CHAPTER

Working with Excel



You use Microsoft Excel to create *spreadsheets*, which are documents that enable you to manipulate numbers and formulas to quickly create powerful mathematical, financial, and statistical models. In this chapter you learn about Excel, take a tour of the program's features, and learn how to customize some aspects of the program.

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Working with Excel involves two basic tasks: building a spreadsheet and then manipulating the data on the spreadsheet.

This section just gives you an overview of these tasks. You learn about each task in greater detail as you work through the book.



Build a Spreadsheet

Add Data

You can insert text, numbers, and other characters into any cell in the spreadsheet. Click the cell that you want to work with and then type your data in the Formula bar. This is the large text box above the column letters. Your typing appears in the cell that you selected. When you are done, press Enter. To edit existing cell data, click the cell and then edit the text in the Formula bar.

Add a Formula

A *formula* is a collection of numbers, cell addresses, and mathematical operators that performs a calculation. In Excel, you enter a formula in a cell by typing an equal sign (=) and then the formula text. For example, the formula =B1-B2 subtracts the value in cell B2 from the value in cell B1.

Add a Function

A function is a predefined formula that performs a specific task. For example, the AVERAGE function calculates the average of a list of numbers, and the PMT function calculates a loan or mortgage payment. You can use functions on their own, preceded by =, or as part of a larger formula. Click **Insert Function** ($\boxed{\mathbb{A}}$) to see a list of the available functions.







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Manipulate Data

Calculate Totals Quickly

If you just need a quick sum of a list of numbers, click a cell below the numbers and then click the **Sum** button (Σ), which is available in the Home tab of Excel's Ribbon. In Excel, you can also select the cells that you want to sum, and their total appears in the status bar.



Manage Tables

The row-and-column format of a spreadsheet makes the program suitable for simple databases called *tables*. Each column becomes a field in the table, and each row is a record. You can sort the records, filter the records to show only certain values, and add subtotals.



Fill a Series

Excel enables you to save time by completing a series of values automatically. For example, if you need to enter the numbers 1 to 100 in consecutive cells, you can enter just the first few numbers, select the cells, and then click and drag the lower right corner to fill in the rest of the numbers. Most programs also fill in dates, as well as the names for weekdays and months.



Add a Chart

A *chart* is a graphic representation of spreadsheet data. As the data in the spreadsheet changes, the chart also changes to reflect the new numbers. Excel offers a wide variety of charts, including bar charts, line charts, and pie charts.





Before you can perform tasks such as adding data and building formulas, you must first start Excel. This brings the Excel window onto the Windows desktop, and you can then begin using the program.

This task and the rest of the book assume that you have already installed Excel 2010 on your computer.



Start Excel

Click Start.

The Start menu appears.

2 Click All Programs.

The App Programs menu appears.

3 Click Microsoft Office.



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The Microsoft Office menu appears.





The Microsoft Excel window appears on the desktop.

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Are there faster methods I can use to start Excel?

Yes. After you have used Excel a few times, it should appear on the main Start menu in the list of your most-used programs. If so, you can click that icon to start the program. You can also force the Excel icon onto the Start menu by following Steps 1 to 3, right-clicking the **Microsoft Excel 2010** icon, and then clicking **Pin to Start Menu**. If you are using Windows 7, you can also click **Pin to Taskbar** to add the Excel icon to the taskbar.



Tour the Excel Window

To get up to speed quickly with Excel, it helps to understand the various elements of the Excel window. These include standard window elements such as the title bar and status bar, as well as Office-specific elements such as the Ribbon and the File tab.



Title Bar

The title bar displays the name of the current workbook.

Quick Access Toolbar

This area gives you one-click access to a few often-used features. To learn how to customize this toolbar, see "Customize the Quick Access Toolbar."

Ribbon

This area gives you access to all of Excel's commands, options, and features. To learn how to use this element, see "Work with Excel's Ribbon."

Excel Window Controls

You use these controls to minimize, maximize, restore, and close Excel's application window.

Workbook Window Controls

You use these controls to minimize, maximize, restore, and close the current workbook window.

File Tab

Click this tab to access file-related commands, such as Save and Open.

Worksheet

This area displays the current worksheet, and it is where you will do most of your Excel work.

Status Bar

This area displays the messages about Excel's current status, the results of certain operations, and other information.



You use Excel's Ribbon element to access all of the program's features and commands. The *Ribbon* is the horizontal strip that runs across the top of the Excel window, just below the title bar. The Ribbon is organized into various tabs, such as File, Home and Insert, and each tab contains related controls, which usually include buttons, lists, and check boxes.



There is no menu bar in Excel, so you do not use pull-down menus to access commands.

Work with Excel's Ribbon

 Click the tab that contains the Excel feature you want to work with.



Excel displays the controls in the tab.

- Each tab is organized into groups of related controls, and the group names appear here.
- In many groups you can click the dialog box launcher button (
 to display a dialog box that contains group settings.
- **2** Click the control for the feature.
- If the control displays a list of options, click the option you want.

Excel runs the command or sets the option.



Work with Excel's Galleries

In Excel's Ribbon, a *gallery* is a collection of preset options that you can apply to the selected object in the worksheet. To get the most out of galleries, you need to know how they work.

Although some galleries are available all the time, in most cases you must select an object — such as a range of cells or a clip art image — before you work with a gallery.

	Picture Effects Gallery
Now Showing: Shadows!	
Reflections! Glows!	
Glows!	

Work with Excel's Galleries

Work with a Gallery List

- If necessary, click the object with which you want to apply an option from the gallery.
- 2 Click the tab that contains the gallery you want to use.
- Click the gallery's **More** arrow (♥).
- You can also scroll through the gallery by clicking the **Down** (⁻) and **Up** (⁻) arrows.
 - Excel displays a list of the gallery's contents.
- 4 Move the mouse ▷ over a gallery option to see a preview of the effect.
- Excel displays a preview of the effect.
- **5** Click the gallery option you want to use.
 - Excel applies the gallery options to the selected object.





Work with a Drop-Down Gallery

- If necessary, click the object with which you want to apply an option from the gallery.
- 2 Click the tab that contains the gallery you want to use.
- Click the gallery's drop-down arrow (⊡).

Excel displays a list of the gallery's contents.

If the gallery contains one or more subgalleries, click the subgallery you want to use.

Excel displays the subgallery's contents.

- If a gallery has commands that you can run, those commands appear at the bottom of the gallery menu.
- Solution 5 Solution 5 Solution 6 Solution 6 Solution 7 Solutio
- Excel displays a preview of the effect.
- Click the gallery option you want to use.

Excel applies the gallery option to the selected object.



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If I find the gallery preview feature distracting, can I turn it off?

Yes. The Live Preview feature is often handy because it shows you exactly what will happen when you click a gallery option. However, as you move the mouse \S through the gallery, the previews can be distracting. To turn off Live Preview, click the **File** tab, click **Options**, click the **General** tab, click **Enable Live Preview** (*I* changes to), and then click **OK**.



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Customize the Quick Access Toolbar

You can make Excel easier to use by customizing the Quick Access Toolbar to include the Excel commands you use most often. You run Quick Access Toolbar buttons with a single click, so adding your favorite commands saves time.

By default, the Quick Access Toolbar contains three buttons: Save, Undo, and Redo, but you can add any of Excel's hundreds of commands.



Customize the Quick Access Toolbar

- Click the Customize Quick Access Toolbar button (
- If you see the command you want, click it and skip the rest of the steps in this section.

Click More Commands.



The Excel Options dialog box appears.

- Excel automatically displays the Quick Access Toolbar tab.
- 3 Click the **Choose commands from .**.
- 4 Click the command category you want to use.







- Excel adds the command.
- To remove a command, click it and then click **Remove**.
- 🕖 Click **OK**.

8 X Excel Options General Customize the Quick Access Toolban Formulas Choose commands from: 🕢 Customize Quick Access Toolbar: Proofing File Tab . For all documents (default) ٠ Save 💁 E-mail as PDF Attachment Save Language Undo Redo l. E-mail as XPS Attachment Enable Editing Advanced New... Customize Ribbon Excel 97-2003 Workbook Excel Binary Workbook Excel Binary Workbook Excel Macro-Enabled Workbook Quick Access Toolba Excel Services Options Excel Vorkbook Add-Ins Trust Center inspect Document 6 C Internet Fax • Add >> Manage Credentials • 🚰 Mark as Final << Remove -5) 📴 Open Open Recent File. OpenDocument Spreadsheet Options
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Excel adds a button for the command to the Quick Access Toolbar.

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Can I get more room on the Quick Access Toolbar to show more buttons?

Yes, you can increase the space available to the Quick Access Toolbar by moving it below the Ribbon. This gives the toolbar the full width of the Excel window, so you can



add many more buttons. Click the **Customize Quick Access Toolbar** button () and then click **Show Below the Ribbon**.

Is there a faster way to add buttons to the Quick Access Toolbar?

Yes. If the command you want to add appears on the Ribbon, you can add a button for the command directly from the Ribbon. Click the Ribbon tab

that contains the command, right-click the command, and then click **Add to Quick Access Toolbar**. Excel inserts a button for the command on the Quick Access Toolbar.



Customize the Ribbon

You can improve your Excel productivity by customizing the Ribbon with extra commands that you use frequently.

To add a new command to the Ribbon, you must first create a new tab or a new group within an existing tab, and then add the command to the new tab or group.



Customize the Ribbon

Display the Customize Ribbon Tab

- Right-click any part of the Ribbon.
- 2 Click Customize the Ribbon.



Add a New Tab or Group

The Excel Options dialog box appears.

- Excel automatically displays the Customize Ribbon tab.
- Click the tab you want to customize.
- You can also click **New Tab** to create a custom tab.
- 2 Click New Group.
- Excel adds the group.
- **3** Click **Rename**.
- **4** Type a name for the group.
- 5 Click OK.



Add a Command

- Click the Choose commands from .
- 2 Click the command category you want to use.
- 3 Click the command you want to add.
- Click the custom group or tab you want to use.
- 6 Click Add.
- Excel adds the command.
- To remove a custom command, click it and then click **Remove**.
- 6 Click OK.
- Excel adds the new group and command to the Ribbon.



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Can I customize the tabs that appear only when I select an Excel object?

Yes. Excel calls these *tool tabs*, and you can add custom groups and commands to any tool tab. Right-click any part of the Ribbon



and then click **Customize the Ribbon** to display the Excel Options dialog box with the Customize Ribbon tab displayed. Click the **Customize the Ribbon** and then click **Tool Tabs**. Click the tab you want and then follow the steps in this section to customize it.

How do I restore the Ribbon to its default configuration?

Right-click any part of the Ribbon and then click **Customize the Ribbon** to display the Excel Options dialog box with the Customize Ribbon tab displayed.

To restore a tab, click the tab, click **Restore Defaults**, and then click **Restore only selected Ribbon tab**. To remove all customizations, click **Restore Defaults** and then click **Restore all Ribbon tabs and Quick Access Toolbar customizations**.



Work with Smart Tags

You can make your Excel work faster and easier by taking advantage of smart tags. A *smart tag* is a special icon that appears when you perform certain Excel tasks, such as pasting data and using the AutoFill feature. Clicking the smart tag displays a list of options that enable you to control or modify the task you just performed.

Some smart tags appear automatically in response to certain conditions. For example, if Excel detects an inconsistent formula, it displays a smart tag to let you know.



Work with Smart Tags

- Perform an action that displays a smart tag, such as copying and pasting a cell as shown here.
- The smart tag appears.



Click the smart tag.

The smart tag displays a list of its options.

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3 Click the option you want to apply.



• Excel applies the option to the task you performed in Step 1.



Are there other types of smart tags I can use?

Yes, Excel offers a few other smart tag types. For example, a Date smart tag recognizes a worksheet date and offers options such as scheduling a meeting on that date. To turn on these extra smart tags, click **File**, click **Options**, click **Proofing**, click **AutoCorrect Options**, and then click the **Smart Tags** tab. Click the **Label data with smart tags** check box (changes to), and then click the check box beside each smart tag in the **Recognizers** list (changes to). Click **OK**.

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You can adjust the Excel window to suit what you are currently working on by changing the view to match your current task. Excel offers three different views: Normal, which is useful for building and editing worksheets; Page Layout, which displays worksheets as they would appear if you printed them out; and Page Break Preview, which displays the page breaks as blue lines, as described in the first Tip on the next page.



Excel offers three different views: Page Layout, which displays worksheets as printed pages; Page Break Preview, which displays the page breaks as blue lines, as described in the first Tip on the next page; and Normal, which is useful for building and editing worksheets.

Change the View - 0 **- X Switch to Page Layout View** 🗶 | 🔒 🧐 🛪 🕅 🖓 🖛 Loans - Microsoft Excel a 🕜 🗖 🗗 🛛 Home Insert View Page Bre 100 Rew Window - Solit Click the View tab. Q 33 -Ruler Formula Bar T Hide 🚍 Arrange All ШŤ Page Layout 🛄 Full Screen Gridlines 🗹 Headings Zoom 100% Zoom to Selection Save Switch Macros 📳 Freeze Panes 🕤 Unhide He Workspace 2 Click Page Layout. Shor Workbook Views fx Loan Data Δ1 + () You can also click the Page 5 0 B C D F Layout button (). Excel switches to Page Layout Cick to add header view. Loan Data Time Basis Quarterly erest Rate (Annual 6.00% -Time Amortization (Years) Time Factor Annua \$500.000 1.5% Principal Adjusted Rate Semi-Balloon Payment Total Periods Quarte \$0 Payment Type Month 8 Amortization Schedule Cumulative Cu Period Payment Principal Interes Principal (\$12,696,71) (\$5, 196, 71) (\$7,500.00) (\$12,696.71) Loan Term Analysis 5,274.66) Loan Rate An (\$7,422.05) (\$10,471.38) lysis Loan [4 Dynamic Amortization Schedule III II 100% Ready 🎦 Page: 1 of 21 - - **X** Switch to Page Break Preview 🔣 🔒 🤊 • 🔍 - 🖛 Loans - Microsoft Excel a 🕜 🗖 🛱 🕅 Home Insert View Page Break Preview Q Q 100 🖷 New Window 🛛 🖂 Split 33 Click the View tab. I Custom Views 🚍 Arrange All 🚃 Hide Вţ Page Lavout I Full Screen Gridlines V Headings Zoom 100% Zoom to Selection Save Switch Macro Freeze Panes * 🛄 Unhide 33 W 2 Click Page Break Preview. A1 fx Loan Data You can also click the Page Loan Data nterest Rate (Annual 6.00% Time Basis Quarterh -3 Time Basis Values Break Preview button (III). Time Factor Amortization (Years) 15 Annual \$500,000 Adjusted Rate Principal 1 594 Semi-Annual Balloon Payment 50 Total Periods 60 Quarterly Payment Type 0 Monthly Amortization Schedule Cumulative Cumulative Remaining Period Payment Principal Interest Ending the Loan After Principal Interest Principal \$494,803,29 (\$5,196.71) (\$7,500.00) (\$7,422.05 riod Principal (\$12,696.71) (\$5,274.66) (\$7,422.05) (\$10,471.38) (\$15,825.16) (\$14,922.05 \$489,528.62 (\$32,182.18) (\$32,343.09) (\$12,696,71) (\$5.353.78) (\$7.342.93) (\$22,264,98) \$484, 174, 84 (\$5,434.09) (\$7,262.62) (\$7,181.11) (\$21,259.25) (\$26,774.86) ,696.71) (\$29,527.60 \$478,740.75 \$1 (\$12,696,71) (\$5,515,60) (\$36,708,71 \$473,225,14 (\$32,667,33) (696.71) (\$5,598.34) (\$5,682.31) (\$7,098.38) (\$7,014.40) (\$32,373.19) (\$38,055.50) (\$43,807.09) (\$50,821.49) \$467,626.81 \$461,944.50 (\$32,830.67) (\$32,994.82) \$1 \$2 16 17 18 (\$12,696.71) (\$43,823.05 \$5 767 55 56 929 17 357 750 66 5456 176 95 (\$33,159.80) (\$33,325.60) 52 (\$12,696.71) (\$6,842,65) (\$49,677,11) (\$12,696,71) (\$5,854.06) (\$64,593,31) \$450,322,89 \$2. HEFH Loan Term Analysis 🖉 Loan Rate Analysis Loan 4 Dynamic Amortization Schedule III II 100% 18

- The Welcome to Page Break Preview dialog box appears.
- Excel switches to Page Break Preview.

3 Click OK.



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Switch to Normal View

- **1** Click the **View** tab.
- **2** Click **Normal**.
- You can also click the Normal button ().
 - Excel switches to Normal view.





What does Page Break Preview do?

In Excel, a *page break* is a position within a worksheet where a new page begins when you print the worksheet. When you switch to Page Break Preview, Excel displays the page breaks as blue lines. If a page



break occurs in a bad position — for example, the page break includes the headings from a range, but not the cells below the headings — you can use your mouse \Im to click and drag the page breaks to new positions.

What does Full Screen view do?

Full Screen view is useful when you want to see the maximum amount of a worksheet on the screen. Full Screen view removes ABC

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many of the Excel window features, including the File button, Ribbon, Quick Access Toolbar, Formula bar, and status bar. To return to the Normal view, press Esc, or click the **Restore Down** button (@).

Configure Excel Options

You can customize Excel and set up the program to suit the way you work by configuring the Excel options. To use these options, you must know how to display the Excel Options dialog box.

These options are dialog box controls such as check boxes, option buttons, and lists that enable you to configure many aspects of Excel.



Configure Excel Options



2 Click Options.

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1 Click the **File** tab.

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The Excel Options dialog box appears.

- Click a tab on the left side of the dialog box to choose the configuration category you want to work with.
- The controls that appear on the right side of the dialog box change according to the tab you select.

cel Options	? <mark> </mark>
General Formulas	General options for working with Excel.
Proofing	User Interface options
Save Language Advanced	✓ Show Mini Toolbar on selection ① ✓ Enable Live Preview ① Color scheme: Silver ▼ ScreenTip style: Show feature descriptions in ScreenTips
Customize Ribbon Quick Access Toolbar	When creating new workbooks
Add-Ins Trust Center	Use this font Font size: Default giew for new sheets: Include this many gheets:
	Personalize your copy of Microsoft Office
3	User name: Paul M
] [OK Cancel

Use the controls on the right side of the dialog box to configure the options you want to change.

5 Click OK.

Excel puts the new options into effect.

xcel Options	8	x
General Formulas	Advanced options for working with Excel.	* E
Proofing	Editing options	-
Save Language	After pressing Enter, move selection Direction: Down Automatically insert a gecimal point	
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TIPS

Are there faster methods I can use to open the Excel Options dialog box?

Yes. Some features of the Excel interface offer shortcut methods that get you to the Excel Options dialog box faster. For example, right-click the Ribbon and then click **Customize**

Ribbon to open the Excel Options dialog box with the Customize Ribbon tab displayed. From the keyboard, you can open the Excel Options dialog box by pressing **Alt** + **F** and then pressing **1**.

How do I know what each option does?

Excel offers pop-up descriptions of some – but, unfortunately, not all – of the options. If you see a small *i* with a circle around it to the right of the option name, it means pop-up help is available for that option. Hover the mouse \Bbbk over the option and Excel displays a pop-up description of the option after a second or two.

Add Excel to the Windows 7 Taskbar

If you use Excel regularly, you can start the program with just a single mouse click by adding an icon for Excel to the Windows 7 taskbar.

This task requires that you are running Excel using the Windows 7 operating system.



Add Excel to the Windows 7 Taskbar

- With Excel running, right-click the Excel icon in the taskbar.
- Click Pin this program to taskbar.



 After you quit Excel, the icon remains on the taskbar, and you can now launch Excel by clicking the icon.





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When you have finished your work with Excel, you should shut down the program. This reduces clutter on the desktop and in the taskbar, and it also conserves memory and other system resources.



Quit Excel

Quit Excel Using the Office Menu

Click the File tab.

2 Click Exit.

Note: If you have any open documents with unsaved changes, Excel prompts you to save those changes.

Note: Another way to quit the program is to press **Alt** + **F4**.



Quit Excel Using the Taskbar

Right-click the Excel taskbar icon.

2 Click **Close window**.

Note: If you have any open documents with unsaved changes, Excel prompts you to save those changes.

