Task – 6: Sales Trend Analysis Aggregation

Objective: - Analyze monthly revenue and order volume.

Tools: - PostgreSQL

Deliverables: - SQL Scripts + results

1. Extract Months form the date column and give the name of months.

Query: SELECT DISTINCT
EXTRACT(MONTH FROM date) AS month_number,
TO_CHAR(date, 'Month') AS month_name
FROM public.sales_data
ORDER BY month_number;

•	month_number numeric	month_name text
1	1	January
2	2	February
3	3	March
4	4	April
5	5	May
6	6	June
7	7	July
8	8	August

2. Find Total Sales by Month on every year using Group by year/month.

Query: -

-- finding Total sales in every months by year.

SELECT

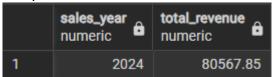
EXTRACT(YEAR FROM date) AS year,
EXTRACT(MONTH FROM date) AS month,
SUM(units_sold) AS total_units,
SUM(total_revenue) AS total_revenue
FROM public.sales_data
GROUP BY year, month
ORDER BY year, month;

Jacpac	year numeric 🙃	month numeric 🙃	total_units bigint	total_revenue numeric
1	2024	1	68	14548.32
2	2024	2	77	10803.37
3	2024	3	82	12849.24
4	2024	4	65	12451.69
5	2024	5	60	8455.49
6	2024	6	61	7384.55
7	2024	7	53	6797.08
8	2024	8	52	7278.11

3. Find Total Revenue using sum().

Query: SELECT
EXTRACT(YEAR FROM date) AS sales_year,
SUM(total_revenue) AS total_revenue
FROM public.sales_data
GROUP BY sales_year
ORDER BY sales_year;

Output: -



4. Find the Total Orders For volume using Distinct.

Query: SELECT
COUNT(DISTINCT transaction_id) AS total_orders
FROM public.sales_data;



5. Total Order sorted by Months.

Query: SELECT
TO_CHAR(date, 'YYYY-MM') AS year_month,
COUNT(DISTINCT transaction_id) AS total_orders
FROM public.sales_data
GROUP BY year_month
ORDER BY year_month ASC;

	year_month fext	total_orders bigint
1	2024-01	31
2	2024-02	29
3	2024-03	31
4	2024-04	30
5	2024-05	31
6	2024-06	30
7	2024-07	31
8	2024-08	27

6. Limit results for specific time periods for first quarter.

Query: SELECT
EXTRACT(YEAR FROM date) AS sales_year,
EXTRACT(MONTH FROM date) AS sales_month,
COUNT(DISTINCT transaction_id) AS total_orders,
SUM(total_revenue) AS total_revenue
FROM public.sales_data

WHERE EXTRACT(MONTH FROM date) BETWEEN 1 AND 3 -- Q1 (Jan, Feb, Mar)

GROUP BY sales_year, sales_month ORDER BY sales_year, sales_month;

	sales_year numeric	sales_month numeric	total_orders bigint	total_revenue numeric
1	2024	1	31	14548.32
2	2024	2	29	10803.37
3	2024	3	31	12849.24