# Sales Trend Analysis Report
# Using SQL Aggregations

Dataset: online_sales | Tool: SQLite (sample data)
Prepared by: You

Objective:
To analyze monthly revenue and order volume using SQL aggregations, and identify trends & insights.

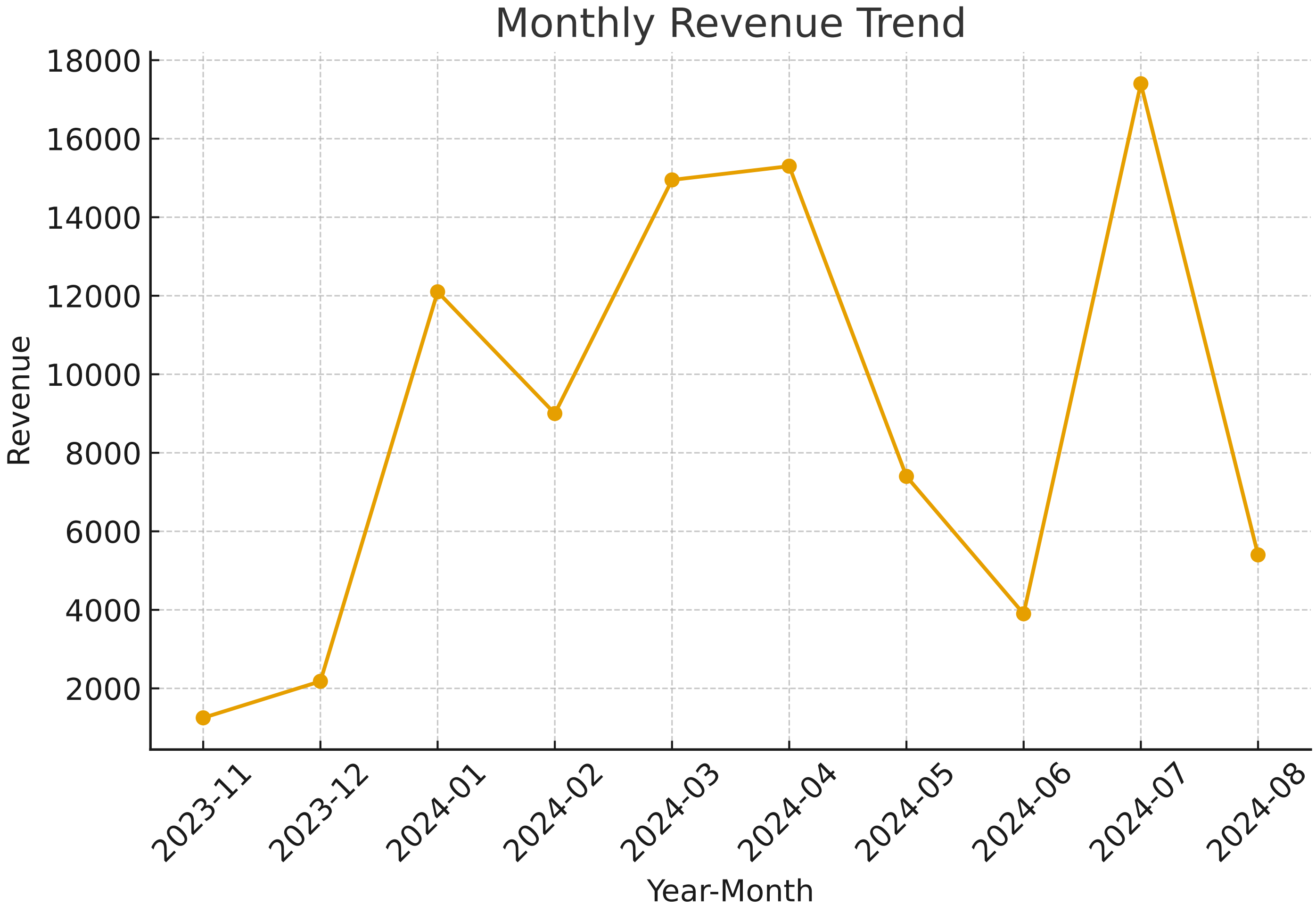
Generated report contains:
- SQL code used
- Aggregated results table
- Revenue & Order charts
- Insights, Conclusion & Recommendations

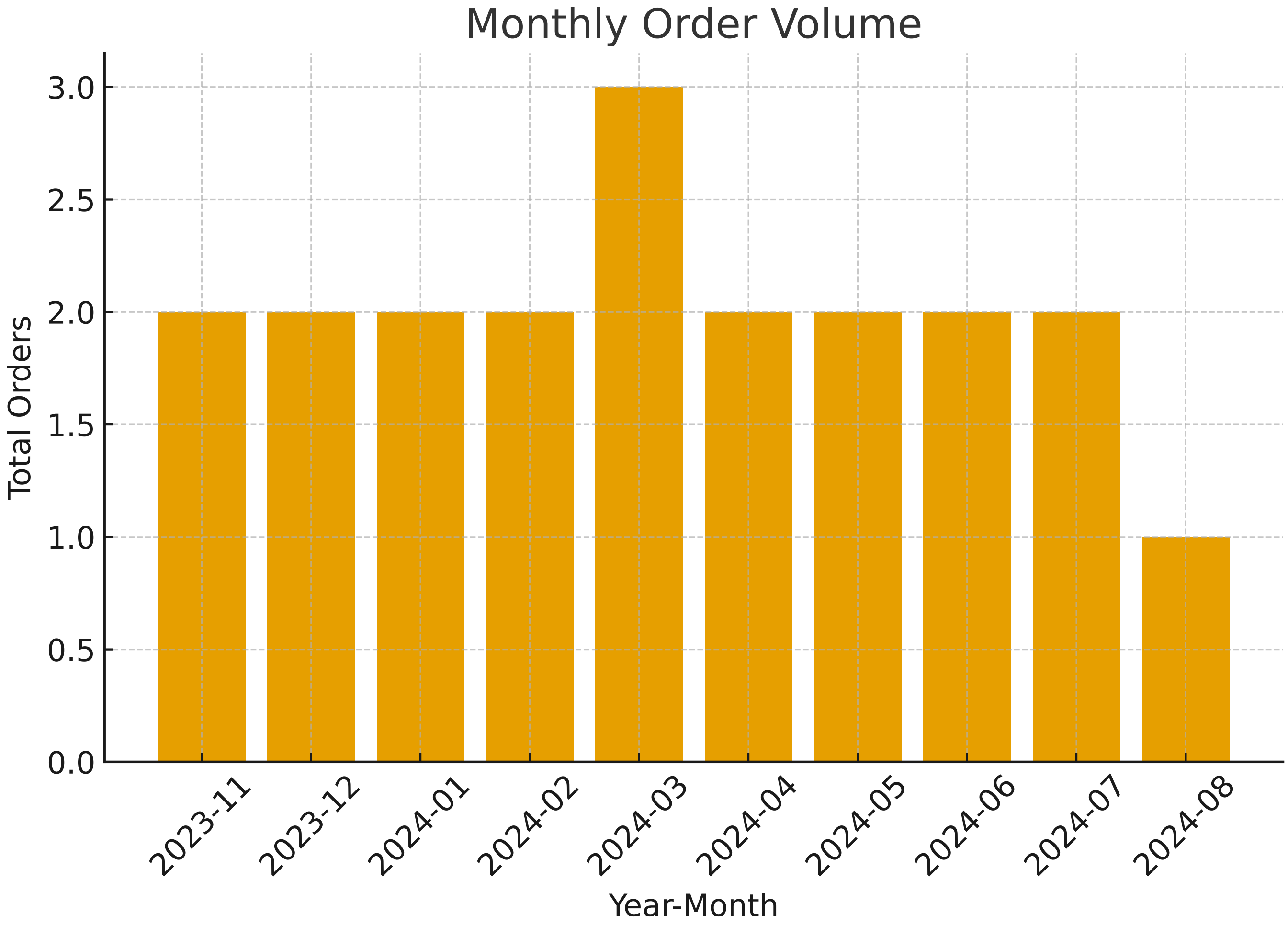
## SQL Code

```sql
-- Monthly sales trend query (SQLite)
SELECT
    strftime('%Y', order_date) AS year,
    strftime('%m', order_date) AS month,
    SUM(amount) AS revenue,
    COUNT(order_id) AS total_orders
FROM online_sales
GROUP BY year, month
ORDER BY year, month;
```

# Aggregated Monthly Results (Year | Month | Revenue | Total Orders)

| year | month | revenue | total_orders |
|---|---|---|---|
| 2023 | 11 | 1250.0 | 2 |
| 2023 | 12 | 2180.0 | 2 |
| 2024 | 01 | 12100.0 | 2 |
| 2024 | 02 | 9000.0 | 2 |
| 2024 | 03 | 14950.0 | 3 |
| 2024 | 04 | 15300.0 | 2 |
| 2024 | 05 | 7400.0 | 2 |
| 2024 | 06 | 3900.0 | 2 |
| 2024 | 07 | 17400.0 | 2 |
| 2024 | 08 | 5400.0 | 1 |


Monthly Revenue Trend
Revenue
18000
16000
14000
12000
10000
8000
6000
4000
2000
2023-11
2023-12
2024-01
2024-02
2024-03
2024-04
2024-05
2024-06
2024-07
2024-08
Year-Month


Monthly Order Volume
Total Orders
0.0
0.5
1.0
1.5
2.0
2.5
3.0
2023-11
2023-12
2024-01
2024-02
2024-03
2024-04
2024-05
2024-06
2024-07
2024-08
Year-Month

## Insights

1. Sales show clear variability month-to-month (ups & downs), indicating seasonality or campaign effects.

2. Early-year months (Jan-Feb) in the sample show comparatively higher revenue — consider focused marketing during this period.

3. Revenue and order volume generally move together in the sample — higher orders => higher revenue, implying stable AOV.

4. Identify low-performance months (e.g., months with revenue dips) to investigate stock, pricing, or promotion issues.

5. Best-performing month in the sample: 2024-07

## Conclusion

Conclusion:
The monthly aggregation reveals trends and peak months which can be used as benchmarks for planning marketing and inventory. Investigate dips for root causes and replicate strategies used in peak months.

## Recommendations

• Replicate promotions used during peak months.

• Analyze dips for stock shortages or reduced marketing activity.

• Run category-wise and product-wise trend analysis next.

• Consider forecasting models for future demand planning.