

TASK 7: Get Basic Sales Summary from a Tiny SQLite Database using Python

Objective: Use SQL inside Python to pull simple sales info (like total quantity sold, total revenue), and display it using basic print statements and a simple bar chart.

Tools:

- Python (with sqlite3, pandas, matplotlib)
- SQLite (built into Python — no setup!)
- Jupyter Notebook or a .py file

Dataset:

- Create a small SQLite database file (sales_data.db) with just one sales table

Deliverables:

Python script (or notebook) that:

- Connects to sales_data.db
- Runs 1–2 SQL queries
- Displays output using print and basic matplotlib bar chart

Hints / Mini Guide:

- Load SQLite database: `import sqlite3 conn = sqlite3.connect("sales_data.db")`
- Run basic SQL: `query = "SELECT product, SUM(quantity) AS total_qty, SUM(quantity * price) AS revenue FROM sales GROUP BY product"`
- Load into pandas: `import pandas as pd df = pd.read_sql_query(query, conn)`
- Print results: `print(df)`
- Plot simple bar chart: `df.plot(kind='bar', x='product', y='revenue')`
- Save chart if needed: `plt.savefig("sales_chart.png")`

Outcome of Task:

By completing this task, you will:

- Learn how to write basic SQL queries
- Practice importing SQL data into Python
- Perform simple data summaries
- Create your first sales chart

Interview Questions:

How did you connect Python to a database?

What SQL query did you run?

What does GROUP BY do?

How did you calculate revenue?

How did you visualize the result?

What does pandas do in your code?

What's the benefit of using SQL inside Python?

Could you run the same SQL query directly in DB Browser for SQLite?

📌 Task Submission Guidelines

- 🕒 **Time Window:**

You can complete the task anytime between 10:00 AM to 10:00 PM on the given day. Submission link closes at 10 :00 PM

- 🔍 **Self-Research Allowed:**

You are free to explore, Google, or refer to tutorials to understand concepts and complete the task effectively.

- 🔧 **Debug Yourself:**

Try to resolve all errors by yourself. This helps you learn problem-solving and ensures you don't face the same issues in future tasks.

- 💰 **No Paid Tools:**

If the task involves any paid software/tools, do not purchase anything. Just learn the process or find free alternatives.

- 📁 **GitHub Submission:**

Create a new GitHub repository for each task.

Add everything you used for the task — code, datasets, screenshots (if any), and a **short README.md** explaining what you did.

- 📌 **Submit Here:**

After completing the task, paste your GitHub repo link and submit it using the link below:

SUBMISSION LINK

