Scripted Lecture  
Exploring Microsoft Excel 2019, Chapter 2

This set of exercises mirrors the hands-on exercises throughout this chapter, following the same steps as the textbook exercises but based on a different scenario. It may be useful for in-class demonstration.

**Traveler's Recreational Vehicles**

*Jon Rollins, a sales representative for Traveler’s Recreational Vehicles hired you to update his sales data for the month of March 2020. The date include the cost of the recreational vehicle, the down payment, interest rate, number of years to pay off the loan, and the financing data for each purchase.*

Hands-On Exercise 1: Formula Basics

You will calculate the amount financed by each borrower then copy the formula down the Amount Financed column to calculate the amounts financed for other borrowers. The workbook contains two worksheets, RV Sales, and Payment Schedule. RV Sales will be used in Hands-On Exercises 1 and 2. Payment Schedule will be used in Hands-On Exercise 3.

Steps:

1. Use a Relative Cell Reference
   1. Open *e02\_script\_data.xlsx* and save it as e02\_script\_solution1\_LastFirst.xlsx.
   2. Click cell D10 in the RV Sales sheet. Type = and click cell B10.
   3. Type – and click cell C10.
   4. Click the check mark between the Name Box and Formula Bar (the Enter key) to complete the formula.
   5. Double-click the cell D10 fill handle. Click cell D11 and view the formula in the Formula Bar.
   6. Press the down arrow and look at the references to see how the references change for each formula you copied. Save the workbook.
2. Use an Absolute Cell Reference
   1. Click cell F10. Type =E10/B7 and click Ctrl+Enter.
   2. Double-click the cell F10 fill handle, click cell F11, and then view the results.
   3. Click Undo in the Quick Access Toolbar to undo the Auto Fill process. With F10 as the active cell, click to the right of cell B7 in the Formula Bar.
   4. Press the function key F4 and click Enter on the formula bar.
   5. Double-click the cell F10 fill handle to copy the formula down the Rate Per Period column. Click Cell F11 and view the formula in the Formula Bar.
   6. Save the workbook.
3. Use a Mixed Cell Reference
   1. Click cell H10 and type =G10\*B7.
   2. Press F4 to make the B7 cell reference absolute and click Enter.
   3. Copy the formula down the # PMT Periods column.
   4. Ensure that cell H10 is active and click Undo on the Quick Access Toolbar.
   5. Click within the $B$7 cell reference in the formula bar. Press F4 to change the cell reference to a mixed cell reference: B$7. Press Ctrl+Enter and copy the formula down the # PMT Periods column.
   6. Save the workbook.

Hands-On Exercise 2: Function Basics

In this exercise, you will enter summary statistics including the SUM function, the AVERAGE function, and the MEDIAN function. In addition, you will calculate the MIN and MAX functions to determine the highest and lowest RV costs, and then use the TODAY function to insert the current date in the worksheet.

Steps:

1. Use the Sum Function
2. Open the file named *e02\_script\_solution1\_LastFirst.xlsx* and save it as e02\_script\_solution2\_LastFirst.xlsx.
3. Ensure the RV Sales worksheet is active and click cell B22.
4. Click AutoSum. Select the range B10:B18. Click Enter.
5. Save the workbook.
6. Use the Average Function
   1. Click the Formulas tab and click cell B23.
   2. Click the AutoSum arrow and select Average.
   3. Select the range B10:B18. Press Enter, making B24 the active cell.
   4. Save the workbook.
7. Use the Median Function
   1. Ensure cell B24 is active and click Insert Function.
   2. Type median in the Search for a function box and click Go. Click OK.
   3. Click Collapse Dialog Box to the right of the Number 1 box.
   4. Select the range B10:B18 and click Expand Dialog Box in the Function Arguments dialog box. Click OK.
   5. Save the workbook.
8. Use the Min, Max, and Count Functions
   1. Click B25. Click the AutoSum arrow, select Min, select the range B10:B18, and then press Enter.
   2. Click cell B26. Click the AutoSum arrow, select Max, select the range B10:B18, and then press Enter.
   3. Click cell B27. Type =COUNT(B10:B18) and press Enter.
   4. Select the range B22:B26. Drag the fill handle to the right by two columns to copy to the range C22:D26. Click cell D26 and notice the reference change.
   5. Click cell B12. Change the cell value to 55599 and press Enter. The results of all formulas and functions change.
   6. Save the workbook.
9. Use the Today Function
   1. Click cell B6. Click Date & Time in the Function Library group, select TODAY, and then click OK.
   2. Click the column B header. Double-click the bar between the column B and C headers and ensure all values in column B display.
   3. Save the workbook.

Hands-On Exercise 3: Logical, Lookup, and Financial Functions

In this exercise, you will add a VLOOKUP function to insert values to the APR column, a PMT function to determine payments for each loan, and an IF function to determine the monthly PMI of each loan.

Steps:

1. Use the VLOOKUP Function

1. Open the file named *e02\_script\_solution2\_LastFirst.xlsx* and save it as e02\_script\_solution3\_LastFirst.xlsx.
2. Click the Payment Schedule worksheet tab. Click cell G16.
3. Click the Formulas tab, click Lookup & Reference, and then select VLOOKUP.
4. Ensure the insertion point is in the Lookup\_value box, click Collapse Dialog Box, click cell F16, and then click Expand Dialog Box.
5. Press Tab, click Collapse Dialog Box, select the range D4:E11, and then click Expand Dialog Box.
6. Select the range D4:E11 and press F4.
7. Press Tab and type 2 in the Col\_index\_num box.
8. Press Tab and type False in the Range\_lookup box.
9. Click OK. Copy the formula down the column.
10. Save the workbook.

2. Use the PMT Function

1. Click cell H16. Click Financial in the Function Library group, scroll, and then select PMT.
2. Enter G16/B5 in the Rate box. Press F4.
3. Press Tab and type F16\*$B$5 in the Nper box.
4. Press Tab and type -D16 in the Pv box.
5. Click OK. Copy the formula down the column.
6. Save the workbook.

3. Use the IF Function

1. Click cell I16. Click Logical in the Function library group and select IF.
2. Type E16>=$B$7 in the Logical\_test box.
3. Press Tab and type 0 in the Value\_if\_true box.
4. Press Tab and type D16\*$B$6/$B$5 in the Value\_if\_false box.
5. Click OK and copy the formula down the column.
6. Set the worksheets to print on one page and return to Normal View. Add a header with your name on the left, sheet code in the middle, and the file name code on the right.
7. Save and close the file.