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import sqlite3

# Create a new SQLite database file
conn = sqlite3.connect("sales_data.db")
cursor = conn.cursor()

# Create the 'sales' table
cursor.execute("""
CREATE TABLE sales (
    id INTEGER PRIMARY KEY AUTOINCREMENT,
    product TEXT,
    quantity INTEGER,
    price REAL
)
""")

# Insert sample data
sample_data = [
    ('Product A', 10, 15.5),
    ('Product B', 5, 20.0),
    ('Product A', 7, 15.5),
    ('Product C', 3, 45.0),
    ('Product B', 8, 20.0),
    ('Product D', 2, 60.0),
    ('Product C', 6, 45.0)
]

cursor.executemany("INSERT INTO sales (product, quantity, price) VALUES (?, ?, ?)", sample_data)

# Commit and close
conn.commit()
conn.close()

print("✅ sales_data.db created with sample data.")

```

✅ sales_data.db created with sample data.

```

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

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

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

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

df.plot(kind='bar', x='product', y='revenue', legend=False, color='orange')
plt.title("Revenue by Product")
plt.xlabel("Product")
plt.ylabel("Revenue")
plt.tight_layout()
plt.savefig("sales_chart.png")
plt.show()

conn.close()

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	product	total_qty	revenue
0	Product A	17	263.5
1	Product B	13	260.0
2	Product C	9	405.0
3	Product D	2	120.0

3 Product D 2 120.0

