**VBA Script for Challenge 1 (Greatest)**

Sub Stock\_Analysis\_Greatest()

' Define the variables that will be used

Dim Ticker As String

Dim Volume\_Total As Double

Volume\_Total = 0

Dim Open\_Amt As Double

Open\_Amt = Cells(2, 3).Value

Dim Close\_Amt As Double

Close\_Amt = 0

Dim Yearly\_Change As Double

Yearly\_Change = 0

Dim Percent\_Change As Double

Percent\_Change = 0

Dim Greatest\_Perc\_Inc\_Ticker As String

Dim Greatest\_Perc\_Dec\_Ticker As String

Dim Greatest\_Total\_Volume\_Ticker As String

Dim Greatest\_Percent\_Increase As Double

Greatest\_Percent\_Increase = 0

Dim Greatest\_Percent\_Decrease As Double

Greatest\_Percent\_Decrease = 0

Dim Greatest\_Total\_Volume As Double

Greatest\_Total\_Volume = 0

Dim Summary\_Table\_Row As Long

Summary\_Table\_Row = 2

Dim Lastrow As Long

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

' Label headers for the summary tables

Range("K1,R1") = "Ticker"

Range("L1") = "Yearly Change"

Range("M1") = "Percent Change"

Range("N1") = "Total Stock Volume"

Range("S1") = "Value"

Range("Q2") = "Greatest % Increase"

Range("Q3") = "Greatest % Decrease"

Range("Q4") = "Greatest Total Volume"

' Create loop to go through all the Tickers to find the required info

For i = 2 To Lastrow

' Create if-then statement to check and see if we are still in the same Ticker and set parameters based on that

If Cells(i + 1, 1).Value <> Cells(i, 1).Value Then

' If the Tickers are not equal, then the following values will be true

Ticker = Cells(i, 1).Value

Close\_Amt = Cells(i, 6).Value

Yearly\_Change = Close\_Amt - Open\_Amt

' Print variables into the appropriate cells

Range("K" & Summary\_Table\_Row).Value = Ticker

Range("L" & Summary\_Table\_Row).Value = Yearly\_Change

' If Yearly Change is greater than zero, set the color to green

If Yearly\_Change > "0" Then

Range("L" & Summary\_Table\_Row).Interior.ColorIndex = 4

' If Yearly Change is less than or equal to zero, set the color to red

ElseIf Yearly\_Change <= "0" Then

Range("L" & Summary\_Table\_Row).Interior.ColorIndex = 3

End If

' Create another if-then statement to get the Percent Change and make sure to account for the zero division possible error

If Open\_Amt <> 0 Then

Percent\_Change = (Yearly\_Change / Open\_Amt) \* 100

' Print variables into cells and format the Percent Change to show numbers as a percent

Range("M" & Summary\_Table\_Row).Value = Percent\_Change

Range("M" & Summary\_Table\_Row).NumberFormat = "0.00\%"

' If the open amount is equal to zero, then Percent Change will be zero because you cannot divide by zero

Else

Percent\_Change = 0

End If

' Find the Greatest Percent Change

If Percent\_Change > Greatest\_Percent\_Increase Then

' If the Percent Change is greater than the Greatest Percent Increase, then the following is true:

Greatest\_Percent\_Increase = Percent\_Change

Greatest\_Perc\_Inc\_Ticker = Ticker

' Print Ticker with the Greatest Percent Increase and the number into the appropriate cells with correct formatting

Range("R2").Value = Ticker

Range("S2").Value = Greatest\_Percent\_Increase

Range("S2").NumberFormat = "0.00\%"

' Find the Greatest Percent Decrease

ElseIf Percent\_Change < Greatest\_Percent\_Decrease Then

' If the Percent Change is less than the Greatest Percent Decrease, then the following is true:

Greatest\_Percent\_Decrease = Percent\_Change

Greatest\_Perc\_Dec\_Ticker = Ticker

' Print Ticker with the Greatest Percent Decrease and the corresponding percent into the appropriate cells with correct formatting

Range("R3").Value = Ticker

Range("S3").Value = Greatest\_Percent\_Decrease

Range("S3").NumberFormat = "0.00\%"

End If

' Obtain Volume Total by Ticker name since we need to account for the last volume amount before Ticker changes to next Ticker

Volume\_Total = Volume\_Total + Cells(i, 7).Value

' Print the Volume Total into the appropriate cells

Range("N" & Summary\_Table\_Row).Value = Volume\_Total

' Find the Greatest Total Volume

If Volume\_Total > Greatest\_Total\_Volume Then

' If the Volume Total amount is greater than the Greatest Total Volume, then the following is true:

Greatest\_Total\_Volume = Volume\_Total

Greatest\_Total\_Volume\_Ticker = Ticker

' Print Ticker with the Greatest Total Volume and the number into the appropriate cells

Range("R4").Value = Ticker

Range("S4").Value = Greatest\_Total\_Volume

End If

' Add 1 to the Summary Table Row so that the correct variable is in the correct cell for the next iteration

Summary\_Table\_Row = Summary\_Table\_Row + 1

' Re-set to zero for next iteration

Yearly\_Change = 0

Percent\_Change = 0

Close\_Amt = 0

Volume\_Total = 0

' Get Open Amount for next Ticker

Open\_Amt = Cells(i + 1, 3).Value

' If the Ticker value is equal, then the Volume Total would be 0 plus the Volume Total numbers associated with the first Ticker

Else

Volume\_Total = Volume\_Total + Cells(i, 7).Value

' Need to end this statement

End If

' Need to end the loop

Next i

' Format cells to autofit in the worksheet so that data is readable and looks clean

Cells.EntireColumn.AutoFit

' Must end the function

End Sub