

Option Explicit

Sub VBACHallenge2()

Dim ws As Worksheet

Dim ticker As String

Dim yearlyChange As Double

Dim PercentChange As Double

'Add header names to columns I, J, K, and L to create Output Table

For Each ws In ThisWorkbook.Worksheets

With ws

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

.Cells(1, 10).Value = "YearlyChange"

.Cells(1, 11).Value = "PercentChange"

.Cells(1, 12).Value = "TotalStockVolume"

.Cells(1, 15).Value = "Ticker"

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

End With

Next ws

' Extract unique tickers

Dim uniqueTickers As Object

Set uniqueTickers = CreateObject("Scripting.Dictionary")

'Loop through each worksheet in the Workbook

For Each ws In ThisWorkbook.Worksheets

Dim lastRow As Long

lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).row

' Extract ticker symbols from each worksheet

Dim cell As Range

For Each cell In ws.Range("A2:A" & lastRow)

If Not uniqueTickers.Exists(cell.Value) And cell.Value <> "" Then

uniqueTickers.Add cell.Value, Nothing

End If

Next cell

'Output unique ticker symbols to respective worksheet

ws.Columns("I:I").Clear

ws.Range("I1").Value = "Unique Tickers"

Dim i As Integer

Dim Key As Variant

i = 2

For Each Key In uniqueTickers.Keys

ws.Cells(i, "I").Value = Key

i = i + 1

Next Key

Set uniqueTickers = CreateObject("Scripting.Dictionary")

Next ws

' Calculate Yearly Change and populate Output table

Dim openPrice As Double

Dim closePrice As Double

Dim priceDifference As Double

For Each ws In ThisWorkbook.Worksheets

lastRow = ws.Cells(ws.Rows.Count, "I").End(xlUp).row

For i = 2 To lastRow

ticker = ws.Cells(i, "I").Value

openPrice = ws.Cells(i, "C").Value

closePrice = ws.Cells(i, "F").Value

priceDifference = closePrice - openPrice

ws.Cells(i, "J").Value = priceDifference

Next i

Next ws

' Calculate Yearly Percent Change and populate Output table

For Each ws In ThisWorkbook.Worksheets

lastRow = ws.Cells(ws.Rows.Count, "I").End(xlUp).row

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For i = 2 To lastRow
    ticker = ws.Cells(i, "I").Value
    openPrice = ws.Cells(i, "C").Value
    closePrice = ws.Cells(i, "F").Value

    If openPrice <> 0 And closePrice <> 0 Then
        PercentChange = ((closePrice - openPrice) / openPrice) * 100
        ws.Cells(i, "K").Value = PercentChange
        ws.Cells(i, "K").NumberFormat = "0.00%"
    End If
Next i
Next ws

' ApplyConditionalFormatting to values in Yearly Change
Dim row As Integer
For Each ws In ThisWorkbook.Worksheets
    lastRow = ws.Cells(ws.Rows.Count, "I").End(xlUp).row

    For row = 2 To lastRow
        If ws.Cells(row, 10).Value >= 0 Then
            ws.Cells(row, 10).Interior.Color = RGB(0, 255, 0) ' Green color
        Else
            ws.Cells(row, 10).Interior.Color = RGB(255, 0, 0) ' Red color
        End If
    Next row
Next ws

' ApplyConditionalFormatting to values in Percent Change
For Each ws In ThisWorkbook.Worksheets
    lastRow = ws.Cells(ws.Rows.Count, "I").End(xlUp).row

    For row = 2 To lastRow
        If ws.Cells(row, 11).Value >= 0# Then
            ws.Cells(row, 11).Interior.Color = RGB(0, 255, 0) ' Green color
        Else
            ws.Cells(row, 11).Interior.Color = RGB(255, 0, 0) ' Red color
        End If
    Next row
Next ws

' Calculate Total Volume and populate Output table - Couldn't get to populate field.
Dim totalSum As Long
Dim tickersymbol As Variant
Dim TotalStockVolume As Long

For Each ws In ThisWorkbook.Worksheets
    lastRow = ws.Cells(ws.Rows.Count, "A").End(xlUp).row

    For i = 2 To lastRow ' Assuming row 1 is header
        ticker = ws.Cells(i, "A").Value
    Next i

    ' Calculate total sum for each unique ticker
    For Each tickersymbol In uniqueTickers
        If TotalStockVolume = TotalStockVolume + ws.Cells(i, 7).Value Then
            ws.Cells("L").Value = TotalStockVolume
            i = i + 1
            TotalStockVolume = 0
        Else
            TotalStockVolume = TotalStockVolume + ws.Cells(i, 7).Value
            ws.Cells(i, "L").Value = TotalStockVolume
            ws.Cells(ws.Rows.Count, "L").End(xlUp).Offset(1, 0).Value = ticker
            ws.Cells(ws.Rows.Count, "L").End(xlUp).Offset(0, 1).Value = totalSum
        End If
    Next tickersymbol
Next ws

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