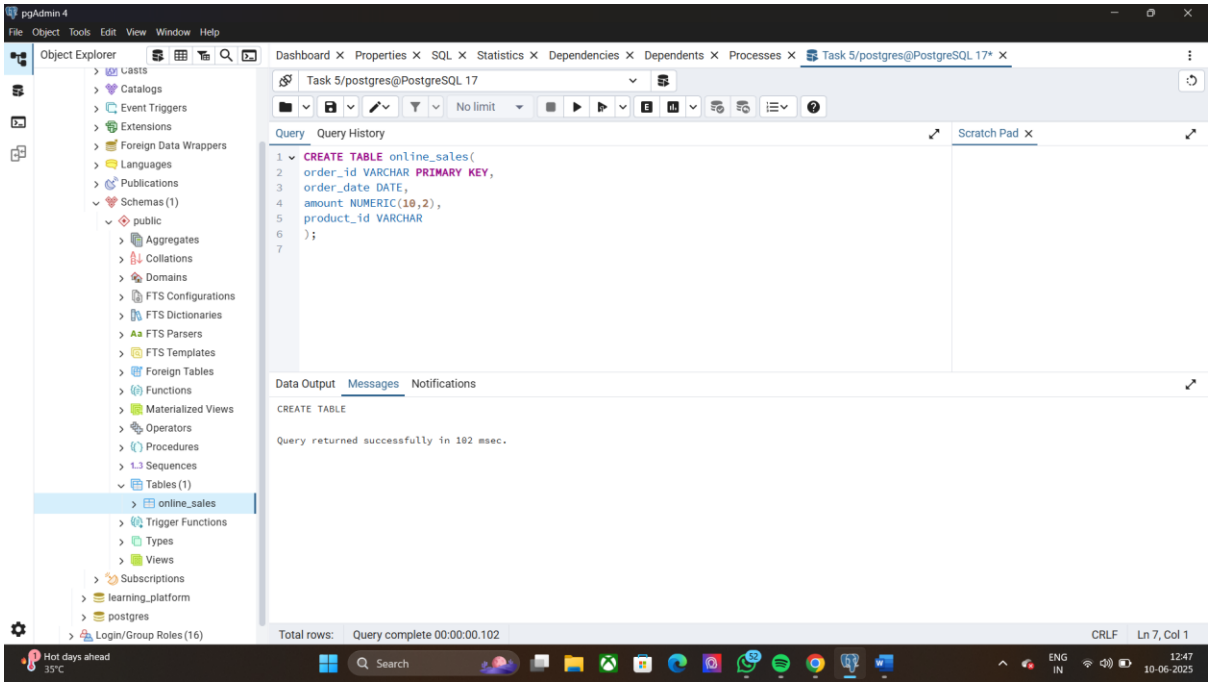
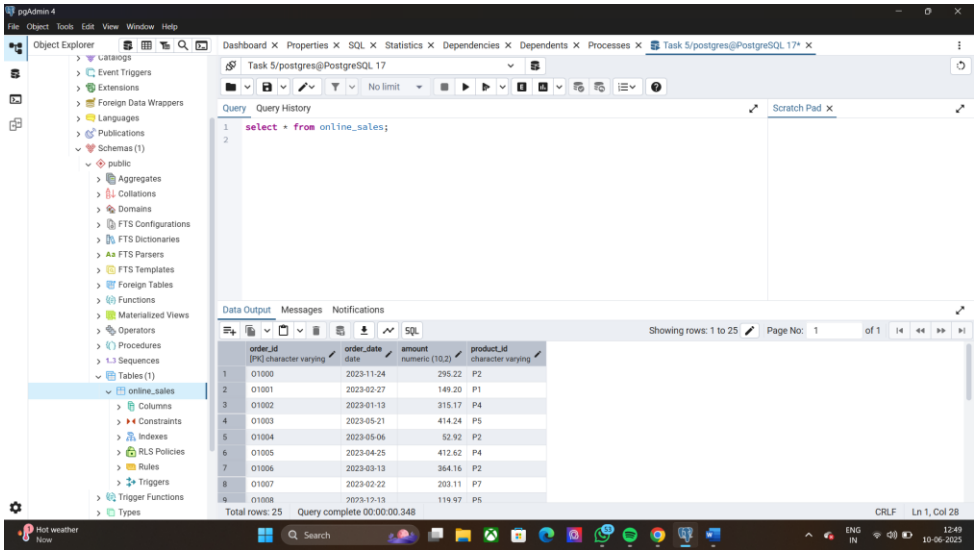
✅ PostgreSQL Table Creation

```
CREATE TABLE online_sales (
   order_id VARCHAR PRIMARY KEY,
   order_date DATE,
   amount NUMERIC(10, 2),
   product_id VARCHAR
);
```



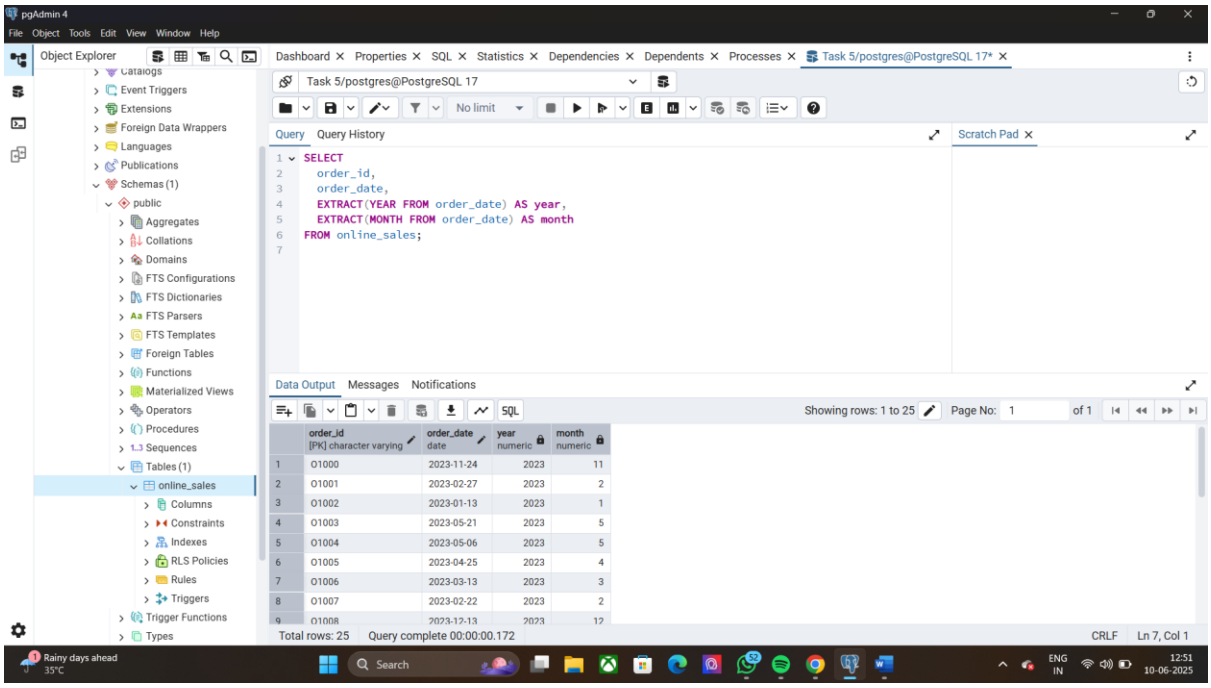
1. View the Dataset

```
SELECT * FROM online_sales;
```



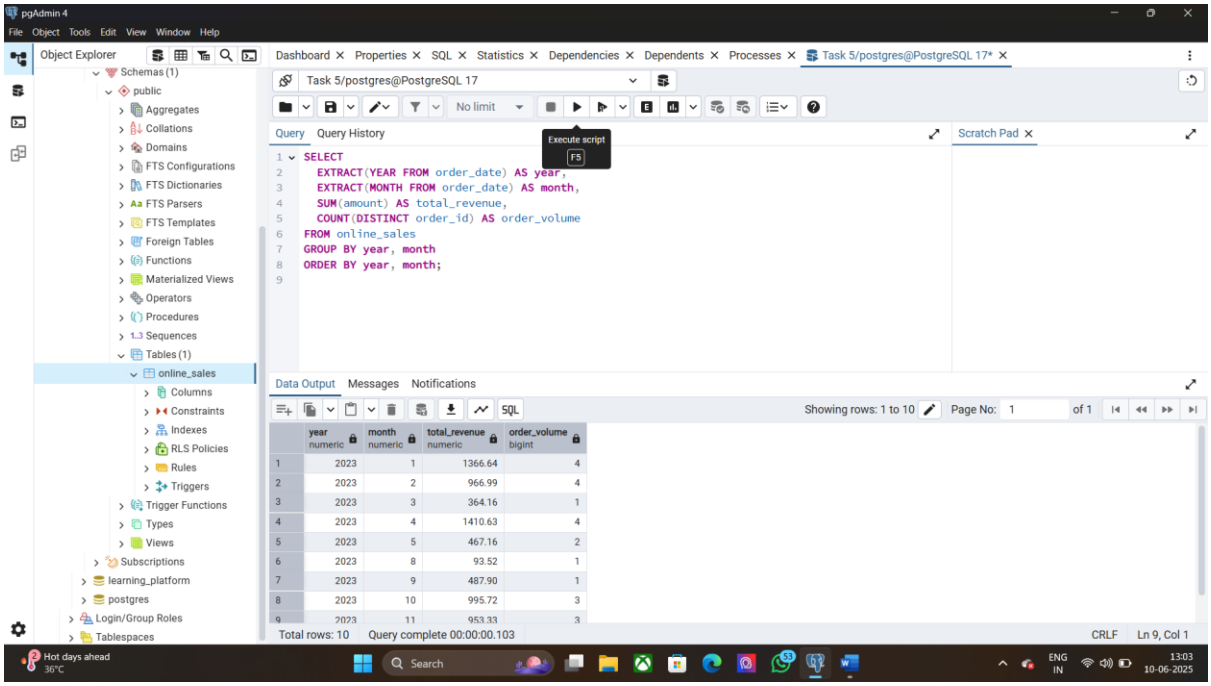
2. Extract Year & Month

```
SELECT
  order_id,
  order_date,
  EXTRACT(YEAR FROM order_date) AS year,
  EXTRACT(MONTH FROM order_date) AS month
FROM online_sales;
```



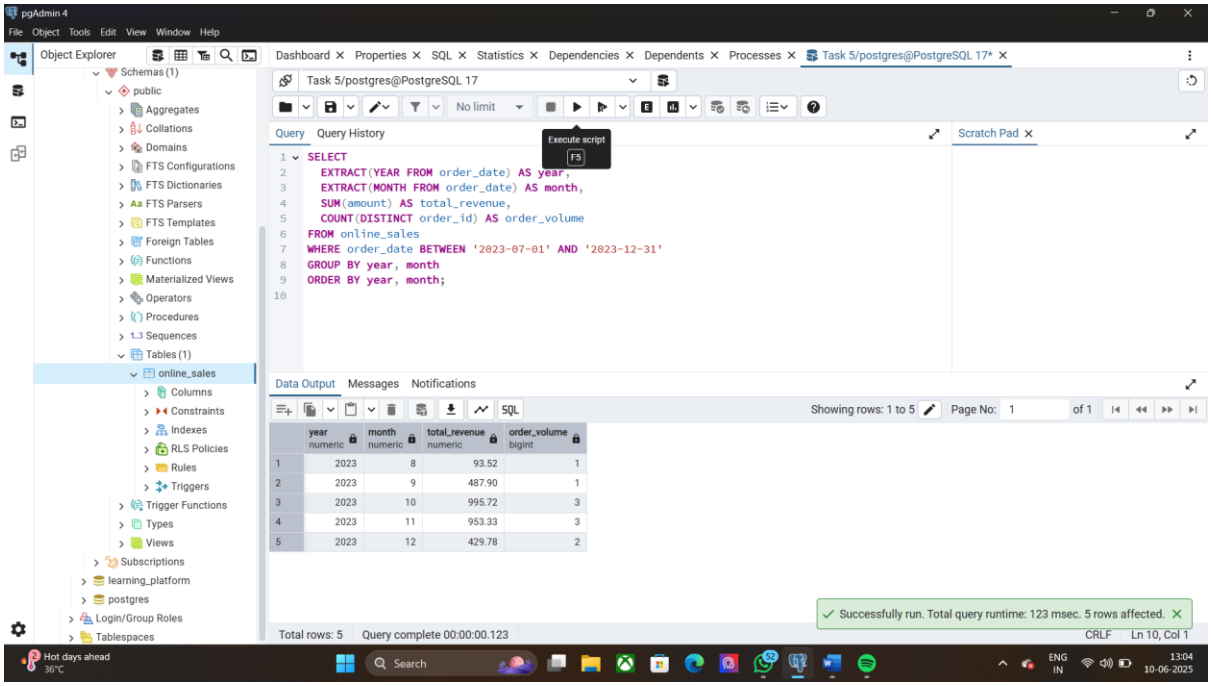
3. Monthly Revenue and Order Volume

```
SELECT
  EXTRACT(YEAR FROM order_date) AS year,
  EXTRACT(MONTH FROM order_date) AS month,
  SUM(amount) AS total_revenue,
  COUNT(DISTINCT order_id) AS order_volume
FROM online_sales
GROUP BY year, month
ORDER BY year, month;
```



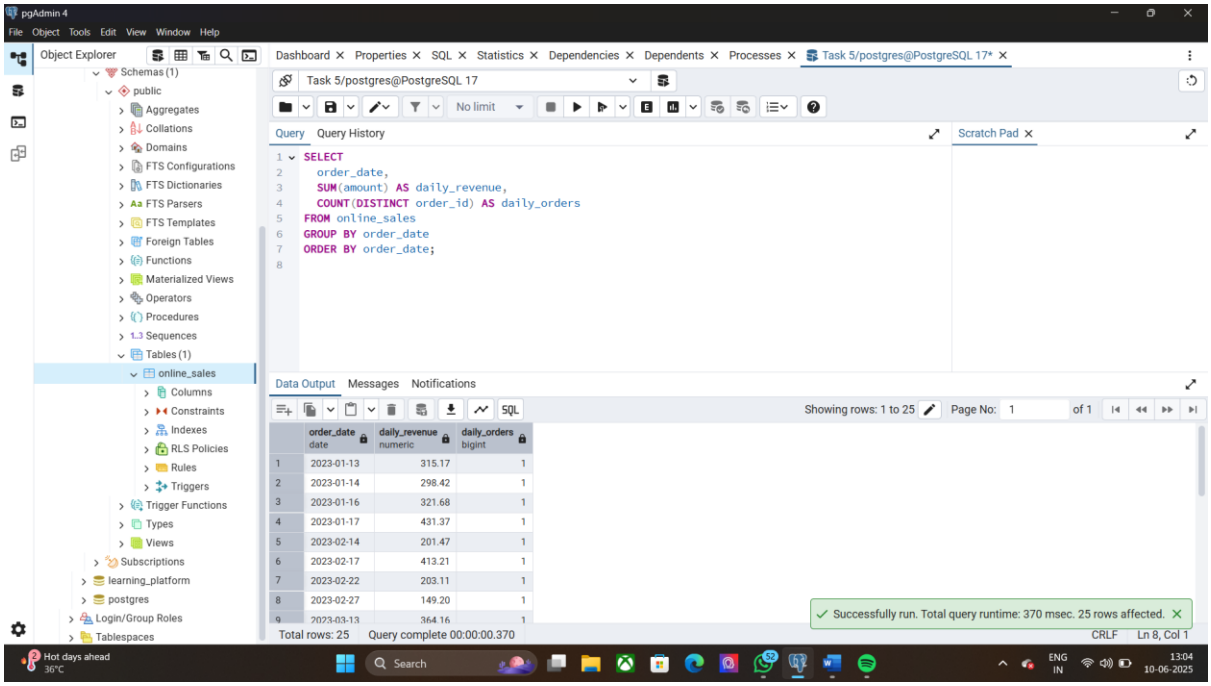
4. Filtered by Date Range (e.g., July–December 2023)

```
SELECT
  EXTRACT(YEAR FROM order_date) AS year,
  EXTRACT(MONTH FROM order_date) AS month,
  SUM(amount) AS total_revenue,
  COUNT(DISTINCT order_id) AS order_volume
FROM online_sales
WHERE order_date BETWEEN '2023-07-01' AND '2023-12-31'
GROUP BY year, month
ORDER BY year, month;
```



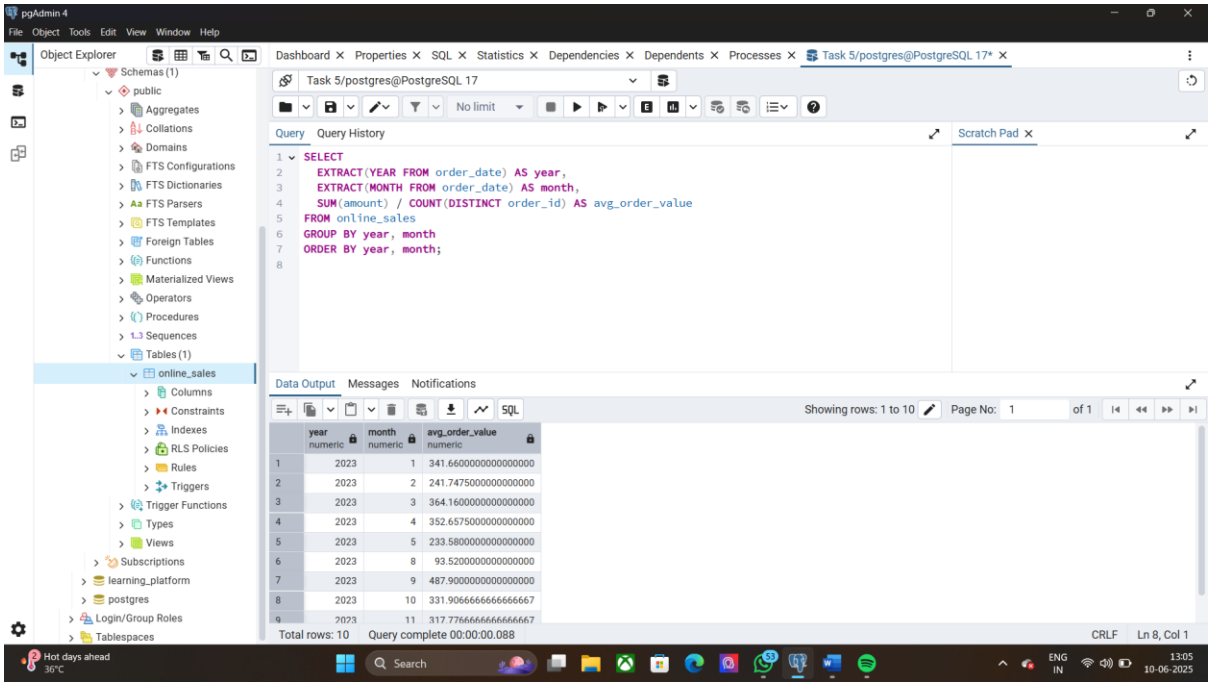
5. Daily Revenue Trend (Optional Granularity)

```
SELECT
 order_date,
 SUM(amount) AS daily_revenue,
 COUNT(DISTINCT order_id) AS daily_orders
FROM online_sales
GROUP BY order_date
ORDER BY order_date;
```



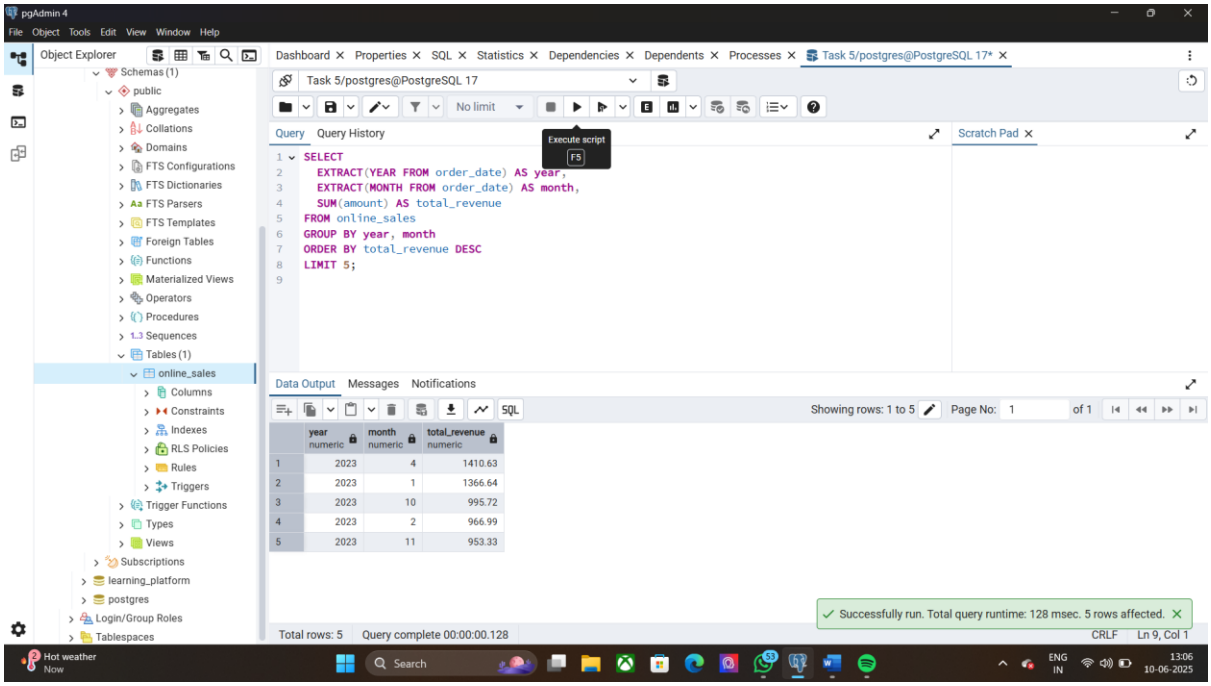
6. Monthly Average Order Value (AOV)

```
SELECT
 EXTRACT(YEAR FROM order_date) AS year,
 EXTRACT(MONTH FROM order_date) AS month,
 SUM(amount) / COUNT(DISTINCT order_id) AS avg_order_value
FROM online_sales
GROUP BY year, month
ORDER BY year, month;
```



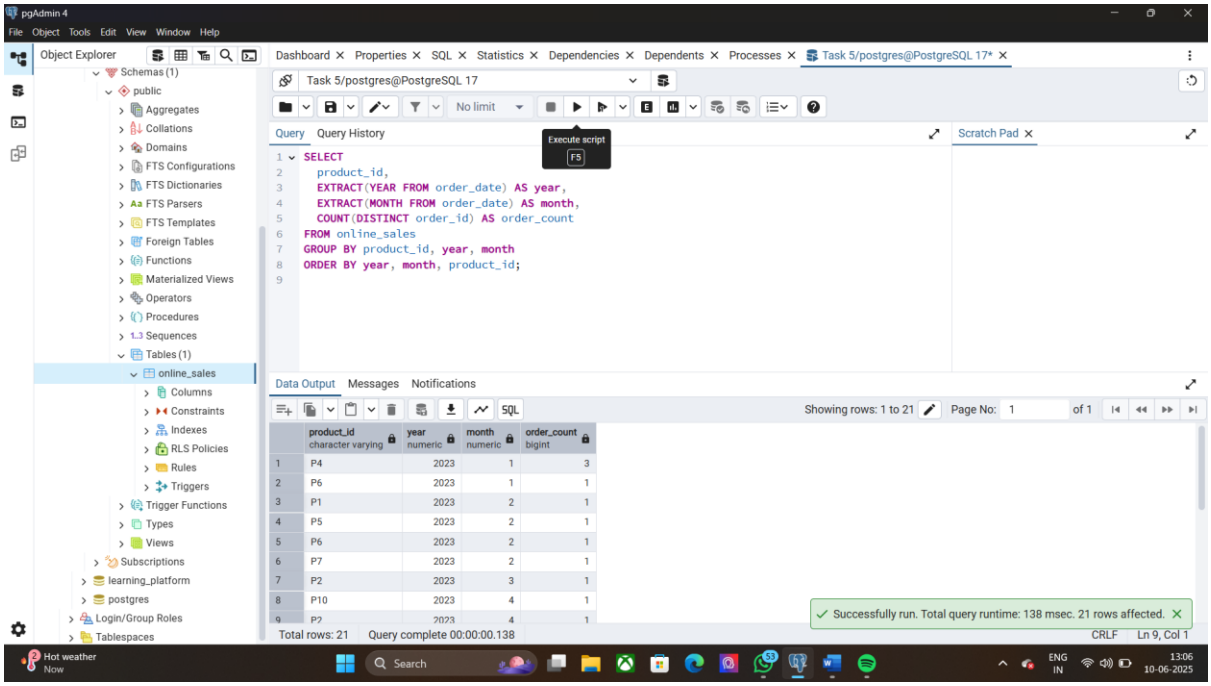
7. Top 5 Months by Revenue

```
SELECT
 EXTRACT(YEAR FROM order_date) AS year,
 EXTRACT(MONTH FROM order_date) AS month,
 SUM(amount) AS total_revenue
FROM online_sales
GROUP BY year, month
ORDER BY total_revenue DESC
LIMIT 5;
```



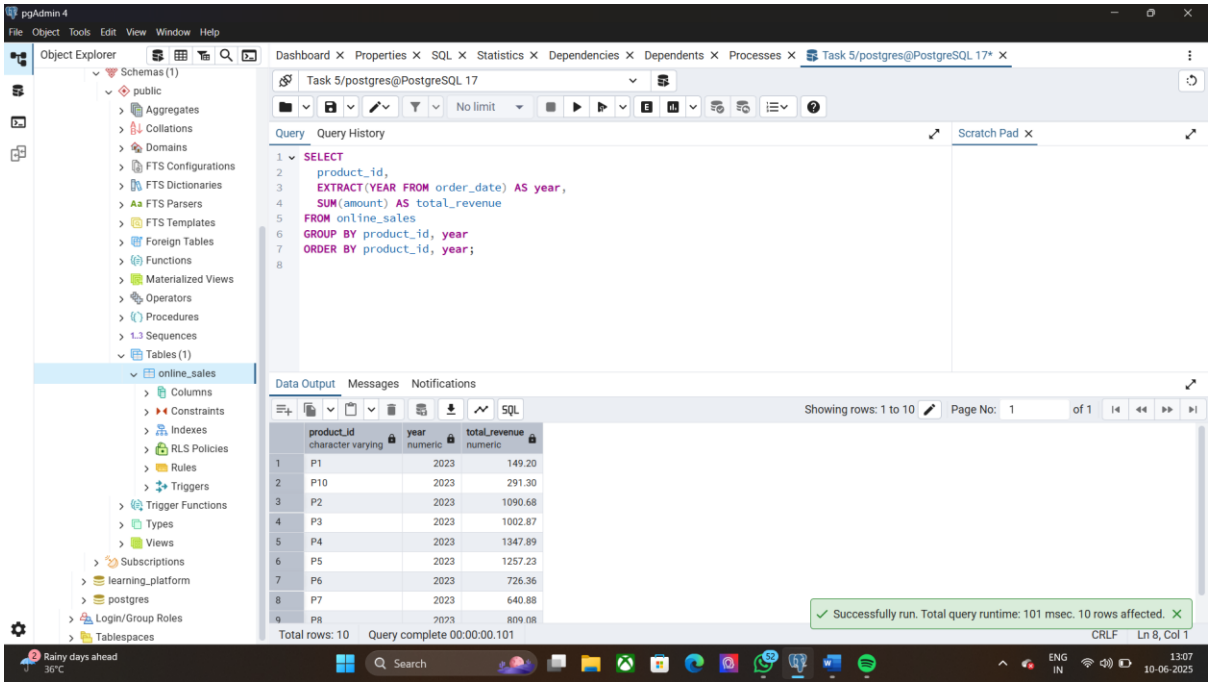
8. Number of Orders Per Product Per Month

```
SELECT
  product_id,
  EXTRACT(YEAR FROM order_date) AS year,
  EXTRACT(MONTH FROM order_date) AS month,
  COUNT(DISTINCT order_id) AS order_count
FROM online_sales
GROUP BY product_id, year, month
ORDER BY year, month, product_id;
```



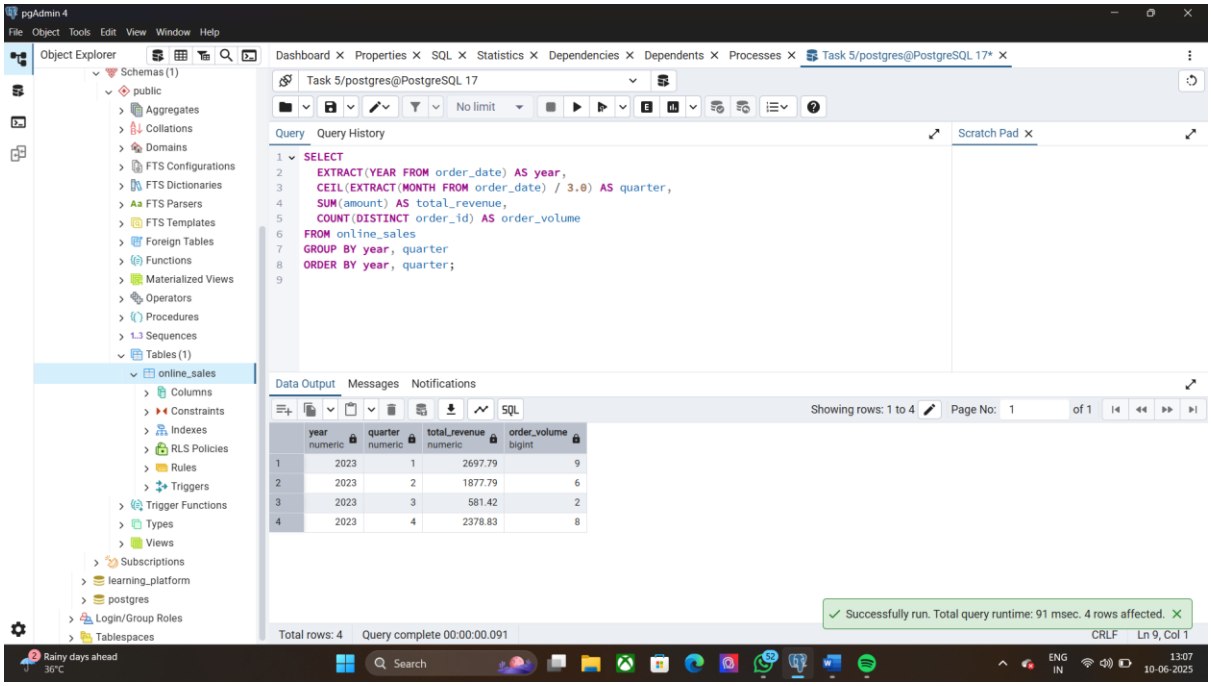
9. Total Revenue Per Product (Yearly Aggregation)

```
SELECT
 product_id,
 EXTRACT(YEAR FROM order_date) AS year,
 SUM(amount) AS total_revenue
FROM online_sales
GROUP BY product_id, year
ORDER BY product_id, year;
```



10. Revenue Summary by Quarter

```
SELECT
  EXTRACT(YEAR FROM order_date) AS year,
  CEIL(EXTRACT(MONTH FROM order_date) / 3.0) AS quarter,
  SUM(amount) AS total_revenue,
  COUNT(DISTINCT order_id) AS order_volume
FROM online_sales
GROUP BY year, quarter
ORDER BY year, quarter;
```


pgAdmin 4
File Object Tools Edit View Window Help
Object Explorer
Schemas (1)
public
Aggregates
Collations
Domains
FTS Configurations
FTS Dictionaries
FTS Parsers
FTS Templates
Foreign Tables
Functions
Materialized Views
Operators
Procedures
Sequences
Tables (1)
online_sales
Columns
Constraints
Indexes
RLS Policies
Rules
Triggers
Trigger Functions
Types
Views
Subscriptions
learning_platform
postgres
Login/Group Roles
Tablespaces
Dashboard
Properties
SQL
Statistics
Dependencies
Dependents
Processes
Task 5/postgres@PostgreSQL 17*
Task 5/postgres@PostgreSQL 17
No limit
Query
Query History
Scratch Pad
SELECT
EXTRACT(YEAR FROM order_date) AS year,
CEIL(EXTRACT(MONTH FROM order_date) / 3.0) AS quarter,
SUM(amount) AS total_revenue,
COUNT(DISTINCT order_id) AS order_volume
FROM online_sales
GROUP BY year, quarter
ORDER BY year, quarter;
Data Output
Messages
Notifications
SQL
Showing rows: 1 to 4
Page No: 1
of 1
year numeric
quarter numeric
total_revenue numeric
order_volume bigint
1 2023 1 2697.79 9
2 2023 2 1877.79 6
3 2023 3 581.42 2
4 2023 4 2378.83 8
Successfully run. Total query runtime: 91 msec. 4 rows affected.
Total rows: 4
Query complete 00:00:00.091
CRLF
Ln 9, Col 1
Rainy days ahead
36°C
Search
ENG
IN
13:07
10-06-2025