____Sales Report Summary Pandas Project :___

```python
In [1]: import pandas as pd

# === Step 1: Sample Sales Data ===
data = {
    "OrderID": [101, 102, 103, 104, 105, 106, 107],
    "Product": ["Laptop", "Phone", "Laptop", "Tablet", "Phone", "Laptop", "Tablet"],
    "Region": ["East", "West", "East", "South", "West", "North", "South"],
    "Month": ["Jan", "Jan", "Feb", "Feb", "Mar", "Mar", "Mar"],
    "Sales": [1500, 1200, 1600, 1100, 1300, 1700, 1150]
}

df = pd.DataFrame(data)
print("=== Sales Data ===")
print(df)

# === Step 2: Basic Summary ===
total_sales_product = df.groupby("Product")["Sales"].sum()
avg_sales_month = df.groupby("Month")["Sales"].mean()
top_product = total_sales_product.idxmax()

print("\n=== Total Sales per Product ===")
print(total_sales_product)

print("\n=== Average Sales per Month ===")
print(avg_sales_month)

print(f"\nTop-selling Product: {top_product}")

# === Step 3: Conditional Analysis ===
high_sales = df[df["Sales"] > 1500]
west_sales = df[df["Region"] == "West"]

print("\n=== Orders with Sales > 1500 ===")
print(high_sales)

print("\n=== Sales in West Region ===")
print(west_sales)

# === Step 4: Export Summary to CSV ===
summary = df.groupby("Product")["Sales"].sum().reset_index()
summary.to_csv("sales_summary.csv", index=False)
print("\nSales summary exported to 'sales_summary.csv'")
```

```
=== Sales Data ===
   OrderID Product Region Month  Sales
0      101  Laptop   East   Jan   1500
1      102   Phone   West   Jan   1200
2      103  Laptop   East   Feb   1600
3      104  Tablet  South   Feb   1100
4      105   Phone   West   Mar   1300
5      106  Laptop  North   Mar   1700
6      107  Tablet  South   Mar   1150

=== Total Sales per Product ===
Product
Laptop    4800
Phone     2500
Tablet    2250
Name: Sales, dtype: int64

=== Average Sales per Month ===
Month
Feb    1350.000000
Jan    1350.000000
Mar    1383.333333
Name: Sales, dtype: float64

Top-selling Product: Laptop

=== Orders with Sales > 1500 ===
   OrderID Product Region Month  Sales
2      103  Laptop   East   Feb   1600
5      106  Laptop  North   Mar   1700

=== Sales in West Region ===
   OrderID Product Region Month  Sales
1      102   Phone   West   Jan   1200
4      105   Phone   West   Mar   1300

Sales summary exported to 'sales_summary.csv'
```

In [ ]: