Title: Intermediate SQL Workflow

Subtitle: Sales Databse Analysis

Project Overview

This project showcases **intermediate SQL skills** by analyzing a **sales database** using **SQLite** within a **Jupyter Notebook** environment. It involves **creating tables, inserting sample data, performing SQL queries, aggregating data, and visualizing results**. This project demonstrates the ability to manipulate and analyze data efficiently.

Key Insights

- **Database Setup:** Successfully created an **SQLite database** (sales_data.db) with two tables:
- **Customers:** (stores customer details)
- **Sales:** (stores transaction details)
- **Data Insertion:** Added **4 customers** and **5 sales transactions** to the database.

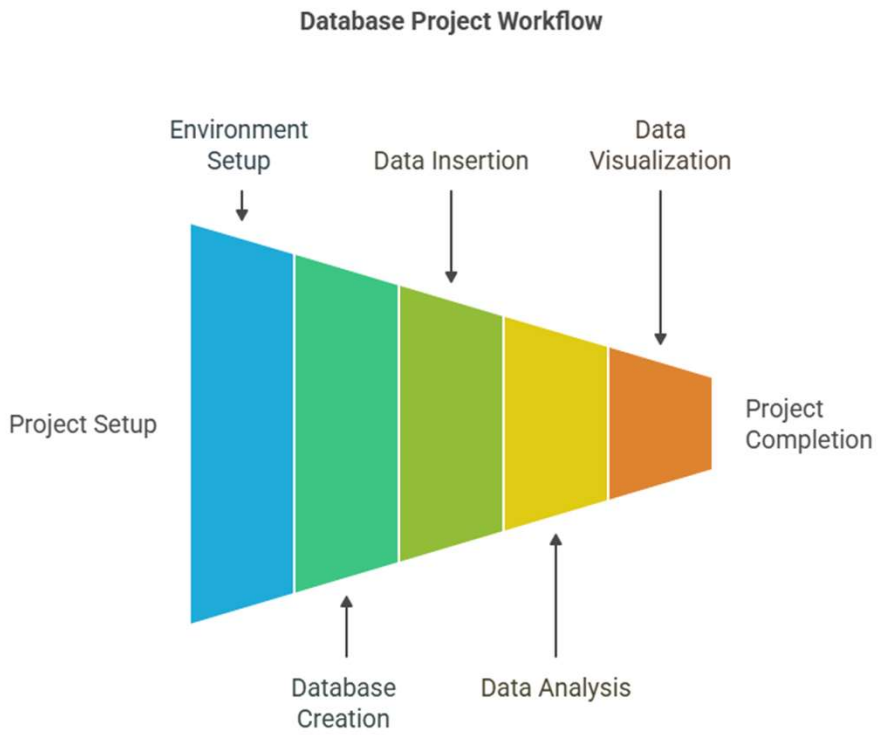
Intermediate SQL Queries

- JOIN operations: Combined customer and sales data for meaningful analysis.

Aggregation functions:

- **Total revenue generated:** $4,200.00
- **Top customer by spending:** Bob Smith ($1,600.00)
- **Best-selling product:** Monitor (3 units sold)

Details



Next Steps

- **Expand Dataset:** Use the **Chinook database**, a **real-world dataset** containing music store transactions.
- **Advanced Queries:** Introduce **CTEs (Common Table Expressions), subqueries, window functions, and advanced JOIN operations.**
- **Data Modeling:** Implement data normalization and indexing for optimized queries.
- **Automate Reporting:** Use **Python scripts** to extract insights and generate reports dynamically.