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

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📊 Sales Summary Report

Task: Generate a basic sales summary from a SQLite database using Python and visualize it with a bar chart.

✅ Objective:

- Connect to a SQLite database (sales_data.db)
- Query total quantity and total revenue per product
- Display results using:
    - Console print
    - Bar chart via matplotlib

🛠 Tools Used:

- Python
- SQLite (sqlite3)
- Pandas
- Matplotlib
- Jupyter Notebook

🔍 Steps Performed:

1. **Connected to the SQLite Database**

python

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conn = sqlite3.connect("sales_data.db")

2. **Executed SQL Query**

sql

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SELECT product, SUM(quantity) AS total_qty, SUM(quantity * price) AS revenue

FROM sales

GROUP BY product

3. **Loaded Data into DataFrame**

python

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df = pd.read_sql_query(query, conn)

4. **Printed Summary Table**

bash

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print(df)

5. **Plotted Revenue Chart**

python

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df.plot(kind='bar', x='product', y='revenue')

plt.tight_layout()

plt.savefig("sales_chart.png")

plt.show()

📈 **Key Output:**

- **Summary Table**: Displayed total quantity and total revenue for each product.
- **Bar Chart**: Visual representation of revenue by product.
- **Chart Saved**: sales_chart.png generated successfully after correcting rendering sequence.

✅ **Learning Outcomes:**

- Hands-on practice with SQLite and SQL inside Python
- Use of pandas for data loading and processing
- Created and saved a revenue-based chart using matplotlib