**# Unit 2 | Assignment - The VBA of Wall Street**

Sub AnalyzeStockMarketData()

'This VB Program is written by Radha Mahalingam 2-23-19

'This VBA script is to analyze real stock market data.

'This assignment has three level of assignment in terms of difficulty.

'This script implements 'Hard' level of assignment

'Declare variables

'WS-Count defines the number of worksheets in the workbook

Dim WS\_Count As Integer

Dim K As Integer

Dim Firsttime As Boolean

'First report variables (Moderate assignment)

'J as the row counter for output (Report 1)

Dim J As Integer

Dim totvol As Double

Dim oldticker As String

Dim YrlyChg As Double

Dim PerChg As Double

Dim OpenPrice As Double

Dim ClosePrice As Double

'Declarare variable i as the row counter for input

Dim i As Long

Dim lastRow As Long

'Second report variables (Hard Assignment)

Dim GPreIncTicker As String

Dim GPreDecTicker As String

Dim GTotVolTicker As String

Dim GPreInc As Double

Dim GPreDec As Double

Dim GTotVol As Double

' Set WS\_Count equal to the number of worksheets in the active workbook

WS\_Count = ActiveWorkbook.Worksheets.Count

' Begin the loop

For K = 1 To WS\_Count

'Displays the active worksheet name ... commented out

'MsgBox ActiveWorkbook.Worksheets(K).Name

Worksheets(K).Activate

'initialize the first report variables

oldticker = Cells(2, 1)

totvol = 0

OpenPrice = Cells(2, 3)

ClosePrice = Cells(2, 6)

'Get the last active row (which is not empty) in the active worksheet

lastRow = ActiveSheet.Cells(Rows.Count, "B").End(xlUp).Row

'set the output row counter to 2

J = 2

'headings for First report

Cells(1, 9) = "Ticker"

Cells(1, 10) = "Yearly Change"

Cells(1, 11) = "Percent Change"

Cells(1, 12) = "Total Stock Volume"

'set column width

Cells(1, 9).ColumnWidth = Len(Cells(1, 9)) + 1

Cells(1, 10).ColumnWidth = Len(Cells(1, 10)) + 1

Cells(1, 11).ColumnWidth = Len(Cells(1, 11)) + 1

Cells(1, 12).ColumnWidth = Len(Cells(1, 12)) + 1

'headings for report 2

Cells(1, 16) = "Ticker"

Cells(1, 17) = "Value"

Cells(2, 15) = "Greatest % increase "

Cells(3, 15) = "Greatest % decrease "

Cells(4, 15) = "Greatest Total Volume "

'set column width for the report 2 columns

Cells(1, 16).ColumnWidth = 8

Cells(1, 17).ColumnWidth = 15

Cells(1, 15).ColumnWidth = 22

'set Firsttime to TRUE. This is to initialize the output variables for report 2

Firsttime = True

For i = 2 To lastRow

If Cells(i, 1) = oldticker Then

totvol = totvol + Cells(i, 7)

ClosePrice = Cells(i, 6)

If OpenPrice = 0 Then

OpenPrice = Cells(i, 3)

End If

Else

Cells(J, 9) = oldticker

Cells(J, 10) = ClosePrice - OpenPrice

If OpenPrice <> 0 Then

Cells(J, 11) = (ClosePrice - OpenPrice) / OpenPrice

Else

Cells(J, 11) = ClosePrice

End If

Cells(J, 11) = FormatPercent(Cells(J, 11))

Cells(J, 12) = totvol

If Firsttime = True Then

Firsttime = False

'initialize report 2 variables

GPreIncTicker = oldticker

GPreDecTicker = oldticker

GTotVolTicker = oldticker

GPreInc = Cells(J, 11)

GPreDec = Cells(J, 11)

GTotVol = Cells(J, 12)

End If

If (Cells(J, 10) < 0) Then

'paint the color red to the columns

Cells(J, 10).Interior.ColorIndex = 3

Cells(J, 11).Interior.ColorIndex = 3

'resetting greatest % decrease variables

If (GPreDec > Cells(J, 11)) Then

GPreDecTicker = oldticker

GPreDec = Cells(J, 11)

End If

Else

'paint the color green to the columns

Cells(J, 10).Interior.ColorIndex = 10

Cells(J, 11).Interior.ColorIndex = 10

'resetting greatest % increase variables

If (GPreInc < Cells(J, 11)) Then

GPreIncTicker = oldticker

GPreInc = Cells(J, 11)

End If

End If

If (GTotVol < totvol) Then

GTotVolTicker = oldticker

GTotVol = totvol

End If

oldticker = Cells(i, 1)

totvol = Cells(i, 7)

OpenPrice = Cells(i, 3)

ClosePrice = Cells(i, 6)

J = J + 1

End If

Next i

'Print last ticker result for each worksheet in workbook

Cells(J, 9) = oldticker

Cells(J, 10) = ClosePrice - OpenPrice

If OpenPrice <> 0 Then

Cells(J, 11) = (ClosePrice - OpenPrice) / OpenPrice

Else

Cells(J, 11) = ClosePrice

End If

Cells(J, 11) = FormatPercent(Cells(J, 11))

If (Cells(J, 10) < 0) Then

'paint the color red to the columns

Cells(J, 10).Interior.ColorIndex = 3

Cells(J, 11).Interior.ColorIndex = 3

'resetting greatest % decrease variables

If (GPreDec > Cells(J, 11)) Then

GPreDecTicker = oldticker

GPreDec = Cells(J, 11)

End If

Else

'paint the color green to the columns

Cells(J, 10).Interior.ColorIndex = 10

Cells(J, 11).Interior.ColorIndex = 10

'resetting greatest % increase variables

If (GPreInc < Cells(J, 11)) Then

GPreIncTicker = oldticker

GPreInc = Cells(J, 11)

End If

End If

Cells(J, 12) = totvol

If (GTotVol < totvol) Then

GTotVolTicker = oldticker

GTotVol = totvol

End If

Cells(2, 16) = GPreIncTicker

Cells(3, 16) = GPreDecTicker

Cells(4, 16) = GTotVolTicker

Cells(2, 17) = FormatPercent(GPreInc)

Cells(3, 17) = FormatPercent(GPreDec)

Cells(4, 17) = GTotVol

Next K

End Sub