```
In [2]:  ▶  #  Step 1: Import Required Libraries
            import pandas as pd
            import sqlite3

            #  Step 2: Load CSV File
            df = pd.read_csv("product_sales.csv")  # Replace with the actual filename
            df.head()
```

Out[2]:

	AgentID	CallID	CustomerID	PickedUp	Duration	ProductSold	Agent_Name
0	0	7999	519	1	117	0	Michele Williams
1	0	7100	469	1	235	0	Michele Williams
2	0	3752	74	1	185	0	Michele Williams
3	0	3751	562	1	121	0	Michele Williams
4	0	6783	30	1	102	1	Michele Williams

```
In [3]:  ▶  #  Step 3: Create SQLite Database and Table
            conn = sqlite3.connect("product_sales.db")
            df.to_sql("Product_Sales", conn, if_exists="replace", index=False)

            #  Confirm table loaded
            pd.read_sql("SELECT * FROM Product_Sales LIMIT 5", conn)
```

Out[3]:

	AgentID	CallID	CustomerID	PickedUp	Duration	ProductSold	Agent_Name
0	0	7999	519	1	117	0	Michele Williams
1	0	7100	469	1	235	0	Michele Williams
2	0	3752	74	1	185	0	Michele Williams
3	0	3751	562	1	121	0	Michele Williams
4	0	6783	30	1	102	1	Michele Williams

```
In [4]:  ▶  # Step 4: Run SQL Queries

            # 1. Average Call Duration
            pd.read_sql("""
                SELECT AVG(Duration) AS AvgDuration
                FROM Product_Sales
            """, conn)
```

Out[4]:

	AvgDuration
0	125.162692

```
In [5]:  ▶  # 2. Total Products Sold by Each Agent
            pd.read_sql("""
                SELECT Agent_Name, SUM(ProductSold) AS TotalSales
                FROM Product_Sales
                GROUP BY Agent_Name
                ORDER BY TotalSales DESC
            """, conn)
```

Out[5]:

	Agent_Name	TotalSales
0	Gloria Singh	209
1	Todd Morrow	204
2	Lisa Cordova	201
3	Michele Williams	198
4	Paul Nunez	194
5	Agent X	194

```python
# 3. Calls Not Picked Up
pd.read_sql("""
    SELECT * FROM Product_Sales
    WHERE PickedUp = 0
""", conn)
```

Out[6]:

	AgentID	CallID	CustomerID	PickedUp	Duration	ProductSold	Agent_Name
0	0	680	837	0	0	0	Michele Williams
1	0	5331	10	0	0	0	Michele Williams
2	0	2768	779	0	0	0	Michele Williams
3	0	7149	897	0	0	0	Michele Williams
4	0	450	275	0	0	0	Michele Williams
...	...	...	...	...	...	...	...

```python
# 4. Top 10 Customers with Highest Call Duration
pd.read_sql("""
    SELECT CustomerID, SUM(Duration) AS TotalDuration
    FROM Product_Sales
    GROUP BY CustomerID
    ORDER BY TotalDuration DESC
    LIMIT 10
""", conn)
```

	CustomerID	TotalDuration
0	604	3290
1	769	2907
2	953	2792
3	10	2773
4	519	2748

```python
# 5. Create a View (Optional — for saving within DB)
conn.execute("""
    CREATE VIEW IF NOT EXISTS AgentSalesSummary AS
    SELECT Agent_Name, COUNT(*) AS TotalCalls, SUM(ProductSold) AS TotalProducts
    FROM Product_Sales
    GROUP BY Agent_Name
""")

# Check view
pd.read_sql("SELECT * FROM AgentSalesSummary", conn)
```

	Agent_Name	TotalCalls	TotalProducts
0	Agent X	921	194
1	Angel Briggs	881	157
2	Christopher Moreno	910	189
3	Dana Hardy	847	182