

```
import sqlite3

# Connect to SQLite database (creates new file if not exists)
conn = sqlite3.connect("sales_data.db")
cursor = conn.cursor()
```

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

```
<sqlite3.Cursor at 0x7b6532a12b40>
```

```
# Insert sample data into sales table
sales_data = [
    ('Tumbler', 100, 12.5),
    ('Notepad', 150, 8.75),
    ('Mug', 80, 10.0),
    ('Phone Case', 200, 15.25)
]
```

```
cursor.executemany('''
    INSERT INTO sales (product, quantity, price)
    VALUES (?, ?, ?)
''', sales_data)
```

```
<sqlite3.Cursor at 0x7b6532a12b40>
```

```
# Commit changes and close connection
conn.commit()
conn.close()
```

```
print("Database 'sales_data.db' created and populated.")
```

```
<sqlite3.Cursor at 0x7b6532a12b40> Database 'sales_data.db' created and populated.
```

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

```
# Connect to SQLite database
conn = sqlite3.connect("sales_data.db")
```

```
# Define SQL query to get sales summary
query = '''
    SELECT product, SUM(quantity) AS total_quantity, SUM(quantity * price) AS revenue
    FROM sales
    GROUP BY product
'''
```

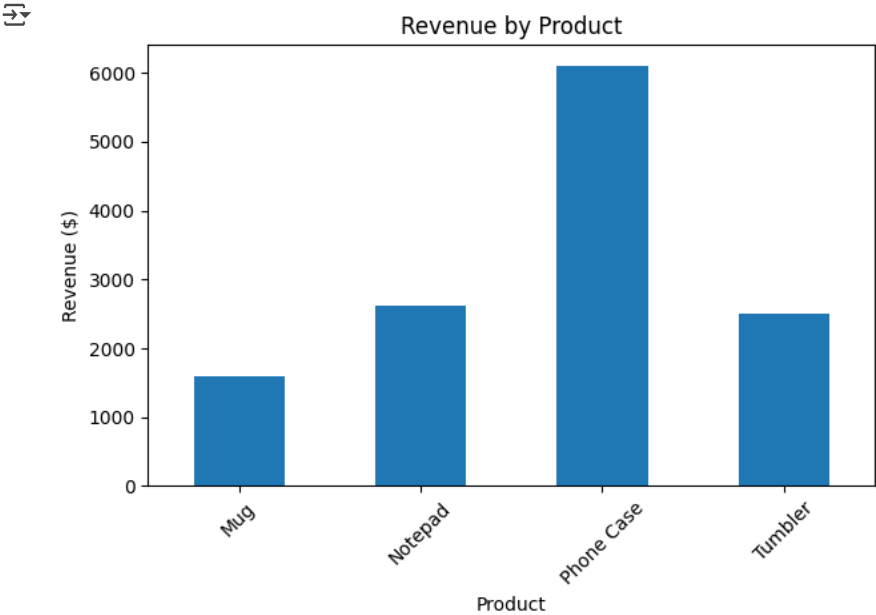
```
# Load data into a pandas DataFrame
df = pd.read_sql_query(query, conn)
```

```
# Print the sales summary
print("Sales Summary:")
print(df)
print()
```

```
<sqlite3.Cursor at 0x7b6532a12b40> Sales Summary:
  product  total_quantity  revenue
0      Mug              160    1600.0
1  Notepad              300    2625.0
2  Phone Case           400    6100.0
3   Tumbler              200    2500.0
```

```
# Plotting the data using matplotlib
df.plot(kind='bar', x='product', y='revenue', legend=False)
```

```
plt.xlabel('Product')
plt.ylabel('Revenue ($)')
plt.title('Revenue by Product')
plt.xticks(rotation=45)
plt.tight_layout()
```



```
# Save the plot as a PNG file
plt.savefig("sales_chart.png")
```

<Figure size 640x480 with 0 Axes>

```
# Display the plot
plt.show()
```

```
# Close the connection
conn.close()
```