E-commerce Delivery Data Analysis – SQL Output

This document contains the results of SQL queries performed on an e-commerce delivery dataset using PostgreSQL. The analysis provides insights on item sales, outlet performance, customer ratings, and more.

1. What are the top 5 selling items by total sales?

```sql
--1. What are the top 5 selling items by total sales?
SELECT item_identifier, SUM(sales) AS total_sales
FROM delivery_data
GROUP BY item_identifier
ORDER BY total_sales DESC
```

Data Output | Messages | Notifications

	item_identifier text	total_sales numeric
1	Low Fat	717390.8474
2	Regular	409413.1234
3	LF	43857.1082
4	reg	15948.6810
5	low fat	15071.7328

2. What are the average sales per item type?

```sql
--2. What is the average sales per item type?
SELECT item_type, AVG(sales) AS avg_sales
FROM delivery_data
GROUP BY item_type
ORDER BY avg_sales DESC;
```

Data Output | Messages | Notifications

	item_type text	avg_sales numeric
1	Household	149.4247531868131868
2	Dairy	148.4992105571847507
3	Starchy Foods	147.8380229729729730
4	Snack Foods	146.1949353333333333
5	Fruits and Vegetables	144.5812345779220779
6	Seafood	141.8417187500000000
7	Breakfast	141.7881509090909091
8	Breads	140.9526685258964143
9	Meat	139.8820324705882353
10	Canned	139.7638351309707242
11	Frozen Foods	138.5033661214953271
12	Hard Drinks	137.0779467289719626
13	Others	132.8514295857988166

3. Which outlet has the highest total sales?

```sql
--3. Which outlet has the highest total sales?
SELECT outlet_identifier, SUM(sales) AS total_sales
FROM delivery_data
GROUP BY outlet_identifier
ORDER BY total_sales DESC
LIMIT 1;
```

Data Output | Messages | Notifications

	outlet_identifier text	total_sales numeric
1	OUT035	133103.9070

4. How do outlet sizes compare in terms of average rating?

```
42  --4. How do outlet sizes compare in terms of average rating?
43  SELECT outlet_size, ROUND(AVG(rating), 2) AS avg_rating
44  FROM delivery_data
45  GROUP BY outlet_size
46  ORDER BY avg_rating DESC;
```

Data Output | Messages | Notifications

	outlet_size text	avg_rating numeric
1	Medium	3.98
2	Small	3.96
3	High	3.95

5. List all item types with total sales above 1 Lakh

```
49  --5. List all item types with total sales above 1 Lakh
50  SELECT item_type, SUM(sales) AS total_sales
51  FROM delivery_data
52  GROUP BY item_type
53  HAVING SUM(sales) > 100000
54  ORDER BY total_sales DESC;
```

Data Output | Messages | Notifications

	item_type text	total_sales numeric
1	Fruits and Vegetables	178124.0810
2	Snack Foods	175433.9224
3	Household	135976.5254
4	Frozen Foods	118558.8814
5	Dairy	101276.4616

6. Find the year in which the oldest outlet was established

```
57  --6. Find the year in which the oldest outlet was established
58  SELECT MIN(outlet_establishment_year) AS oldest_year
59  FROM delivery_data;
```

Data Output | Messages | Notifications

	oldest_year integer
1	2011

7. Which outlet type has the highest number of items sold (count)?

```
62  --7. Which outlet type has the highest number of items sold (count)?
63  SELECT outlet_type, COUNT(*) AS total_items_sold
64  FROM delivery_data
65  GROUP BY outlet_type
66  ORDER BY total_items_sold DESC;
```

Data Output | Messages | Notifications

	oldest_year integer
1	2011

8. What is the average item weight and visibility per item fat content?

```sql
--8. What is the average item weight and visibility per item fat content?
SELECT item_fat_content,
       ROUND(AVG(item_weight), 2) AS avg_weight,
       ROUND(AVG(item_visibility), 4) AS avg_visibility
FROM delivery_data
GROUP BY item_fat_content;
```

Data Output | Messages | Notifications

	oldest_year integer
1	2011

9. Get the top 3 outlets with the highest average sales per item (subquery use)

```sql
--9. Get the top 3 outlets with the highest average sales per item (subquery use)
SELECT outlet_identifier, ROUND(AVG(sales), 2) AS avg_sales
FROM delivery_data
GROUP BY outlet_identifier
ORDER BY avg_sales DESC
LIMIT 3;
```

Data Output | Messages | Notifications

	outlet_identifier text	avg_sales numeric
1	OUT035	143.12
2	OUT046	142.06
3	OUT018	141.68

10. Create a view to monitor performance of outlets (view use)

```sql
--10. Create a view to monitor performance of outlets (view usage)
CREATE VIEW outlet_performance AS
SELECT outlet_identifier,
       outlet_type,
       outlet_size,
       SUM(sales) AS total_sales,
       AVG(rating) AS avg_rating
FROM delivery_data
GROUP BY outlet_identifier, outlet_type, outlet_size;

SELECT * FROM outlet_performance ORDER BY total_sales DESC;
```

Data Output | Messages | Notifications

	outlet_identifier text	outlet_type text	outlet_size text	total_sales numeric	avg_rating numeric
1	OUT035	Supermarket Type1	Small	133103.9070	3.9445161290322581
2	OUT046	Supermarket Type1	Small	132113.3698	3.9583870967741935
3	OUT013	Supermarket Type1	High	131809.0156	3.9495708154506438
4	OUT018	Supermarket Type2	Medium	131477.7764	3.9712284482758621
5	OUT027	Supermarket Type3	Medium	130714.6746	3.9529411764705882
6	OUT049	Supermarket Type1	Medium	130476.8598	3.9854838709677419
7	OUT019	Grocery Store	Small	73807.5824	3.9950757575757576
8	OUT017	Supermarket Type1	Small	50121.8602	3.9475543478260870
9	OUT045	Supermarket Type1	Small	47264.1186	3.9871165644171779
10	OUT017	Supermarket Type1	High	45056.2274	3.9560509554140127
11	OUT045	Supermarket Type1	Medium	44122.4416	3.9620060790273556

Conclusion:

This SQL analysis helped identify key trends in sales, outlet performance, and customer preferences. These insights can support decision-making in marketing, inventory planning, and outlet management.