Task 7: Basic Sales Summary using SQLite + Python

This PDF contains the Jupyter Notebook script required for Task 7.

Markdown Cell 1:

```
# Task 7: Basic Sales Summary using SQLite + Python

Objective:
- Connect to a SQLite database
- Run SQL query to get total quantity and revenue per product
- Display results and plot a bar chart
```

Code Cell 1:

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

Code Cell 2:

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

# Create sales table (if not exists)
cursor.execute("""
CREATE TABLE IF NOT EXISTS sales (
    id INTEGER PRIMARY KEY AUTOINCREMENT,
    product TEXT,
    quantity INTEGER,
    price REAL
)
""")

# Insert sample data ONLY if table is empty
cursor.execute("SELECT COUNT(*) FROM sales")
if cursor.fetchone()[0] == 0:
    cursor.executemany("""
        INSERT INTO sales (product, quantity, price)
        VALUES (?, ?, ?)
    """, [
        ("Laptop", 3, 65000),
        ("Laptop", 1, 65000),
        ("Mouse", 10, 500),
        ("Mouse", 5, 500),
        ("Keyboard", 4, 1500),
        ("Keyboard", 3, 1500)
    ])
    conn.commit()

print("■ Database ready and sample data inserted.")
```

Code Cell 3:

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

```
"""

df = pd.read_sql_query(query, conn)
print("■ Query executed successfully.")
print(df)
```

Code Cell 4:

```
plt.figure(figsize=(8,5))
plt.bar(df['product'], df['revenue'])
plt.title("Revenue by Product")
plt.xlabel("Product")
plt.ylabel("Revenue")
plt.tight_layout()
plt.show()
```

Code Cell 5:

```
conn.close()
print("■ Database connection closed.")
```