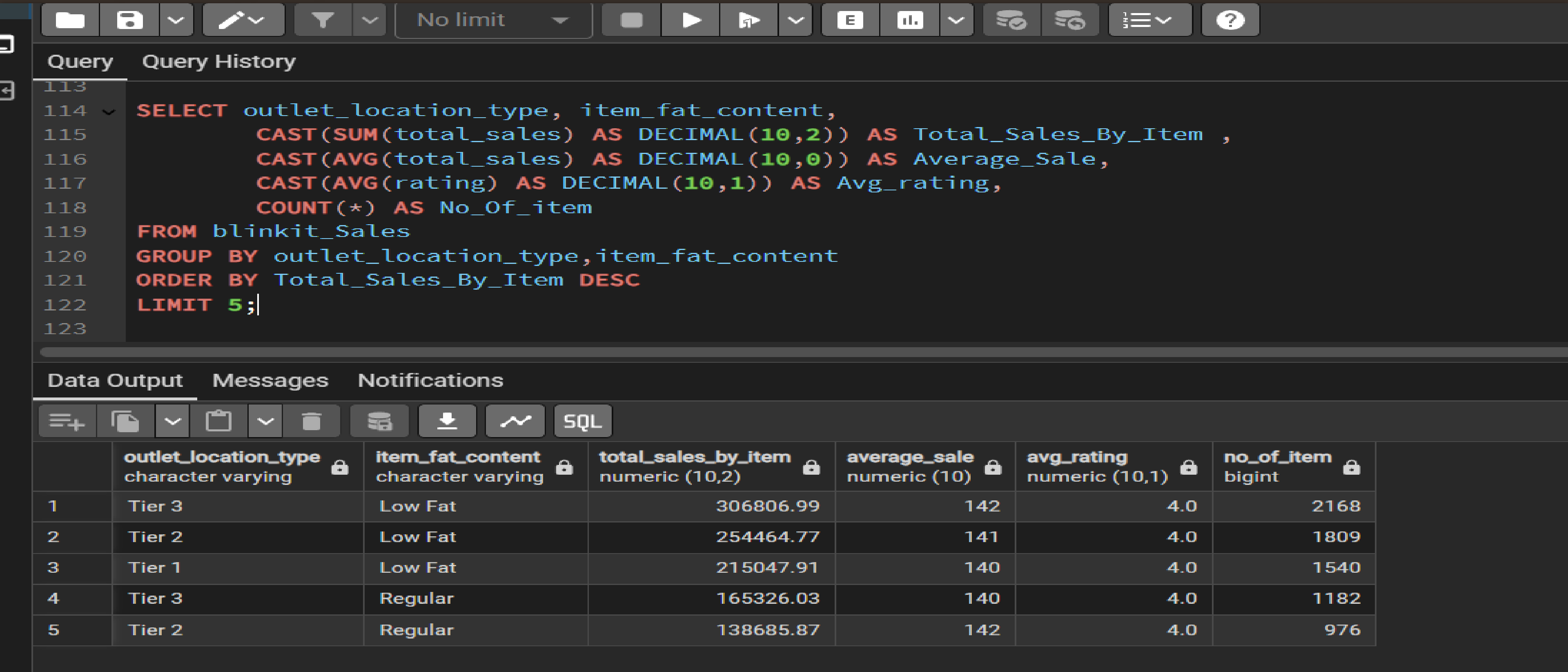
Fat Content by Outlet for Total Sales:

Objective: Compare total sales across different outlets segmented by fat content.

Additional KPI Metrics: Assess how other KPIs (Average Sales, Number of Items, Average Rating) vary with fat content.



```sql
SELECT outlet_location_type, item_fat_content,
        CAST(SUM(total_sales) AS DECIMAL(10,2)) AS Total_Sales_By_Item ,
        CAST(AVG(total_sales) AS DECIMAL(10,0)) AS Average_Sale,
        CAST(AVG(rating) AS DECIMAL(10,1)) AS Avg_rating,
        COUNT(*) AS No_Of_item
FROM blinkit_Sales
GROUP BY outlet_location_type,item_fat_content
ORDER BY Total_Sales_By_Item DESC
LIMIT 5;
```

	outlet_location_type character varying	item_fat_content character varying	total_sales_by_item numeric (10,2)	average_sale numeric (10)	avg_rating numeric (10,1)	no_of_item bigint
1	Tier 3	Low Fat	306806.99	142	4.0	2168
2	Tier 2	Low Fat	254464.77	141	4.0	1809
3	Tier 1	Low Fat	215047.91	140	4.0	1540
4	Tier 3	Regular	165326.03	140	4.0	1182
5	Tier 2	Regular	138685.87	142	4.0	976

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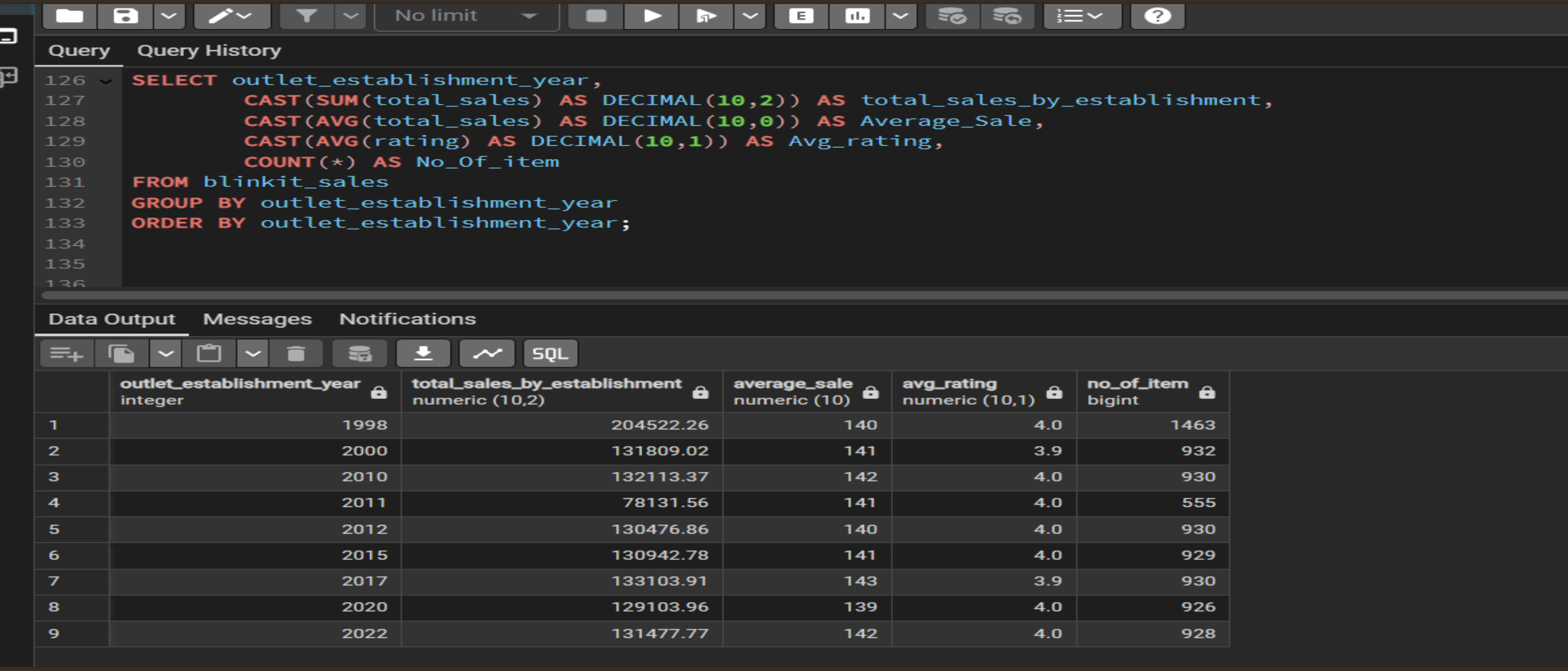
Total Sales by Outlet Establishment:

Objective: Evaluate how the age or type of outlet establishment influences total sales



```sql
SELECT outlet_establishment_year,
        CAST(SUM(total_sales) AS DECIMAL(10,2)) AS total_sales_by_establishment,
        CAST(AVG(total_sales) AS DECIMAL(10,0)) AS Average_Sale,
        CAST(AVG(rating) AS DECIMAL(10,1)) AS Avg_rating,
        COUNT(*) AS No_Of_item
FROM blinkit_sales
GROUP BY outlet_establishment_year
ORDER BY outlet_establishment_year;
```

	outlet_establishment_year integer	total_sales_by_establishment numeric (10,2)	average_sale numeric (10)	avg_rating numeric (10,1)	no_of_item bigint
1	1998	204522.26	140	4.0	1463
2	2000	131809.02	141	3.9	932
3	2010	132113.37	142	4.0	930
4	2011	78131.56	141	4.0	555
5	2012	130476.86	140	4.0	930
6	2015	130942.78	141	4.0	929
7	2017	133103.91	143	3.9	930
8	2020	129103.96	139	4.0	926
9	2022	131477.77	142	4.0	928

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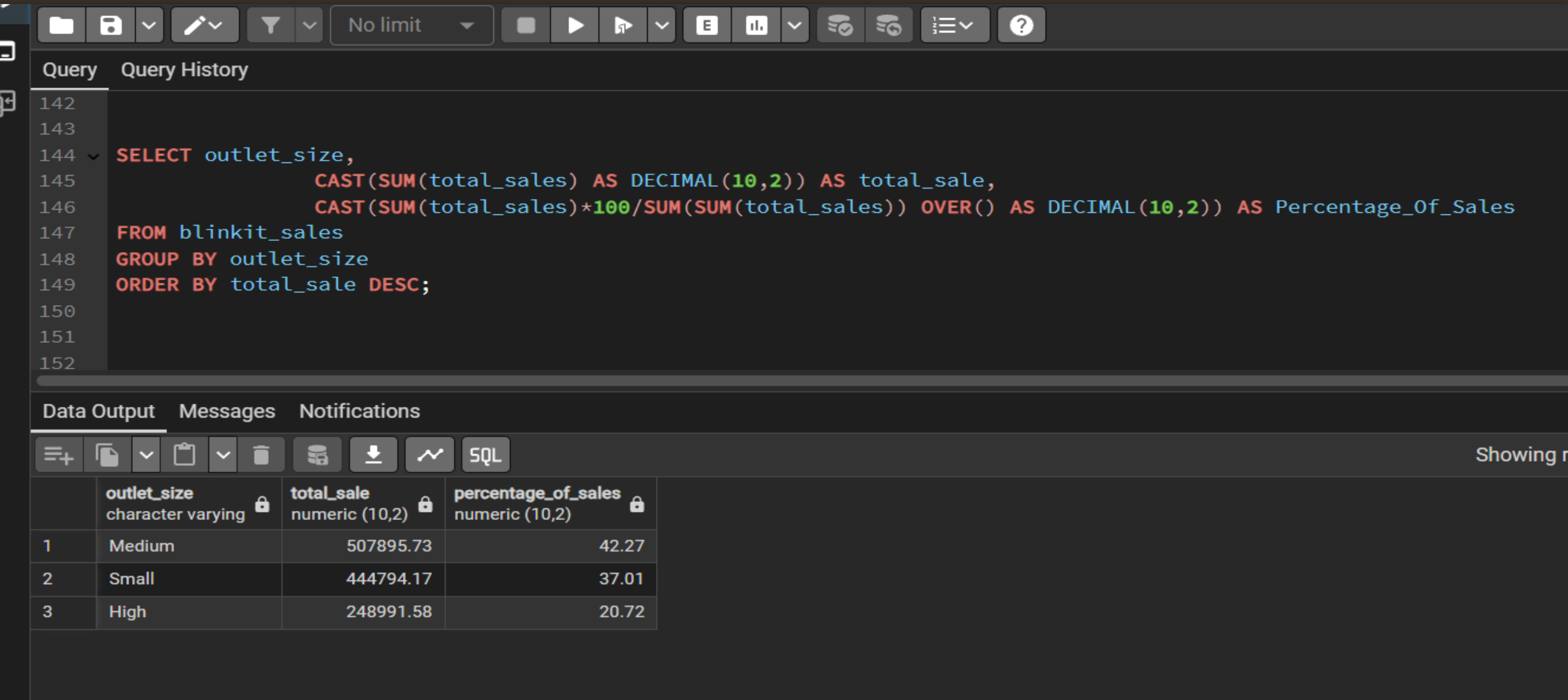
Percentage of Sales by Outlet Size:

Objective: Analyze the correlation between outlet size and total sales.



```sql
SELECT outlet_size,
                CAST(SUM(total_sales) AS DECIMAL(10,2)) AS total_sale,
                CAST(SUM(total_sales)*100/SUM(SUM(total_sales)) OVER() AS DECIMAL(10,2)) AS Percentage_Of_Sales
FROM blinkit_sales
GROUP BY outlet_size
ORDER BY total_sale DESC;
```

	outlet_size character varying	total_sale numeric (10,2)	percentage_of_sales numeric (10,2)
1	Medium	507895.73	42.27
2	Small	444794.17	37.01
3	High	248991.58	20.72

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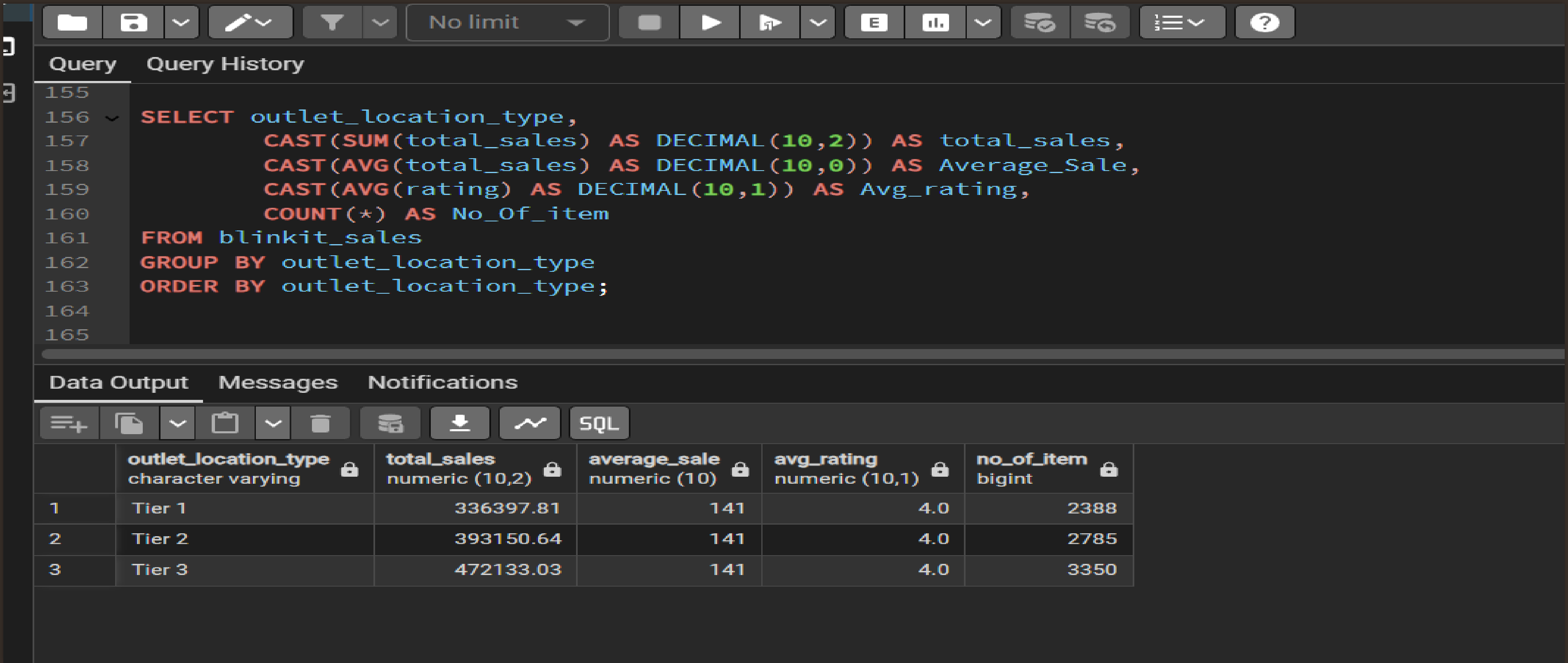
Sales by Outlet Location:

Objective: Assess the geographic distribution of sales across different locations.



```sql
SELECT outlet_location_type,
        CAST(SUM(total_sales) AS DECIMAL(10,2)) AS total_sales,
        CAST(AVG(total_sales) AS DECIMAL(10,0)) AS Average_Sale,
        CAST(AVG(rating) AS DECIMAL(10,1)) AS Avg_rating,
        COUNT(*) AS No_Of_item
FROM blinkit_sales
GROUP BY outlet_location_type
ORDER BY outlet_location_type;
```

	outlet_location_type character varying	total_sales numeric (10,2)	average_sale numeric (10)	avg_rating numeric (10,1)	no_of_item bigint
1	Tier 1	336397.81	141	4.0	2388
2	Tier 2	393150.64	141	4.0	2785
3	Tier 3	472133.03	141	4.0	3350

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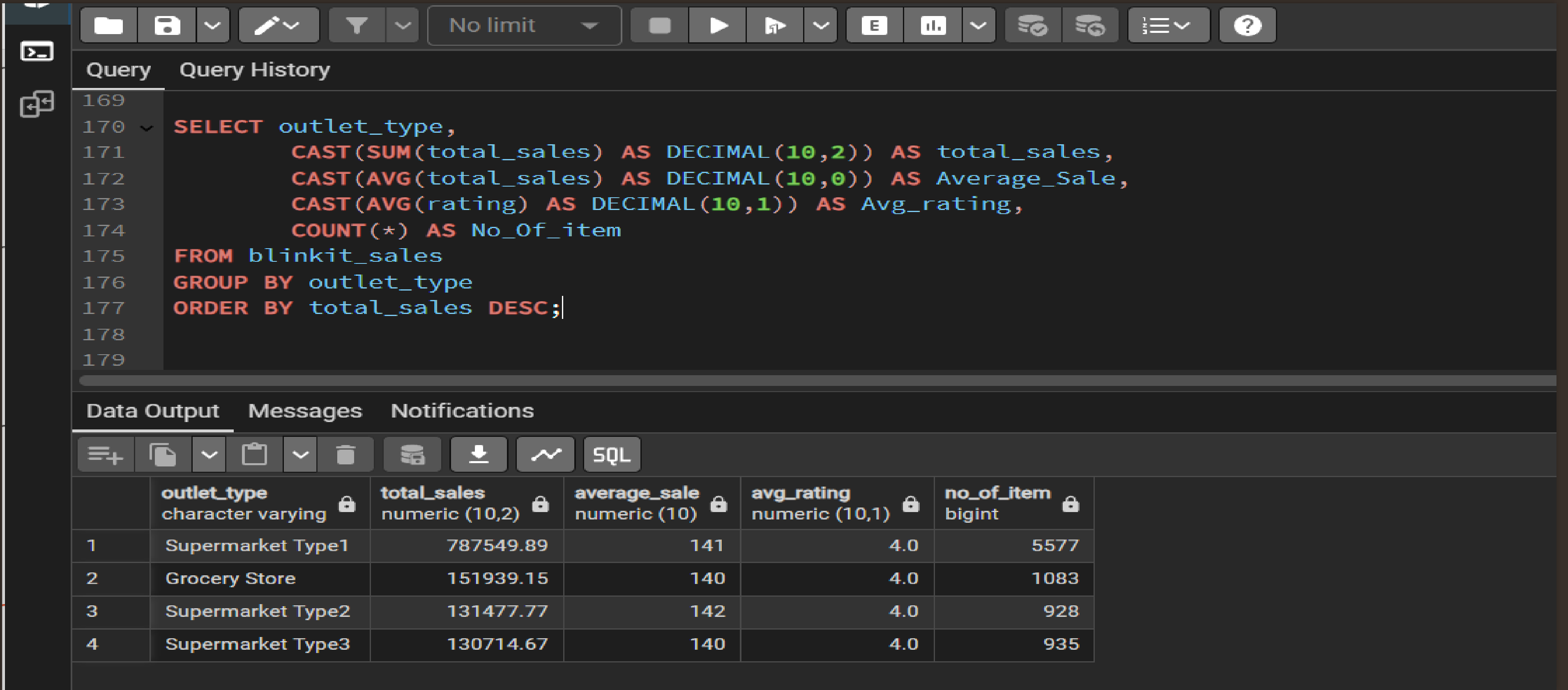
All Metrics by Outlet Type:

Objective: Provide a comprehensive view of all key metrics (Total Sales, Average Sales, Number of Items, Average Rating) broken down by different outlet types.



```sql
SELECT outlet_type,
        CAST(SUM(total_sales) AS DECIMAL(10,2)) AS total_sales,
        CAST(AVG(total_sales) AS DECIMAL(10,0)) AS Average_Sale,
        CAST(AVG(rating) AS DECIMAL(10,1)) AS Avg_rating,
        COUNT(*) AS No_Of_item
FROM blinkit_sales
GROUP BY outlet_type
ORDER BY total_sales DESC;
```

	outlet_type character varying	total_sales numeric (10,2)	average_sale numeric (10)	avg_rating numeric (10,1)	no_of_item bigint
1	Supermarket Type1	787549.89	141	4.0	5577
2	Grocery Store	151939.15	140	4.0	1083
3	Supermarket Type2	131477.77	142	4.0	928
4	Supermarket Type3	130714.67	140	4.0	935

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ADVANTAGES

★ Helps Blinkit identify **best-selling and low-selling items**.
★ Supports **inventory planning and supply chain optimization**.
★ Guides **business expansion** by highlighting profitable outlets and regions.
★ Improves **customer experience** by linking ratings with sales data.
★ Builds a **data-driven foundation** for dashboards and future analytics.

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THANK YOU