EXCEL-VBA-TIPS

Custom VBA macro to Sum and Count

EXCEL has functions to sum or count the values in a range of data. To understand how these functions work, this tip presents a code to sum and count the values in a column of data. The companion spreadsheet shows an example dataset and the macros used to make the calculations. The VBA coding shown below contains two example macros to sum the data, a macro to sum only data that satisfies a given condition, a macro to count the number of data values, and a macro that combines counting and summing so that the average can be computed:

```
Sub SumX()
' This sub sums the values in range A1:A4
'
' Make sure this sub runs on the Data page
Sheets("Data").Select
' Initialize variables
sum_val = 0
' Loop over all the values and sum them
For ctr = 1 To 4
   x = Cells(ctr, 1).Value
   ' Update the summation
   sum_val = sum_val + x
Next
' Output the summation
Range("C1").Value = sum_val
End Sub

Sub SumX2()
' This sub sums the values in range A1:A4
'
' Make sure this sub runs on the Data page
Sheets("Data").Select
' Initialize variables
sum_val = 0
rctr = 1
' Loop over all the values and sum them
Do Until Cells(rctr, 1).Value = ""
   x = Cells(rctr, 1).Value
   ' Update the summation
   sum_val = sum_val + x
   ' Update the row counter
   rctr = rctr + 1
Loop
' Output the summation
Range("C1").Value = sum_val
End Sub
```

```
Sub CountX()
' This sub counts the values in range A1:A4
'
' Make sure this sub runs on the Data page
Sheets("Data").Select
' Initialize variables
cnt_val = 0
rctr = 1
' Loop over all the values and count them
Do Until Cells(rctr, 1).Value = ""
   ' Update the count
   cnt_val = cnt_val + 1
   ' Update the row counter
   rctr = rctr + 1
Loop
' Output the number of values
Range("C2").Value = cnt_val
End Sub

Sub AvgX()
' This sub sums and counts the values in range A1:A4
'
' Make sure this sub runs on the Data page
Sheets("Data").Select
' Initialize variables
sum_val = 0
cnt_val = 0
rctr = 1
' Loop over all the values and sum and count them
Do Until Cells(rctr, 1).Value = ""
   x = Cells(rctr, 1).Value
   ' Update the summation
   sum_val = sum_val + x
   ' Update the count
   cnt_val = cnt_val + 1
   ' Update the row counter
   rctr = rctr + 1
Loop
' Compute the average
If cnt_val > 0 Then
   avg_val = sum_val / cnt_val
Else
   avg_val = "undefined"
End If
' Output the average
Range("C3").Value = avg_val
```

```
End Sub

Sub CondSumX()
' This sub sums the values in range A1:A4
' that are greater than a threshold value
' Make sure this sub runs on the Data page
Sheets("Data").Select
' Initialize variables
threshold = 2
sum_val = 0
' Loop over all the values and sum them
For ctr = 1 To 4
   x = Cells(ctr, 1).Value
   ' Check to see if the value of x is above the threshold
   If x > threshold Then
      ' Update the summation
      sum_val = sum_val + x
   End If
Next
' Output the summation
Range("C4").Value = sum_val
End Sub
```