

Basic Sales Summary from a Tiny SQLite Database using Python

This shows how I linked Python to a SQLite database to build a basic sales table, execute SQL queries, and produce simple data summaries. I utilized pandas to import SQL results and represented product-based revenue with a matplotlib bar chart. This enabled me to work on SQL within Python, manage databases, and perform fundamental data visualization.

PYTHON CODE:

```
import sqlite3

import pandas as pd

import matplotlib.pyplot as plt


#create/connect to DB and table

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

cursor = conn.cursor()


cursor.execute("""

CREATE TABLE IF NOT EXISTS sales (

    product TEXT,

    quantity INTEGER,

    price REAL

)

""")
```

```
#insert sample rows

cursor.executemany("""
insert into Sales(product, quantity, price)values(?,?,?)""",
[("Mobile",30,15000),
 ("Laptop",9,55000),
 ("Earphones",40,800),
 ("Mobile",10,15000),
 ("Laptop",5,55000),
 ("charger", 25,500),
 ("Earphones",30,800),
 ("charger", 20,500)
])
```

```
conn.commit()
```

```
#run sql and load into pandas
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)
```

```
# 4. plot revenue by product
```

```
ax = df.plot(kind='bar', x='product', y='revenue', legend=True)
```

```
ax.set_ylabel("Revenue")
```

```
ax.set_title("Revenue by Product")
```

```
plt.tight_layout()
```

```
plt.savefig("sales_chart.png")
```

```
plt.show()
```

```
# 5. close the connection
```

```
conn.close()
```

