**VBA Challenge – Felicia Williams 2020**

Sub AlphabeticaltestLoop()

Dim ws As Worksheet

'Loop each worksheet

For Each ws In Worksheets

'Declare all the variables

Dim lastrow As Long

Dim x, y, I, MaxLine, MinLine, MaxRow As Integer

Dim closeNumber, openNumber, MaxNumber, MinNumber, MaxVolume As Double

Dim total As Double

'Assign an orignal value to all the variables

x = 2

y = 9

MaxNumber = 0

MinNumber = 0

MaxVolume = 0

openNumber = ws.Cells(2, 3).Value

lastrow = ws.Range("A999999").End(xlUp).Row

total = ws.Cells(2, 7).Value

'Design the excel format

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

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

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

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

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

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

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

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

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

ws.Columns("I").ColumnWidth = 10

ws.Columns("J:L").ColumnWidth = 20

ws.Columns("O").ColumnWidth = 20

ws.Columns("Q").ColumnWidth = 20

ws.Columns("p").ColumnWidth = 10

ws.Range("I1:Q1").HorizontalAlignment = xlCenter

'Calculate the Ticker, yearly change, percentage change, and total stack value

For I = 2 To lastrow

If ws.Cells(I, 1).Value = ws.Cells(I + 1, 1).Value Then

total = total + ws.Cells(I + 1, 7).Value

End If

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

closeNumber = ws.Cells(I, 6).Value

ws.Cells(x, y).Value = ws.Cells(I, 1).Value

ws.Cells(x, y + 1).Value = closeNumber - openNumber

ws.Cells(x, y + 1).NumberFormat = "0.000000000"

If ws.Cells(x, y + 1).Value >= 0 Then

ws.Cells(x, y + 1).Interior.ColorIndex = 4

Else:

ws.Cells(x, y + 1).Interior.ColorIndex = 3

End If

If openNumber <> 0 Then

ws.Cells(x, y + 2).Value = (closeNumber - openNumber) / openNumber

Else:

ws.Cells(x, y + 2).Value = 0

End If

ws.Cells(x, y + 2).NumberFormat = "0.00%"

ws.Cells(x, y + 3).Value = total

openNumber = ws.Cells(I + 1, 3).Value

'situation when the open number is 0, then caluculaate the next open\_number

If openNumber = 0 Then

For J = I + 1 To lastrow

If ws.Cells(J, 1).Value <> ws.Cells(J + 1, 1).Value Then Exit For

If ws.Cells(J, 3).Value > 0 Then

openNumber = ws.Cells(J, 3).Value

Exit For

End If

Next J

End If

x = x + 1

total = ws.Cells(I + 1, 7).Value

End If

Next I

'Calculate the greatet % Increase

For I = 2 To lastrow

If ws.Cells(I, 11) > MaxNumber Then

MaxNumber = ws.Cells(I, 11).Value

MaxLine = I

End If

Next I

ws.Cells(2, 16).Value = ws.Cells(MaxLine, 9).Value

ws.Cells(2, 17).Value = ws.Cells(MaxLine, 11).Value

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

'Calculate the greatet % Decrease

For I = 2 To lastrow

If ws.Cells(I, 11) < MinNumber Then

MinNumber = ws.Cells(I, 11).Value

MinLine = I

End If

Next I

ws.Cells(3, 16).Value = ws.Cells(MinLine, 9).Value

ws.Cells(3, 17).Value = ws.Cells(MinLine, 11).Value

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

'Calculate the Greatest Total Value

For I = 2 To lastrow

If ws.Cells(I, 12) > MaxVolume Then

MaxVolume = ws.Cells(I, 12).Value

MaxRow = I

End If

Next I

ws.Cells(4, 16).Value = ws.Cells(MaxRow, 9).Value

ws.Cells(4, 17).Value = ws.Cells(MaxRow, 12).Value

Next ws

End Sub