Scenario: You are working on a project that involves analyzing the sales performance of a company over the past four quarters. The quarterly sales data is stored in a NumPy array named sales\_data, where each element represents the sales amount for a specific quarter. Your task is to calculate the total sales for the year and determine the percentage increase in sales from the first quarter to the fourth quarter.

Question: Using NumPy arrays and arithmetic operations calculate the total sales for the year and determine the percentage increase in sales from the first quarter to the fourth quarter?

Program:

import pandas as pd

df = pd.read\_csv("data/quarterly\_sales.csv", header=None)

total\_sales = df[0].sum()

percentage\_increase = ((df.iloc[3, 0] - df.iloc[0, 0]) / df.iloc[0, 0]) \* 100

print("Pandas - Total sales for the year:", total\_sales)

print("Pandas - Percentage increase from Q1 to Q4:", percentage\_increase)

output :

Total sales for the year: 640000

Pandas - Percentage increase from Q1 to Q4: 66.66666666666666

dataset:

Q1,Q2,Q3,Q4

120000,150000,170000,200000