

WORKING WITH MULTIPLE WORKSHEETS WITHIN A WORKBOOK

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ABSTRACT

This paper demonstrates how easy it is use Microsoft Excel to rename sheet tabs, copy and move sheets within a workbook or place them in other workbooks, reference cell addresses from other worksheets in the workbook and include them in formulas and functions, insert and delete sheets, hide and unhide sheets, and add color to sheet tabs.

KEYWORDS: Rename sheet tabs, copy and move sheets, reference cells from other worksheets in the workbook, insert and delete sheets, hide and unhide sheets, and add color to sheet tabs.

INTRODUCTION

Excel enables you to work with multiple worksheets in a workbook. This feature allows you to keep separate parts of a template in different worksheets and maintain the worksheets in a single file. For example, you might organize a set of financial statements in a workbook so that the balance sheet is in one worksheet, the income statement in a second worksheet, the statement of retained earnings in a third worksheet, and the statement of cash flows in yet another worksheet. Similarly, you might place the monthly income and quarterly income statements for a given year in separate worksheets.

Organizing similar or related information in different worksheets makes it easier to access and view the information. For example, if you place the monthly income statements in different worksheets, you can quickly go from one monthly statement to another simply by clicking on a sheet tab. If you placed all of the monthly income statements in a single worksheet, you would spend considerable amounts of time scrolling from one monthly statement to another.

Once you have decided to organize information into different worksheets, you can:

- Rename worksheets.
- Copy or move worksheets within the workbook (or to another workbook).
- Reference cell addresses from one or more worksheets in the formulas and functions in in the workbook (or in another workbook).
- Insert and delete worksheets.
- Hide worksheets and unhide worksheets.
- Change the color of the sheet tabs.

Open the workbook file Canyon. In this workbook file, you will find income statements for Canyon Maintenance, Inc., for the months of January, February, and March, 2012, in Sheets 1 through 3, respectively. Switching from one sheet to another is easy. Simply click on the sheet's tab at the bottom of the workbook window. For example, view the income statements in Sheets 1 through 3. You will see that, except for the periods covered and monthly amounts, they are identical.

Renaming Sheets

Excel's generic worksheet names Sheet1, Sheet2, Sheet3 do not tell you very much. For example, the sheet names in the Canyon workbook provide no indication about the contents of Sheets 1 through 3. Therefore, when you organize information in different worksheets, you should rename the worksheets so that their names are descriptive of the kinds and types of information they represent. Descriptive names will also indicate whether a worksheet contains information.

To change a sheet name, complete the following steps:

1. Select the sheet by clicking on the sheet tab. For example, select the Sheet1 tab.

- Double-click on the sheet tab. (Optionally, position the mouse pointer on the sheet tab, press the right mouse button to display the Short Cut menu, and then choose the Rename command.)  Excel highlights Sheet1 in the sheet tab, as shown at the right.
- Enter a new sheet name, which replaces the highlighted sheet name, and press Enter. You can enter a sheet name of up to 31 characters, including spaces. For example, enter the sheet name *Jan 2012* and then press Enter.

Similarly, rename Sheet2 as *Feb 2012* and Sheet3 as *Mar 2012*.

Copying and Moving Worksheets Within a Workbook

The Move or Copy Sheet command in the shortcut menu allows you to move or copy the selected sheet (or sheets) to a different location within the same workbook or to another workbook. For example, suppose that you want to copy the *Mar 2012* worksheet in order to facilitate the preparation of a quarterly income statement for the quarter ending March 31, 2012. By copying the *Mar 2012* worksheet, you can create a similar worksheet and avoid having to enter (or copy from another worksheet*) report and row titles, change column widths, change fonts and font sizes, change number formats, or add underlines and double-underlines.

*Note: Copying the contents of a cell or a range of cells between worksheets is similar to copying within a worksheet. (1) Select the worksheet, (2) select the cells to be copied, (3) press Ctrl + C to copy to the clipboard, (4) select the worksheet to paste to, (5) select the cells to paste to, and (6) then press Ctrl + V to paste from the clipboard.

To copy the *Mar 2012* worksheet:

- Select this worksheet by clicking on its sheet tab.
- Choose the Move or Copy Sheet command from the Edit menu or position the mouse pointer on the sheet tab and choose the Move or Copy command from the shortcut menu. Excel displays the Move or Copy dialog box, as shown in Figure 1.
- In the **To book:** list box, you see the name of the active workbook. If you wanted to, and you don't, you could copy (or move) the *Mar 2012* worksheet to another open workbook by clicking on the arrow at the right end of the box and then clicking on the workbook's name in the drop-down list. Select New Book if you want to create a new workbook containing only the sheet you want copied (or moved).

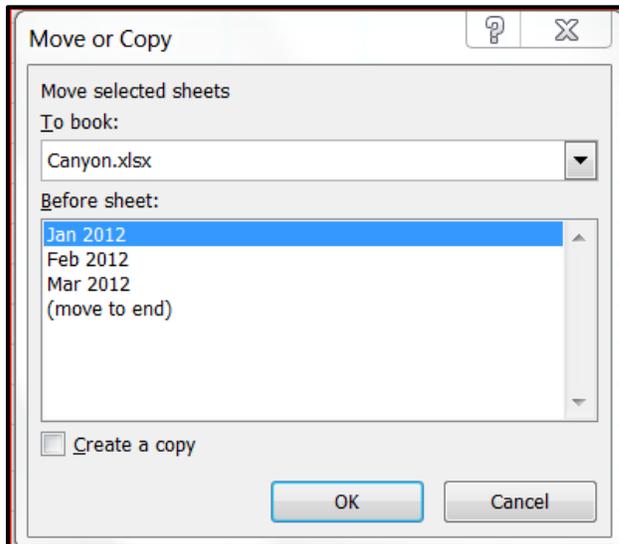


Figure 1 Move or Copy Dialog Box

- Click on (move to end) in the **Before Sheet** list box, which tells Excel to place the copied worksheet after the existing *Mar* Check the **Create a copy** box. Otherwise, Excel will move, and not copy, the active worksheet to the new location within the workbook.
- Click on OK to create the copy.
- 2012 worksheet.

View the sheet tabs at the bottom of the workbook window. Excel has given the copied worksheet the name *Mar 2012 (2)*. Using the guidance on renaming a worksheet, change the sheet name to *1st Qtr2012*. After changing the name, the sheet tabs should appear as shown in Figure 2.

18			
19	Income from Operations		26,662.81
20			
21	<u>Other Revenues</u>		
22	Equipment rental	\$ 13,178.00	
23	Interest revenue	<u>440.74</u>	<u>13,618.74</u>
24			
25			40,281.55
26	<u>Other Expenses</u>		
27	Interest Expense		<u>1,950.00</u>

Jan 2012 Feb 2012 Mar 2012 1st Qtr 2012

Figure

Descriptive Sheet Tab Names

Referencing Cell Addresses from Other Worksheets in the Workbook

You reference cell addresses from other worksheets in a workbook in formulas and functions by preceding the cell address with the sheet name and an exclamation point. For example, if the active worksheet is *1st Qtr2012* and you want to include cell address C6 from the *Jan 2012* worksheet in a formula or function, you would enter the cell address as follows in the formula or function: 'Jan 2012'!C6

Similarly, you would reference the range B9:B17 from the *Jan 2012* worksheet as follows: 'Jan 2012'!B9:B17

For example, to compute sales for the first quarter of 2012, you could enter the following formula in cell C6 of the *1st Qtr2012* worksheet: ='Jan 2012'!C6 + 'Feb 2012'!C6 + 'Mar 2012'!C6

As an alternative to entering the cell addresses in the formula at the keyboard, you can point to the cell addresses in the different worksheets. For example, select cell B9 in the *1st Qtr2012* worksheet. In cell B9, you will sum salaries expense for the quarter ending March 31. However, instead of entering the sheet names and cell addresses at the keyboard, you will point to them as follows:

1. Enter an equal (=) sign in cell B9 of the *1st Qtr2012* worksheet. You should see = on the formula bar.
2. Click on the *Jan 2012* sheet tab and then click on cell B9. You should see the following on the formula bar:='Jan 2012'!B9
3. Enter the plus (+) sign.
4. Click on the *Feb 2012* sheet tab and then click on cell B9. You should see the following on the formula bar:='Jan 2012'!B9 + 'Feb 2012'!B9
5. Enter the plus (+) sign.
6. Click on the *Mar 2012* sheet tab and then click on cell B9. You should see the following on the formula bar:='Jan 2012'!B9 + 'Feb 2012'!B9 + 'Mar 2012'!B9
7. Click on the Enter box on the formula bar (or press the Enter key).

Upon clicking on the Enter box, Excel stores the formula in cell B9 of the *1st Qtr2012* worksheet and places that worksheet in the workbook window.

If the cells you are referencing in a formula or function are in the same location in each of the other worksheets, you can use a 3D reference. To create a 3D reference for Advertising expense, you would:

1. Select cell B10 in the *1st Qtr2012* worksheet.

Notes:

1. Excel is not case sensitive when entering worksheet names in formulas and functions. Thus, you could have entered the worksheet name as *JAN 2012* or *Jan 2012*.
2. If a sheet name does not contain spaces, then there is no need to enclose the name within single quotes (i.e., apostrophes) when entering the name in a formula or function. For example, you would enter the sheet name *Income2012* as *Income2012*.

2. Enter the following at the keyboard: =SUM(
3. Click on the *Jan 2012* tab, the first sheet in the range.
4. Hold the Shift key down and click on *Mar 2012* sheet tab, the last sheet in the range.
5. Click on cell B10.
6. Click on the Enter box on the formula bar (or press the Enter key).

Excel stores the function =SUM('Jan 2012:Mar 2012'!B10) in cell B10 of the *1st Qtr2012* worksheet.

Note: Entering the closing right parenthesis is optional. If you do not enter it, then Excel will enter it for you.

To sum the remaining totals for the quarterly income statement, copy the function in cell B10 to the following cells and ranges:

- B11 through B17
- B22 through B23
- C27
- C31

The only problem with copying the contents of cell B10 to the other cells is that Excel also copied the format from cell B10 to these other cells. So that the formatting of the cells in the quarterly income statement matches the monthly statements, you should:

- Underline cells B17, B23, C27, and C31.
- Change the number format of cell B22 to Currency.

Finally, edit cell A3 and change Month to Quarter. Your completed 1st Qtr2012 worksheet should match that shown in Figure 3. Now that you have successfully renamed the sheet tabs and completed the 1st Qtr2012 worksheet, press Ctrl + S to update your Canyon workbook on the disk.

	A	B	C	D
1	Canyon Maintenance, Inc.			
2	Income Statement			
3	For the Quarter Ended March 31, 2012			
4				
5				
6	Service Revenue		\$ 349,010.00	
7				
8	<u>Operating Expenses</u>			
9	Salaries expense	\$ 104,913.00		
10	Advertising expense	67,275.68		
11	Commissions Expense	34,940.00		
12	Rent expense	21,600.00		
13	Depreciation of service vehicles	18,500.25		
14	Depreciation of office equipment	14,476.50		
15	Insurance expense	9,000.00		
16	Uncollectible accounts expense	3,435.00		
17	Supplies expense	<u>1,281.23</u>	<u>275,421.66</u>	
18				
19	Income from Operations		73,588.34	
20				
21	<u>Other Revenues</u>			
22	Equipment rental	\$ 37,776.00		
23	Interest revenue	<u>1,257.44</u>	<u>39,033.44</u>	
24				
25			112,621.78	
26	<u>Other Expenses</u>			
27	Interest Expense		<u>6,055.00</u>	
28				
29	Income before income tax		106,566.78	
30				
31	Provision for income taxes		<u>21,313.35</u>	
32				
33	Net Income		<u>\$ 85,253.43</u>	
34				
35				

Figure3Completed1stQtr2012Worksheet

Inserting and Deleting Worksheets

When you create a new workbook in Excel, you typically begin with three worksheets, named Sheet1, Sheet2, and Sheet3. If you need more, you can add them by inserting them into the workbook. If you feel that you have too many, you can delete the ones you don't need. To insert a new worksheet, select a worksheet (or any other type of sheet) by clicking on its tab and then choose the Insert command from the shortcut menu. Excel displays an Insert dialog box. If necessary, click on the General tab and Worksheet should be highlighted. Click on OK. Excel inserts a new worksheet to the left of the selected sheet. For example, insert a new worksheet between the Mar 2012 and the 1st Qtr2012 worksheets.

The Delete Sheet command in the shortcut menu allows you to delete the selected sheet or sheets, including worksheets, chart sheets, and module sheets. For example, to delete the worksheet you previously inserted in the Canyon workbook, carry out the following steps:

1. Click on the sheet tab.
2. Choose the **Delete Sheet** command from the shortcut menu. If you have entered any data in the worksheet, then Excel displays a message dialog box warning you that "Data may exist in the sheet(s) selected for deletion. To permanently delete the data, press Delete.", as shown in Figure 4.
3. Click on Delete to delete the worksheet.

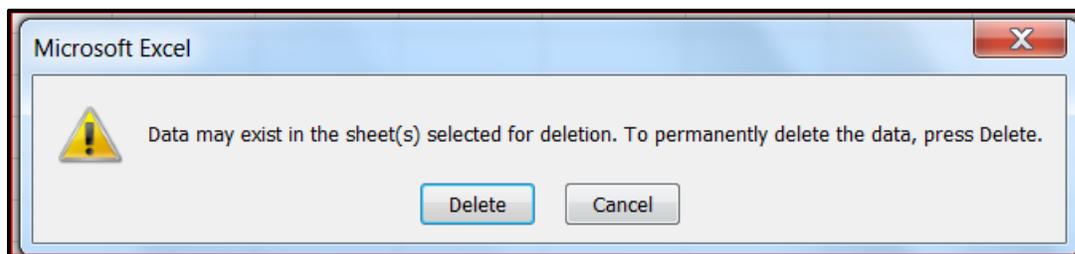


Figure 4 Warning Message Dialog Box
When Deleting a Sheet

You should save your workbook before deleting a sheet, because the "permanently deleted" warning message means just that. When you click on OK, the sheet is gone forever. You cannot undo a delete sheet action. All you can do is recreate the sheet and that could represent a great deal of effort.

CAUTION

Hiding and Unhiding Sheets

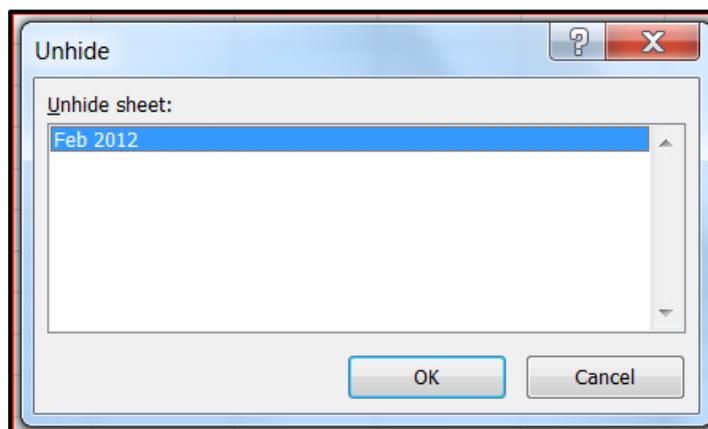
There are occasions when you may want to hide one or more sheets in a workbook because they may contain sensitive information. For example, suppose you decide to hide the *Feb 2012* worksheet. To hide this sheet, follow these steps:

1. Select the *Feb 2012* worksheet by clicking on its sheet tab.
2. Choose the Hide command from the shortcut menu.

When you hide a sheet, the sheet tab no longer appears at the bottom of the workbook. For example, after hiding the *Feb 2012* worksheet, you will no longer see its sheet tab.

To unhide the *Feb 2012* worksheet, complete the following steps:

1. Click on any sheet tab.
2. Choose the Unhide command from the shortcut menu. Excel displays the Unhide dialog box, with the name(s) of hidden sheets listed in the Unhide sheet list box, and highlights the name of the first sheet hidden, as shown in Figure 5. If you have previously hidden two or more sheets, then select *Feb 2012* as the name of the sheet you want to highlight in the Unhide sheet: list box.
3. Click on OK.



**Figure 5 Unhide (Sheet)
Dialog Box**

A quick glance at the bottom of the Canyon workbook should again show the sheet name *Feb 2012*.

Add Color to Sheet Tabs

In filing cabinets and the like, you might color-code you to help you to stay organized. Now, Excel lets you color-code sheet tabs in a workbook. As a result, you can organize the worksheets and other sheets in a workbook by color-coding the sheet tabs.

To add color to a sheet tab, complete the following steps:

1. Select the sheet by clicking on the sheet tab. For example, select the Jan 2012 sheet tab.
2. Press the right mouse button to display the Short Cut menu, and then choose the Tab Color command. Excel displays the Format Tab Color dialog box, as shown in Figure 6, with a palette of colors you can choose from to apply a color to the selected sheet's tab.
3. Click on the desired color and the click on OK. Excel applies the color to the sheet's tab.

After you click on OK, Excel underlines the sheet name in the color you chose (to indicate it's the current sheet). When you click to a new tab, the old tab will appear in the color you choose.



**Figure 6 Format Tab Color
Dialog Box**

SUMMARY

This paper shows you how to perform a number of functions and techniques with a Microsoft Excel worksheet. After you have read this paper and practiced with Excel, you should be able to rename sheet tabs, copy and move sheets, reference cell addresses from other worksheets in the workbook in formulas and functions, insert and delete sheets, and hide and unhide sheets, and add color to sheet tabs.