Question7:

Scenario: You are working as a data analyst for an e-commerce company. You have been given

a dataset containing information about customer orders, stored in a Pandas DataFrame named

order\_data. The DataFrame has columns for customer ID, order date, product name, and order

quantity. Your task is to analyze the data and answer specific questions about the orders.

Question: Using Pandas DataFrame operations, how would you find the following information

from the order\_data DataFrame:

1. The total number of orders made by each customer.

2. The average order quantity for each product.

3. The earliest and latest order dates in the dataset.

Answer:

Code:

import pandas as pd

df = pd.read\_csv(r"D:\datasets\question3.csv")

df['Order Date'] = pd.to\_datetime(df['Order Date'])

total\_orders\_per\_customer = df.groupby('Customer ID').size()

average\_quantity\_per\_product = df.groupby('Product Name')['Order Quantity'].mean()

earliest\_order\_date = df['Order Date'].min()

latest\_order\_date = df['Order Date'].max()

print("1. Total number of orders per customer:")

print(total\_orders\_per\_customer)

print("\n2. Average order quantity per product:")

print(average\_quantity\_per\_product)

print("\n3. Earliest and latest order dates:")

print(f"Earliest: {earliest\_order\_date.date()}")

print(f"Latest: {latest\_order\_date.date()}")

Output:



