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Challenge Two

All Stock Analysis

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Overview of Project:

The purpose of this project All Stock Analysis original vs, refactored data analysis for Steveand his parents to compare stocks by an overview based on a compilation of data from two years 2017, 2018. The return of 12 stocks reflecting an overall percentage return based on unknown behavioral projections of positive or negative experience that year. The three companies’ significant returns for 2017, were Daqo New Energy Corporation ADR (DQ) a Chinese company primarily use in solar photovoltaic systems has a significate percentage of 199.4%. Secondly, SolarEdge Technologies Inc. (SEDG), an Israeli company involved in solar inverters photovoltaic arrays and other products returns were an impressive 184.5%. Next, Enphase Energy Inc. (ENPH) an American company manufactures solar microinverters, as well as other energy generators primarily for residents return 129.5%. Lastly First Solar, Inc. an American manufacturer of solar panels and PV supporting systems with the second largest comparable total daily volume came in with a mild return of 101.3%. The project was labeled by their ticker symbol in accordance with NASDAQ as energy stocks and parsed the top 12 stocks which is something they can reflex on base the annual return.

The Tables are based on 12 stocks for 2017 and 2018. The overall VBA process parsed out information pertaining to twelve stocks, next their overall total daily volume and lastly the return of that stock. 2017 total return for the twelve stocks were positive except for RUN. However, in 2018 was extensive negative returns. The overall increase in total daily volume was 139,399,100 from 2017 to 2018.

It required a ticker index to be established with numerous steps in the coding process.

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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 12

tickerVolumes(i) = 0

'ticker = tickers(i)

Next i

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

For j = 2 To RowCount

'3a) Increase volume for current ticker

If Cells(j, 1).Value = TickerIndex Then

tickerVolumes(TickerIndex) = tickerVolumes(TickerIndex) + Cells(j, 8).Value

End If

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

'If Then

If Cells(j - 1, 1).Value <> tickers(TickerIndex) Then

tickerStartingPrices(TickerIndex) = Cells(j, 6).Value

End If

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

'If the next row‚Äôs ticker doesn‚Äôt match, increase the tickerIndex.

'If Then

If Cells(j + 1, 1).Value <> tickers(TickerIndex) Then

tickerEndingPrices(TickerIndex) = Cells(j, 6).Value

'3d Increase the tickerIndex.

TickerIndex = TickerIndex + 1

End If

Next j

'output data for current ticker.

'Worksheets("AllStocksAnalysis").Activate

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

For i = 0 To 1

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

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

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

Next i

'Formatting

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 l = 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 l

endTime = Timer

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

End Sub

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**In summary:**

On a first note the advantages and disadvantages of refactoring code in general provides and overview

Graphical user interface, text

Description automatically generatedTimeline

Description automatically generated

As you can see in the screen shot the code ran faster in 2017 0.05859375 seconds vs. 2018 0.9140625 seconds. I had to continue to debug and then the excel system would crash. In turn I re-wrote the code again. The steps to coding were provided as a statement. The overall daily total volume increased by 139,399,100 for the top twelve stocks from 2017 to 2018.

The coding process looped was established to link the worksheet. The objective was to increase the ticker volume for the volume current ticker.

A next point to be made are the details statements that are advantageous comparably original and refactored VBA scripts were the speed and the overall volume was less in the in the original information to code. The original stock analysis was just for the one-year 2018. So, the code was milder comparatively. The speed was also quicker on the original all stock analysis vs. All stock Analysis refactored. The disadvantage for coding the All-Stock Analysis refactored process was that it contained an extensive amount of data in which it took longer to process.