import os

import csv

csvpath = os.path.join("Resources","budget\_data.csv")

#identify lists and starting amounts

Number\_Month = []

Profit\_loss = []

Net\_change = []

Previous\_PL = 0

lineNumber = 0

changeTime = 0

GreatestInc = 0

GreatestIncDate = 0

GreatestDec = 0

GreatestDecDate = 0

#opena and read csv (commna)

with open(csvpath,'r', encoding='utf-8') as csvfile:

csvreader = csv.reader(csvfile, delimiter=',')

#skip header in csv file

header = next(csvreader)

#loop through data

for row in csvreader:

lineNumber += 1

Number\_Month.append(row[0])

Profit\_loss.append(int(row[1]))

#calculate netchange and find greatest increase and decrease change

if lineNumber != 1:

currentNetChange = int(row[1]) - Previous\_PL

Net\_change.append(currentNetChange)

changeTime = changeTime + 1

if currentNetChange > GreatestInc:

GreatestInc = currentNetChange

GreatestIncDate = row[0]

if currentNetChange < GreatestDec:

GreatestDec = currentNetChange

GreatestDecDate = row[0]

Previous\_PL = int(row[1])

#print the results

print(f"Financial Analysis")

print("----------------------------")

print(f"Total Months: {len(Number\_Month)}")

print(f"Total: ${sum(Profit\_loss)}")

print(f"Average Change: ${(sum(Net\_change)/changeTime):3f}")

print(f"Greatest Increase in Profits: {GreatestIncDate} $({GreatestInc})")

print(f"Greatest Decrease in Profits: {GreatestDecDate} $({GreatestDec})")

# create a open output file

output\_file = os.path.join("budget\_final.csv")

with open(output\_file, "w") as file:

writer = csv.writer(file)

# Write the header row

file.write(f"Financial Analysis")

file.write("\n")

file.write(f"----------------------------")

file.write("\n")

file.write(f"Total Months: {len(Number\_Month)}")

file.write("\n")

file.write(f"Total: ${sum(Profit\_loss)}")

file.write("\n")

file.write(f"Average Change: ${(sum(Net\_change)/changeTime):3f}")

file.write("\n")

file.write(f"Greatest Increase in Profits: {GreatestIncDate} $({GreatestInc})")

file.write("\n")

file.write(f"Greatest Decrease in Profits: {GreatestDecDate} $({GreatestDec})")

file.write("\n")