E-Commerce Data Analysis with MySQL

Project Overview

This project analyzes an E-commerce dataset loaded into MySQL/PostgreSQL.
The goal is to extract actionable business insights, focusing on customer purchasing behavior and overall sales performance.

The following key metrics were analyzed:

- Total -selling product
- Total revenue
- Orders Per Customer
- Monthly Sales
- Total number of orders
- Most sold product
- Revenue by product
- Customer purchase summary
- Orders by date

Objective

To analyze an e-commerce dataset by loading order data into a MySQL database, writing SQL queries to extract insights, and presenting the results.
This project demonstrates database design, data import, querying, and reporting skills using MySQL Workbench.

Dataset

- Source: Synthetic e-commerce order data
- Table: orders
- Columns:

Column Name	Data Type	Description
order_id	INT	Unique order identifier
customer_id	INT	Unique customer identifier
product	VARCHAR(255)	Product name

Column Name	Data Type	Description
quantity	INT	Quantity of product sold
price	DECIMAL(10,2)	Price per unit
order_date	DATE	Date of the order

	A	B	C	D	E	F	G	H	I
1	order_id	customer_	product	quantity	price	order_date			
2	1	101	Smartpho	2	299.99	15/01/2023			
3	2	102	Laptop	1	899.5	20/01/2023			
4	3	103	Headphor	3	49.99	05/02/2023			
5	4	104	Smartwat	1	199.99	18/02/2023			
6	5	105	Keyboard	4	29.99	12/03/2023			
7	6	106	Mouse	2	19.99	15/03/2023			
8	7	101	Smartpho	1	299.99	25/03/2023			
9	8	107	Tablet	2	399	02/04/2023			
10	9	108	Monitor	1	149.5	10/04/2023			
11	10	109	Laptop	1	950	22/04/2023			
12									
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18									

Steps Performed

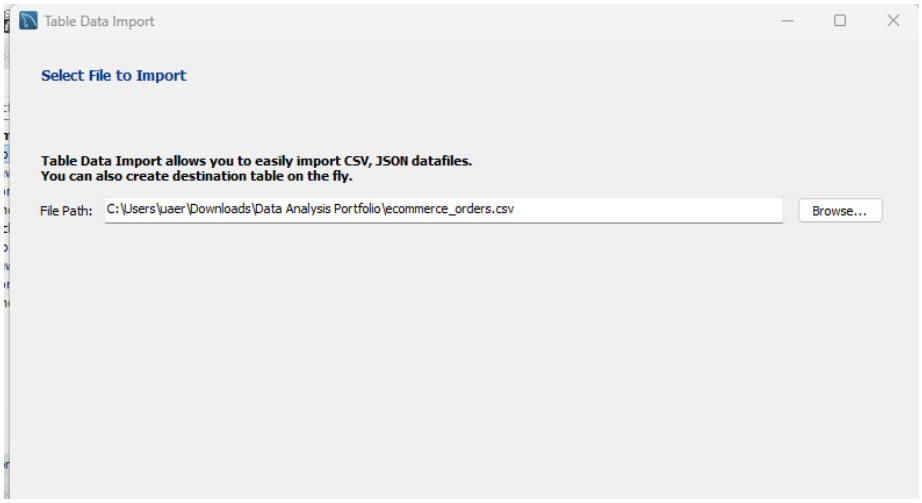
Database Setup

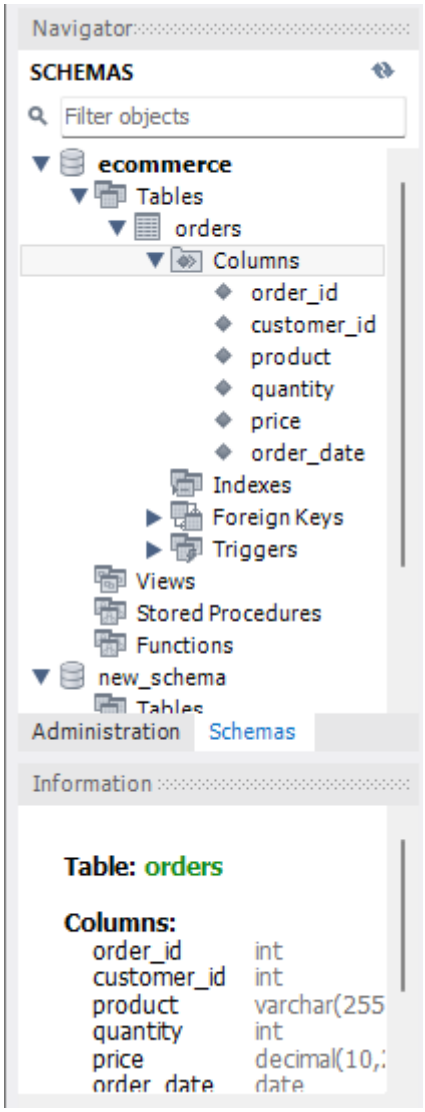
- Installed MySQL Server & Workbench.
- Created a database named ecommerce.
- Created the orders table with the above schema.

```sql
CREATE TABLE orders (
    order_id INT,
    customer_id INT,
    product VARCHAR(255),
    quantity INT,
    price DECIMAL(10,2),
    order_date DATE
);
```

Data Import

- Inserted sample order data into the orders table.





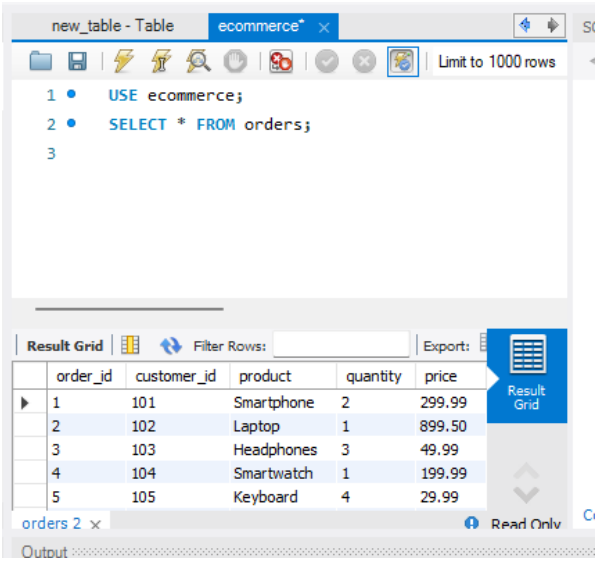
Queries Executed

- Selected all data:

  sql

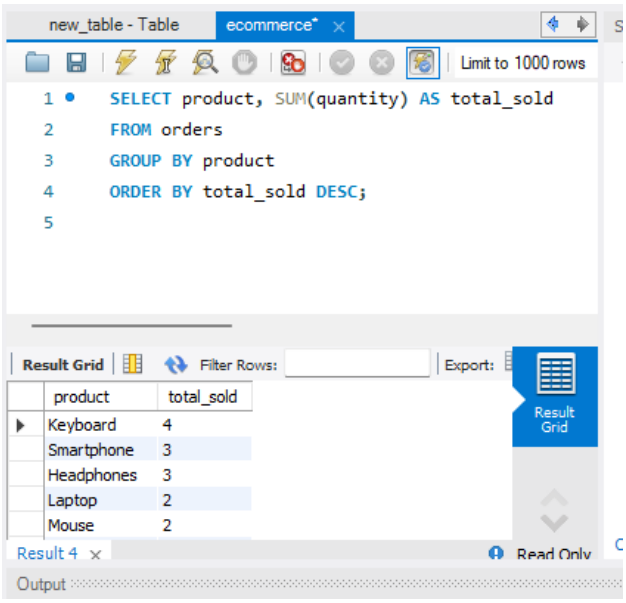
  Copy code

  SELECT * FROM orders;

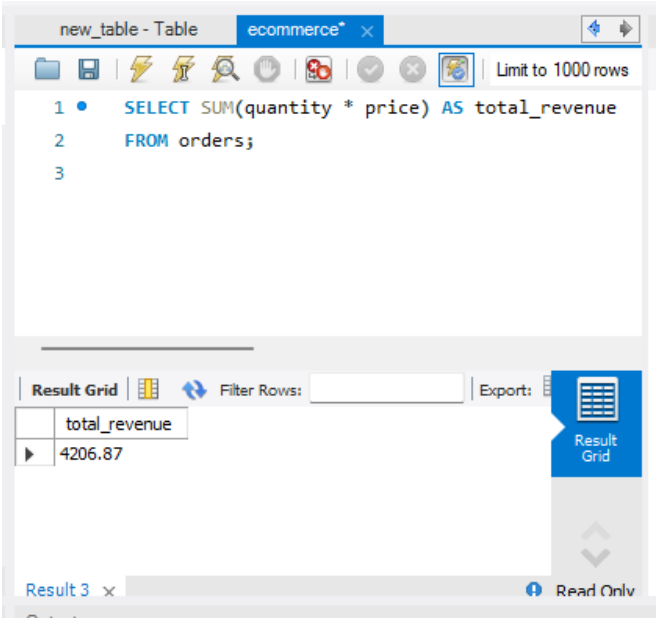


Insights:

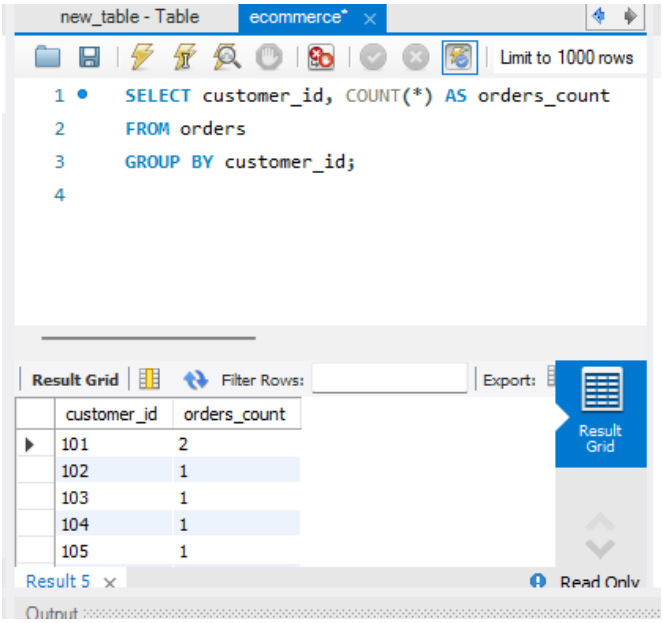
- Top-selling product



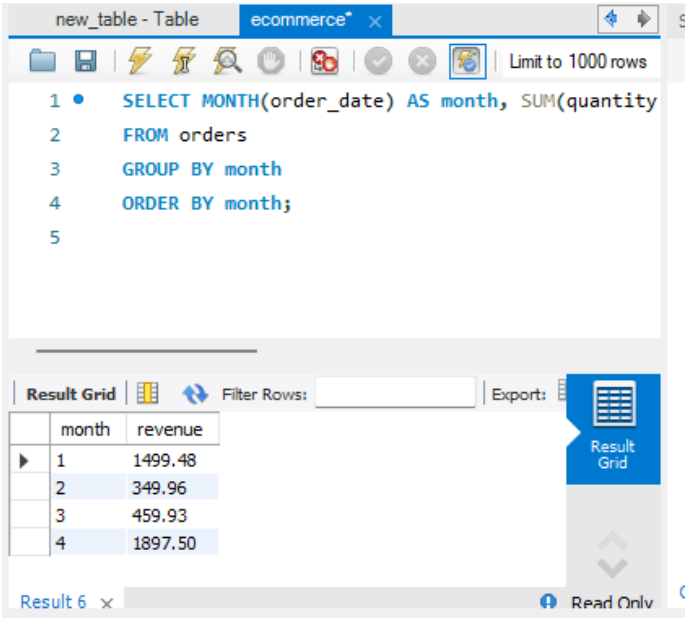
- Total revenue



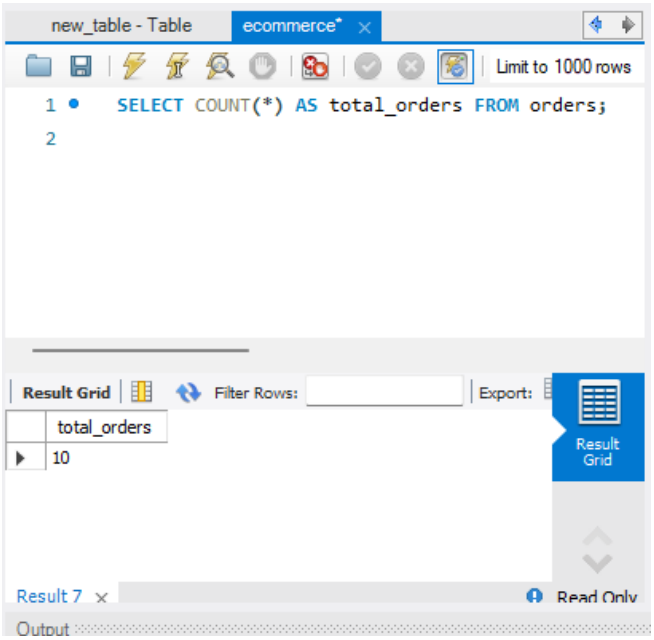
- Orders Per Customer



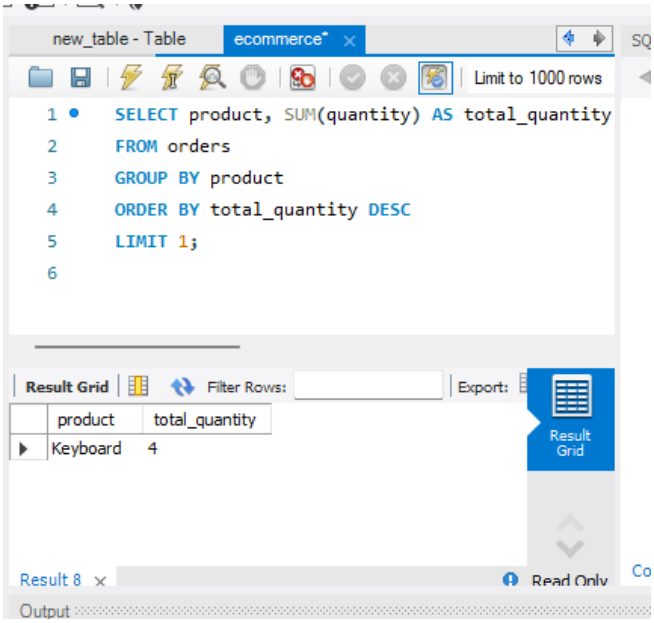
- Monthly Sales



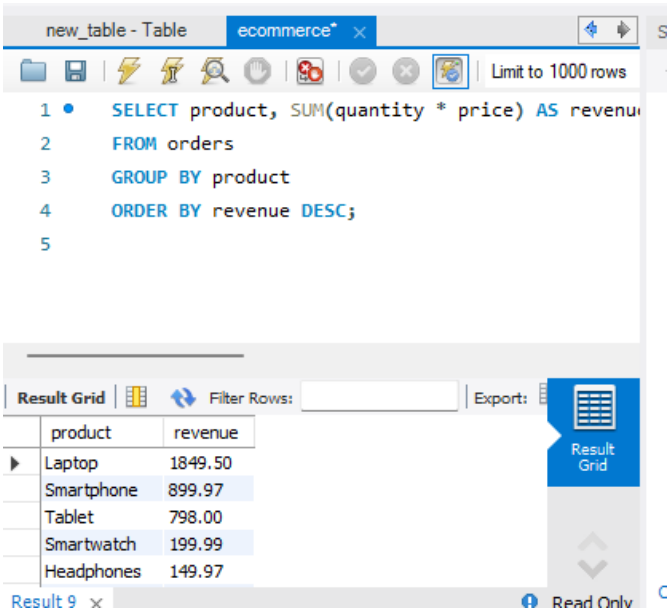
- Total number of orders



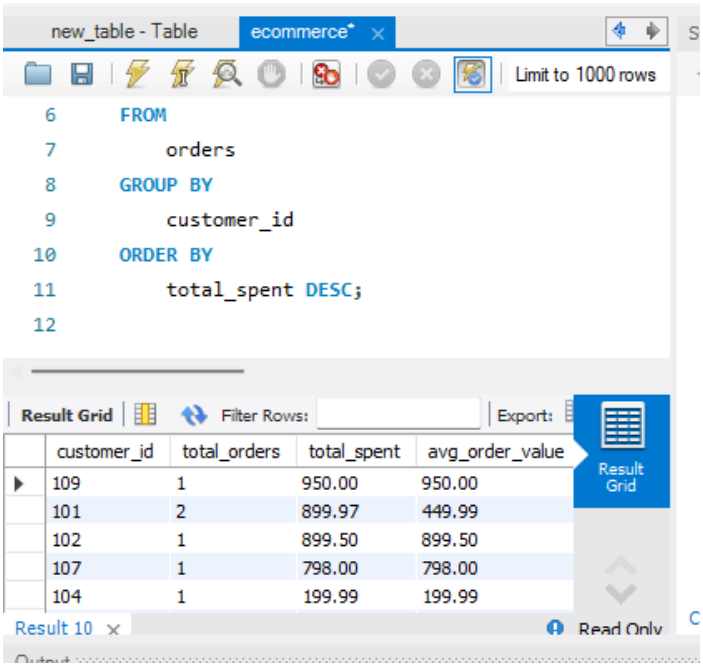
- Most sold product



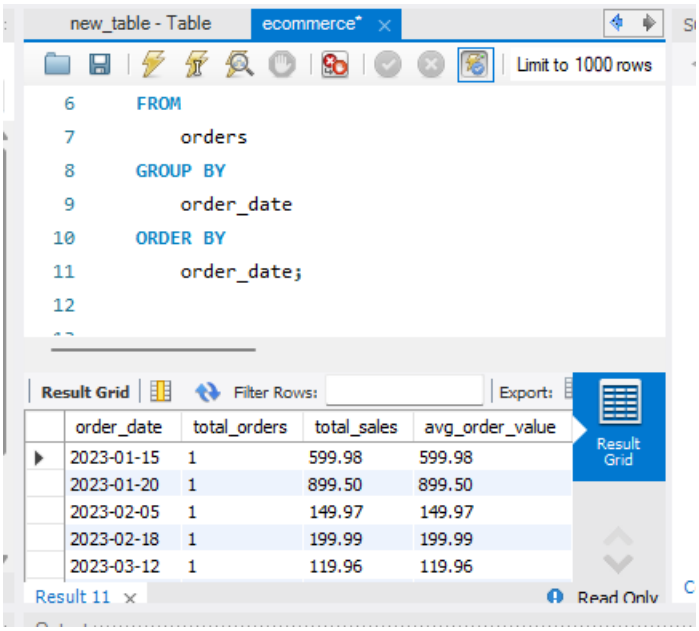
- Revenue by product



- Customer purchase summary



- Orders by date



Tools & Technologies Used

- MySQL 8.x
- MySQL Workbench
- CSV file (optional)

Learnings

- Hands-on experience with SQL queries
- Database design & schema creation
- Data import and export
- Generating actionable insights from raw data