

Task : Sales Trend Analysis Using Aggregations

Objective : Analyze monthly revenue and order volume.

Tools: PostgreSQL / MySQL / SQLite (I used MySQL)

Deliverables: SQL script + results table

Hints/Mini Guide:

- a. Use EXTRACT(MONTH FROM order_date) for month.
- b. GROUP BY year/month. Use SUM() for revenue.
- c. COUNT(DISTINCT order_id) for volume.
- d. Use ORDER BY for sorting.
- e. Limit results for specific time periods.

Dataset: online_sales (orders table with order_date, amount, product_id) ([CSV Link](#))

Steps Involved :

Step 1 : Download the CSV file

Step 2 : Go to MySQL, and create a schema named online_sales_grocery, after import the csv file into MySQL

Step 3 : Write and Run the scripts given below one by one

SQL Scripts (Queries)

1. use online_sales_grocery;

2. -- all data

```
select * from online_sales_grocery;
```

{ Result : ([Result](#)) }

3. -- month and year(group by year and month number)

```
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 total_orders
```

```
FROM online_sales_grocery
```

```
GROUP BY year, month
```

```
ORDER BY year, month;
```

{ Result : ([Link](#)) }

4. -- Limit Results to a Specific Period (e.g., 2024 only)

```
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 total_orders
FROM online_sales_grocery
WHERE YEAR(order_date) = 2024
GROUP BY year, month
ORDER BY year, month;
```

{ Result : ([Link](#)) }

5. -- Limit by Recent Months (e.g., last 6 months)

```
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 total_orders
FROM online_sales_grocery
WHERE order_date >= DATE_SUB(CURDATE(), INTERVAL 6 MONTH)
GROUP BY year, month
ORDER BY year, month;
```

{ Result : ([Link](#)) }