# Algorithm

1. **Output defined – the summary table with individual tickers with price change and percentage change. Also, the volume of the total shares.**

**Second output- the greatest increase and decrease from the list of shares**

1. **Defining the logical operators for the macro code to run across the sheets.**
2. **Defining the variables.**
3. **The loop for the ticker defined. Based on each ticker the function in the loop defined.**
4. **Setting the variables.**

**Run the function and check for desired output**

# Macro code

**Sub Ticker\_over\_the\_years()**

**Dim Ws as Worksheet**

**For Each Ws In Worksheet**

**'Using boolean operator with "if" command to set up the logic that can run across years/alphabets**

**Dim Summary\_Table\_Header As Boolean**

**Summary\_Table\_Header = True**

**Dim active\_spreadsheet As Boolean**

**active\_spreadsheet = True**

**'Variables for question 1**

**Dim Ticker\_Name As String**

**Dim Total\_Ticker\_Volume As Double**

**Total\_Ticker\_Volume = 0**

**Dim Open\_Price As Double**

**Open\_Price = 0**

**Dim Close\_Price As Double**

**Close\_Price = 0**

**Dim Price\_change As Double**

**Price\_change = 0**

**Dim Percent\_change As Double**

**Percent\_change = 0**

**'Variables for question 2**

**Dim Max\_value\_ticker\_name As String**

**Dim Min\_value\_ticker\_name As String**

**Dim Increase\_percentage As Double**

**Increase\_percentage = 0**

**Dim Decrease\_percentage As Double**

**Decrease\_percentage = 0**

**Dim Maximum\_volume\_ticker As String**

**Dim Maximum\_volume As Double**

**Maximum\_volume = 0**

**Dim Summary\_Table\_Row As Long**

**Summary\_Table\_Row = 2**

**Dim finalrow As Long**

**Dim i As Long**

**finalrow = Ws.Cells(Rows.Count, 1).End(xlUp).Row**

**If Summary\_Table\_Header Then**

**' Set Titles for the question 1**

**Ws.Range("I1").Value = "Ticker"**

**Ws.Range("J1").Value = "Yearly Change"**

**Ws.Range("K1").Value = "Percent Change"**

**Ws.Range("L1").Value = "Total Stock Volume"**

**' Set Titles for the quetsion 2**

**Ws.Range("O2").Value = "Greatest % Increase"**

**Ws.Range("O3").Value = "Greatest % Decrease"**

**Ws.Range("O4").Value = "Greatest Total Volume"**

**Ws.Range("P1").Value = "Ticker"**

**Ws.Range("Q1").Value = "Value"**

**Else**

**Summary\_Table\_Header = False**

**End If**

**Open\_Price = Ws.Cells(2, 3).Value**

**For i = 2 To finalrow**

**If Ws.Cells(i + 1, 1).Value <> Ws.Cells(i, 1).Value Then**

**Ticker\_Name = Ws.Cells(i, 1).Value**

**Close\_Price = Ws.Cells(i, 6).Value**

**Price\_change = Close\_Price - Open\_Price**

**If Open\_Price <> 0 Then**

**Percent\_change = (Price\_change / Open\_Price) \* 100**

**Else**

**On Error Resume Next**

**End If**

**Total\_Ticker\_Volume = Total\_Ticker\_Volume + Ws.Cells(i, 7).Value**

**Ws.Range("I" & Summary\_Table\_Row).Value = Ticker\_Name**

**Ws.Range("J" & Summary\_Table\_Row).Value = Price\_change**

**'Positive change**

**If (Price\_change > 0) Then**

**Ws.Range("J" & Summary\_Table\_Row).Interior.ColorIndex = 4**

**'Negative change**

**ElseIf (Price\_change <= 0) Then**

**Ws.Range("J" & Summary\_Table\_Row).Interior.ColorIndex = 3**

**End If**

**Ws.Range("K" & Summary\_Table\_Row).Value = (CStr(Percent\_change) & "%")**

**Ws.Range("L" & Summary\_Table\_Row).Value = Total\_Ticker\_Volume**

**Summary\_Table\_Row = Summary\_Table\_Row + 1**

**Price\_change = 0**

**Close\_Price = 0**

**Open\_Price = Ws.Cells(i + 1, 3).Value**

**If (Percent\_change > Increase\_percentage) Then**

**Increase\_percentage = Percent\_change**

**Max\_value\_ticker\_name = Ticker\_Name**

**ElseIf (Percent\_change < Decrease\_percentage) Then**

**Decrease\_percentage = Percent\_change**

**Min\_value\_ticker\_name = Ticker\_Name**

**End If**

**If (Total\_Ticker\_Volume > Maximum\_volume) Then**

**Maximum\_volume = Total\_Ticker\_Volume**

**Maximum\_volume\_ticker = Ticker\_Name**

**End If**

**Percent\_change = 0**

**Total\_Ticker\_Volume = 0**

**Else**

**Total\_Ticker\_Volume = Total\_Ticker\_Volume + Ws.Cells(i, 7).Value**

**End If**

**Next i**

**If active\_spreadsheet Then**

**Ws.Range("Q2").Value = (CStr(Increase\_percentage) & "%")**

**Ws.Range("Q3").Value = (CStr(Decrease\_percentage) & "%")**

**Ws.Range("P2").Value = Max\_value\_ticker\_name**

**Ws.Range("P3").Value = Min\_value\_ticker\_name**

**Ws.Range("Q4").Value = Maximum\_volume**

**Ws.Range("P4").Value = Maximum\_volume\_ticke**

**Else**

**active\_spreadsheet = False**

**Next Ws**

**End Sub**