# 🧾 Basic Sales Summary using SQLite and Python

## 📊 Project Overview

This project demonstrates how to use SQLite (a lightweight database engine) with Python to generate a simple sales summary. It covers creating a local database, running SQL queries inside Python, and visualizing results using Matplotlib.

## 🎯 Objectives

* Create a small SQLite database (sales\_data.db) with sample sales data.
* Run SQL queries in Python using sqlite3.
* Calculate total quantity sold and total revenue for each product.
* Display results using print() and visualize with a bar chart.

## 🛠️ Tools & Libraries

* Python 3
* SQLite3 (built-in with Python)
* Pandas
* Matplotlib

Install required libraries: pip install pandas matplotlib

## 📂 Dataset

A single table named 'sales' is created inside sales\_data.db:

|  |  |  |
| --- | --- | --- |
| Column | Type | Description |
| id | INTEGER | Primary key |
| product | TEXT | Product name |
| quantity | INTEGER | Units sold |
| price | REAL | Price per unit |

## 💻 Steps in Script

1. Connect to or create sales\_data.db
2. Create a sales table and insert sample data
3. Run SQL query to calculate total sales quantity and revenue
4. Load results into a pandas DataFrame
5. Print summary output
6. Plot a bar chart for product-wise revenue

## 🖼️ Example Output

Console Output Example:

product total\_quantity total\_revenue  
Keyboard 13 19500.0  
Laptop 8 486000.0  
Monitor 10 116000.0  
Mouse 25 19750.0

Chart Output: A bar chart showing total revenue by product.

## 📁 Files in Repository

|  |  |
| --- | --- |
| File | Description |
| sales\_summary.py | Main Python script |
| sales\_data.db | SQLite database file |
| sales\_chart.png | Generated bar chart |
| README.md | Project documentation |

## 🚀 How to Run

Run the script using the command:

python sales\_summary.py

This will:  
- Create the SQLite database  
- Insert sample sales data  
- Print total quantity and revenue per product  
- Display a bar chart visualization

## 📈 Outcome

This mini-project helps you understand:  
- How SQL works inside Python  
- How to use Pandas for SQL query results  
- How to visualize database results using Matplotlib