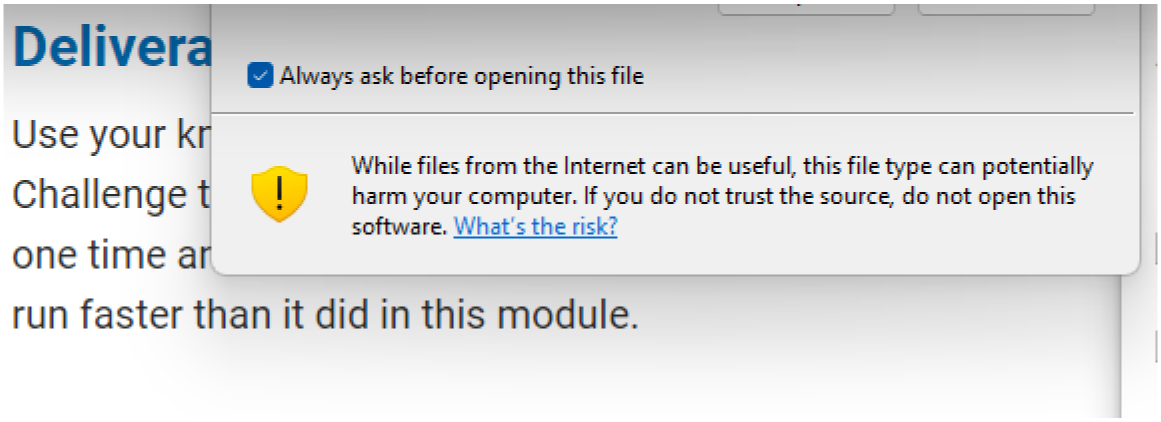

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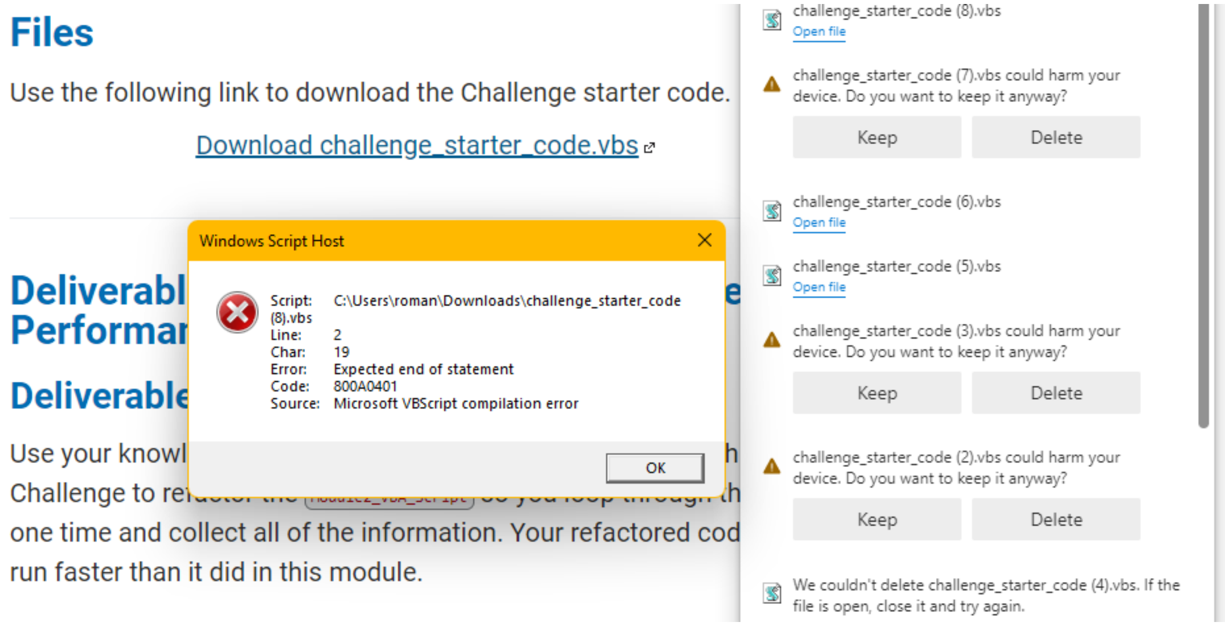
run faster than it did in this module.

☑ Always ask before opening this file

While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not open this software. What's the risk?



Files

Use the following link to download the Challenge starter code.

Download challenge_starter_code.vbs

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Use your knowl

Challenge to re

one time and collect all of the information. Your refactored cod

run faster than it did in this module.

Windows Script Host

```
Script:   C:\Users\roman\Downloads\challenge_starter_code
(8).vbs
Line:     2
Char:     19
Error:    Expected end of statement
Code:     800A0401
Source:   Microsoft VBScript compilation error
```

challenge_starter_code (8).vbs

Open file

challenge_starter_code (7).vbs could harm your device. Do you want to keep it anyway?

challenge_starter_code (6).vbs

Open file

challenge_starter_code (5).vbs

Open file

challenge_starter_code (3).vbs could harm your device. Do you want to keep it anyway?

challenge_starter_code (2).vbs could harm your device. Do you want to keep it anyway?

We couldn't delete challenge_starter_code (4).vbs. If the file is open, close it and try again.

1. Overview of Project: Explain the purpose of this analysis.

The purpose of this analysis is to determine if green energy stocks have a positive return on investment for the data analysts parents stocks.

2. Results: Using images and examples of your code, compare the stock performance between 2017 and 2018, as well as the execution times of the original script and the refactored script.

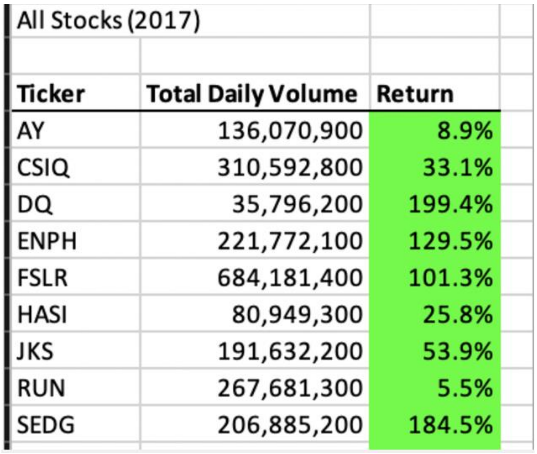
   See below for screen shots of graphs and code and refactored code.

3. Summary: In a summary statement, address the following questions.
   0. What are the advantages or disadvantages of refactoring code?

   The advantage advantages of refactoring code is that you can debug it and make it run faster with ever cleaner code. A disadvantage of refactoring code from the original is that you may have to debug it to run from Mac OS from Microsoft excel VBS which is proprietary and not open source like Python therefore making the conversion even buggier and less smooth. The main advantage to refactor code is analogous to writing quotes in an essay and then attributing the original author in the comments instead of a work cited page.

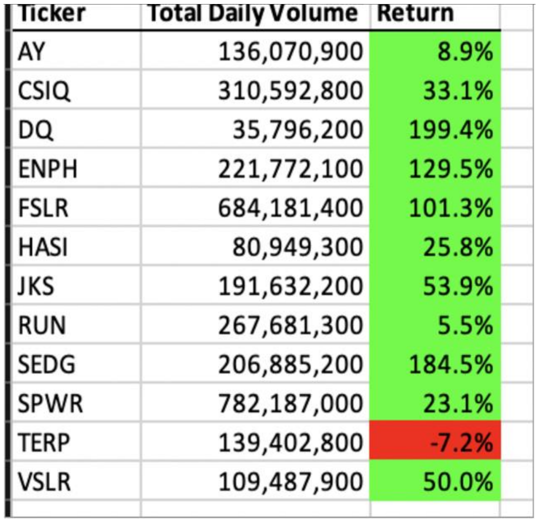
   1. How do these pros and cons apply to refactoring the original VBA script?

   The pro of refactoring code in the original VBS script is that you can keep the proprietary Microsoft Visual basic application language in house and not clutter it with bugs as you try to improve upon an industry standard but slower language. Original VBA script is written in an old outdated language that is proprietary to Microsoft and is hard to translate into other languages like python which is open source.



All Stocks (2017)

Ticker	Total Daily Volume	Return
AY	136,070,900	8.9%
CSIQ	310,592,800	33.1%
DQ	35,796,200	199.4%
ENPH	221,772,100	129.5%
FSLR	684,181,400	101.3%
HASI	80,949,300	25.8%
JKS	191,632,200	53.9%
RUN	267,681,300	5.5%
SEDG	206,885,200	184.5%



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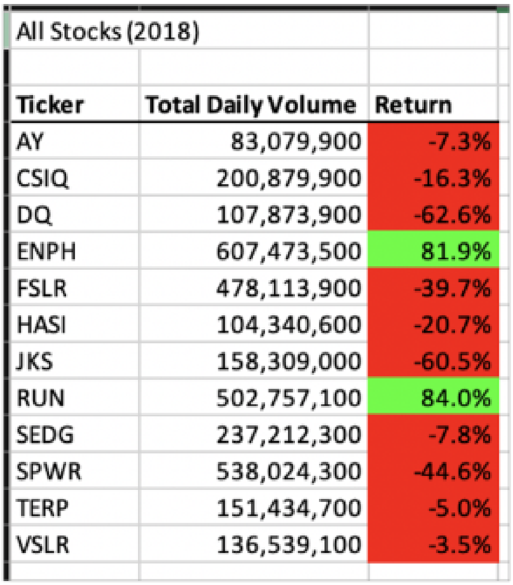
FSLR	684,181,400	101.3%
HASI	80,949,300	25.8%
JKS	191,632,200	53.9%
RUN	267,681,300	5.5%
SEDG	206,885,200	184.5%
SPWR	782,187,000	23.1%
TERP	139,402,800	-7.2%
VSLR	109,487,900	50.0%



All Stocks (2018)

Ticker	Total Daily Volume	Return
AY	83,079,900	-7.3%
CSIQ	200,879,900	-16.3%
DQ	107,873,900	-62.6%
ENPH	607,473,500	81.9%
FSLR	478,113,900	-39.7%
HASI	104,340,600	-20.7%
JKS	158,309,000	-60.5%
RUN	502,757,100	84.0%
SEDG	237,212,300	-7.8%
SPWR	538,024,300	-44.6%
TERP	151,434,700	-5.0%
VSLR	136,539,100	-3.5%

The written analysis contains the following structure, organization, and formatting:

- There is a title, and there are multiple paragraphs **(2 pt)**.
- Each paragraph has a heading **(2 pt)**.
- There are subheadings to break up text **(2 pt)**.
- Links are working, and images are formatted and displayed where appropriate **(2 pt)**.

```
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


    '1b) Create three output arrays


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


    ''2b) Loop over all the rows in the spreadsheet.
    For i = 2 To RowCount

        '3a) Increase volume for current ticker


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



        '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



            '3d Increase the tickerIndex.


        '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


    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
```

The written analysis has the following:

- Overview of Project
    - The purpose and background are well defined **(2 pt)**.
- Results
- Yes there is
    - The analysis is well described with screenshots and code **(4 pt)**.
    - Yes there is
- Summary
    - There is a detailed statement on the advantages and disadvantages of refactoring code in general **(3 pt)**.
- Yes there is
    - There is a detailed statement on the advantages and disadvantages of the original and refactored VBA script
    - Yes there is

Submission