Step by Step

Microsoft
Project 2010

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Microsoft® Project 2010
Step by Step

Carl Chatfield
Timothy Johnson

[2013-09-27]

Contents at a Glance

Contents

Part 1   Simple Scheduling

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13   Viewing and Reporting Project Status   279

14   Getting Your Project Back
on Track   299

Part 3   Special Subjects

15   Applying Advanced Formatting and Printing   317

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Acknowledgments

Introducing Microsoft Project 2010

Microsoft Project 2010 is a powerful program that helps you plan and manage a wide range of projects. From meeting crucial deadlines and budgets to selecting the right resources, Project 2010 offers easier and more intuitive experiences to help you be more productive and realize better results. You can use Project to:

● Create project plans at the level of detail that's right for your project. Work with summary data initially or shift to a more detailed approach when it's convenient. Control what tasks Project can schedule automatically or that you'll schedule manually.

● Manage tasks, costs, work, and resources at whatever level of detail is appropriate for your project's needs.

● See your project plan data in a variety of views. Apply grouping, highlighting, sorting, and filtering to see your data the way that you want.

● Track and manage your project plan throughout project execution.

● Collaborate and share data with others in your organization using a variety of productivity applications.

● Use resource pools, consolidated projects, and cross-project links to extend your project management focus across multiple projects.

Project 2010 builds on previous versions to provide powerful project management tools. This introduction provides an overview of new features that we explore throughout the book.

New Features

If you're upgrading to Project 2010 from a previous version, you're probably most interested in the differences between the old and new versions and how they will affect you. The following sections list new features you will want to be aware of, depending on the version of Project you are upgrading from.

If You Are Upgrading from Project 2007

If you have been using Project 2007, you might be wondering what new features and interface changes Microsoft has added to its desktop project management application. The list of new features includes the following:

● **The Microsoft Office Fluent interface (the "ribbon")** No more hunting through menus, submenus, and dialog boxes. This new interface organizes all the commands that most people use in a new way, making them quickly accessible from tabs at the top of the program window.

● **The Backstage view** Finally, all the tools you need to work with your files are accessible from one location.

● **Manually scheduled tasks** Begin creating tasks with whatever information (numeric or text data) you may have, and don't worry about automatic scheduling of tasks until you're ready. Manually scheduled tasks are not affected by changes in duration, start or finish dates, dependencies, or other issues that otherwise would cause Project to reschedule a task. You can then switch individual tasks or an entire project plan from manual to automatic scheduling.

● **Timeline view** Create a visually compelling "project at a glance" view that includes just the summary tasks, tasks, and milestones that you choose. Easily copy the Timeline view as a graphic image to paste into other applications.

● **Better pasting to Excel and Word** Paste Project data into Excel or Word and preserve the column headings and outline structure of your Project data.

● **Customizable ribbon** Create your own tabs and groups to suit the way you work.

● **Custom fields** Just start typing a numeric value, date value, or text string into the rightmost column in a table, and Project will identify the right data type.

● **AutoFilter improvements** Use Microsoft Excel–like filtering, as well as sorting and grouping, right from AutoFilter arrows on column headings.

● **Save as PDF or XPS** Create PDF or XPS format documents directly from Project.

● **Team Planner view (Project Professional only)** Perform actions like reassigning a task from one resource to another with simple dragging in the Team Planner view.

● **Inactivate tasks (Project Professional only)** Disable (but don't delete) selected tasks from a project plan so they have no effect on the overall schedule but can be reactivated later if you need them.

- **SharePoint Task List integration (Project Professional only)** Publish and synchronize tasks between Project and a new type of Microsoft SharePoint list called a Project Task List.

If You Are Upgrading from Project 2003

In addition to the features listed in the previous section, if you're upgrading from Project 2003, you'll want to take note of the new features that were introduced in Project 2007. The 2007 upgrade included several new and improved features, including the following:

- **Visual reports** Export Project task, resource, or assignment details to Excel or Visio in a highly structured graphical format.

- **Change highlighting** See what values changed throughout a project plan immediately after you make a change to a calculated task, resource, or assignment value.

- **Cost resources** Assign this special type of resource to tasks to accrue categories of costs you wish to track, like travel or entertainment. Cost resources have no effect on the scheduling of tasks to which they are assigned.

- **Task Inspector pane** Called the Task Driver pane in Project 2007, the Task Inspector pane shows you details that affect the scheduling of a selected task.

- **Multi-level Undo** Back out of a series of actions when you need to.

- **Calendar working time exceptions** Record not just the date, but also an explanation of a resource or project calendar working time exception.

Let's Get Started!

We've been working with Project since it debuted for Windows, and each version has offered something that made project planning and management a little easier. Project 2010 is a substantial update for desktop project management, and we look forward to showing you around.

Modifying the Display of the Ribbon

The goal of the Microsoft Office working environment is to make working with Office documents, including Microsoft Project plans, Microsoft Word documents, Microsoft Excel workbooks, Microsoft PowerPoint presentations, Microsoft Outlook e-mail messages, and Microsoft Access database tables, as intuitive as possible. You work with an Office document and its contents by giving commands to the program in which the document is open. All Office 2010 programs organize commands on a horizontal bar called the ribbon, which appears across the top of each program window whether or not there is an active document.
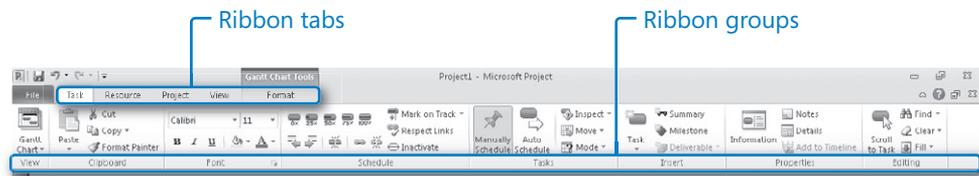
A typical program window ribbon.

Commands are organized on task-specific tabs of the ribbon, and in feature-specific groups on each tab. Commands generally take the form of buttons and lists. Some appear in galleries. Some groups have related dialog boxes or task panes that contain additional commands.

Throughout this book, we discuss the commands and ribbon elements associated with the program feature being discussed. In this topic, we discuss the general appearance of the ribbon, things that affect its appearance, and ways of locating commands that aren't visible on compact views of the ribbon.

See Also For detailed information about the ribbon in Microsoft Project, see the section "The Ribbon and Tabs: Finding the Features You Want," in Chapter 1, "A Guided Tour of Project." For information about customizing the ribbon and other parts of the Project interface, see Chapter 16, "Customizing Project."

Tip Some older commands no longer appear on the ribbon but are still available in the program. You can make these commands available by adding them to the Quick Access Toolbar. For more information, see the section "Customizing the Ribbon and Quick Access Toolbar," in Chapter 16, "Customizing Project."

Dynamic Ribbon Elements

The ribbon is dynamic, meaning that the appearance of commands on the ribbon changes as the width of the ribbon changes. A command might be displayed on the ribbon in the form of a large button, a small button, a small labeled button, or a list entry. As the width of the ribbon decreases, the size, shape, and presence of buttons on the ribbon adapt to the available space.

For example, when sufficient horizontal space is available, the buttons on the Task tab of the Project program window are spread out and you're able to see more of the commands available in each group.
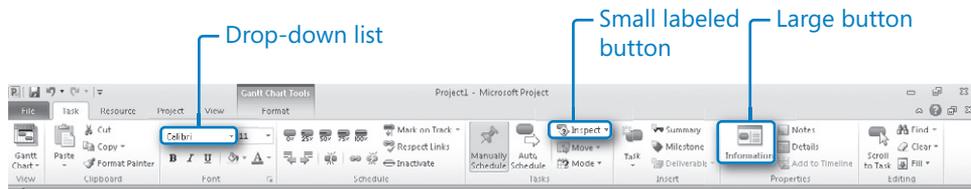
The Task tab of the Project program window at 1280 pixels wide.

If you decrease the width of the ribbon, small button labels disappear and entire groups of buttons hide under one button that represents the group. Click the group button to display a list of the commands available in that group.
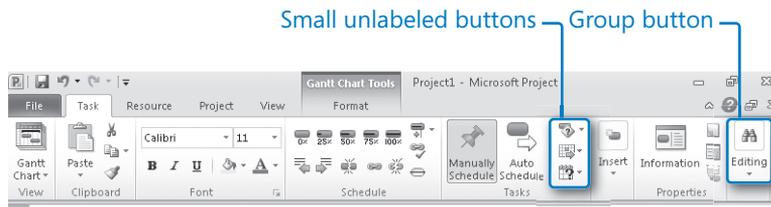
The Task tab of the Project program window at 800 pixels wide.

When the window becomes too narrow to display all the groups, a scroll arrow appears at its right end. Click the scroll arrow to display hidden groups.

Scroll arrow ⌐
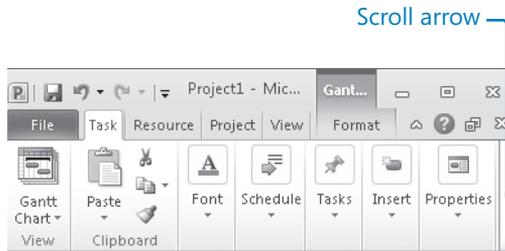
The Task tab of the Project program window at 393 pixels wide.

Changing the Width of the Ribbon

The width of the ribbon depends on the horizontal space available to it, which in turn depends on these three factors:

- **The width of the program window** Maximizing the program window provides the most space for ribbon elements. You can resize the program window by clicking the button in its upper-right corner or by dragging the border of a non-maximized window.

    Tip On a computer running Windows 7, you can maximize the program window by dragging its title bar to the top of the screen.

- **Your screen resolution** Screen resolution is the size of your screen display expressed as pixels wide × pixels high. The greater the screen resolution, the greater the amount of information that will fit on one screen. Your screen resolution options depend on your monitor. At the time of writing, possible screen resolutions range from 800 × 600 to 2048 × 1152. In the case of the ribbon, the greater the number of pixels wide (the first number), the greater the number of buttons that can be shown on the ribbon, and the larger those buttons can be.

    On a computer running Windows 7, you can change your screen resolution from the Screen Resolution window of Control Panel.
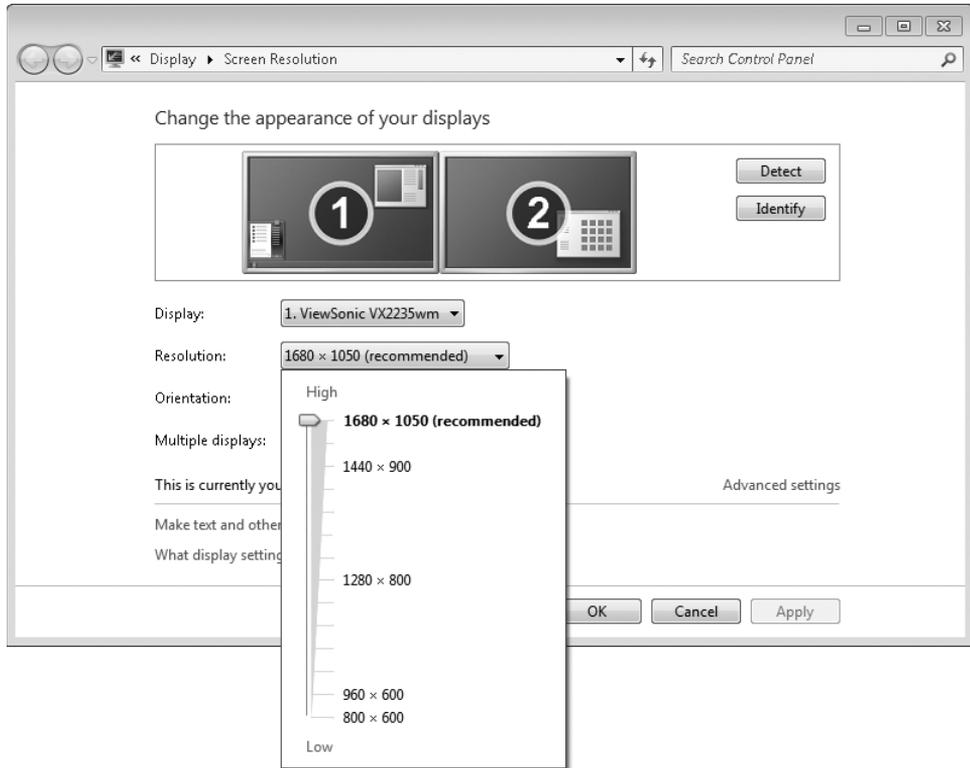
You set the resolution by dragging the pointer on the slider.

● **The density of your screen display** You might not be aware that you can change the magnification of everything that appears on your screen by changing the screen magnification setting in Windows. Setting your screen magnification to 125% makes text and user interface elements larger on screen. This increases the legibility of information, but it also means that less fits onto each screen.

On a computer running Windows 7, you can change the screen magnification from the Display window of Control Panel.
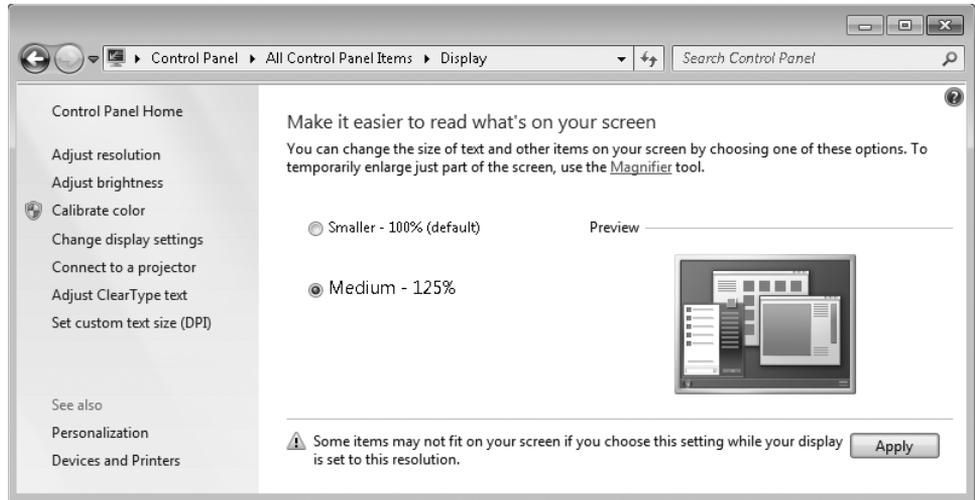
You can choose one of the standard display magnification options or create another by setting a custom text size.

The screen magnification is directly related to the density of the text elements on screen, which is expressed in dots per inch (dpi) or points per inch (ppi). (The terms are interchangeable, and in fact, they are both used in the Windows dialog box in which you change the setting.) The greater the dpi, the larger the text and user interface elements appear on screen. By default, Windows displays text and screen elements at 96 dpi. Choosing the Medium - 125% display setting changes the dpi of text and screen elements to 120 dpi. You can choose a custom setting of up to 500% magnification, or 480 dpi, in the Custom DPI Setting dialog box.
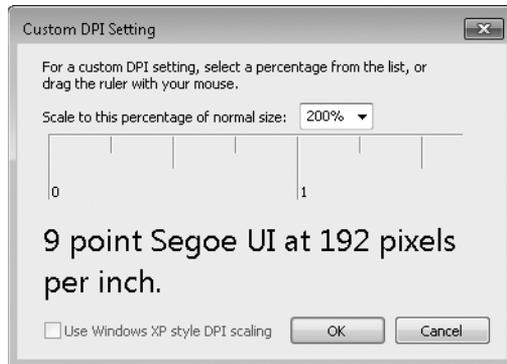
You can choose a magnification of up to 200% from the lists or choose a greater magnification by dragging across the ruler from left to right.

See Also For more information about display settings, refer to *Windows 7 Step by Step* (Microsoft Press, 2009), *Windows Vista Step by Step* (Microsoft Press, 2006), or *Windows XP Step by Step* (Microsoft Press, 2002) by Joan Lambert Preppernau and Joyce Cox.

Adapting Exercise Steps

The screen images shown in the exercises in this book were captured at a screen resolution of 1280 × 800, at 100% magnification, and the default text size (96 dpi). If any of your settings are different, the ribbon on your screen might not look the same as the one shown in the book. For example, you might see more or fewer buttons in each of the groups, the buttons you see might be represented by larger or smaller icons than those shown, or the group might be represented by a button that you click to display the group's commands.

When we instruct you to give a command from the ribbon in an exercise, we do it in this format:

● On the **Project** tab, in the **Properties** group, click **Project Information**.

If the command is in a list, we give the instruction in this format:

● On the **View** tab, in the **Data** group, click **Tables** and then click **Cost**.

The first time we instruct you to click a specific button in each exercise, we display an image of the button in the page margin to the left of the exercise step.

If differences between your display settings and ours cause a button on your screen to look different from the one shown in the book, you can easily adapt the steps to locate the command. First, click the specified tab. Then locate the specified group. If a group has been collapsed into a group list or group button, click the list or button to display the group's commands. Finally, look for a button that features the same icon in a larger or smaller size than that shown in the book. If necessary, point to buttons in the group to display their names in ScreenTips.

If you prefer not to have to adapt the steps, set up your screen to match ours while you read and work through the exercises in the book.

Features and Conventions of This Book

This book has been designed to lead you step by step through many of the tasks you're most likely to want to perform in Microsoft Project Professional 2010 or Microsoft Project Standard 2010. If you start at the beginning and work your way through all the exercises, you will gain enough proficiency to be able to create and work with a wide range of Project features. However, each topic is self contained. If you have worked with a previous version of Project, or if you completed all the exercises and later need help remembering how to perform a procedure, the following features of this book will help you locate specific information:

● **Detailed table of contents** Search the listing of the topics and sidebars within each chapter.

● **Chapter thumb tabs** Easily locate the beginning of the chapter you want.

● **Topic-specific running heads** Within a chapter, quickly locate the topic you want by looking at the running heads at the top of odd-numbered pages.

● **Glossary** Look up the meaning of a word or the definition of a concept.

● **Detailed index** Look up specific tasks and features in the index, which has been carefully crafted with the reader in mind.

You can save time when reading this book by understanding how the *Step by Step* series shows exercise instructions, keys to press, buttons to click, and other information.

Convention	Meaning
SET UP	This paragraph preceding a step-by-step exercise indicates the practice files that you will use when working through the exercise. It also indicates any requirements that you should attend to or actions that you should take before beginning the exercise.
CLEAN UP	This paragraph following a step-by-step exercise provides instructions for saving and closing open files or programs before moving on to another topic. It also suggests ways to reverse any changes you made to your computer while working through the exercise.
1 **2**	Numbered steps guide you through hands-on exercises in each topic, as well as procedures in sidebars and expository text.
Important	This paragraph points out information that you need to know to complete a procedure.

Convention	Meaning
Note	This paragraph describes information that merits special attention.
See Also	This paragraph directs you to more information about a topic in this book or elsewhere.
Tip	This paragraph provides a helpful hint or shortcut that makes working through a task easier.
Ctrl+G	A plus sign (+) between two keys means that you must press those keys at the same time. For example, "Press Ctrl+G" means that you should hold down the Ctrl key while you press the G key.
	Pictures of buttons appear in the margin the first time the button is used in a chapter.
Bold	In exercises that begin with SET UP information, bold type displays text that you should type; the names of program elements, such as buttons, commands, windows, and dialog boxes; and files, folders, or text that you interact with in the steps.
Bold italic	Terms that are defined in the Glossary are formatted this way.

Using the Practice Files

Before you can complete the exercises in this book, you need to copy the book's practice files to your computer. These practice files, as well as other information, can be downloaded from the book's detail page, located at:

http://go.microsoft.com/fwlink/?Linkid=191765

Display the detail page in your Web browser and follow the instructions for downloading the files.

Important The Microsoft Project 2010 program is not available from this Website. You should purchase and install that program before using this book.

The following table lists the practice files for this book.

Note The same set of practice files works with both Microsoft Project Professional 2010 and Microsoft Project Standard 2010. Differences between the two editions of Project are explained where needed throughout the book.

Chapter	File
Chapter 1: A Guided Tour of Project	Guided Tour_Start.mpp
Chapter 2: Creating a Task List	(no initial practice file)
Chapter 3: Setting Up Resources	Simple Resources_Start.mpp
Chapter 4: Assigning Resources to Tasks	Simple Assignments_Start.mpp
Chapter 5: Formatting and Sharing Your Plan	Simple Formatting_Start.mpp
Chapter 6: Tracking Progress on Tasks	Simple Tracking_Start.mpp
Chapter 7: Fine-Tuning Task Details	Advanced Tasks A_Start.mpp
	Advanced Tasks B_Start.mpp
Chapter 8: Fine-Tuning Resource Details	Advanced Resources_Start.mpp
Chapter 9: Fine-Tuning Assignment Details	Advanced Assignments A_Start.mpp
	Advanced Assignments B_Start.mpp
Chapter 10: Fine-Tuning the Project Plan	Advanced Plan_Start.mpp
Chapter 11: Organizing Project Details	Advanced Organizing_Start.mpp
Chapter 12: Tracking Progress on Tasks and Assignments	Advanced Tracking A_Start.mpp
	Advanced Tracking B_Start.mpp
	Advanced Tracking C_Start.mpp
	Advanced Tracking D_Start.mpp
Chapter 13: Viewing and Reporting Project Status	Reporting Status_Start.mpp

Chapter	File
Chapter 14: Getting Your Project Back on Track	Back on Track_Start.mpp
Chapter 15: Applying Advanced Formatting and Printing	Advanced Formatting_Start.mpp
Chapter 16: Customizing Project	Customizing A_Start.mpp
	Customizing B_Start.mpp
Chapter 17: Sharing Project Information with Other Programs	Sample Task List.xls
	Sharing_Start.mpp
Chapter 18: Consolidating Projects and Resources	Consolidating A_Start.mpp
	Consolidating B_Start.mpp

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Every effort has been made to ensure the accuracy of this Microsoft Press book. If you run into problems please contact the appropriate source, listed in the following sections, for help and assistance.

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The practice files referred to throughout this book are available as Web downloads. For more information, see "Using the Practice Files," at the beginning of this book.

If your question or issue concerns the content of this book or its practice files, please first consult the book's errata page, which can be accessed at:

http://go.microsoft.com/fwlink/?Linkid=191765

This page provides information about known errors and corrections to the book. If you do not find your answer on the errata page, send your question or comment to Microsoft Press Technical Support at:

mspinput@microsoft.com

Getting Help with Project 2010

If your question is about Microsoft Project 2010, not about the content of this book or its practice files, please search Microsoft Support or the Microsoft Knowledge Base at:

http://support.microsoft.com

In the United States, Microsoft software product support issues not covered by the Microsoft Knowledge Base are addressed by Microsoft Product Support Services. The Microsoft software support options available from Microsoft Product Support Services are listed at:

http://support.microsoft.com/gp/selfoverview/

Chapter at a Glance

Create a list of resources, page 56.

Change a resource's capacity to perform work, page 59.

Enter resource cost rates, page 60.

Change a resource's working time, page 63.

Add notes about resources, page 68.

3 Setting Up Resources

In this chapter, you will learn how to:

✔ Set up basic resource information for the people who work on projects.

✔ Adjust the maximum capacity of a resource to do work.

✔ Set up cost information for work resources.

✔ Change a resource's availability for work.

✔ Enter cost resource information for financial tracking.

✔ Record additional information about a resource in a note.

Microsoft Project 2010 supports three types of *resources*. These are work resources, as well as two special-purpose resources: cost and material. Briefly, here is how to think about the three resource types:

● *Work resources* include the people and equipment needed to complete the tasks in a project.

● *Cost resources* represent a financial cost associated with a task that you need to account for. Examples include categories of expenses like travel, entertainment, and so on.

● *Material resources* are consumables that you use up as the project proceeds. For example, a construction project might need to track steel or concrete as it is used throughout the project.

In this chapter you will set up work and cost resources. Material resources are described in Chapter 8, "Fine-Tuning Resource Details."

In this chapter, you will set up the work and cost resources that you need to complete the new book launch at Lucerne Publishing. Effective resource management is one of the most powerful advantages of using Project instead of task-focused planning tools, such as paper-based organizers. You do not need to set up resources and assign them

to tasks in Project; however, without this information, you might be less effective in managing your schedule. Setting up resource information in Project takes a little effort, but the time is well spent if your project is primarily driven by time or cost constraints (and nearly all projects are driven by one, if not both, of these factors).

> **Practice Files** Before you can complete the exercises in this chapter, you need to copy the book's practice files to your computer. A complete list of practice files is provided in "Using the Practice Files" at the beginning of this book. For each exercise that has a practice file, simply browse to where you saved the book's practice file folder.

Important If you are running Project Professional, you may need to make a one-time setting change. This helps ensure that the practice files you work with in this chapter do not affect your Project Server data. For more information, see Appendix C, "Using the Practice Files if Connected to Project Server."

Setting Up Work Resources

Work resources are the people and equipment that do the work of the project. Project focuses on two aspects of work resources: their availability and their costs. Availability determines when specific resources can work on tasks and how much work they can perform, and costs refer to how much money will be required to pay for those resources.

Some examples of work resources are listed in this table.

Work Resource	Example
Individual people identified by name.	Jun Cao; Zac Woodall
Individual people identified by job title or function.	Publisher; Contract specialist
Groups of people who have common skills. (When assigning such interchangeable resources to a task, you might not be concerned about who the individual resource is so long as they have the right skills.)	Copyeditors; Typesetters
Equipment.	Offset lithography press

Equipment Resource Considerations

In Project, you set up people and equipment resources in exactly the same way; they are both examples of work resources. However, you should be aware of important differences in how you can schedule these two work resources. Most people resources have a working day of typically 8 and usually no more than 12 hours, but equipment resources might have much more varied capacities for work, ranging from short durations (followed by maintenance) to around the clock without interruption. Moreover, people resources might be flexible in the tasks they can perform, but equipment resources tend to be more specialized. For example, a content editor for a book project might also act as a copyeditor in a pinch, but a desktop copy machine cannot replace a printing press.

You do not need to track every piece of equipment that will be used in your project, but you might want to set up equipment resources when

- Multiple teams or people might need a piece of equipment to accomplish different tasks simultaneously, and the equipment might be overbooked.
- You want to plan and track costs associated with the equipment.

Consider these issues if your projects involve equipment resources.

Project can help you make smarter decisions about managing work resources and monitoring financial costs.

In this exercise, you enter the names of several people resources.

SET UP Start Project if it's not already running.

You need the Simple Resources_Start project plan located in your Chapter03 practice file folder to complete this exercise. Open the Simple Resources_Start project plan, and then follow these steps.

1. On the **File** tab, click **Save As**.

   Project displays the Save As dialog box.

2. In the **File name** box, type **Simple Resources**, and then click **Save**.

   Tip You can instruct Project to automatically save the active project plan at predefined intervals, such as every 10 minutes. On the File tab, click Options. In the Project Options dialog box, click Save, select the Auto Save Every check box, and then specify the time interval you want.

3. On the **View** tab, in the **Resource Views** group, click **Resource Sheet**.

You will use the Resource Sheet view to enter the initial list of resources for the new book launch project.

4. Click the cell directly below the **Resource Name** column heading.

5. Type **Jun Cao**, and press the Enter key.

Project creates a new resource.
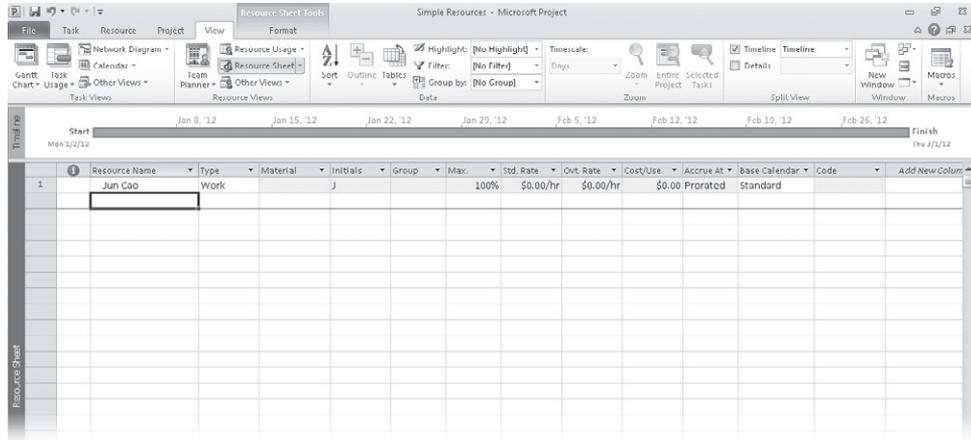
6. On the next empty rows in the **Resource Name** column, enter the following names:

Sharon Salavaria

Toby Nixon

Toni Poe

Zac Woodall

When you create a new work resource, Project assigns it 100% Max. Units by default.

These are all individual people. You can also have a resource that represents multiple people. You'll enter such a resource next.

7. In the **Resource Name** field, below the last resource, type **Copyeditors**, and then press Enter.

> ### What Is the Best Way to Enter Resource Names?
>
> In Project, work resource names can refer to specific people (Sharon Salavaria) or to specific job titles, such as Publisher or Contract Specialist. Use whatever naming convention makes the most sense to you and to those who will see your project plan information. The important questions are: who will see these resource names, and how will they identify the resources? The resource names that you choose will appear both in Project and in any resource information shared from Project. For example, in the default Gantt Chart view, the name of the resource appears next to the bars of the tasks to which that resource is assigned.
>
> A resource might refer to somebody who is already on staff or to a position to be filled later. If you have not yet filled all the resource positions required, you might not have real people's names to enter. In that case, use descriptive placeholder names or job titles when setting up resources in Project.

Entering Resource Capacity

The Max. Units field represents the maximum capacity of a resource to accomplish any task. Specifying that a resource has 100% *maximum units* means that 100 percent of that resource's working time is available to work on assigned tasks in the project plan. Project will alert you if you assign the resource to more tasks than they can accomplish at 100% maximum units (in other words, if the resource becomes *overallocated*). 100% is the default Max. Units value for new resources.

For a resource that represents not a specific person, but a category of interchangeable people with a common skill set, you can enter a larger Max. Units value to indicate the number of available people. Entering a Max. Units setting such as 800% for such a resource means that you can expect that eight individual people who all belong to that resource category will be available to work full time every workday.

In this exercise, you adjust the Max. Units values to indicate one resource that represents multiple people, and another resource whose capacity to work in this project plan is less than full time.

1. Click the **Max. Units** field for the *Copyeditors* resource.

2. Type or select **400%**, and then press Enter.

   Tip When you click a numeric value in a field like Max. Units, up and down arrows appear. You can click these to display the number you want, or simply type the number in the field.

Next you'll update the Max. Units value for Sharon Salavaria to indicate that she works half time.

3. Click the **Max. Units** field for *Sharon Salavaria*, type or select **50%**, and then press Enter.

	ⓘ	Resource Name ▼	Type ▼	Material ▼	Initials ▼	Group ▼	Max. ▼	Std. Rate ▼	Ovt. Rate ▼	Cost/Use ▼	Accrue At ▼	Base Calendar ▼
1		Jun Cao	Work		J		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
2		Sharon Salavaria	Work		S		50%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
3		Toby Nixon	Work		T		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
4		Toni Poe	Work		T		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
5		Zac Woodall	Work		Z		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard
6		Copyeditors	Work		C		400%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard

Tip If you prefer, you can enter maximum units as partial or whole numbers (.5, 1, 4) rather than as percentages (50%, 100%, 400%). To use this format, on the File tab, click Options. In the Project Options dialog box, click the Schedule tab. In the Show assignment units as a box, click Decimal.

With these changes to Max. Units, Project will identify these resources as being overallocated when their assigned work exceeds their capacities. You will work with resource overallocation in Chapters 8 and 9.

Entering Resource Pay Rates

Almost all projects have some financial aspect, and cost limits the scope of many projects. Tracking and managing cost information allows the project manager to answer such important questions as the following:

- What is the expected total cost of the project based on our task durations and resource assignments?

- Are we using expensive resources to do work that less expensive resources could do?

- How much money will a specific type of resource or task cost over the life of the project?

- Are we spending money at a rate that we can sustain for the planned duration of the project?

You can enter standard rates and costs per use for work and material resources, as well as overtime rates for work resources. Cost resources do not use pay rates and are described later in this chapter.

When a work resource has a standard pay rate entered and is assigned to a task, Project calculates the cost of the assignment. Project does so by multiplying the assignment's work value by the resource's pay rate—both using a common increment of time (such as hours). You can then see cost per resource, cost per assignment, and cost per task (as well as costs rolled up to summary tasks and the entire project plan). You will assign resources to tasks in Chapter 4, "Assigning Resources to Tasks."

Project handles overtime expenses differently. Project will apply the overtime pay rate only when you specifically record overtime hours for an assignment. You will find more information about working with overtime in Chapter 14, "Getting Your Project Back On Track." Project does not automatically calculate overtime hours and associated costs be-cause there's too great a chance that it would apply overtime when you did not intend it. In the new book launch project plan, Jun Cao's working schedule provides a good ex-ample. In the next exercise, you will set up a working schedule of 10 hours per day, four days per week for Jun. This is still a regular 40-hour workweek, even though 2 hours per day could be mistaken for overtime with the normal assumption of an 8-hour day.

In addition to or instead of cost rates, a resource can include a set fee that Project accrues to each task to which the resource is assigned. This is called a cost per use. Unlike cost rates, the cost per use does not vary with the task's duration or amount of work the resource performs on the task. You specify the cost per use in the Cost/Use field in the Resource Sheet view.

In this exercise, you enter standard and overtime pay rates for work resource.

1. In the **Resource Sheet**, click the **Std. Rate** field for *Jun Cao*.

2. Type **42** and press Enter.

   Jun's standard hourly rate of $42 appears in the Std. Rate column. Note that the default standard rate is hourly, so you did not need to specify cost per hour.

3. In the **Std. Rate** field for *Sharon Salavaria*, type **1100/w** and press Enter.

   Sharon's weekly pay rate appears in the Std. Rate column.

		Resource Name	Type	Material	Initials	Group	Max.	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar	Co
1		Jun Cao	Work		J		100%	$42.00/hr	$0.00/hr	$0.00	Prorated	Standard	
2		Sharon Salavaria	Work		S		50%	1,100.00/wk	$0.00/hr	$0.00	Prorated	Standard	
3		Toby Nixon	Work		T		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard	
4		Toni Poe	Work		T		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard	
5		Zac Woodall	Work		Z		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard	
6		Copyeditors	Work		C		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard	

4. Enter the following standard pay rates for the given resources:

Resource Name	Standard Rate
Toby Nixon	**2700/w**
Toni Poe	Leave at 0 (Toni is the book author and you're not tracking her rate-based costs in this project plan)
Zac Woodall	**55**
Copyeditors	**45**

	ⓘ	Resource Name	Type	Material	Initials	Group	Max.	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar	Co
1		Jun Cao	Work		J		100%	$42.00/hr	$0.00/hr	$0.00	Prorated	Standard	
2		Sharon Salavaria	Work		S		50%	1,100.00/wk	$0.00/hr	$0.00	Prorated	Standard	
3		Toby Nixon	Work		T		100%	2,700.00/wk	$0.00/hr	$0.00	Prorated	Standard	
4		Toni Poe	Work		T		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard	
5		Zac Woodall	Work		Z		100%	$55.00/hr	$0.00/hr	$0.00	Prorated	Standard	
6		Copyeditors	Work		C		400%	$45.00/hr	$0.00/hr	$0.00	Prorated	Standard	

As you can see, you can enter pay rates with a variety of time bases—hourly (the default), daily, weekly, and so on. In fact, you can enter pay rates in all the increments of time for which you can enter task durations—from minutes to years.

Next, you will enter an overtime pay rate for one of the resources.

5. In the **Overtime Rate** field for *Jun Cao*, type **67**, and then press Enter.

Tip If you work with a large number of resources who have the same standard or overtime pay rates, you can set up Project to apply these pay rates automatically whenever you add a new resource. You do this in the Advanced tab of the Project Options dialog box, which is accessible from the File tab.

Project Management Focus: Getting Resource Cost Information

Work resources can account for the majority of costs in many projects. To take full advantage of the extensive cost management features in Project, the project manager would ideally know the costs associated with each work resource. For people resources, it might be difficult to obtain such information. In many organizations, only senior management and human resource specialists know the pay rates of all resources working on a project, and they might consider this information confidential. Depending on your organizational policies and project priorities, you might not be able to track resource pay rates. If you cannot track resource cost information and your project is constrained by cost, your effectiveness as a project manager might be reduced, and the sponsors of your projects should understand this limitation. If you do include cost details in your project plan and this is considered sensitive information, consider requiring a password to open such project plans. To set a password, click the File tab, and then click Save As. In the Save As dialog box, click Tools and then click General Options.

Adjusting Working Time for Individual Resources

Project uses different types of calendars for different purposes. In Chapter 2, "Creating a Task List," you modified the *project calendar* to specify nonworking days for the entire project. In this exercise, you will focus on the resource calendar. A *resource calendar* controls the working and nonworking times of an individual resource. Project uses resource calendars to determine when work for a specific resource can be scheduled. Resource calendars apply only to work resources (people and equipment), not to material or cost resources.

When you initially create resources in a project plan, Project creates a resource calendar for each work resource. The initial working time settings for resource calendars exactly match those of the project calendar, which by default is the *Standard base calendar*. The Standard base calendar is built into Project and accommodates a default work schedule from 8 A.M. to 5 P.M., Monday through Friday, with an hour off for lunch each day. If all the working times of your resources match the working time of the project calendar, you do not need to edit any resource calendars. However, chances are that some of your resources will need exceptions to the working time in the project calendar—such as

- A flex-time work schedule
- Vacation time
- Other times when a resource is not available to work on the project, such as time spent training or attending a conference

Tip If you have a resource who is available to work on your project only part time, you might be tempted to set the working time of the resource in your project to reflect a part-time schedule, such as 8 A.M. to 12 P.M. daily. However, a better approach would be to adjust the availability of the resource as recorded in the Max. Units field to 50%, as you did for the previous exercise for the resource named Sharon Salavaria. Changing the unit availability of the resource keeps the focus on the capacity of the resource to work on the project rather than on the specific times of the day when that work might occur. You set the maximum units for a resource in the Resource Sheet view.

Changes that you make to the project calendar are reflected automatically in resource calendars derived from the same project calendar. For example, in Chapter 2, you specified a nonworking day for a staff morale event, and Project rescheduled all work to skip that day.

In this exercise, you specify the working and nonworking times for individual work resources.

1. On the **Project** tab, in the **Properties** group, click **Change Working Time**.

The Change Working Time dialog box appears.

2. In the **For calendar** box, click *Toby Nixon*.

   Toby Nixon's resource calendar appears in the Change Working Time dialog box. Toby has told you he will not be available to work on Thursday and Friday, January 19 and 20, because he plans to attend a book industry conference.

3. On the **Exceptions** tab in the **Change Working Time** dialog box, click in the first row directly below the **Name** column heading and type **Toby attending a conference**.

   The description for the calendar exception is a handy reminder for you and others who may view the project plan later.

4. Click in the **Start** field and type or select **1/19/12**.

5. Click in the **Finish** field, type or select **1/20/12**, and then press the Enter key.

   Tip **Alternatively, in the calendar you can first select the date or date range for which you want to create an exception, and then enter the exception name. Project will insert the Start and Finish dates automatically based on your selection, and then press the Enter key.**

Every work resource calendar is based on the project calendar; the default project calendar is the Standard base calendar.

Project will not schedule work for Toby on these dates.

Tip To set up a partial working time exception for a resource, such as a portion of a day when a resource cannot work, click Details. In the Details dialog box, you can also create recurring exceptions to the resource's availability.

To conclude this exercise, you will set up a "4 by 10" work schedule (that is, 4 days per week, 10 hours per day) for a resource.

6. In the **For** box, click *Jun Cao*.

7. When prompted to save the resource calendar changes that you made for Toby Nixon, click **Yes**.

8. Click the **Work Weeks** tab in the **Change Working Time** dialog box.

9. Click **[Default]** directly under the **Name** column heading, and then click **Details**.

Next, you will modify the default working week days and times for Jun Cao.

10. Under **Selected Day(s)**, select **Monday** through **Thursday**.

These are the weekdays Jun can normally work.

11. Click **Set day(s) to these specific working times**.

Next you'll modify Jun's regular daily schedule for the days she normally works.

12. In row 2, click **5:00 PM** and replace it with **7:00 PM**, and then press Enter.

Finally, you will mark Friday as a nonworking day for Jun.

13. Click **Friday**.

14. Click **Set days to nonworking time**.

Now Project can schedule work for Jun as late as 7 P.M. every Monday through Thursday, but it will not schedule work for her on Fridays.
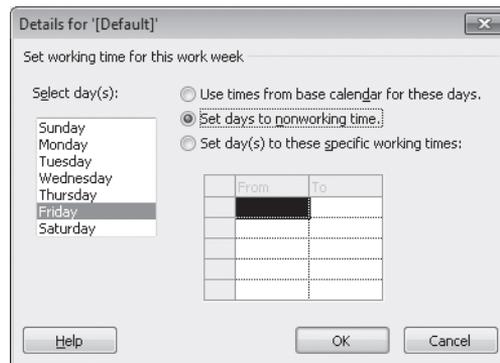
15. Click **OK** to close the **Details** dialog box.

You can see in the calendar in the Change Working Time dialog box that Fridays (as well as Saturdays and Sundays) are marked as nonworking days for Jun Cao.
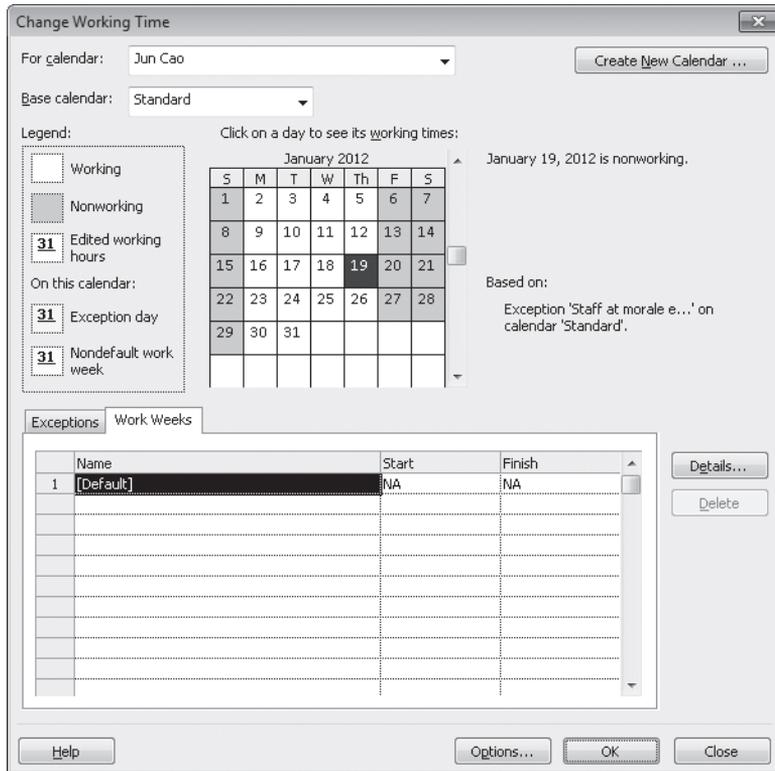
16. Click **OK** to close the **Change Working Time** dialog box.

Because you have not yet assigned these resources to tasks, you don't see the scheduling effect of their nonworking time settings. You will observe this in Chapter 4.

Tip If you find that you must edit several resource calendars in a similar way (to handle a night shift, for example), it may be easier to assign a different base calendar to a resource or collection of resources. This is more efficient than editing individual calendars, and it allows you to make project-wide adjustments to a single base calendar if needed. For example, if your project includes a day shift and a night shift, you can apply the Night Shift base calendar to those resources who work the night shift. You change a base calendar in the Change Working Time dialog box. For collections of resources, you can select a specific base calendar directly in the Base Calendar column on the Entry table in the Resource Sheet view.

Setting Up Cost Resources

Another type of resource that you can use in Project is the cost resource. You can use a cost resource to represent a financial cost associated with a task in a project. While work resources (people and equipment) can have associated costs (hourly rates and fixed costs per assignment), the sole purpose of a cost resource is to associate a particular type of cost with one or more tasks. Common types of cost resources might include categories of expenses you'd want to track on a project for accounting or financial reporting purposes, such as travel, entertainment, or training.

Cost resources do no work and have no effect on the scheduling of a task. The Max. Units Standard and Overtime pay rates and Cost/Use fields do not apply to cost resources. After you assign a cost resource to a task and specify the cost amount per task, you can then see the cumulative costs for that type of cost resource, such as total travel costs in a project.

The way in which cost resources generate cost values differs from that of work resources. When you assign a work resource to a task, the work resource can generate a cost based on a pay rate (such at $40 per hour for the length of the assignment), a flat per-use cost (such as $100 per assignment), or both. You set up such pay rates and cost per use amounts once for the work resource, as you did in the section "Entering Resource Pay Rates" earlier in this chapter. However, you enter the cost value of a cost resource only when you assign it to a task. You can do so in the Cost field of the Assign Resources dialog box or in the Cost field of the Task Form with the Cost detail shown.

Lucerne Publishing maintains a profit and loss (P&L) sheet for every book it publishes. Travel is a major expense incurred in a book launch.

In this exercise, you'll set up a cost resource.

1. In the **Resource Sheet**, click the next empty cell in the **Resource Name** column.
2. Type **Travel** and press the Tab key.
3. In the **Type** field, click **Cost**.

	ⓘ	Resource Name	Type	Material	Initials	Group	Max.	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar	Cos
1		Jun Cao	Work		J		100%	$42.00/hr	$67.00/hr	$0.00	Prorated	Standard	
2		Sharon Salavaria	Work		S		50%	1,100.00/wk	$0.00/hr	$0.00	Prorated	Standard	
3		Toby Nixon	Work		T		100%	2,700.00/wk	$0.00/hr	$0.00	Prorated	Standard	
4		Toni Poe	Work		T		100%	$0.00/hr	$0.00/hr	$0.00	Prorated	Standard	
5		Zac Woodall	Work		Z		100%	$55.00/hr	$0.00/hr	$0.00	Prorated	Standard	
6		Copyeditors	Work		C		400%	$45.00/hr	$0.00/hr	$0.00	Prorated	Standard	
7		Travel	Cost		T						Prorated		

You will assign a cost resource in Chapter 4.

Documenting Resources

You might recall from Chapter 2 that you can record any additional information about a task, resource, or assignment in a *note*. For example, if a resource has flexible skills that can help the project, it is a good idea to record this in a note. In that way, the note resides in the project plan and can be easily viewed or printed.

In this exercise, you enter resource notes relevant to the new book launch project. In Chapter 2, you entered a task note via the Notes button on the Task tab of the Properties group. You can enter resource notes in a similar way (via the Notes button on the Resource tab of the Properties group) but in this exercise, you'll use a differ-ent method. You'll use the Resource form, which allows you to view and edit notes for multiple resources more quickly.

In this exercise, you'll enter notes in the Resource Form.

1. In the **Resource Name** column, click *Toby Nixon*.

2. On the **Resource** tab, in the **Properties** group, click the **Details** button.

   Tip You can also click Details, Resource Form on the View tab of the Split View group.

   The Resource Form appears below the Resource Sheet view.

In this type of split view, details about the selected item in the upper view (a resource, in this case) appear in the lower view. You can quickly change the selected resource name in the upper view by clicking directly on a name, using the up arrow or down arrow keys, or by clicking Previous or Next in the Resource Form.

The Resource Form can display one of several details; initially it displays the Schedule details. Next you'll switch it to display the Notes details.

3. Click anywhere in the **Resource Form**.

4. On the **Format** tab, in the **Details** group, click **Notes**.

> **Tip** You can also right-click in the gray background area of the Resource Form and, in the shortcut menu that appears, click Notes.

The Notes details appear in the Resource Form.

5. In the **Notes** box, type **Toby worked on launch campaigns for Toni Poe's previous two books.**

Notice that as soon as you started typing the note, the Previous and Next buttons changed to OK and Cancel.

6. Click **OK**.

In the Resource Sheet view, a note icon appears in the Indicators column.

7. Point to the note icon that appears next to Toby's name in the Resource Sheet.

The note appears in a ScreenTip. For notes that are too long to appear in a ScreenTip, you can double-click the note icon to display the full text of the note. You can also see more of long notes in the Resource Form or in the Resource Information dialog box.

To conclude this exercise, you'll add a note for one more resource.

8. In the **Resource Form**, click **Previous** to shift the focus to Sharon Salavaria and display her details.

Tip You can also click on Sharon's name in the Resource Sheet view above the Resource Form.

9. In the **Notes** box, type **Sharon's standard pay rate is adjusted for her half-time work schedule.** Then click **OK**.

Finally, you'll close the Resource Form.

10. On the **Resource** tab, in the **Properties** group, click the **Details** button.

   The Resource Form is closed, leaving the Resource Sheet displayed.

   In this exercise, you've entered notes for some resources. This information is unique to those resources.

   ✖ **CLEAN UP** Close the Simple Resources file.

Key Points

- Recording resource information in your project plans helps you better control who does what work when and at what costs.
- Work resources (people and equipment) perform the work in a project.
- Cost resources account for the types of expenses that you may wish to track across a project.

Index