# Sales and Profit Analysis Report

## a) Load CSV into DataFrame

import pandas as pd  
df = pd.read\_csv("sales\_data.csv")  
print(df.head())

Sample data:

Date Product Quantity Sold Unit Price Total Sales  
2025-01-01 Product A 10 100 1000  
2025-01-02 Product B 5 200 1000  
2025-01-03 Product A 7 100 700  
2025-01-04 Product C 12 150 1800  
2025-01-05 Product B 8 200 1600

## b) Calculate Total Sales

df['Total Sales'] = df['Quantity Sold'] \* df['Unit Price']

Data with Total Sales:

Date Product Quantity Sold Unit Price Total Sales  
2025-01-01 Product A 10 100 1000  
2025-01-02 Product B 5 200 1000  
2025-01-03 Product A 7 100 700  
2025-01-04 Product C 12 150 1800  
2025-01-05 Product B 8 200 1600

## c) Total Sales and Top 5 Profitable Products

product\_sales = df.groupby('Product')['Total Sales'].sum().reset\_index()  
product\_sales['Profit'] = product\_sales['Total Sales'] \* 0.20  
top\_profitable = product\_sales.sort\_values(by='Profit', ascending=False).head(5)  
print(top\_profitable)

Top 5 Most Profitable Products:

Product Total Sales Profit  
Product B 2600 520.0  
Product C 1800 360.0  
Product A 1700 340.0