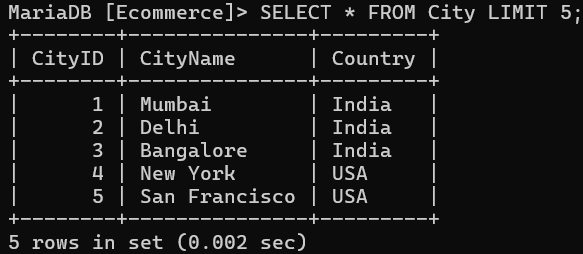
**Step 1: Understand Your Database**

* **Preview your data** (first 5 rows from each table):

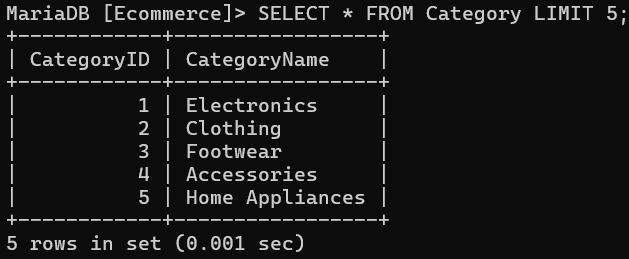
SELECT \* FROM City LIMIT 5;



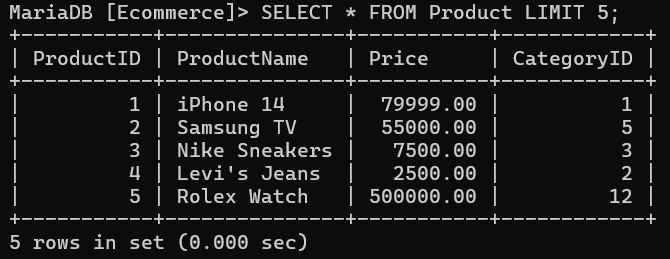
SELECT \* FROM Customer LIMIT 5;



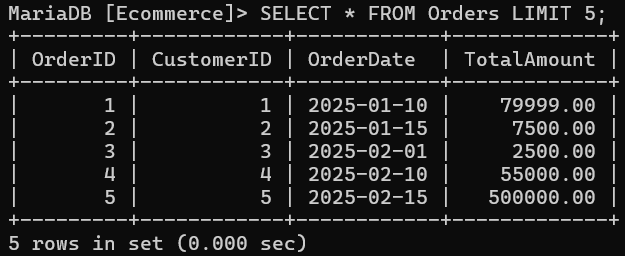
SELECT \* FROM Category LIMIT 5;



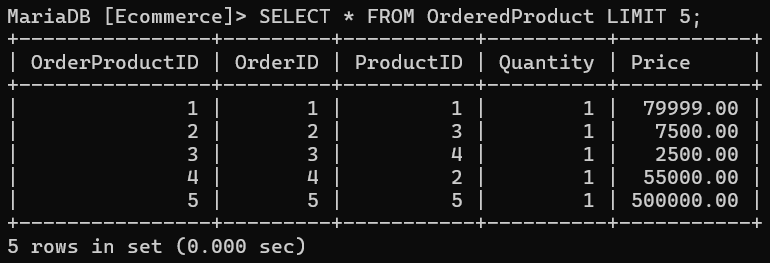
SELECT \* FROM Product LIMIT 5;



SELECT \* FROM Orders LIMIT 5;



SELECT \* FROM OrderedProduct LIMIT 5;



SELECT \* FROM Review LIMIT 5;

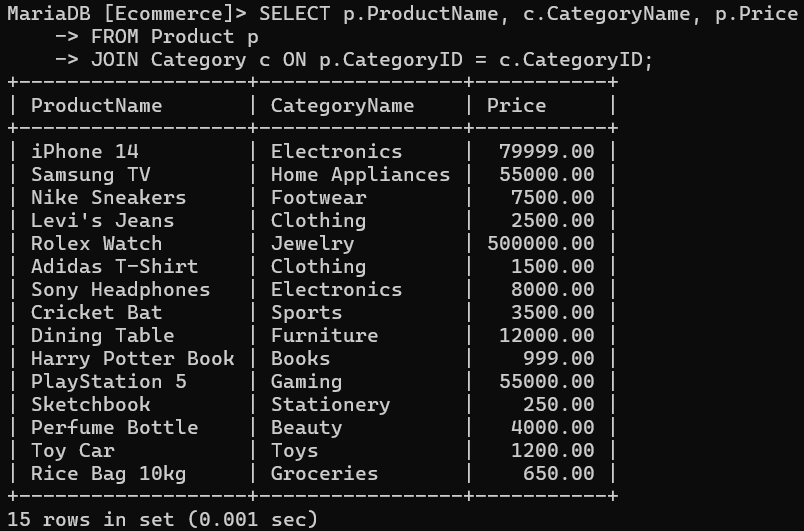


**Step 2: Basic SELECT Queries**

* **List all customers with their city:**

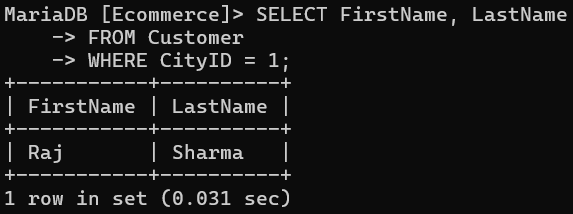


* **List all products and their categories:**

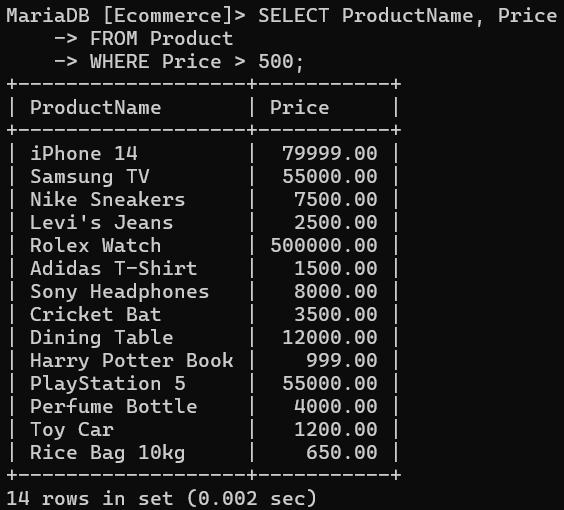


**Step 3: Filtering Data (WHERE Clause)**

* **Customers in a specific city:**

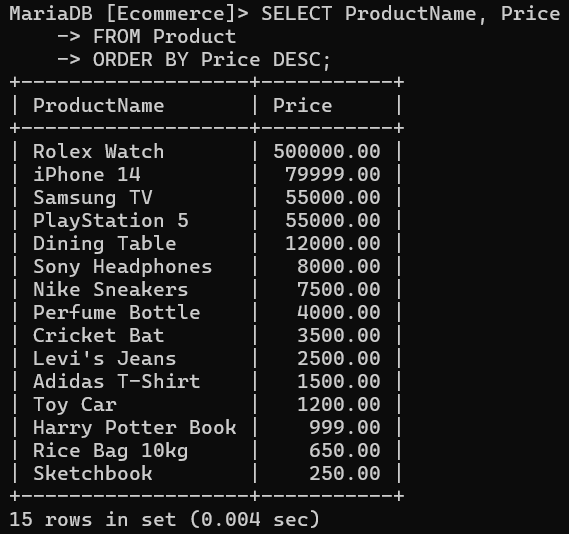
****

* **Products above a certain price:**

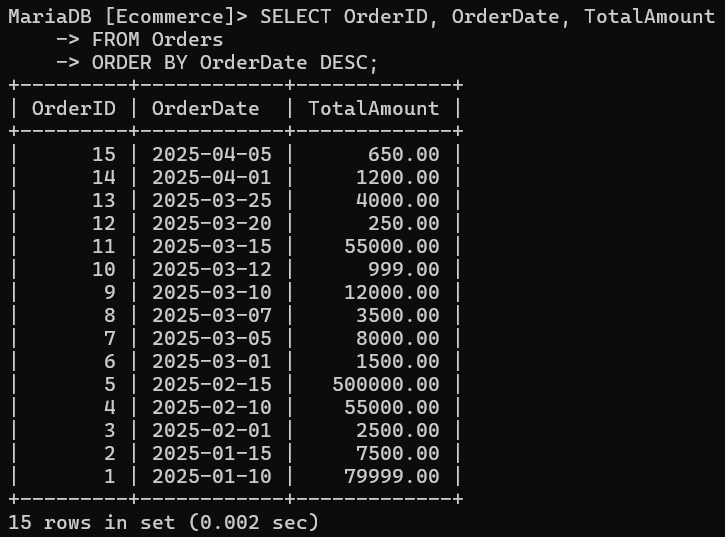
****

**Step 4: Sorting Data (ORDER BY)**

* **List products from highest to lowest price:**

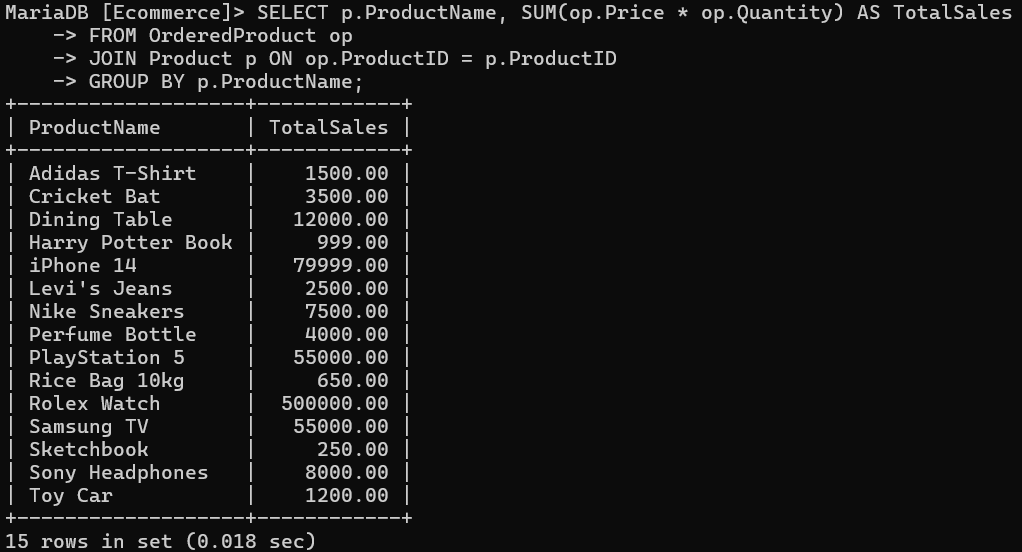
****

* **Orders by most recent date:**

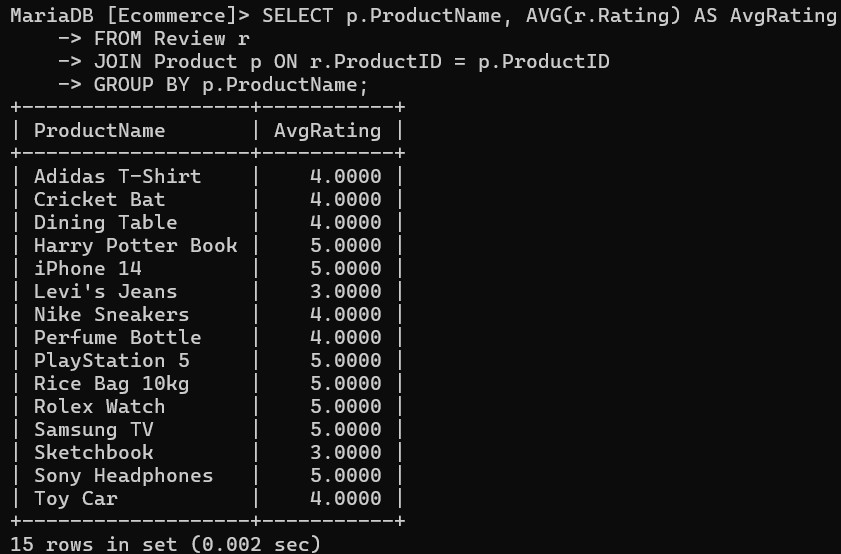
****

**Step 5: Aggregation (GROUP BY & Aggregate Functions)**

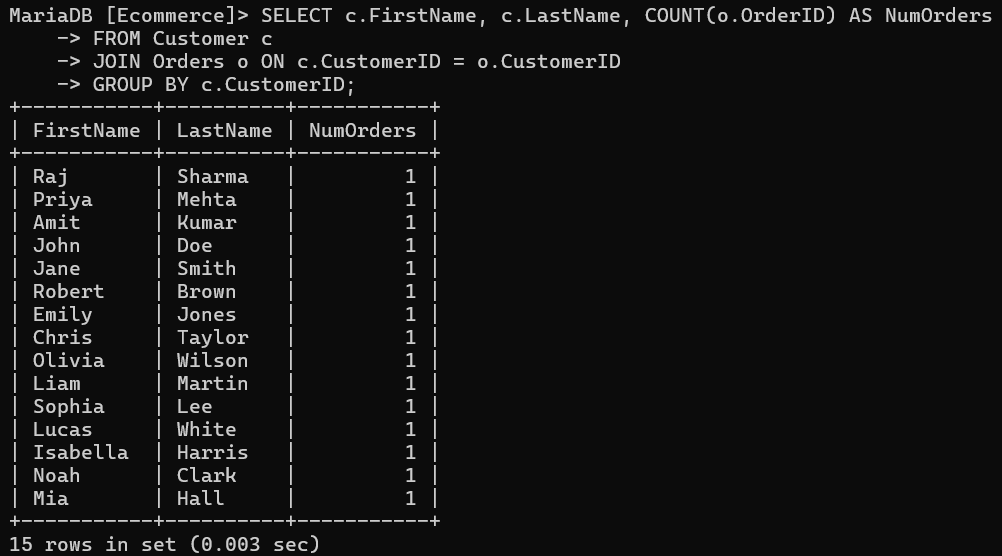
* **Total sales per product:**

****

* **Average rating per product:**

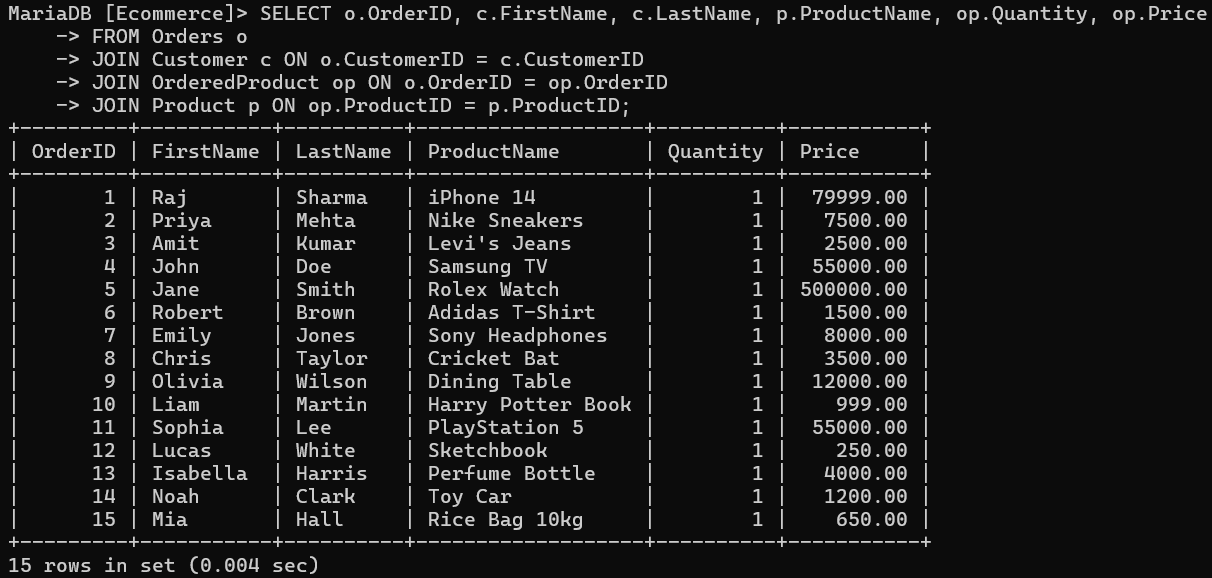
****

* **Number of orders per customer:**

****

**Step 6: Joins**

* **List orders with product details and customer names:**

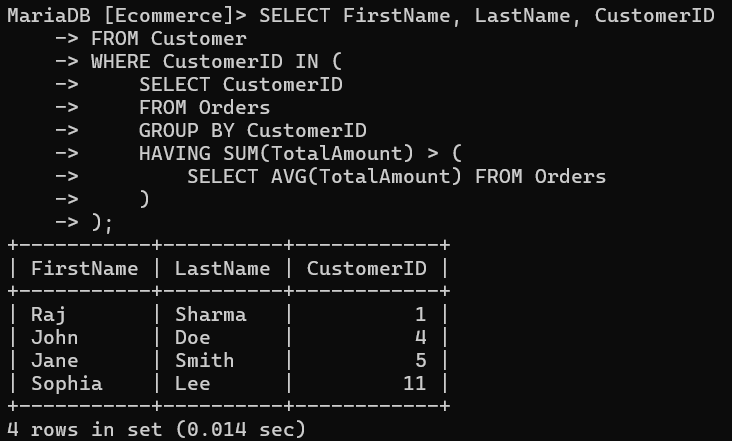
****

* **Left join to see customers with or without orders:**

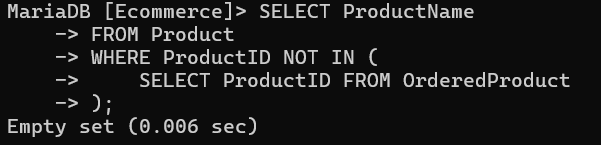
****

**Step 7: Sub-queries**

* **Find customers who spent more than average:**

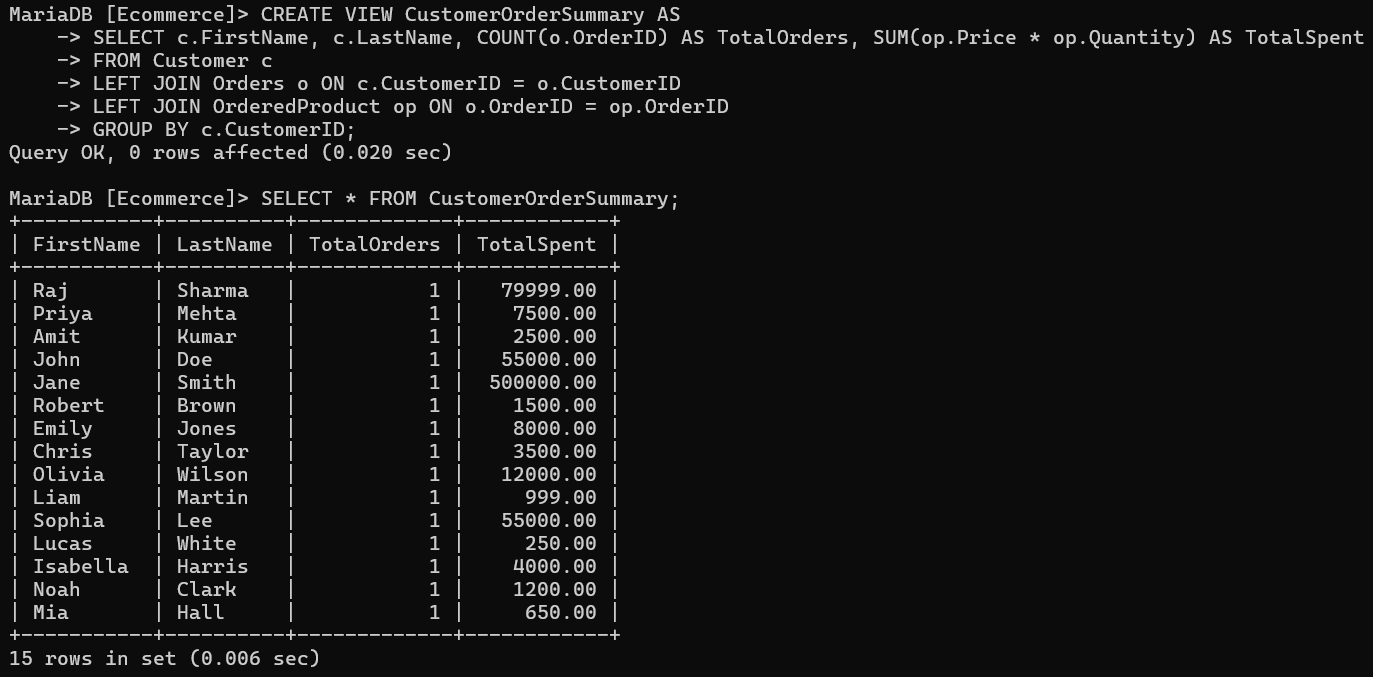
****

* **Products never ordered:**

****

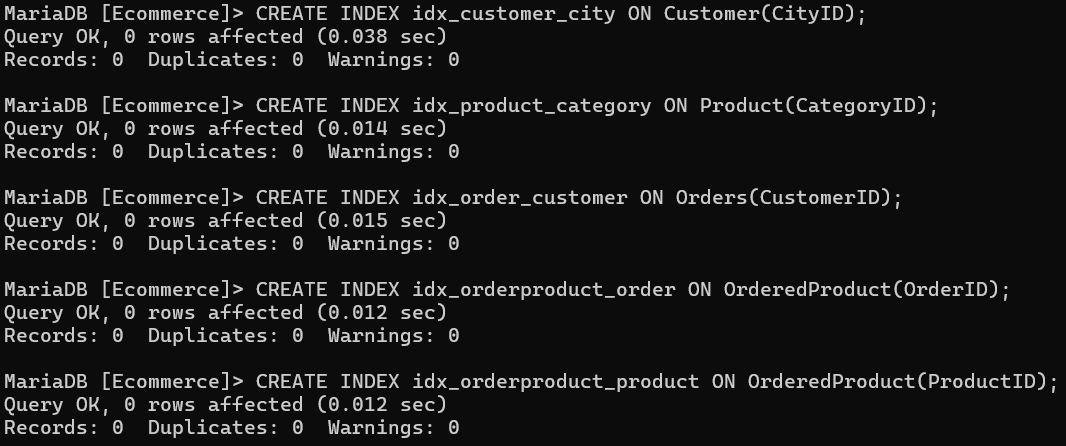
**Step 8: Views**

* **Create a view for easier analysis:**

****

**Step 9: Indexing for Optimization**

* **Create indexes on frequently joined columns:**

****