Master Microsoft Excel Macros and VBA

Project #3 – Preparing and Cleaning Up Data

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Course Reviews

*"This is a great course. I love how the lessons are only about 4 minutes each. **It makes it possible to learn a lot in a short amount of time.** It seems targeted to new learners but it also makes for a great review even if you are familiar with Microsoft Office... 5 stars!"* - Wendy

"Great visual over the shoulder presentations by a very articulate instructor. The simple tips on Word and PowerPoint alone were well worth taking the course. What I learned will not only save time, but will end much of the frustration I have experienced with PDF's. Recommend the course." – Bill

*"These presentations are very well put together. **The instructor keeps you engaged and is easy to follow.**"* - Karen

Contents

Project #3 - Overview

In order to complete project #3 you are going to combine using both the Macro Recorder and writing your own custom Excel VBA code. The Macro Recorder will be used to record routine tasks that are easily performed in the Excel interface. Then you will move into the Visual Basic Editor to write a custom procedure that makes calls to the recorded macros adding in looping logic to repeat the macros for each sheet in the workbook.

East	Technical Support	800	650	700	2150
East	Telephone	900	850	850	2600
East	Copying	4850	3200	1155	9205
East	Overhead	1250	1250	1250	3750
East	Software	2025	2200	1650	5875
East	Maintenance	1350	1500	1700	4550
East	Supplies	3300	3500	3700	10500
East	Telemarketing	3825	3725	3750	11300
East	Contractors	8900	10315	5250	24465
East	Consultants	6250	6000	6500	18750
East	Rent	8000	8000	8000	24000
East	Miscellaneous	11500	12500	12500	36500
East	Advertising	12250	12250	12750	37250
East	Clerical Support	25000	24000	26390	75390

1st Qtr Expense Report

Division	Category	Jan	Feb	Mar	Total
East	Technical Support	800	650	700	2150
East	Telephone	900	850	850	2600
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East	Overhead	1250	1250	1250	3750
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Macro Recorder Macros

Using the Macro recorder you will record two macros.

1. **AddHeaders**: This macro will add the headers to the top of the list (Division, Category, Jan…)
2. **FormatList:** This macro will format the headers and the Jan-Mar data as currency

Custom VBA Procedures

After the 2 initial macros are created using the Macro Recorder you will then build a custom procedure in the Visual Basic Editor where you will create a loop that performs the two recorded macros on each sheet in the workbook.

Working with Excel VBA Loops

The Macro Recorder tool in Excel is a great tool, making the creation of Macros super easy. But, the Macro Recorder has some limitations. If you would like to add any logic or repeat task a fixed or unknown number of times, you will need to move away from the Macro Recorder and get into Excel VBA.

There are a few different approaches to creating loops within Excel VBA.

- Do While Loop
- For Next Loop

Based on the logic you wish to perform in your procedure will really dictate the type of loop you'll work with.

DO WHILE LOOP

```
Do While ActiveCell.Value <> ""
    ' do something
Loop
```

A Do While Loop will continue to repeat a block of code while a condition is true. In the above example the code between the Do line and Loop line will continue to repeat until the active cell's value is not empty. This is a great setup for looping through a set of records while checking for specific conditions (ex. Format records where a date has expired)

DO UNTIL LOOP

The counterpart to the Do While Loop is the Do Until Loop. This loop is very similar. The difference is in the logic the loop uses to determine if the condition to loop is still true.

```
Do Until ActiveCell.Value = ""
    ' do something
Loop
```

Rather than looping **while** a condition is still true, this one will continue to loop **until** a condition is true.

Both loops are valid techniques to use in Excel VBA. Which one you use is based on the logic needed to perform the loop.

Level Up by doing it yourself!

The macro you created earlier that added and formatted headers on a single worksheet has impressed your co-workers so much that they would now like to repeat those same steps but on multiple worksheets in a workbook. You decide to record the actions of adding the headers and formatting the data, but in order to repeat those actions for each worksheet in the workbook you decide to create a loop in Visual Basic.

1. Download and open the file: **CleaningUpData.xlsx** provided in this lecture
2. Note the worksheets (**East, West, North, and South Records**)
    a. The **RECORDIG** worksheet will be used to record the two initial macros
3. Each worksheets contains similar data but specific to the division

RECORD THE ADDHEADERS MACRO

1. Activate the **RECORDING** worksheet
2. Go to **VIEW – MACROS – RECORD MACRO**
3. Name the Macro **ADDHEADERS**, leave the other settings as default
4. Record yourself adding the headers to the list
    a. DIVISION, CATEGORY, JAN, FEB, MAR, TOTAL EXPENSE
5. Go to **VIEW – MACROS – STOP RECORDING**

RECORD THE FORMATDATA MACRO

1. Activate the **RECORDING** worksheet
2. Go to **VIEW – MACROS – RECORD MACRO**
3. Name the Macro **FORMATLIST**, leave the other settings as default
4. Record yourself doing the following;
    a. Formatting the headers in row 1 (*ex. Bold, background color, font color, borders*)
    b. Format the Jan-Mar numeric data as currency
        i. Click in cell **C2**

ii. Press **CTRL+SHIFT+DOWN ARROW**

iii. Press **CTRL+SHIFT+RIGHT ARROW**

iv. Format the data as Currency

5. Go to **VIEW – MACROS – STOP RECORDING**

CREATE THE LOOP

1. Open the Visual Basic Editor window (*ALT+F11*)
2. Note the 2 macros you recorded in the previous steps
3. Insert a new Procedure
   a. **INSERT – PROCEDURE**
   b. Name the Procedure **WorksheetLoop**
   c. Leave the other settings as default
   d. Add the following code to the procedure

```
For i = 1 To Worksheets.Count
        Worksheets(i).Select

        AddHeaders
        FormatList

Next i
```

RUN THE PROCEDURE

1. Close the VBE Window
2. Delete the **RECORDINGS** worksheet
3. Go to **VIEW – MACROS – VIEW MACROS**
4. Select the Macro **WORKSHEET LOOP**
5. Click **RUN**

Instructor BIO:

Kyle is a Microsoft Certified Trainer (MCT) and a certified Microsoft Office Master Instructor and has been teaching and consulting for the past 10+ years on various computer applications, including;

1. Microsoft Office Suite 1997, 2000, XP, 2003, 2007, 2010, 2013
    1. Excel, Word, PowerPoint, Outlook, Access and Visio
2. SharePoint End-User 2007, 2010, 2013
3. VBA (Excel and Access)
4. Adobe Suite
    1. Photoshop, Illustrator, InDesign
5. Maya (Modeling and Animation)
6. Unity3d (Game Design)
7. HTML, CSS and JavaScript
8. Crystal Reports

Kyle is a graduate of the San Francisco Art Institute in the Media Arts and Animation Program. He has worked as a Game Designer for Electronic Arts, designing on games such as Nerf N-Strike, Nerf N-Strike Elite, both for the Wii, and a Sims 3 Expansion Pack for the PC.

Kyle has facilitated courses that range from 1-on-1 interactions to large scale groups of 100+ participants, including; live in person classes, webinar style classes online and live online full courses. He is consistently ranked top in reviews for each of the courses he teaches.

What Students have said about Kyle:

- *"Kyle was off the chart "GOOD""*
- *"ONE OF THE BEST COURSES THAT I'VE HAD... (IN 12+ YEARS)."*
- *"Awesome trainer because I'm computer "stupid" and he helped me understand it."*
- *"Kyle Pew is very knowledgeable and presented information with exceptional skill."*

In his 10+ years of training (corporate training, 1-on-1 consulting and college courses), Kyle has taught 1000's of courses and 10's of thousands of students all the while maintaining a high level of delivery and satisfaction from the student he has taught.

Teaching Philosophy:

Kyle believes that student's best learn through the application of real-life business situations through exercises. Allowing students to guide the class with their specific situations allows for the quickest and easiest adaptation to new technology and skills.

Check out my Udemy profile for more information and more courses.
https://www.udemy.com/user/kyle-pew/