'Defining all the variables to be used in the analysis

Sub AnalyzeStockDataMultipleSheets()

Dim ws As Worksheet

Dim sheetNames As Variant

Dim LastRow As Long

Dim i As Long

Dim ticker As String

Dim startRow As Long

Dim endRow As Long

Dim openPrice As Double

Dim closePrice As Double

Dim quarterlyChange As Double

Dim percentChange As Double

Dim totalVolume As Double

Dim outputRow As Long

' Variables to track the greatest values

Dim greatestIncrease As Double

Dim greatestDecrease As Double

Dim greatestVolume As Double

' Variables to store the tickers associated with the greatest values

Dim tickerGreatestIncrease As String

Dim tickerGreatestDecrease As String

Dim tickerGreatestVolume As String

' Array of sheet names

sheetNames = Array("B", "C", "D", "E", "F")

' Loop through each sheet in the array

For Each sheetName In sheetNames

' Set the worksheet to the current sheet

Set ws = ThisWorkbook.Sheets(sheetName)

' Initialize greatest values for this sheet

greatestIncrease = -999999

greatestDecrease = 999999

greatestVolume = 0

' Adding headers for the output columns in the current sheet

ws.Cells(1, 9).Value = "Ticker"

ws.Cells(1, 10).Value = "Quarterly Change"

ws.Cells(1, 11).Value = "Percent Change"

ws.Cells(1, 12).Value = "Total Stock Volume"

' Adding headers for the greatest values in columns P and Q

ws.Cells(1, 16).Value = "Ticker"

ws.Cells(1, 17).Value = "Value"

' Finding the last row of data in the ticker column

LastRow = ws.Cells(ws.Rows.Count, 1).End(xlUp).Row

' Initialize the output row

outputRow = 2

' Looping through all rows of data

i = 2

Do While i <= LastRow

ticker = ws.Cells(i, 1).Value

startRow = i

' Loop to find the end of the quarter for the same ticker

Do While ws.Cells(i, 1).Value = ticker And i <= LastRow

i = i + 1

Loop

endRow = i - 1

' Get opening and closing prices

openPrice = ws.Cells(startRow, 3).Value

closePrice = ws.Cells(endRow, 6).Value

' Calculate the quarterly change and percentage change

quarterlyChange = closePrice - openPrice

If openPrice <> 0 Then

percentChange = quarterlyChange / openPrice

Else

percentChange = 0

End If

' Calculate the total volume (ChatGPT)

totalVolume = Application.WorksheetFunction.Sum(ws.Range(ws.Cells(startRow, 7), ws.Cells(endRow, 7)))

' Output the ticker data

ws.Cells(outputRow, 9).Value = ticker

ws.Cells(outputRow, 10).Value = quarterlyChange

ws.Cells(outputRow, 11).Value = percentChange

ws.Cells(outputRow, 12).Value = totalVolume

' Check for greatest percentage increase

If percentChange > greatestIncrease Then

greatestIncrease = percentChange

tickerGreatestIncrease = ticker

End If

' Check for greatest percentage decrease

If percentChange < greatestDecrease Then

greatestDecrease = percentChange

tickerGreatestDecrease = ticker

End If

' Check for greatest volume

If totalVolume > greatestVolume Then

greatestVolume = totalVolume

tickerGreatestVolume = ticker

End If

' Increment the output row

outputRow = outputRow + 1

Loop

' Output the greatest values for this sheet

ws.Cells(2, 15).Value = "Greatest % Increase"

ws.Cells(2, 16).Value = tickerGreatestIncrease

ws.Cells(2, 17).Value = greatestIncrease

ws.Cells(3, 15).Value = "Greatest % Decrease"

ws.Cells(3, 16).Value = tickerGreatestDecrease

ws.Cells(3, 17).Value = greatestDecrease

ws.Cells(4, 15).Value = "Greatest Total Volume"

ws.Cells(4, 16).Value = tickerGreatestVolume

ws.Cells(4, 17).Value = greatestVolume

' Apply percent format to the Percent Change column (column K)

ws.Range("K2:K" & outputRow - 1).NumberFormat = "0.00%"

' Apply conditional formatting to highlight positive (green) and negative (red) percent changes (ChatGPT)

With ws.Range("K2:K" & outputRow - 1)

.FormatConditions.Add Type:=xlCellValue, Operator:=xlGreater, Formula1:="0"

.FormatConditions(1).Interior.Color = RGB(0, 255, 0) ' Green for positive

.FormatConditions.Add Type:=xlCellValue, Operator:=xlLess, Formula1:="0"

.FormatConditions(2).Interior.Color = RGB(255, 0, 0) ' Red for negative

End With

' Format percent values in the output for greatest increase/decrease

ws.Cells(2, 17).NumberFormat = "0.00%"

ws.Cells(3, 17).NumberFormat = "0.00%"

Next sheetName

End Sub