MSU-VIRT-DATA-PT-09-2021-U-B-TTH

Sub MacroCheck()

Dim testMessage As String

testMessage = "Hello World!"

MsgBox (testMessage)

End Sub

Sub DQAnalysis()

Worksheets("DQ Analysis").Activate

Range("A1").Value = "DAQ0 (Ticker: DQ)"

'Create a header row

Cells(3, 1).Value = "Year"

Cells(3, 2).Value = "Total Daily Volume"

Cells(3, 3).Value = "Return"

Worksheets("2018").Activate

'set intitial volume to zero

TotalVolume = 0

Dim startinPrice As Double

Dim endingPrice As Double

'Establish the number of rows to loop over

rowStart = 2

rowEnd = Cells(Rows.Count, "A").End(xlUp).Row

'loop over all the rows

For i = rowStart To rowEnd

If Cells(i, 1).Value = "DQ" Then

'incease totalVolume by the value in the current row

TotalVolume = TotalVolume + Cells(i, 8).Value

End If

If Cells(i, 1).Value <> "DQ" And Cells(i - 1, 1).Value = "DQ" Then

startingPrice = Cells(i, 6).Value

End If

If Cells(i, 1).Value <> "DQ" And Cells(i + 1, 1).Value = "DQ" Then

endingPrice = Cells(i, 6).Value

End If

Next i

Worksheets("DQ Analysis").Activate

Cells(4, 1).Value = 2018

Cells(4, 2).Value = TotalVolume

Cells(4, 3).Value = (endingPrice / startingPrice) - 1

End Sub

Sub AllStocksAnalysis()

Dim startTime As Single

Dim endTime As Single

yearValue = InputBox("What year would you like to run the analysis on?")

startTime = Timer

'1) Format the output sheet on All Stocks Analysis worksheet

Worksheets("All Stocks Analysis").Activate

Range("A1").Value = "All Stocks (" + yearValue + ")"

'Create a header row

Cells(3, 1).Value = "Ticker"

Cells(3, 2).Value = "Total Daily Volume"

Cells(3, 3).Value = "Return"

'2) Initialize array of all tickers

Dim tickers(11) As String

tickers(0) = "AY"

tickers(1) = "CSIQ"

tickers(2) = "DQ"

tickers(3) = "ENPH"

tickers(4) = "FSLR"

tickers(5) = "HASI"

tickers(6) = "JKS"

tickers(7) = "RUN"

tickers(8) = "SEDG"

tickers(9) = "SPWR"

tickers(10) = "TERP"

tickers(11) = "VSLR"

'3a) Initialize variables for starting price and ending price

Dim startingPrice As Single

Dim endingPrice As Single

'3b) Activate data worksheet

Worksheets("2018").Activate

'3c) Get the number of rows to loop over

RowCount = Cells(Rows.Count, "A").End(xlUp).Row

'4 Loop through tickers

For i = 0 To 11

ticker = tickers(i)

TotalVolume = 0

'5) loop through rows in the data

Worksheets("2018").Activate

For J = 2 To RowCount

'5a) Get total volume for current ticker

If Cells(J, 1).Value = ticker Then

TotalVolume = TotalVolume + Cells(J, 8).Value

End If

'5b) get starting price for current ticker

If Cells(J - 1, 1).Value <> ticker And Cells(J, 1).Value = ticker Then

startingPrice = Cells(J, 6).Value

End If

'5c) get ending price for current ticker

If Cells(J + 1, 1).Value <> ticker And Cells(J, 1).Value = ticker Then

endingPrice = Cells(J, 6).Value

End If

Next J

'6) Output data for current ticker

Worksheets("All Stocks Analysis").Activate

Cells(4 + i, 1).Value = ticker

Cells(4 + i, 2).Value = TotalVolume

Cells(4 + i, 3).Value = endingPrice / startingPrice - 1

Next i

endTime = Timer

MsgBox "This code ran in " & (endTime - startTime) & " seconds for the year " & (yearValue)

End Sub

Sub formatAllStocksAnalysisTable()

'Formatting

Worksheets("All Stocks Analysis").Activate

Range("A3:C3").Font.FontStyle = "Bold"

Range("A3:C3").Borders(xlEdgeBottom).LineStyle = xlContinuous

Range("B4:B15").NumberFormat = "#,##0"

Range("C4:C15").NumberFormat = "0.0%"

Columns("B").AutoFit

dataRowStart = 4

dataRowEnd = 15

For i = dataRowStart To dataRowEnd

If Cells(i, 3) > 0 Then

'Color the cell green

Cells(i, 3).Interior.Color = vbGreen

ElseIf Cells(i, 3) < 0 Then

'Color the cell red

Cells(i, 3).Interior.Color = vbRed

Else

'Clear the cell color

Cells(i, 3).Interior.Color = xlNone

End If

Next i

yearValue = InputBox("What year would you like to run the analysis on?")

End Sub

Sub AllStocksAnalysisRefactored()

Dim startTime As Single

Dim endTime As Single

yearValue = InputBox("What year would you like to run the analysis on?")

startTime = Timer

'Format the output sheet on All Stocks Analysis worksheet

Worksheets("All Stocks Analysis").Activate

Range("A1").Value = "All Stocks (" + yearValue + ")"

'Create a header row

Cells(3, 1).Value = "Ticker"

Cells(3, 2).Value = "Total Daily Volume"

Cells(3, 3).Value = "Return"

'Initialize array of all tickers

Dim tickers(12) As String

tickers(0) = "AY"

tickers(1) = "CSIQ"

tickers(2) = "DQ"

tickers(3) = "ENPH"

tickers(4) = "FSLR"

tickers(5) = "HASI"

tickers(6) = "JKS"

tickers(7) = "RUN"

tickers(8) = "SEDG"

tickers(9) = "SPWR"

tickers(10) = "TERP"

tickers(11) = "VSLR"

'Activate data worksheet

Worksheets(yearValue).Activate

'Get the number of rows to loop over

RowCount = Cells(Rows.Count, "A").End(xlUp).Row

'1a) Create a ticker Index

tickerIndex = 0

'1b) Create three output arrays

Dim tickerVolumes(12) As Long

Dim tickerStartingPrices(12) As Single

Dim tickerEndingPrices(12) As Single

''2a) Create a for loop to initialize the tickerVolumes to zero.

For i = 0 To 11

tickerVolumes(i) = 0

Next i

''2b) Loop over all the rows in the spreadsheet.

For i = 2 To RowCount

'3a) Increase volume for current ticker

tickerVolumes(tickerIndex) = tickerVolumes(tickerIndex) + Cells(i, 9).Value

'3b) Check if the current row is the first row with the selected tickerIndex.

'If Then

If Cells(i - 1, 2).Value <> tickers(tickerIndex) Then

tickerStartingPrices(tickerIndex) = Cells(i, 7).Value

End If

'End If

'3c) check if the current row is the last row with the selected ticker

'If the next row’s ticker doesn’t match, increase the tickerIndex.

'If Then

If Cells(i + 1, 2).Value <> tickers(tickerIndex) Then

tickerEndingPrices(tickerIndex) = Cells(i, 7).Value

End If

'3d Increase the tickerIndex.

tickerIndex = tickerIndex + 1

'End If

Next i

'4) Loop through your arrays to output the Ticker, Total Daily Volume, and Return.

For i = 0 To 11

Worksheets("All Stocks Analysis").Activate

tickerIndex = i

Cells(i + 4, 1).Value = tickers(tickerIndex)

Cells(i + 4, 2).Value = tickerVolumes

Cells(i + 4, 3).Value = tickerEndingPrices(tickerIndex) / tickerStartingPrices(tickerIndex) - 1

Next i

'Formatting

Worksheets("All Stocks Analysis").Activate

Range("A3:C3").Font.FontStyle = "Bold"

Range("A3:C3").Borders(xlEdgeBottom).LineStyle = xlContinuous

Range("B4:B15").NumberFormat = "#,##0"

Range("C4:C15").NumberFormat = "0.0%"

Columns("B").AutoFit

dataRowStart = 4

dataRowEnd = 15

For i = dataRowStart To dataRowEnd

If Cells(i, 3) > 0 Then

Cells(i, 3).Interior.Color = vbGreen

Else

Cells(i, 3).Interior.Color = vbRed

End If

Next i

endTime = Timer

MsgBox "This code ran in " & (endTime - startTime) & " seconds for the year " & (yearValue)

End Sub