```python
import sqlite3

# Connect to SQLite (creates the DB file automatically)
conn = sqlite3.connect("sales_data.db")
cursor = conn.cursor()

# Create table
cursor.execute("""
CREATE TABLE IF NOT EXISTS sales (
    product_name TEXT,
    quantity INTEGER,
    price REAL
)
""")

print("Step 1 complete: Database and table created successfully!")

conn.commit()
conn.close()
```

[1]   Python

⋯   Step 1 complete: Database and table created successfully!

```python
import sqlite3

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

# Clear old data (optional)
cursor.execute("DELETE FROM sales")

# Insert realistic data
data = [
    ("iPhone 14", 4, 799),
    ("Samsung S23", 3, 749),
    ("Dell XPS 13", 2, 1199),
```

[2]   Python

Generate   + Code   + Markdown   ▷ Run All   ≝ Clear All Outputs   ≔ Outline   ⋯

```python
import sqlite3

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

# Clear old data (optional)
cursor.execute("DELETE FROM sales")

# Insert realistic data
data = [
    ("iPhone 14", 4, 799),
    ("Samsung S23", 3, 749),
    ("Dell XPS 13", 2, 1199),
    ("HP Pavilion", 5, 899),
    ("AirPods Pro", 10, 249),
]

cursor.executemany("INSERT INTO sales VALUES (?, ?, ?)", data)

conn.commit()
conn.close()

print("Step 2 complete: Data inserted successfully!")
```

[2]   Python

⋯   Step 2 complete: Data inserted successfully!

```python
import sqlite3
import pandas as pd

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

query = """
SELECT
```

[4]   Python

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```python
import sqlite3
import pandas as pd

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

query = """
SELECT
    product_name,
    SUM(quantity) AS total_quantity,
    SUM(quantity * price) AS total_revenue
FROM sales
GROUP BY product_name
"""

df = pd.read_sql_query(query, conn)

print("SALES SUMMARY:")
print(df)

conn.close()
```

[4]   Python

```
SALES SUMMARY:
   product_name  total_quantity  total_revenue
0  AirPods Pro               10         2490.0
1  Dell XPS 13                2         2398.0
2  HP Pavilion                5         4495.0
3  Samsung S23                3         2247.0
4     iPhone 14               4         3196.0
```

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

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

[7]   Python

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

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

query = """
SELECT
    product_name,
    SUM(quantity) AS total_quantity,
    SUM(quantity * price) AS total_revenue
FROM sales
GROUP BY product_name
"""

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

print(df)

plt.figure(figsize=(9,6))
plt.bar(df['product_name'], df['total_revenue'])
plt.xlabel("Product Name")
plt.ylabel("Revenue")
plt.title("Revenue by Product")
plt.xticks(rotation=45)
plt.tight_layout()
plt.show()
```

[7]   Python

```
   product_name  total_quantity  total_revenue
0  AirPods Pro               10         2490.0
1  Dell XPS 13                2         2398.0
2  HP Pavilion                5         4495.0
3  Samsung S23                3         2247.0
4     iPhone 14               4         3196.0
```

Revenue by Product

```
   product_name  total_quantity  total_revenue
0  AirPods Pro               10         2490.0
1  Dell XPS 13                2         2398.0
2  HP Pavilion                5         4495.0
3  Samsung S23                3         2247.0
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```


Revenue by Product