TASK 7.

**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

**Solution**

**import sqlite3**

**import pandas as pd**

**import matplotlib.pyplot as plt**

**# Create a dummy SQLite database and table**

**conn = sqlite3.connect("sales\_data.db")**

**cursor = conn.cursor()**

**# Create the sales table if it doesn't exist**

**cursor.execute("""**

**CREATE TABLE IF NOT EXISTS sales (**

**sale\_id INTEGER PRIMARY KEY AUTOINCREMENT,**

**product TEXT NOT NULL,**

**quantity INTEGER NOT NULL,**

**price REAL NOT NULL**

**)**

**""")**

**# Insert some sample sales data**

**sales\_data = [**

**('Laptop', 2, 1200.00),**

**('Mouse', 5, 25.00),**

**('Keyboard', 3, 75.00),**

**('Laptop', 1, 1150.50),**

**('Monitor', 4, 300.00),**

**('Mouse', 2, 22.75),**

**('Keyboard', 4, 80.00),**

**]**

**cursor.executemany("INSERT INTO sales (product, quantity, price) VALUES (?, ?, ?)", sales\_data)**

**conn.commit()**

**# SQL query to get total quantity sold and total revenue per product**

**query = """**

**SELECT**

**product,**

**SUM(quantity) AS total\_quantity\_sold,**

**SUM(quantity \* price) AS total\_revenue**

**FROM**

**sales**

**GROUP BY**

**product;**

**"""**

**# Execute the SQL query and load the results into a pandas DataFrame**

**df = pd.read\_sql\_query(query, conn)**

**# Close the database connection**

**conn.close()**

**# Display the results using print statements**

**print("Basic Sales Summary:")**

**print("-" \* 30)**

**print(df)**

**print("-" \* 30)**

**print(f"Total Number of Products Sold: {df['total\_quantity\_sold'].sum()}")**

**print(f"Total Revenue: ${df['total\_revenue'].sum():.2f}")**

**print("-" \* 30)**

**# Create a simple bar chart of revenue per product**

**plt.figure(figsize=(8, 6))**

**plt.bar(df['product'], df['total\_revenue'], color='skyblue')**

**plt.xlabel("Product")**

**plt.ylabel("Total Revenue ($)")**

**plt.title("Total Revenue per Product")**

**plt.grid(axis='y', linestyle='--')**

**plt.tight\_layout()**

**plt.show()**

**# If you want to save the chart:**

**# plt.savefig("sales\_chart.png")**

**print("\nBar chart of revenue per product displayed (and optionally saved as sales\_chart.png).")**

**output :**

**Basic Sales Summary:**

**------------------------------**

**product total\_quantity\_sold total\_revenue**

**0 Keyboard 7 580.0**

**1 Laptop 3 3501.0**

**2 Monitor 4 1200.0**

**3 Mouse 7 166.0**

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**Total Number of Products Sold: 21**

**Total Revenue: $5447.00**

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**Bar chart of revenue per product displayed (and optionally saved as sales\_chart.png).**

