📦 E-Commerce Sales & Customer Analysis (SQL Project)

📌 Project Overview

This project focuses on analyzing e-commerce sales data to uncover insights related to revenue, customer behavior, and product performance using **MySQL**.
The goal of this project is to demonstrate core **Data Analyst skills** such as database design, SQL querying, and translating data into meaningful business insights.

🧰 Tools & Technologies Used

- **MySQL** – for database creation and analysis
- **SQL** – joins, aggregations, GROUP BY, HAVING
- **GitHub** – project version control and sharing

🗂️ Database Schema

The analysis is based on the following relational tables:

- **customer** – customer details (name, city, signup date)
- **orders** – order-level transaction data
- **products** – product and category information
- **order_items** – quantity of products per order

This normalized schema reflects real-world e-commerce databases.

📊 Key Analysis Performed

- Calculated **total revenue** generated from all orders
- Analyzed **monthly sales trends**
- Identified **top customers by total spending**
- Evaluated **city-wise revenue contribution**
- Computed **Average Order Value (AOV)**
- Identified **repeat customers**
- Determined the **best-selling product category** by quantity sold

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🔍 Business Questions Answered

- How much total revenue has the business generated?
- How do sales vary month by month?
- Which customers contribute the most to revenue?
- Which cities generate the highest sales?
- What is the average value of an order?
- Which customers place repeat orders?
- Which product category sells the most units?

📈 Key Insights

- Revenue is driven by a small group of high-value customers.
- Sales performance varies across months, indicating seasonal trends.
- Certain cities contribute significantly more revenue than others.
- Repeat customers indicate strong retention opportunities.
- Best-selling categories highlight areas of high customer demand.

(See `insights.md` for detailed insights.)

📂 Project Files

- `schema.sql` – database schema creation
- `data.sql` – sample data insertion
- `analysis_queries.sql` – SQL queries used for analysis
- `insights.md` – business insights derived from analysis
- `README.md` – project documentation

🔗 Conclusion

This project demonstrates the practical use of SQL to analyze transactional data and generate actionable insights. It reflects the typical responsibilities of a **Fresher / Entry-Level Data Analyst**, including data exploration, KPI calculation, and business-oriented thinking.

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