DATA ANALYST INTERNSHIP

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

Importing Libraries:

```
import sqlite3
import pandas as pd
import matplotlib.pyplot as plt
```

Connecting “sales.db” Database Using Conn and Cursor Variable:

```
# Step 1: Connect to SQLite database
conn = sqlite3.connect('sales_data.db')
cursor = conn.cursor()
```

Creating Simple sales table:

```
# Step 2: Create a simple sales table
cursor.execute('''
CREATE TABLE IF NOT EXISTS sales (
    id INTEGER PRIMARY KEY AUTOINCREMENT,
    product TEXT,
    quantity INTEGER,
    price REAL
)
''')
```

```
cursor.execute("DELETE FROM sales")
sample_data = [
    ('Widget', 10, 2.5),
    ('Gadget', 5, 5.0),
    ('Widget', 7, 2.5),
    ('Gizmo', 3, 7.0),
    ('Gadget', 2, 5.0)
]
cursor.executemany("INSERT INTO sales (product, quantity, price) VALUES (?, ?, ?)", sample_data)
conn.commit()
```

Sql query for finding Total Quantity and Revenue by Product:

```
query = """
SELECT
    product,
    SUM(quantity) AS total_qty,
    SUM(quantity * price) AS revenue
FROM sales
GROUP BY product
"""
```

Load the query and Conn

```
df = pd.read_sql_query(query, conn)
```

Print the Revenue and Quantity by Product

```
print("Sales Summary:")
print(df)
```

Visualization:

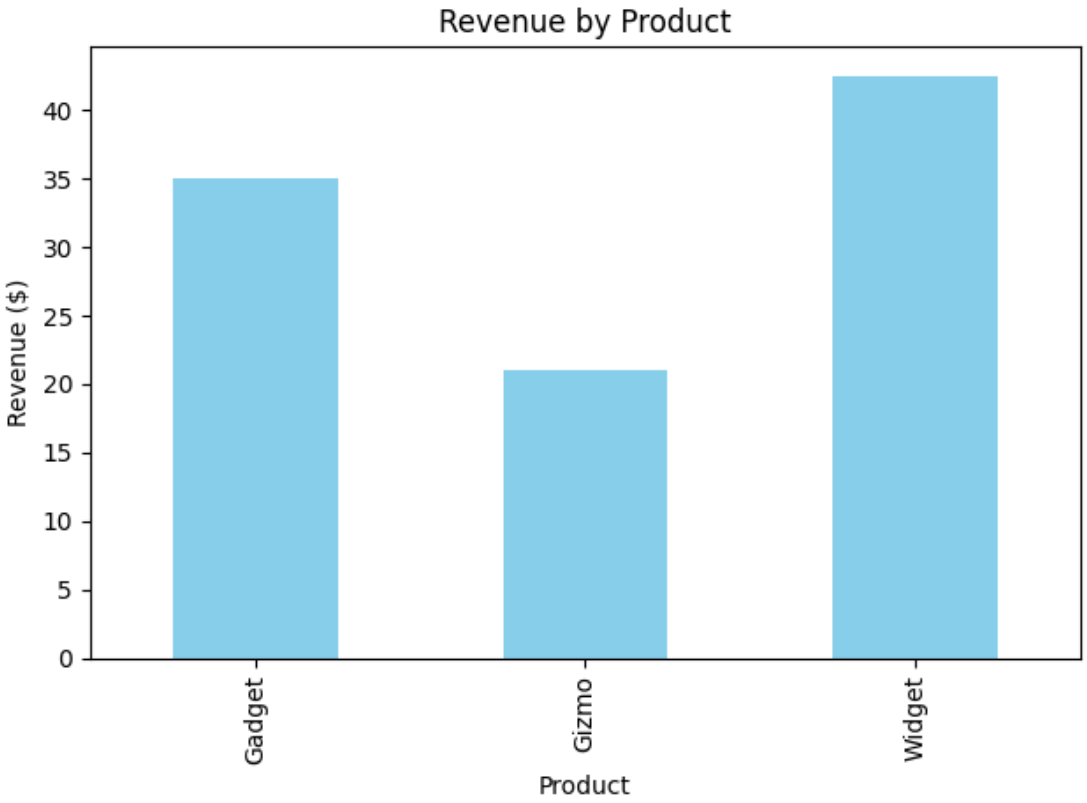
```
df.plot(kind='bar', x='product', y='revenue', legend=False, color = 'skyblue')
plt.title("Revenue by Product")
plt.ylabel("Revenue ($)")
plt.xlabel("Product")
plt.tight_layout()
```

```
plt.show()


conn.close()
```

Output:

```
Sales Summary:
  product  total_qty  revenue
0  Gadget          7     35.0
1   Gizmo          3     21.0
2  Widget         17     42.5
```



Thank You