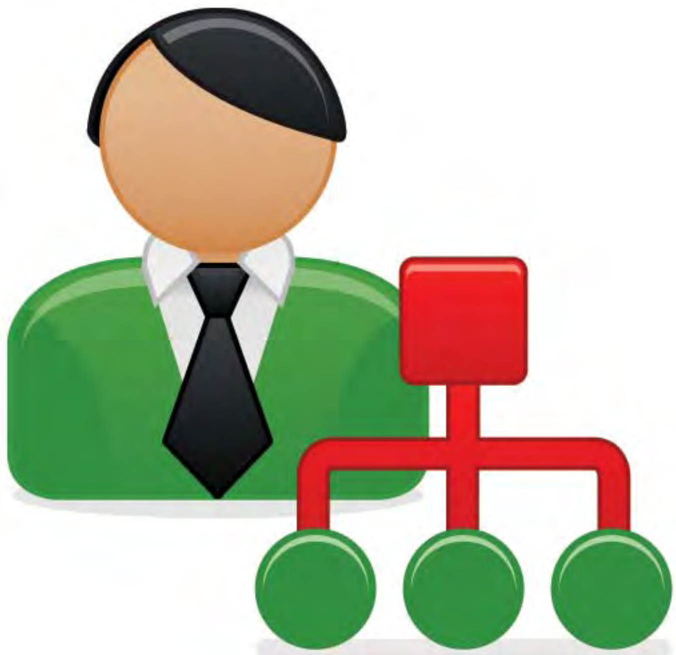
Microsoft Project 2007

Fundamentals



MPP
MS PROJECT PROS

Learning Series

Version 3.0

Learning Series

Microsoft Project 2007-Fundamentals

Description

This is two-day course is designed to teach project managers how to create and manage projects and resources. Participants will learn how to create new projects, enter tasks, create a WBS, set dependencies, create contrainsts and deadlines and manage resource assignments. The will also learn how to analyze and manage resource over and underallocations, set baselines, track and manage progress and generate reports.

Objectives

After completing this course, you will be able to:

- Understand the Microsoft Project Environment
- Create new project schedules
- Organize a task list
- Shape the schedule
- Mofify dependencies
- Work with calendars
- Manage resources
- Manage costs
- Understand task type settings
- Resolve overallocations
- Set constraints and deadlines
- Track progress
- Generate reports

Other Course Offerings

Project 2007

- Microsoft Project Server 2007 for Project Managers
- Microsoft Project Server 2007 for Administrators

Project 2010

- Microsoft Project 2010-Fundamentals
- Microsoft Project Server 2010 for Project Managers
- Microsoft Project Server 2010 for Administrators

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Microsoft Project 2007

Fundamentals

Courseware Version 3.0

Acknowledgments

MS Project Professional 2007 Fundamentals

Courseware Version: 3.0

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Student File(s)

Steps for downloading student files:

Step 1: Visit our website (www.msprojectpros.com)

Step 2: Register on our site and log-in

Step 3: Click the **Members Only** link in the navigation bar

Step 4: Click the **Microsoft Project 2007- Fundamentals** student files link

Step 5: Extract the files

Table of Contents

Microsoft Project 2007
Fundamentals

Module 1-Exploring the Project Environment

Performance Objectives

In this module, you gain confidence in your ability to:

- View a project file to become familiar with the Project environment
- Navigate to various views and become familiar with view types

Exercise File

MP07Fund_ModuleOne.mpp

Working with a Project File

The features of Microsoft Project 2007 help you efficiently plan, manage, and coordinate a project from its inception to completion. Decisions on a project can be made based on the most current information due to Project 2007's capabilities to store, update and display scheduling information. Also, Project 2007 has the capability to create potential scenarios that may help decide the course of a particular project.

The Project environment brings together an array of items that help the input and retrieval of information. By becoming familiar with these items such as different views, tables, forms, reports and dialog boxes, in addition to the toolbar buttons and menu commands, your use of Project will become more efficient.

To begin using Project, a blank project file is displayed in Gantt Chart view which is a graphical representation of a project schedule that contains Gantt bars that represent tasks. Here you can open an existing project file, a file from an earlier version of Project, or create a new project file.

NEW TERMS

Schedule The timing and sequence of tasks within a project. A schedule consists mainly of tasks, task dependencies, durations, constraints, and time-oriented project information.

View Any of the various presentation formats that are used to enter and display project information.

Gantt Chart view A graphical representation of a project schedule, containing Gantt bars that represent tasks.

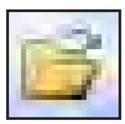
Start Project

1. Choose **Start: Programs: Microsoft Project.**

Open an existing file

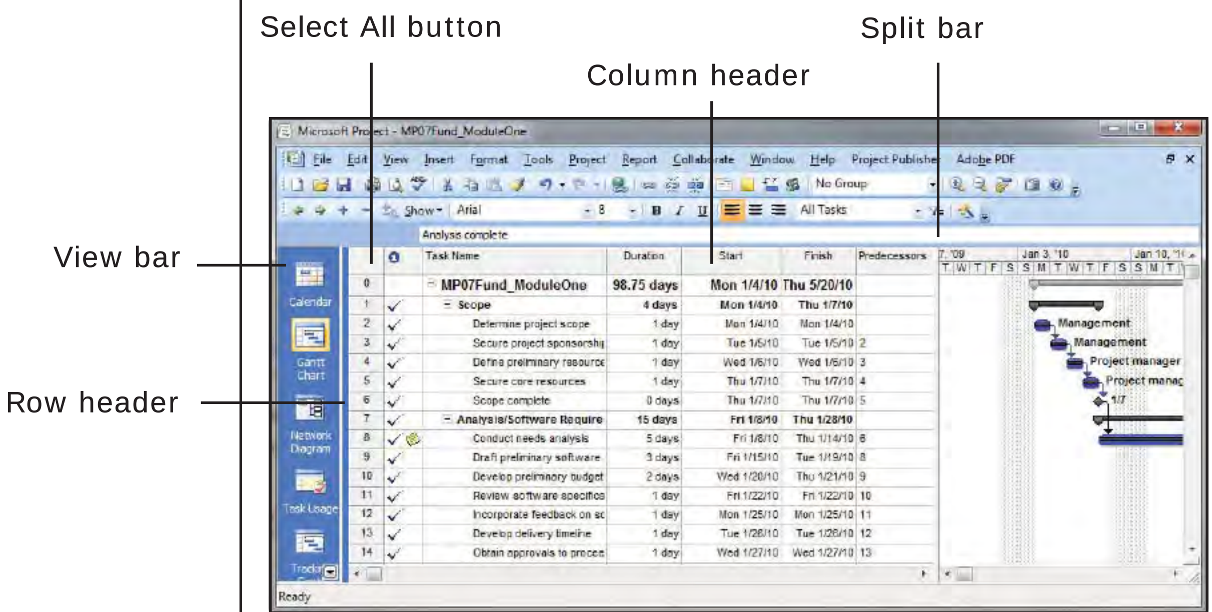
1. Locate the **Open** button on the Standard toolbar.

2. Click the **Open** button**.**



3. Browse to the **MP07_Fundamentals** folder on your computer.

3. Double-click on the **MP07Fund_ModuleOne.mpp** file.



Save a file with a new name

1. Choose **File: Save As.**

2. Verify that you are in the **MP07_Fundamentals** folder.

3. Type **My_MP07Fund_ModuleOne.mpp**.

4. Click **Save.**

Displaying Views

Each of the three types of views in Project: sheet views, chart and graph views, and form views present project information differently.

Each view presents project information in a unique way. Sheet views display information in columns and rows and are used when large amounts of information are being entered or viewed at one time. Chart and Graph views display information to visually present information without much detail in a graphical format. Form views display single sets of information and are used when focusing on detailed information. Views can also be displayed in a single or combination format.

NEW TERMS

timescale The time period indicator that is displayed at the top of certain views, such as the Gantt Chart, Task Usage and Resource Usage view. The timescale consists of a major timescale and a minor timescale below it.

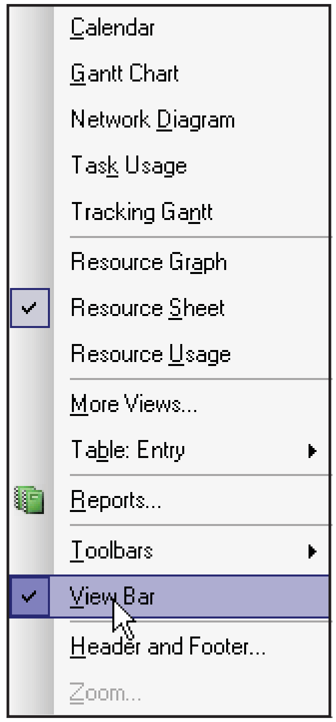
sheet view A view (such as the Task Sheet View) presents task or resource information in rows and columns. Each row specifies an individual task or resource and each column specifies a type of information.

chart and graph view A view (such as the Gantt Chart or Resource Graph) or part of a view that represents project information graphically.

form view A view (such as the Task Form) that presents detailed information about individual tasks or resources.

Hide and display the View bar

1. Choose **View: View Bar** to display.

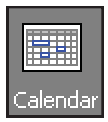


You can also right-click the View Bar area and display or hide the View Bar.

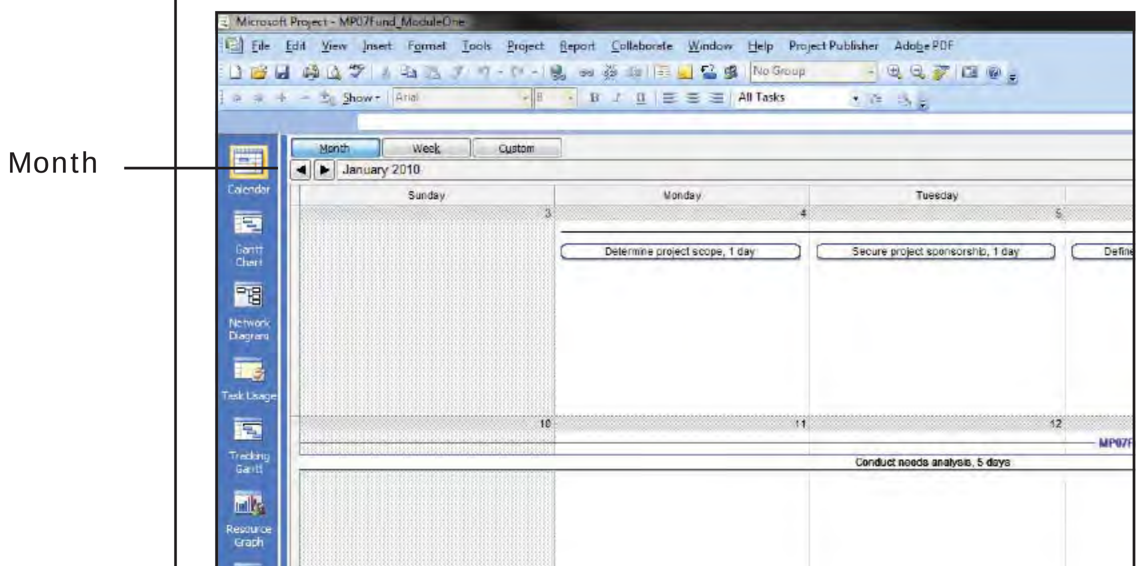
2. Choose **View: View Bar** to hide.

Use the View bar

1. Locate the **Calendar** icon on the View bar.



2. Click the **Calendar** icon.



3. Click the View bar down arrow until the Tracking Gantt icon is displayed.

4. Click the **Tracking Gantt Chart** icon.

5. Click the **Gantt Chart** icon to return to the Gantt Chart.

Navigating in Views

While working in Project views its important to be aware of the vertical and horizontal scroll bars. Each view, whether it is a single or combination view, has a vertical and horizontal scroll bar. A vertical scroll bar moves within the view from top to bottom. The horizontal scroll bar moves within the view from left to right. In some views, such as the Gantt Chart view, there is only one vertical scroll bar, which moves the Entry table and Gantt Chart at the same time. The **Arrow** keys and the [**TAB**] key on the keyboard can be used to move within a view in a similar way.

A frequently used command is the the "Scroll To Task" button which scrolls the timescale to locate the start of a selected task. The Zoom In and Zoom Out buttons are used to increase and decrease the timescale to see time-related views in various time increments.

Move within a view

1. Click the right scroll arrow on the Gantt chart four times.

2. Click the down scroll arrow three times.

3. Click the Task Name field for task 16.

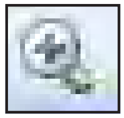
You can also use the F5 key to go to a specific task or date.

4. Locate the **Scroll To Task** button on the Standard toolbar

5. Click the **Scroll To Task** button.

Change the timescale units

1. Locate the Zoom In button on the Standard toolbar.



2. Click the Zoom In button.

3. Locate the Zoom Out button on the Standard toolbar.

4. Click the Zoom Out button three times.

5. Click the Zoom In button twice.

Indicators and Help

When certain actions are performed in Project, a small icon, called an indicator, is displayed in the Indicators column. The Indicators field is displayed by default in several tables, such as the Entry table. When the pointer is placed over an indicator, a ScreenTip displays important details about the item with which it is associated. There are five types of indicators: constraint, task type, workgroup, contour, and miscellaneous.

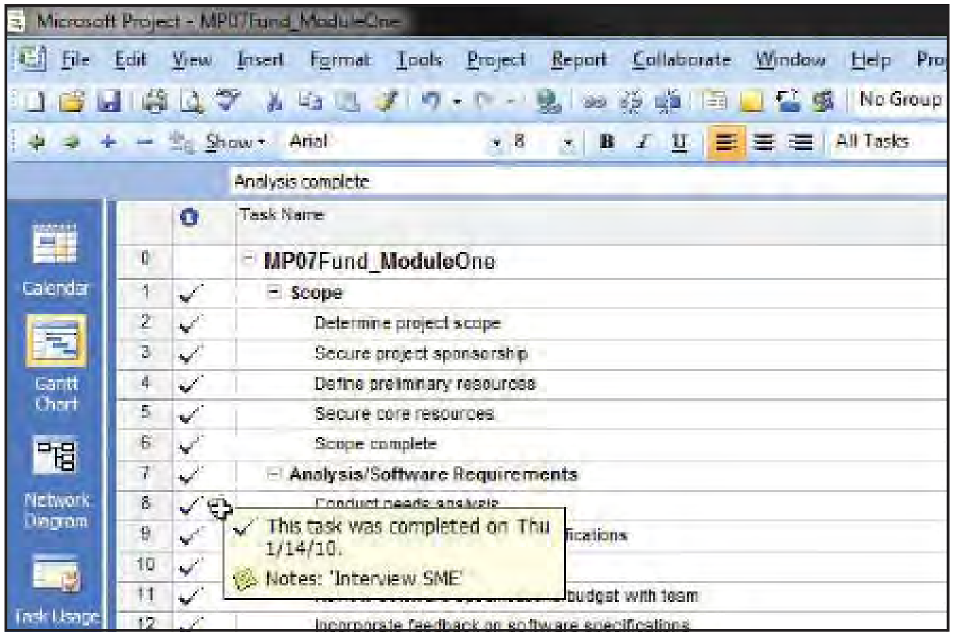
NEW TERMS

indicator A small icon representing information for a task or resource that is displayed in the indicators field.

ScreenTip The display of additional information regarding an indicator or an element of a dialog box.

Display indicator ScreenTips

1. Position the pointer over the indicator for Task 8, Conduct needs analysis.



2. Position the pointer over the indicator for task 16, Analysis Complete.

3. Position the pointer over the indicator for task 18, Review preliminary software specifications.

Using Help

The Help system in Project is a great way to help you understand commands and features in the Project application. Help can be initiated by clicking the help button, typing F1 on your keyboard and also by resting your pointer on a column header and then clicking the hyperlink.

Search for a Help Topic

1. Click the **Microsoft Office Project Help** button.

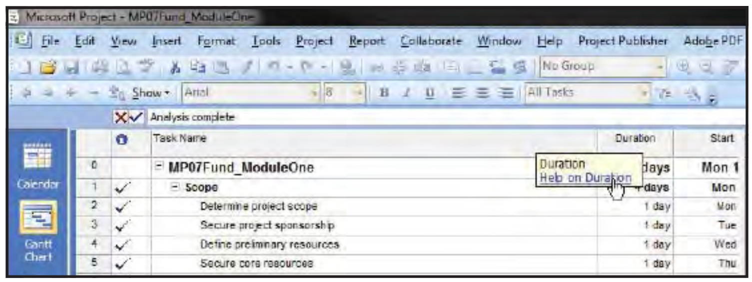
2. Click the **Getting Help** hyperlink.

3. Click the **Printing a Help topic** hyperlink.

4. Click the **Close** button in the upper right corner to close the dialog box.

Column Header Help

1. Rest your pointer over the Duration column header.



2. Wait for the pop up help item and click the **Help on Duration** hyperlink.

3. Click the **Close** button in the upper right corner to close the dialog box.

Close the Project File

1. Click the **Save** button.

2. Click **File: Close.**

Module 1 Recap Quiz

1. Name three ways to get create a new schedule in Microsoft Project?

2. Name the different View Types?

3. Name two ways to display the View Bar?

4. What does the F5 key do?

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Module 2-Getting Started with Microsoft Project

Performance Objectives

In this module, you gain confidence in your ability to:

- Enter tasks and durations to being creating a project schedule
- Enter recurring tasks

Exercise File

None

Creating a Project File

In order to get started with Microsoft Project 2007 you must create a new project file. A new project file can be created by clicking the New button or choosing File: New. You can store additional information about the project in the properties area of the project file. This information can then be used for reporting and search purposes.

NEW TERMS

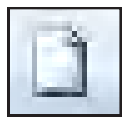
Project Information Specific project information that guides the schedule, such as start date, finish date, current date, status date and calendar.

Properties General information about a project schedule, such as the project title, the project managers name, company and comments.

Create a new project file

1. Make sure Microsoft Project is running.

2. Locate the **New** button on the Standard toolbar.



3. Click the **New** button.

Enter properties information

1. Choose **File:Properties**

2. Type **Software Development** in the Title box.

3. Press [**TAB**].

4. Press [**TAB**] again, and type **Steve Masters** in the Author box

5. Press [**TAB**], and type **Steve Masters** in the Managers box

6. Click **OK**.

7. Choose **File: Save**.

8. Save the file as **MP07Fund_ModuleTwo**.

Entering Task Durations

A default duration of one day is entered automatically when each task is entered. You can easily change the value by editing the cell for that task.

A unit of working time is defined by the hours of the day and the number of days work is done on the project. By default, a work day is eight hours and a work week is five days.

Duration abbreviations are used to further define duration unit values. The abbreviation of d (day) is assigned to durations by default. To change the unit abbreviation, enter a duration abbreviation along with the unit value, such as 4d for four days.

Milestones will be used throughout your schedule to represent the completion of an event, phase, or other measurable goal within a project. A milestone is created by entering a duration of zero for a task. A milestone task is displayed on the Gantt Chart as a diamond-shaped marker with the date the milestone occurs. Any task can be designated as milestones through the Task Details dialog box.

NEW TERMS

Milestone A reference point that marks a major event in a project and monitors the projects progress. Any task with zero duration is displayed as a milestone.

Entering tasks and durations

1. Click in the first cell in the Name column.

2. Type **Scope.**

3. Press [**TAB**] and type **3d** and press [**ENTER**]

4. Type the following task names and durations, starting below task ID 1. Press [**ENTER**] after each duration.

Scope	1 day
Determine project scope	3 days
Secure project sponsorship	1 wk
Define preliminary resources	1 day
Secure core resources	1 day
Scope complete	0 days

■ Enter detail tasks

1. Click in the second cell in the Name column.

2. Enter **Secure project sponsorship** and press [**TAB**].

3. Type **1W** and press [**ENTER**]

■ Create a milestone task

1. Click in the **Task Name**.

2. Type **Scope Complete** and press **[TAB]**

3. Type **0** and press **[ENTER]**

4. Save the File.

Creating a Recurring Task

Projects will have ongoing events that recur on a regular basis. Rather than entering these tasks over and over again, the Project Manager can use the Recurring Task feature. A recurring task could be a weekly meeting, a status report, or regular inspection.

Parameters of the recurring task will be specified in the Recurring Task Information dialog box. The duration of each occurrence, what day of the week or month it will occur, and how many times or how long it will occur can also specified. A recurring task can be set to occur daily, weekly, monthly, or yearly.

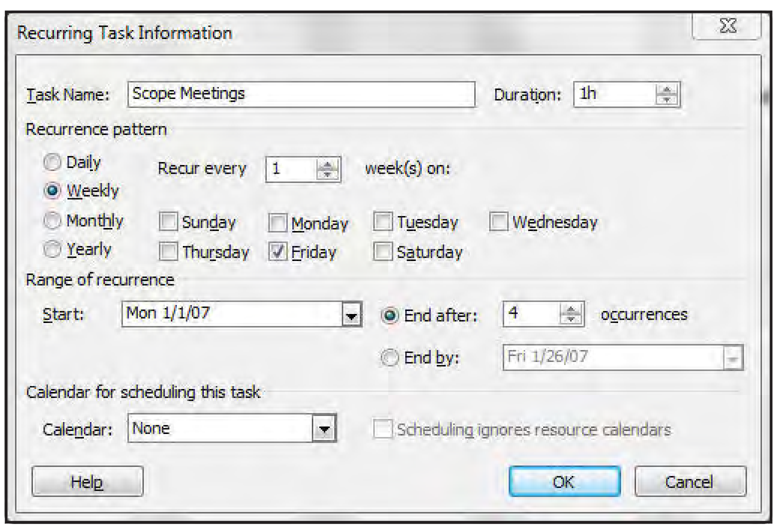
NEW TERMS

recurring task A task that occurs repeatedly during the course of a project

Enter a recurring task

1. Click in the **Task Name** field below task 2.

2. Choose **Insert: Recurring Task.**



3. Type **Scope Meeting** for Task Name.

4. Hit tab and type **1h** for for Duration.

5. Set the recurrence pattern to Weekly.

6. Check the **Friday** checkbox.

7. Set the Range of recurrence to End after **4** occurrences.

8. Click **Ok**.

9. Click **Save**.

Module 2 Recap Quiz

1. Where can you set the Project Manager's name for the project file?

2. How can you set a task as a milestone?

3. How do you insert a recurring task?

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Module 3-Modifying and Organizing a Task List

Performance Objectives

In this module, you gain confidence in your ability to:

- Insert, move and delete tasks
- Use outlining to create grouped tasks in a hierarchical structure

Exercise File

MP07Fund_ModuleThree.mpp

Editing the Task List

Using Microsoft Project 2007, it is easy to make changes to a project schedule as it is being developed and as the project gets under way. Tasks can be inserted anywhere in the task list, moved within the task list for better sequencing of events, and deleted.

■ Open the Project File

1. Locate the **Open** button on the Standard toolbar.

2. Click the **Open** button.

3. Open **MP07Fund_ModuleThree.mpp.**

■ Save the file with a new name

1. Choose **File: Save As.**

2. Verify that you are in the **MP07_Fundamentals** folder.

3. Type **My_MP07Fund_ModuleThree.mpp**.

4. Click **Save.**

Inserting a Task

It is common to identify new tasks or break single tasks into multiple tasks as a project schedule is being developed. As additional tasks are identified, they can be easily added to the schedule by inserting them into the task list. A task row can be inserted by selecting a field within a task row or the task ID heading and hitting the Ins key. A new task row is inserted into the task list at the point of the current selection. The task ID numbers are automatically adjusted to include the new task. The selected task and all tasks below it are shifted down in the task list to make room for the new task row.

■ Insert a task

1. Click task 6**, Scope Complete.**

You can also use the **Ins** key.

2. Choose **Insert: New Task.**

3. Type **Interview core resources** and press **[TAB]**.

4. Type **1** and press **[ENTER]**.

Moving a Task

While working with your task list it may be necessary to move tasks around. Instead of deleting a task and then inserting it in the correct order, it can be moved using drag and drop or cut and paste. Drag and drop automatically inserts a row at the new task location and shifts the row in the previous location. Single task rows or multiple task rows can be moved at the same time using drag and drop. When using drag and drop, the task ID heading must be selected.

■ Move a task

1. Click the task ID heading for Task 6, **Interview Core resources.**

2. Position the pointer on the task ID heading, and drag up until a horizontal gray bar is displayed between task 4 and 5**.**

3. Release the mouse button.

4. Save the file.

Deleting a Task

At some point it will be necessary to delete one or multiple tasks. When a task is deleted, the entire task row is cleared, the remaining task rows are shifted up, and the task ID numbers are automatically adjusted. A task row can be deleted by selecting a field within a task row or the task ID heading. When editing a task list, a task might be deleted accidentally or inserted incorrectly. If this occurs, the Undo command can be used to reverse the last command or typing action. With Project Professional 2007 you have multiple Undo's.

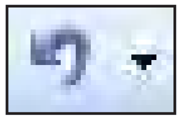
■ Delete a task

1. Click the task ID heading for Task 5, **Interview Core resources.**

2. Press **Delete.**

Undo a deletion

1. Locate the **Undo** button on the Standard toolbar**.**



2. Click the **Undo** button.

3. Save the file.

Outlining the Task List

To organize the tasks within a project, a hierarchical outline can be created by grouping together common tasks. Each group of tasks is preceded by a summary task, which describes the tasks within the group. A best practice is to begin each project with a Project Summary task. The Project Summary task is a brief description of the project. A Project Summary task is useful to quickly identify a project, and is also useful when working with multiple projects in a combined file.

A task changes to a summary task when one or more tasks below it are indented. The indented task becomes a subtask of the summary task. When a task becomes a summary task, duration, start and finish dates, and cost information change to summarize the information of the subtasks. Each indention shows another level of detail. If the tasks are outdented the outline structure is automatically removed. Outlining at the onset of the scheduling process is prefereable but can happen anytime during the scheduling process.

NEW TERMS

summary task A task that is made up of subtasks and summarizes those subtasks. Outlining creates summary tasks.

project summary task A brief description of the entire project. All other tasks are subtasks to the project summary task.

subtask/detail A task that is subordinate to a summary task. This is equivalent to a work package.

Understanding the WBS

In order to understand the development of the Work Breakdown Structure, the Project Manager must understand the notion of the 100% rule. The 100% rule states that all work needs to be represented as defined by the project scope and captures all deliverables. This includes project management, internal, external and interim work. The WBS should never include work that falls outside of the scope of the project. This applies to all levels of the work being represented.

The Project Manager must also be sensitive to capturing too little or too much of the work and must always think in terms of the result of the actions being represented in the WBS. This is the importance of organizing the activities in terms of results.

The level of detail can typically follow the 8/80 hour rule which means that no single activity or group of activities to produce a single deliverable should be more less than 8 hours or effort and no more than 80. There will always be occasions when this doesnt apply, but it can be followed as a general rule when building the WBS.

NEW TERMS

Work Breakdown Structure All work being represented as defined by the project scope organized in a structured, outlined and organized manner.

Once the task list is outlined, the subtasks can be hidden or shown to display only the information needed at that time. Hiding subtasks can be helpful for focusing on a specific area of the schedule, whether it is being viewed on-screen or printed. Editing the task list after it has been outlined is similar to editing it before it was outlined. However, if the only subtask of a summary task is deleted or outdented, the summary task becomes a subtask of the summary task one level above. Also, if a summary task is deleted, the subtasks below are also deleted, but you are prompted.

The way to create and display outlines is to use the outline buttons on the Formatting toolbar. These are available only in the following views: Gantt Chart, Task Sheet, Task Usage, Resource Usage, and Resource Allocation view.

Best Practices when Naming Tasks

Summary Task

Summary tasks can be deliverables or phases. A best practice is to you use nouns for deliverables or phases. By definition, a noun is any word in the English language that you can put *the* in front of. If you use phases, use the imperfect tense (-ing). This tense indicates that something is ongoing.

For Example: ***Requirements Gathering Phase***

Detail/Sub tasks

A best practice for subtasks, also known as detail tasks is to use verbs. The preferred tense for the verb is the present tense. The present tense indicates action, because you will be delegating and assigning these tasks to team members.

For Example: ***Gather Requirements***

Milestones

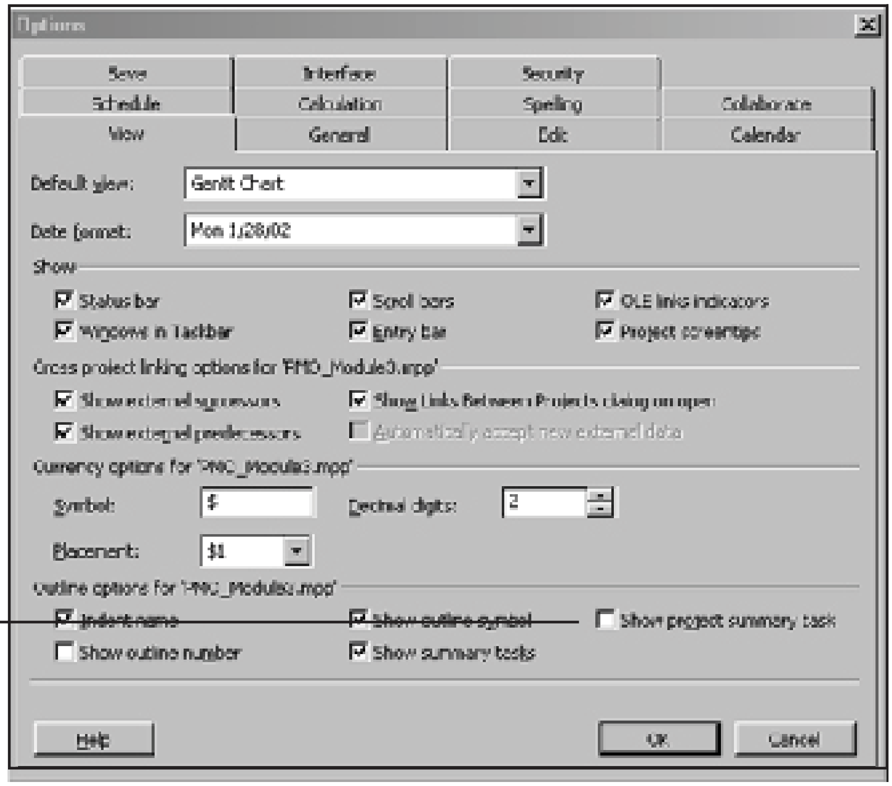
Typically, the milestone is formulated using the syntax: <deliverable><perfect tense verb> where <deliverable> is a noun that describes the deliverable, and the <perfect tense verb> describes what happened to the deliverable at that point in time.

For Example: ***Requirements Gathering Phase Complete***

Displaying the Project Summary Task

1. Click **Tools** then **Options**.

2. Check the **Show Project Summary task.**



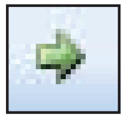
Project Summary Task

3. Click **OK.**

Indent Tasks

1. Highlight tasks 2-7

2. Click the **Indent** button**.**

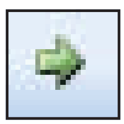


You can click Task 2, hold down the shift key and then click Task 7.

Indent more Tasks

1. Highlight Tasks 9-18.

2. Locate the **Indent** button on the Formatting toolbar**.**



3. Click the **Indent** button.

4. Click the **Save** button.

Project Summary Task

Summary Task

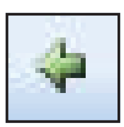
Sub/Detail Task

		Task Name	Duration
0		MP07Fund_ModuleThree_Template	5 days
1		Scope	1 day
2		Determine project scope	1 day
3		Secure project sponsorship	1 day
4		Define preliminary resources	1 day
5		Interview Core resources	1 day
6		Secure core resources	1 day
7		Scope complete	0 days
8		Analysis/Software Requirements	5 days
9		Conduct needs analysis	5 days
10		Draft preliminary software specifications	3 days
11		Develop preliminary budget	2 days
12		Review software specifications/budget with team	1 day
13		Incorporate feedback on software specifications	1 day
14		Develop delivery timeline	1 day
15		Obtain approvals to proceed (concept, timeline, budget)	1 day
16		Secure required resources	1 day
17		Analysis complete	0 days
18		Project Complete	0 days

Outdent a Task

1. Highlight Task 18, Project Complete.

2. Locate the **Outdent** button on the Formatting toolbar.

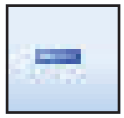


3. Click the **Outdent** button.

Hide subtasks

1. Click Task 1, Scope.

2. Locate the **Hide Subtasks** button on the Formatting toolbar**.**

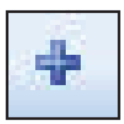


3. Click the **Hide Subtasks** button.

Show subtasks

1. Highlight Task 11, Scope.

2. Locate the **Show Subtasks** button on the Formatting toolbar**.**



3. Click the **Show Subtasks** button.

Module 3 Recap Quiz

1. What are two ways that you can insert a new task?

2. What is considered a best practice when naming a subtask?

3. How do you show/enable the Project Summary Task?

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Module 4-Shaping the Schedule

Performance Objectives

In this module, you gain confidence in your ability to:

- Link and Unlinking Tasks
- Format the Critical Path

Exercise File

MP07Fund_ModuleFour.mpp

Linking and Unlinking Tasks

As you enter tasks into the project file, you are noticing that they are are scheduled to start on the same date. A project schedule is more than a list of isolated tasks and a start date. A schedule defines specific characteristics of tasks, what order they should occur in, and how each task works within the project. The reality is that tasks actually occur in a sequence. The sequence of tasks in a schedule is developed by linking one task to another. Linking tasks establishes dependencies.

When tasks are linked, a link line is drawn on the Gantt Chart between the Gantt bars. There are four types of task dependencies. The default dependency in Project is Finish to Start. A finish to start dependency is the most common, and therefore it's easiest to start by linking all tasks in the schedule this way. A Finish to Start dependency type implies that the finish of one task marks the start of the next task that its "dependent" on. If a task or group sequence doesn't fit the default dependency type, it can be unlinked and then linked to a more appropriate task or group or the dependency type can be changed. Nonadjacent tasks can also be linked.

NEW TERMS

link A connection or dependency between two or more tasks in a project.

dependency The nature of the relationship between linked tasks.

link line On the Gantt Chart, the line that is displayed between two tasks to indicate a task dependency.

finish-to-start One of the four task dependencies. In a finish-to-start dependency, the finish of one task marks the start of another task.

Open the Project File

1. Locate the **Open** button on the Standard toolbar.

2. Click the **Open** button.

3. Open **MP07Fund_ModuleFour.mpp.**

Save a file with a new name

1. Choose **File: Save As.**

2. Verify that you are in the **MP07_Fundamentals** folder.

3. Type **My_MP07Fund_ModuleFour.mpp**.

4. Click **Save.**

Link Tasks

1. Drag to select tasks 2-7.

2. Locate the the **Link Tasks** button on the Standard toolbar.

3. Click the **Link Tasks** button.

Link Non adjacent Tasks

1. Click task 7.

2. Press [**CTRL**] and select task 9

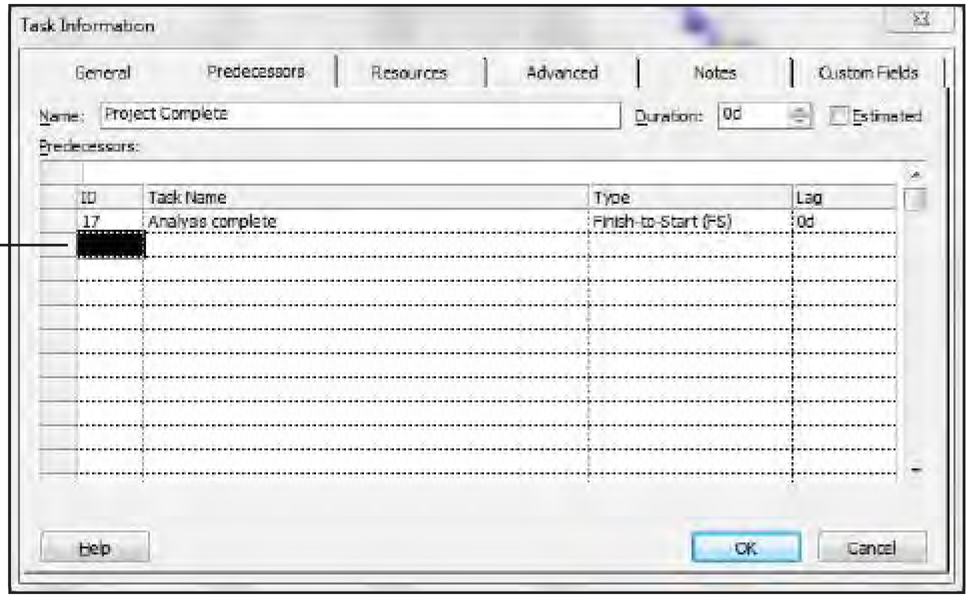
3. Click the **Link Tasks** button.

4. Drag to select tasks 9-18

5. Click the **Link Tasks** button.

■ Linking with Task Information

1. Double-click task 18.



2. Click underneath task 17 in the ID Field and type 7 and hit [**Enter**].

3. Click **Ok**.

Formatting the Critical Path

The critical path identifies those tasks that determine the overrall duration of a project schedule. A critical task is a task that has no slack time and cannot have its duration or start date changed without impacting the project finish date. A series of critical tasks form a critical path through a schedule.

The Gantt Chart Wizard is used to format the display of the critical path in a Project schedule. The Gantt Chart Wizard provides options that determine exactly how the critical path and the Gantt Chart are formatted. As changes are made to the schedule, the critical path is automatically updated.

NEW TERMS

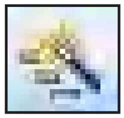
critical path The series of tasks that must be completed on schedule for a project to finish on time. Each task on the critical path is a critical task.

slack time The amount of time a task can slip before it affects another task's dates or the project finish date. Free slack is the amount of time a task can slip before it delays the project finish date.

Gantt Chart Wizard A series of interactive dialog boxes containing options that are selected to determine how the Gantt Chart is formatted.

Format the critical path

1. Locate the Gantt Chart Wizard button on the Standard toolbar.



2. Click the Gantt Chart Wizard button.

3. Click **Next**.

4. Click the **Critical path** radio button.

5. Click **Next**.

6. Verify that the **Resources and Dates** option is selected, and click **Next**.

7. Verify that the **Do you want to show link lines between dependent tasks?** option is set to **Yes** and click **Next**.

8. Click **Format It**.

9. Click **Exit Wizard**.

10. Save and close the file.

Module 4 Recap Quiz

1. What is the purpose of linking tasks?

2. What is the default dependency type?

3. When you format the Critical Path, what does it reveal to you as a Project Manager?

Microsoft Project 2007
Fundamentals

Module 5-Modifying Task Dependencies

Performance Objectives

In this module, you gain confidence in your ability to:

- Use task dependencies, lag and lead time to create a real-world relationship between tasks

Exercise File

MP07Fund_ModuleFive.mpp

Changing Task Dependencies

When tasks are initially linked, the default finish-to-start dependency is established. Task dependencies define the sequence in which scheduled tasks are performed in a project. Not all tasks must finish before another task can start, therefor, to create the right sequencing of tasks, the dependencies between tasks will be changed.

For example, if the start of one task depends on the start of another, a start-to-start dependency can be established. If the finish of one task depends on the finish of another, a finish-to-finish dependency can be established. A single task can also be dependent on multiple tasks.

The Task Dependency dialog box, which is displayed by double-clicking a link line, can be used to change dependencies. The dialog box displays the tasks to which the link line is connected and displays the current dependency. When a task dependency is changed, the link line on the Gantt Chart is redrawn to reflect the change. There is also a Dependency tab in the Task Information dialog box.

Open the Project File

1. Locate the **Open** button on the Standard toolbar.

2. Click the **Open** button.

3. Open **MP07Fund_ModuleFive.mpp.**

Save a file with a new name

1. Choose **File: Save As.**

2. Verify that you are in the **MP07_Fundamentals** folder.

3. Type **My_MP07Fund_ModuleFive.mpp**.

4. Click **Save.**

Establish a start-to-start dependency

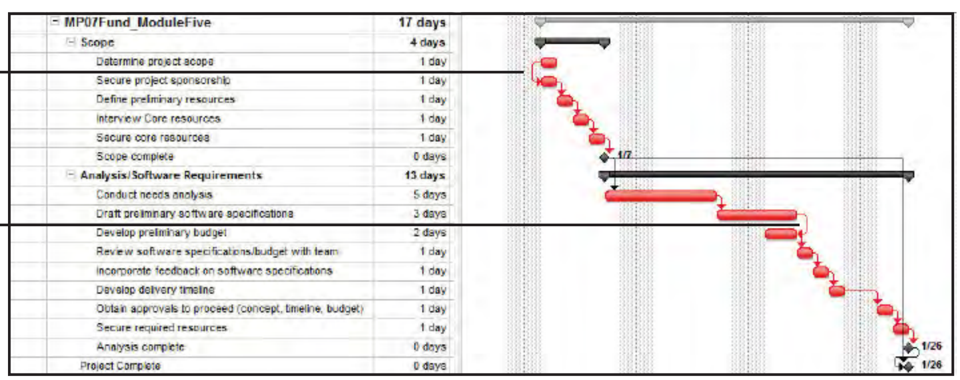
1. Double-click the link line between 2 and 3.
2. Click the **Type** down arrow.
3. Click **Start-To-Start** and click **OK.**

Establish a finish-to-finish dependency

1. Double-click the link line between 10 and 11.
2. Click the **Type** down arrow.
3. Click **Finish-To-Finish** and click **OK.**

Start-to-Start

Finish-to-Finish



Using Lag and Lead Time

The sequencing of tasks can be defined even more by using lead time and lag time. Lead time is used to create overlap in a task dependency that can shorten the project duration. Lag time is used to create a delay in the task dependency that can lengthen the project duration.

NEW TERMS

lead time An overlap between tasks that have dependency. Lead time is entered as a negative lag value in Project.

lag time A delay between tasks that have a dependency. Lag time is entered as a positive lag value in Project.

Specify Lag time

1. Double click the link line between tasks **3** and **4**

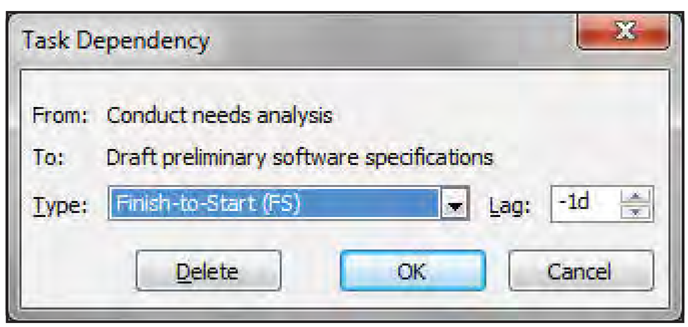
2. Press [**TAB**]

3. Type **1** in the Lag Field and click **OK**.

Specify Lead Time

1. Double click the link line between tasks **9** and **10**

2. Press [**TAB**] type **-1** in the Lag Field and click **OK.**



Specify Lag as a percentage

1. Double click the link line between tasks **3** and **4**

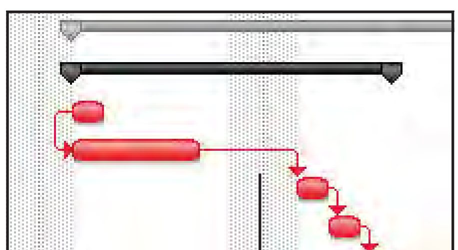
2. Press [**TAB**]

3. Type **25%** in the Lag Field and click **OK**.

Increase the task duration

1. Click in the duration of task 3, Secure project sponsorship.

2. Type 4 and hit [**ENTER**].



25% of the predecessors task

3. Save and close the file.

Module 5 Recap Quiz

1. What are the four dependency types?

2. How do you specify lead time?

3. How do you specify lag time?

4. How do you change a task dependency?

Microsoft Project 2007
Fundamentals

Module 6-Working with Calendars

Performance Objectives

In this module, you gain confidence in your ability to:

- Modify base calendars to reflect the working and nonworking time for the project and resources

Exercise File

MP07Fund_ModuleSix.mpp

Open the Project File

1. Locate the **Open** button on the Standard toolbar.

2. Click the **Open** button.

3. Open **MP07Fund_ModuleSix.mpp.**

Save a file with a new name

1. Choose **File: Save As.**

2. Verify that you are in the **MP07_Fundamentals** folder.

3. Type **My_MP07Fund_ModuleSix.mpp**.

4. Click **Save.**

Working with Base Calendar

Calendars are a critical component of scheduling. There are three types of calendars in Microsoft Project: base, resource and task calendars. The default base calendar, also known as the Project calendar, is called the Standard Calendar. When a resource is added to a project, the Standard Calendar is assigned as the resource's base calendar. The Standard Calendar, by default, has an 8:00 AM to 5:00 PM workday, Monday through Friday, with no holidays. Project comes with two other base calendars, the 24 Hours calendar and the Night Shift calendar, that can be assigned to a project, resource or task. New Base Calendars can also be created for tasks, resources and groups of resources.

The base calendar for a project must be customized to include any changes in the work hours and work days. Base calendar changes or exceptions might include national holidays, project holidays, and nonstandard working days and hours. Changes made to a Base Calendar are automatically reflected in any resource calendar with that base calendar assigned to it.

The Change Working Time dialog box is used to make changes to a base calendar. Changes can be made to a single day, several days, or a month. Changes are reflected by a pattern or shading in the Date box for that day. A pattern indicates a date where the working hours have been changed from the default hours. Shading shows nonworking days. When any date is changed, the date number will appear bold and underlined.

NEW TERMS

base calendar A calendar that specifies working and nonworking time for a project or set of resources. The default base calendar in Project is the Standard calendar.

resource calendar A calendar that specifies working and onworking time for an individual resource. Resource calendars are used to define exceptions for individual resources, such as vacations, different working days or hours.

View the calendar options

1. Choose **Tools: Options** from the menu bar.

2. Click the **Calendar** tab.

3. Click **Ok.**

Create a new base calendar

It is recommended that the Standard calendar is not modified

1. Choose **Tools: Change Working Time.**

2. Click the **Create New Calendar** button.

3. Type **My Company** in the Name field.

4. Verify **Make a copy of Standard calendar** is selected.

5. Click **Ok.**

Create exceptions in new calendar

1. Verify you are in the Exceptions tab.

2. Scroll to **January 2010**

3. Click the **1st**.

4. Click under the Name field.

5. Type **New Year's Day.**

6. Hit [**ENTER**].

Create another exception(s) in new calendar

1. Verify you are in the Change Working Time dialog box.

2. Verify you are in **January 2010** and click the **18th**.

3. Type **Birthday of MLK, Jr.** under the Name field.

4. Hit [**ENTER**].

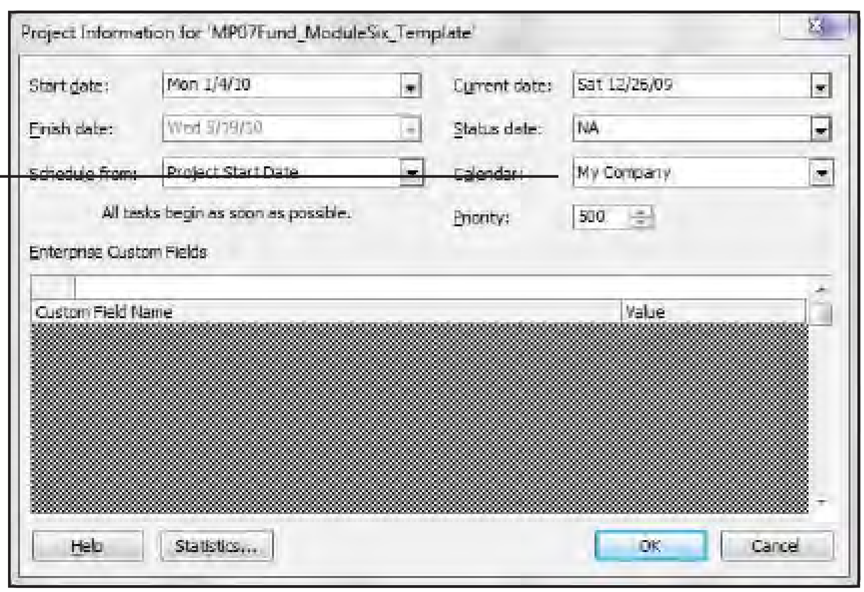
5. Click **Ok**.

Apply the new calendar to the Project

1. Click **Project: Project Information**.

2. Click the Calendar drop down and choose **My Company**.

Project Calendar



3. Click **Ok**.

Editing Resource Calendars

Availability of indivdual resources is tracked within its resource calendars. A resource calendar begins as a copy of the base calendar assigned to the resource, so only exceptions for that resource should be entered in the resource calendar. Typical changes to a resource calendar might include personal vacation, training, or ongoing meetings. A resource calendar for equipment or locations can be used to reflect scheduled maintenance or upkeep. When changes are made to the base calendar they will automatically be reflected in the resources calendar.

Resource and base calendars are edited in the same way. You can edit Resource calendars in the Change Working Time dialog box or on the Working Time tab in the Resource Information dialog box.

Apply a new base calendar

1. Click the View Bar down arrow until the Resource Sheet icon is displayed, and click the Resource Sheet icon.

2. Double-click **project manager.**

3. Click the **Change Working Time** button.

4. Select **My Company** from the Base Calendar drop down menu.

5. Scroll to January 2010.

Edit a resource calendar

1. Verify you are in the **Change Working Time** dialog box for the Project Manager

2. Click the 19th of January through the 22nd.

3. Click the Name field of the Exceptions tab.

4. Type **Vacation**.

5. Hit [**TAB**].

Set a Nondefault workday/week

1. Verify you are in the **Change Working Time** dialog box for the Project Manager

2. Click the 4th of January.

3. Click the **Work Weeks** tab.

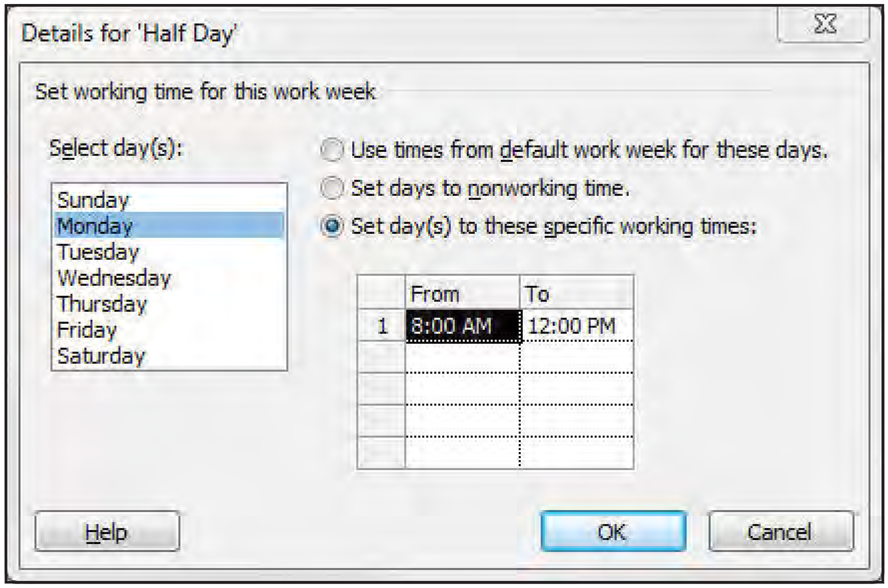
4. Click in line 2 under the Name field.

5. Type **Half Day** and hit [**TAB**].

6. Click the **Details** button.

7. Click the **Details** button.

8. Click Monday under the **Select day(s):** area.



9. Type **8 am** under the From column and **12 pm** under the To column.

The 4th now has a nondefault coloring in the calendar area

10. Click **Ok.**

11. Click **Ok** again.

12. Click **Ok** in the Resource Information dialog box.

13. Save and Close the file.

Module 6 Recap Quiz

1. What are the three calendar types?

2. Where do you set the default calendar options?

3. How do you create an exception in a resources calendar?

Microsoft Project 2007
Fundamentals

Module 7-Using Project Resources

Performance Objectives

In this module, you gain confidence in your ability to:

- Learn about the multiple resource types and assign resources to keep track of the work performed

Exercise File

MP07Fund_ModuleSeven.mpp

Adding Resources

Resources are added to a project schedule by entering the resource name in the Resource Sheet view. Resource names can be generic or specific, such as architect or J. Jones. Whatever method is used for naming resources, it should be consistent throughout. Resources can be entered in the Assign Resources dialog box or on the Resource Sheet.

A resource is any person, place, or item necessary to complete a task. Each resource necessary to the project should be entered into the schedule. Resources can be added to a project one at a time as they are assigned or all at once.

The default setting when adding resources is to set the Max Units field at 100% or a single unit. This means that only one of that resource is available to the project for assignment. A unit of a resource is defined by the Project Manager and is either a single person, a piece of equipment, or a group of resources, such as a work team. The units of a resource can be increased beyond 100 percent or decreased below 100 percent.

Project also stores additional information about a resource such as initials, group, costs, calendar, and custom fields. This information can then be used by Project Managers for filtering and searching for resoruces based on certain criteria.

NEW TERMS

resource The people, equipment, places, and supplies used to complete tasks in a project.

resource type These include work, material and cost resource types.

unit The quantity of a resource assigned to a task.

Open the Project File

1. Choose **Start: Programs: Microsoft Project**.

2. Locate the **Open** button on the Standard toolbar.

3. Click the **Open** button.

4. Open **MP07Fund_ModuleSeven.mpp.**

Save a file with a new name

1. Choose **File: Save As.**

2. Verify that you are in the **MP07_Fundamentals** folder.

3. Type **My_MP07Fund_ModuleSeven.mpp**.

4. Click **Save.**

■ Add resources on the Resource Sheet

1. Click the **View bar** down arrow until the **Resource Sheet** icon is displayed and click the **Resource Sheet** icon.

2. Click in the **Resource Name** field.

3. Type **Steve Masters** and press [**ENTER**].

4. Type **Rob Young** and press [**ENTER**].

5. Type **Kim Ralls** and press [**ENTER**].

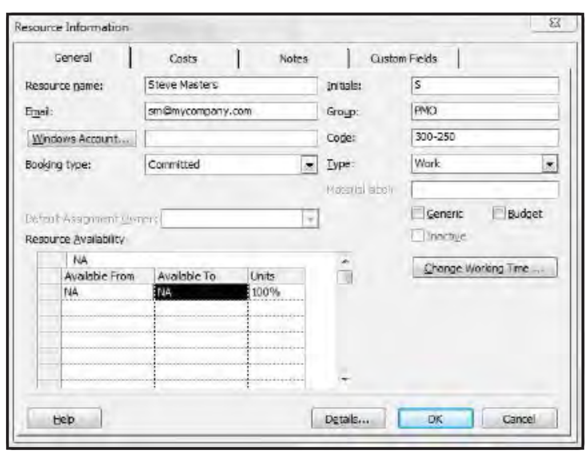
■ Add more information in the resource information dialog box

1. Double-click the resource name **Steve Masters**.

2. Type sm@mycompany.com in the Email field.

3. Type PMO in the Group field.

4. Type 300-250 in the Code field.



Resources Types

Resource types allow you to classify how resources are used. Work resources will be used most often, because they represent the people on the project team. Work resources are typically assigned to tasks on projects because they are qualified to complete the task in the time allowed.

Material resources can be thought of as good or services that are consumed such as a ream of paper. They are also assumed to be in unlimited quantities. Material resources are also consumed by units not hours.

Cost resources are used to account for administrative, variable factors that must be accounted for at the point of assignment. For example a plane ticket can be managed as a cost resource type , but its cost will be factored in when the resource is assigned to the task.

Budget resources are a specific type of cost resource and are used with the project summary level to establish a budget. You use budget resources to compare actual cost against an aribtrary budgeted total cost.

NEW TERMS

work resource A human resource represented as named, unnamed and generic that will be performing tasks in a project schedule.

material resource Goods or services that are consumed during the project schedule.

cost resource Used to account for administartive overhead that are accounted for at the point of assignment.

budget resource A type of cost resource that is used with the project summary level to establish a budget.

■ Add a material resource on the Resource Sheet

1. Verify that you are in the **Resource Sheet** view.

2. Click in the **Resource Name** field under Kim Ralls.

3. Type **Paper** and press [**TAB**].

4. In the type field choose **Material** and press [**ENTER**].

■ Add a cost resource on the Resource Sheet

1. Click in the **Resource Name** field under Paper.

2. Type **Flight** and press [**TAB**].

3. Click in the type field and choose **Cost** and press [**ENTER**].

■ Add a cost budget resource on the Resource Sheet

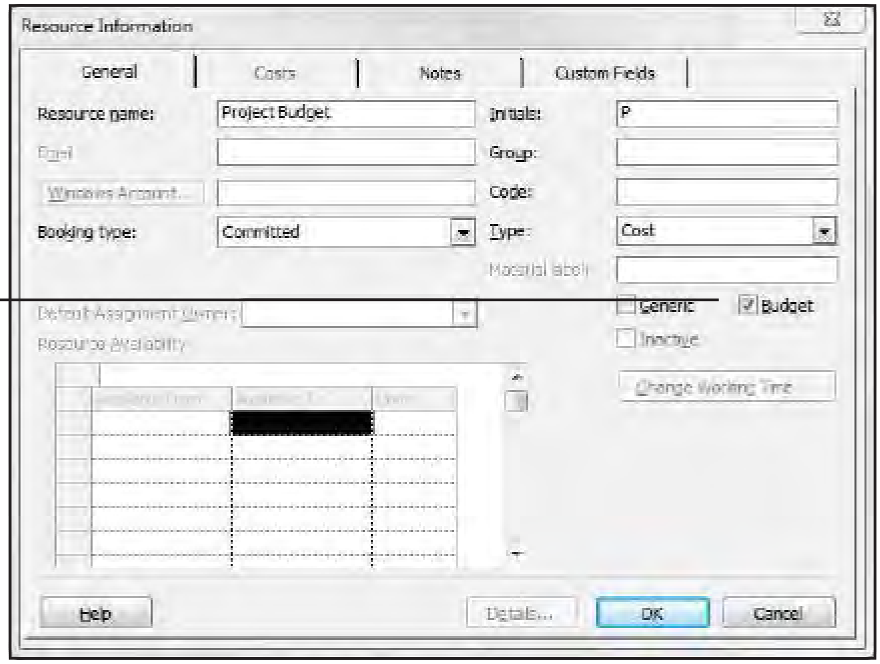
1. Click in the **Resource Name** field under Flight.

2. Type **Project Budget** and press [**TAB**].

3. Click in the type field and choose **Cost** and press [**ENTER**].

4. Double-click in the Project Budget cost resource.

Budget



5. Select the **Budget** checkbox.

Generic Resources

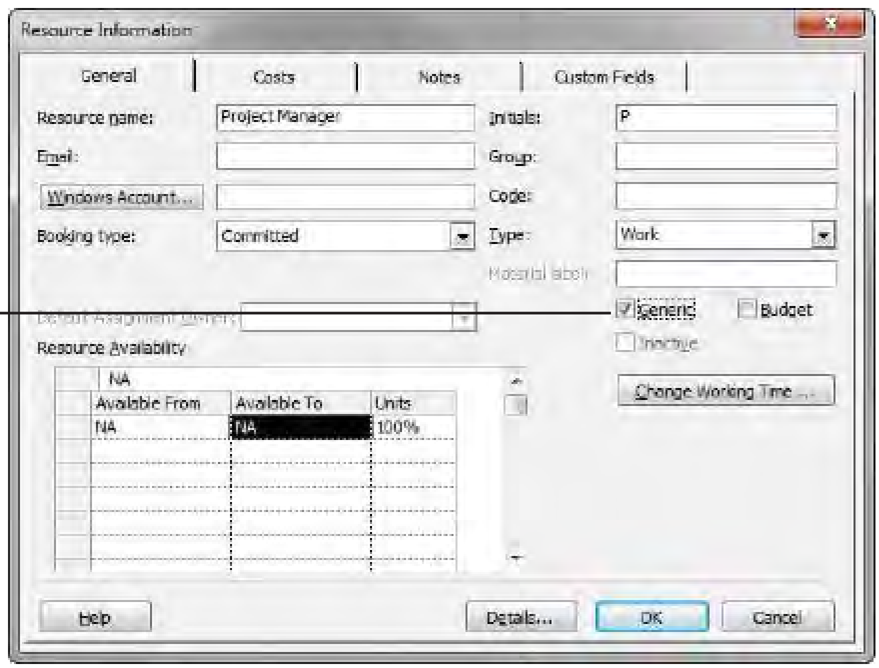
There are three types of people (human) resources-named resources (Steve Masters), unnamed resources (Project Manager) and generic resources. Generic resources can include business analysts, dba, programmer, architect and anybody else who is going to be completing tasks on your schedule.

Generic resources are used as placeholders in a project schedule. They are meant to be temporary and provide you the ability to build out your schedule with assignments. When you secure the proper resources you can then replace the generic resource with the named or unnamed resources. Generic resources will have the same labels as unnamed resources but they will be distinguished as “generic” and will never have actual time tracked against them.

Add a generic resource on the Resource Sheet

1. Verify that you are in the **Resource Sheet** view.
2. Click in the **Resource Name** field under Project Budget.
3. Type **Project Manager** and press [**TAB**].
4. In the type field verify **Work** is selected.
5. Double-click the Project Manager resource.

Generic



6. Select the **Generic** check box.
7. Click **Ok**.

Assigning Resources to Tasks

When assigning resources to tasks, all resources necessary to complete the task need to be assigned. For example, a single task might have more than one person assigned, while another task might only have a single person and some equipment assigned.

Resources are assigned to tasks so that the schedule can more accurately reflect when tasks can occur based on resource availability. This is important because if resources are not assigned to tasks, a task might be scheduled to occur when no resource is available to complete it.

Assigning resources can occur in multiple places in Project including the Assign Resources dialog box, the Task Information dialog box and also by using the split pane view while in the Gantt Chart.

■ Assigning a resource

1. Click the **Gantt Chart** icon on the View Bar.

2. Click task 2, Determine project scope.

3. Click the **Assign Resources** button

3. Verify that **Steve Masters** is selected in the Resource Name column.

4. Click **Assign**.

■ Assigning variable units of a resource to a task

1. Click task 3.

2. Verify that the Assign Resources dialog box is open and click in the **Units** field for Steve Masters.

3. Type **25** and click **Assign**.

4. Click **Close**.

Assign a Generic Resource

1. Click task 4.

2. Verify that the Assign Resources dialog box is open and click the Project Manager (Generic) resource.

You can leave the Assign Resources dialog box open while you select tasks

3. Click **Assign**.

4. Click task 5, Secure core resources and click **Assign**.

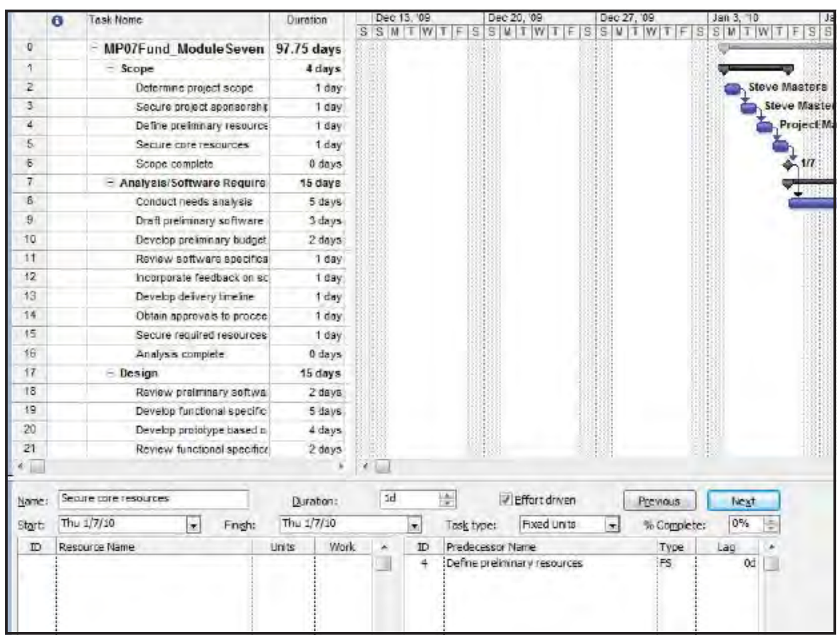
5. Click **Close**.

Assign Resources with the Split Window

1. Click task 5.

2. Choose **Window:Split.**

Split Window



3. Click in the Resource Name column and click **Project Manager** from the drop down.

4. Click **Ok**.

Remove the Split Window

1. Choose **Window: Remove Split.**

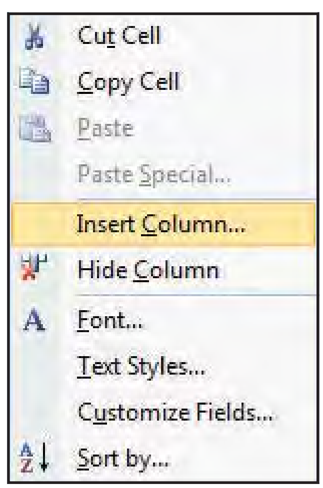
Assign the Budget Resource

1. Click the Task Usage view.

2. Click task 0, MP07Fund_ModuleSeven.

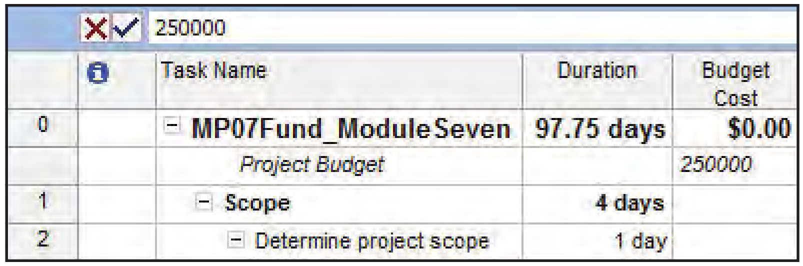
3. Click the Assign Resources button and assign the **Project Budget** resource.

4. Right-click the Duration column and choose Insert Column.



5. Scroll down to select the **Budget Cost** field.

6. Click inside the empty cell for the Budget Cost field for Task 0.



7. Type **250000** and click [**ENTER**].

8. Click the Gantt Chart view.

9. Save and Close the file.

Module 7 Recap Quiz

1. What are the three resource types?

2. How do you distinguish a resource as Generic?

3. What view can you use to assign a budget cost resource?

Microsoft Project 2007
Fundamentals

Module 8-Entering Project Costs

Performance Objectives

In this module, you gain confidence in your ability to:

- Enter resource and task costs to calculate the project costs

Exercise File

MP07Fund_ModuleEight.mpp

Working with Resource Costs

When a resource is used on a task, there is a cost associated with its use, such as an hourly wage, salary or rental on a piece of equipment. By entering cost information into Microsoft Project 2007, you can create a project budget, analyze costs, and identify potential cost overruns as the project progresses.

Open the Project File

1. Choose **Start: Programs: Microsoft Project**.

2. Locate the **Open** button on the Standard toolbar.

3. Click the **Open** button.

4. Open **MP07Fund_ModuleEight.mpp.**

Save a file with a new name

1. Choose **File: Save As.**

2. Verify that you are in the **MP07_Fundamentals** folder.

3. Type **My_MP07Fund_ModuleEight.mpp**.

4. Click **Save.**

Entering resource costs

1. Click the View Bar down arrow until the **Resource Sheet** icon is displayed, and click the **Resource Sheet** icon.

2. Click in the Std. Rate field for the **Steve Masters** resource.

3. Type **75** and press [**TAB**].

4. Type **100** and press [**ENTER**]**.**

5. Click in the **Std. Rate** field for Rob Young.

6. Type **52000/y** and press **[ENTER].**

Enter a resource rate change

1. Double-click the **Kim Ralls** resource.

2. Click in the **Costs** tab.

3. Type **20** in the first row of the Standard Rate column.

4. Type **30** in the first row of the Overtime Rate column.

5. Click in the second **Effective Date** field.

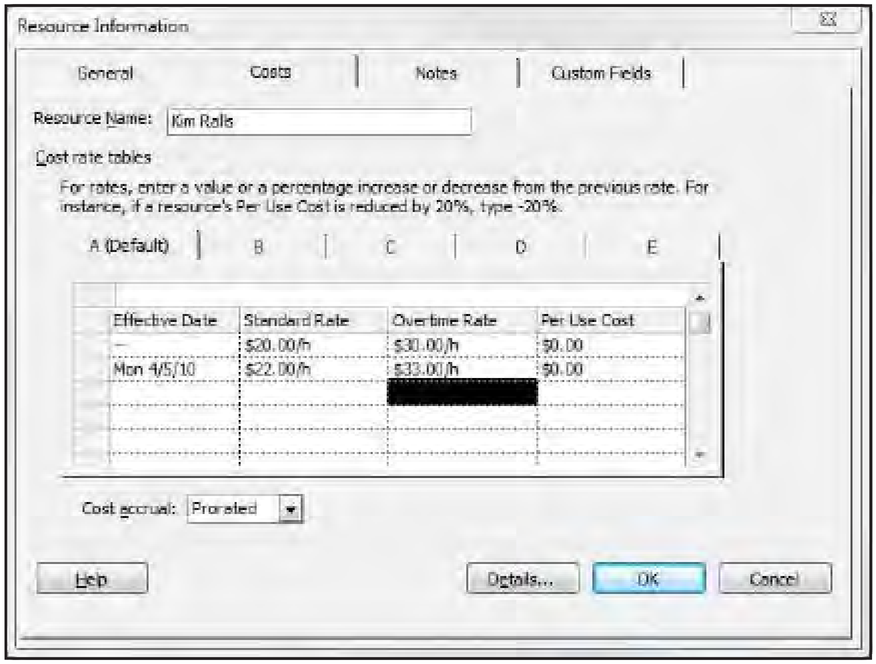
6. Click the **Effective Date** down arrow.

7. Select **April 5, 2010**.

5. Click in the Standard Rate field, type 22 and press the [**RIGHT ARROW**].

The percentage increase is calculated based on the previous rate.

6. Type 10% in the Overtime Rate field, and press [**ENTER**].



Using Cost Rate Tables

In addition to a resource's pay rate changing, a resource might also perform several types of work at different pay rates. Using cost rate tables, each resource can have up to five different cost rates that can be applied to assigned tasks. Cost rate tables are created on the Costs tab in the Resource Information dialog box.

When a new cost rate table is created for a resource, the proper use of each table should be documented. By documenting the type of work that each cost rate table is associated with, anyone working with the schedule can accurately assign the appropriate cost rate table to a task. Resource notes can be used to document this information.

NEW TERMS

cost rate table A collection of information about a resource's rates, including the standard rate, overtime rate, any per-use cost, and the date when the pay rates takes effect.

■ Create a new cost table

1. Double-click the **Steve Masters** resource.

2. Verify the **Costs** tab is selected.

3. Click **tab B** in the Cost Rate Tables area.

4. Click in the Standard Rate field, type **125** and press the [**RIGHT ARROW**].

5. Type **135** in the Overtime Rate field, and press [**ENTER**].

■ Create a new cost table note

1. Verify that the Resource Information dialog box for the **Steve Masters** resource is displayed.

2. Click the **Notes** tab.

3. Click in the **Notes** box.

4. Type **Cost table A is for project management duties. Cost table B is for developer lead duties.**

5. Click **OK**.

6. Position the pointer over the indicator for Steve Masters.

Applying Task Costs

Resource costs are entered on the Resource Sheet and the Costs tab in the Resource Information dialog box. Resource costs can be designated as an hourly rate, a yearly salary, or per-use cost. Resource costs can also be accrued in several ways. They can be prorated on an hourly basis, accrued at the end of a task, or accrued at the beginning of a task.

In can addition to tracking initial resource rates, Project can also track variable resource rate changes over time. Variable resource rates are time-stamped so that the new rate is applied to the project at the appropriate time. By entering the pay rate with an effective date, the resource costs are calculated based on when the task is performed. Up to 25 different rate changes can be entered. When the effective date of the new resource cost occurs, the cost information on the Resource Sheet is updated automatically.

NEW TERMS

fixed cost A set cost for a task that remains constant regardless of the task duration or the work performed by a resource.

Apply a resource rate table to a task

1. Click the Task Usage icon on the View bar.

2. Choose **View:Table:Cost.**

3. Drag the veritcal split bar to the right until the Total Cost column is displayed.

4. Select the **Project Manager** resource under task 4, Define preliminary resources.

5. Locate the **Assignment Information** button on the Standard toolbar.

6. Click the **Assignment Information** button.

7. Click the **Cost Rate Table** down arrow.

8. Click **B** down arrow.

Enter a fixed cost for a task

1. Click in the **Fixed Cost** field for Task 5, Secure Core Resources.

2. Type **1200** and press **[TAB].**

3. Click the **Fixed Cost Accrual** down arrow.

4. Click **End,** and press [**ENTER**].

5. Click the **Gantt Chart** icon on the View bar.

■ Enter a fixed cost for a task

1. Click the View Bar down arrow until the **Task Usage** icon is displayed, and click the **Task Usage** icon

2. Right-click the select all button in upper left corner and choose Cost.

3. Click in the Fixed Cost field for Task 19.

4. Type **500** and press [**TAB**]**.**

5. Click the Fixed Cost Accrual down arrow.

6. Click End, and press [**ENTER**].

7. Return to the **Gantt Chart.**

Assign a Cost Resource Type

1. Verify that you are in the **Gantt Chart** view.

2. Click Task 3, Secure project sponsorship.

3. Click the **Assign Resources** button.

4. Click the **Flight** resource (cost) under the Resource Name column.

5. Click in the **Cost** column for the **Flight** resource (cost).

6. Type 450 and hit [**ENTER**].

7. Save and Close the file

Module 8 Recap Quiz

1. What view should you be in when you set a standard rate for a resource?

2. Can a resource rate change based on a date and if so where would set it up?

3. What view allows you to use a different rate based on the task being perfomed?

Microsoft Project 2007
Fundamentals

Module 9-Task Type Settings

Performance Objectives

In this module, you gain confidence in your ability to:

- Understand and change task type settings to control how resources changes affect a task

Exercise File

MP07Fund_ModuleNine

Using Task Type Settings

In Microsoft Project 2007, the default scheduling method is effort-driven scheduling. The reaction of a task is influenced by the addition and removal of resources. Effort-driven scheduling extends or shortens the duration of a task to accommodate changes to resources, but doesn't change the total work for the task.

NEW TERMS

scheduling method The method by which a project is scheduled, such as effort- driven scheduling.

task type setting A characterization of a task based on which aspect of the task is fixed and which aspects are variable.

effort-driven scheduling The default method of scheduling in Project, by which the duration of a task shortens or lengthens as resources are added or removed from a task while the amount of effort (work) necessary to complete a task remains unchanged.

work For tasks, the total labor or “resource hours’’ required (in terms of minutes, hours, days, or weeks) for all resources to complete a task. For assignments, the amount of work to which a resource is assigned for a specific task. For resources, the total amount of work to which a resource is assigned for all tasks. Work is different from task duration.

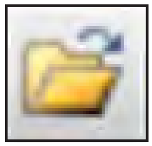
The total work for a task is determined by the duration estimate for the task and the initial resource assignment. For example, task A has a duration of two days and 100 percent of resource Z assigned to it. The total work for this task is 16 hours. As resources are added or removed after the initial assignment, the total work is redistributed among the resources.

Effort-driven scheduling can be turned off for individual tasks or all new tasks added in a project. When effort-driven scheduling is turned off, total work increases when units of other resources are added to a task.

The task type setting also has an effect on how tasks are scheduled. There are three task types: fixed units, fixed duration, and fixed work. The default task type is fixed units. Using one of these task types, the formula “Duration * Units = Work’’ can be controlled when resources are added or removed from a task assignment.

Open the Project File

1. Locate the **Open** button on the Standard toolbar.



2. Click the **Open** button.

3. Open **MP07Fund_ModuleNine.mpp.**

Save a file with a new name

1. Choose **File: Save As.**

2. Verify that you are in the **MP07_Fundamentals** folder.

3. Type **My_MP07Fund_ModuleNine.mpp**.

4. Click **Save.**

Change the View

1. Choose **View:View Bar.**

2. Choose **View: More Views.**

3. Click **Task Entry** in the Views box.

4. Click **Apply**.

Understanding the Initial Assignment

In Microsoft Project 2007, the first time you load a resource onto a task it is considered an *initial assignment.* When you have estimated the duration of a task and you assign a single resource at 100% to that task work is then calculated. If you assigned two resources at 100% for the initial assignment the resulting total work would be twice the amount.

Scenario One (Single Resource)

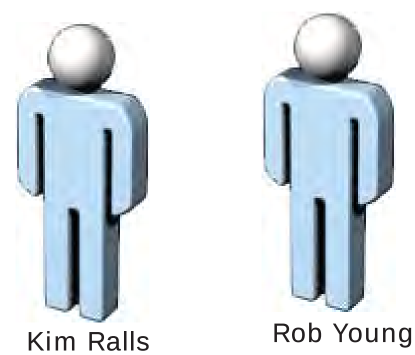
Task Name	Duration	Units	Work
Conduct Needs Analysis	5 days	100%	*40 Hours*

Kim Ralls

Project Manager estimates the task will take 5 days to be completed and assigns Kim Ralls to the task. Because this is the initial assignment, Microsoft Project performs the calculation Duration X Units = Work. The result is 40 hours of work.

Scenario Two (Two Resources)

Task Name	Duration	Units	Work
Conduct Needs Analysis	5 days	100% for K. Ralls 100% for R.Young	*80 Hours*



Project Manager estimates the task will take 5 days to be completed and assigns Kim Ralls and Rob Young to the task. Because this is the initial assignment, Microsoft Project performs the calculation Duration X Units = Work. The result is 80 hours of work.

Scenario Three (Secondary Assignment)

Task Name	Duration	Units	Work
Conduct Needs Analysis	5 days	100% for K. Ralls	*40 Hours*

Kim Ralls

Project Manager estimates the task will take 5 days to be completed and assigns Kim Ralls to the task. Because this is the initial assignment, Microsoft Project performs the calculation Duration X Units = Work. The result is 40 hours of work.

Task Name	Duration	Units	Work
Conduct Needs Analysis	2.5 days	100% for K. Ralls 100% for R. Young	*40 Hours*

Rob Young

Project Manager then decides to add a second resource to the task, Rob Young. Because this is a secondary assignment, Microsoft Project looks at the variable that is fixed and makes an adjustment to the variable that is not fixed, duration.

Perform an initial assignment

1. Click task 8, Conduct Needs Analysis.

2. Click in the **Resource Name** column for task 8, and click the drop down.

3. Select Kim Ralls from the drop down list.

4. Click **OK**.

The calculation results in 40h of Work.

5. Click **Undo**.

Perform an new initial assignment with two resources

1. Click task 8, Conduct Needs Analysis.

2. Click in the **Resource Name** column for task 8, and click the drop down.

3. Select Kim Ralls from the drop down list.

4. Select Rob Young from the drop down list.

5. Click **OK**.

The calculation results in 80h of total Work.

6. Click **Undo**.

Perform an initial assignment

1. Click task 8, Conduct Needs Analysis.

2. Click in the **Resource Name** column for task 8, and click the drop down.

3. Select Kim Ralls from the drop down list.

The calculation results in 40h of total Work.

4. Click **OK**.

Perform a secondary assignment

1. Verify task 8, Conduct Needs Analysis is selected.

2. Click in the second row under the **Resource Name** column and click the drop down.

3. Select Rob Young from the drop down list.

The calculation results in 40h of total Work, but reduces the Duration to 2.5 days.

4. Click **OK**.

The three task types used in Project are **fixed units** (A task in which the assigned units [or resources] is a fixed value and any changes to the amount of work or the task's duration do not affect the task's units. This is calculated as follows: Duration x Units = Work.), **fixed work** (A task in which the amount of work is a fixed value and any changes to the task's duration or the number of assigned units [or resources] do not affect the task's work. This is calculated as follows: Duration x Units = Work.), and **fixed duration** (A task in which the duration is a fixed value and any changes to the work or the assigned units [that is, resources] don't affect the task's duration. This is calculated as follows: Duration x Units = Work.).

Project uses fixed units by default.

Each of the task types affects scheduling when you edit one of the three elements as follows:

In a	If you revise units	If you revise duration	If you revise work
Fixed units task	Duration is recalculated	Work is recalculated	Duration is recalculated
Fixed work task	Duration is recalculated	Units are recalculated	Duration is recalculated
Fixed duration task	Work is recalculated	Work is recalculated	Units are recalculated

Modifying a Fixed Units Task

The fixed units task type is the default task type in Project. When resources are added or removed from a fixed units task, the duration of the task is generally affected. However, designating a task as non-effort- driven, or adding or removing resources, determines the true effect on the task's duration.

In Project, when using the fixed units task type, as the resource assignment is changed, the duration is adjusted. If the duration is changed, the total work is adjusted. The exception is when the task is not effort-driven and units of a different resource are assigned. In this situation, the total work is increased.

You use the fixed units task type when the unit value of a resource assignment must remain as set by you. For example, two painters are assigned for four days to paint the walls of a building. The duration is four days, the units are 200 percent of the painters and the total work is 64 hours. If two more painters are assigned to the task, the duration is reduced to two days. The total work, 64 hours, is now split between four painters instead of two, thus reducing the duration.

NEW TERMS

scheduling method The method by which a project is scheduled, such as effort- driven scheduling.

task type setting A characterization of a task based on which aspect of the task is fixed and which aspects are variable.

Work with a fixed units task

1. Double-click task 9, Draft preliminary software.

2. Click the **Advanced** tab.

2. Verify that the Task type is set to **Fixed Units** and **Effort driven** is checked.

3. Click **Cancel**.

Modifying a Fixed Duration Task

If a task has the fixed duration task type, the duration of the task remains the same when resources are added or removed. Depending on whether the task is effort-driven or not, the resource units or the total hours are affected when resource changes are made to a fixed duration task.

When you use the fixed duration task type, as the resource assignment is changed, the units or work is adjusted. If you change the work, the units are adjusted.

You use the fixed duration task type when the duration of task must remain as set by you. For example, installing the carpet trim in the conference room normally takes one full day for two installers for a total of 16 hours work. Due to a constraint on the predecessor task, the carpet trim must be installed in two hours. By fixing the duration at two hours, you can add various resource units until 16 hours of work is assigned, or enter 16 hours of work and let Project calculate the units of the initial resource assignment necessary to accomplish the task.

Change the task type setting

1. Click in the top pane, press [**F5**], type **9** and press [**ENTER**]
2. Click the **Task Type** drop down in the bottom pane**.**
3. Click **Fixed Duration,** and click **OK**.

Perform an initial assignment

1. Verify task 9, Draft preliminary software is selected.

2. Click in the **Resource Name** column for task 9, and click the drop down.

3. Select **Kim Ralls** from the drop down list.

The calculation results in 24h of total Work.

4. Click **OK**.

Perform a secondary assignment

1. Verify task 9, Draft preliminary software is selected.

2. Click in the second row under the **Resource Name** column and click the drop down.

3. Select **Rob Young** from the drop down list.

The calculation results in 24h of total Work, but reduces Units of each resource to 50%because you fixed the Duration.

4. Click **OK**.

Effort Driven Scheduling

In Microsoft Project 2007, the default scheduling method is effort-driven scheduling. The reaction of a task is influenced by the addition and removal of resources. Effort-driven scheduling extends or shortens the duration of a task to accommodate changes to resources, but doesn't change the total work for the task.

NEW TERMS

effort-driven scheduling The default method of scheduling in Project, by which the duration of a task shortens or lengthens as resources are added or removed from a task while the amount of effort (work) necessary to complete a task remains unchanged.

Modifying a Fixed Work Task

If a task has the fixed work task type, the total work for the task remains the same when resources are added or removed. The duration and resource units are affected on a fixed work task. A fixed work task must be effort-driven.

When you use the fixed work task type, as the resource assignment is changed, the duration is adjusted. If the duration is changed, the resource units are adjusted.

You use the fixed work task type when the total work value of an initial resource assignment must remain as set by you. For example. If it takes six hours to drive from point A to point B, it does not matter how many vehicles or drivers are assigned to the task; it will still take six hours to get there.

Change the task type setting

1. Click in the top pane, press [**F5**], type **10** and press [**ENTER**]

2. Click the **Task Type** drop down in the bottom pane**.**

3. Click **Fixed Work,** and click **OK**.

You cannot remove effort-driven scheduling from fixed work tasks. Fixed work tasks do not have flexible work values, and are therefore always effort-driven.

Add the Work Column

1. Right-click the Duration column in the top pane, and choose Insert Column.

2. Scroll down to find Work.

3. Click **Work** and click **OK**.

Set the Work estimate

1. Verify task 10, Develop preliminary budget is selected.

2. Click in the **Work** column for task 10, and type **16** and hit [**ENTER**].

Perform an initial assignment

1. Verify task 10, Draft preliminary software is selected.

2. Click in the **Resource Name** column for task 9, and click the drop down.

3. Select **Kim Ralls** from the drop down list.

4. Click **OK**.

The calculation results in 2 Days duration.

Perform a secondary assignment

1. Verify task 10, Develop preliminary budget is selected.

2. Click in the second row under the **Resource Name** column and click the drop down.

3. Select **Rob Young** from the drop down list.

4. Click **OK**.

The calculation results in 16h of total Work, but reduces the duration to 1 Day.

Module 9 Recap Quiz

1. What are the three task types that can be fixed?

2. Which task type does not allow for effort driven scheduling to be turned off and why?

3. In a Fixed Duration task, if you revise work, what is recalcualted?

Microsoft Project 2007
Fundamentals

Module 10-Resolving Resource Overallocations

Performance Objectives

In this module, you gain confidence in your ability to:

- Resolve resource conflicts to eliminate over-allocations

Exercise File

MP07Fund_ModuleTen.mpp

Locating Resource Overallocations

Viewing resource workloads helps identify to what extent a resource is over-allocated or underallocated. The information obtained by viewing workloads helps to resolve resource conflicts within a schedule. A resource is overallocated when it is assigned more work than it can complete in its scheduled available hours. When a resource is overallocated, the resource text is highlighted in red in a resource view, and a leveling indicator is displayed. The Resource Management is a toolbar that provides commands for resolving overallocations in addition to assigning resources.

NEW TERMS

overallocation The result of assigning more tasks to a resource than the resource can accomplish in the working time available.

underallocation The result of assigning fewer tasks to a resource than the resource can accomplish in the working time available

The Resource Allocation view can be used to view the daily allocation for each resource. The Resource Allocation view is a combination view, including the Resource Usage view and the Leveling Gantt view. When a resource is selected in the Resource Usage view in the top pane, the tasks assigned to that resource are displayed in the Leveling Gantt in the bottom pane. The resource allocations are shown by default as work hours for each day.

Open the Project File

1. Locate the **Open** button on the Standard toolbar.

2. Click the **Open** button.

3. Open **MP07Fund_ModuleTen.mpp.**

Save a file with a new name

1. Choose **File: Save As.**

2. Verify that you are in the **MP07_Fundamentals** folder.

3. Type **My_MP07Fund_ModuleTen.mpp**.

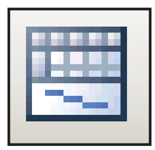
4. Click **Save.**

Switch to the Resource Allocation View

1. Right-click anywhere on a toolbar.

2. Choose **Resource Management.**

3. Locate the **Resource Allocation View** button on the Resource Management toolbar.



4. Click the **Resource Allocation View** button.

Locate a resource overallocation

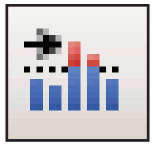
1. Press [F5], type **3** and click **[ENTER].**

2. Click anywhere in the bottom pane.

3. Press [**ALT HOME]** to verify that the timescale is scrolled all the way to the left.

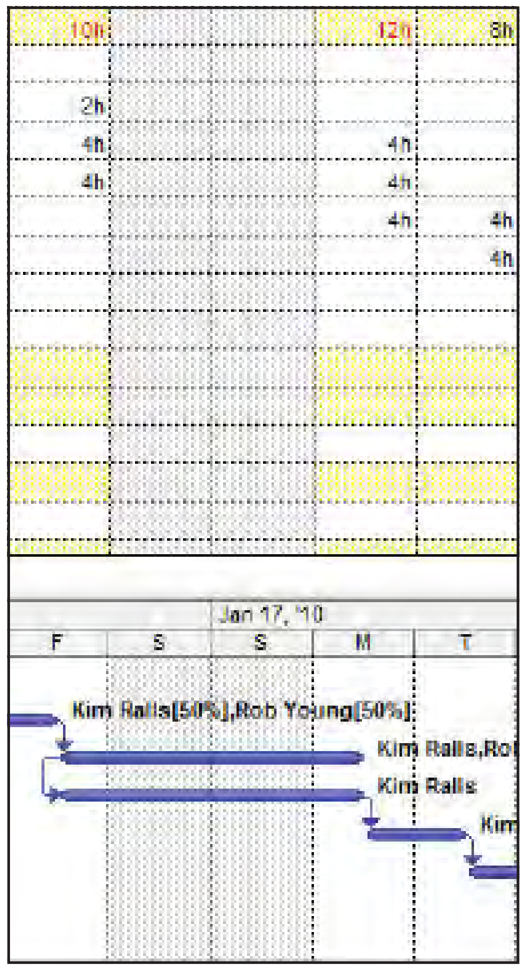
You can also drag the timescale scroll box all the way to the left. The timescale scrolls to the beginning of the project. The search for an overallocation should always begin at the project start date.

4. Locate the **Go To Next Overallocation** button on the Resource Management toolbar.



5. Click the **Go To Next Overallocation** button.

Overallocation



Resolving Resource Overallocations

Before a project begins, it is a best practice to have all resource overallocations resolved so that the schedule accurately reflects the resources and work required to complete all tasks. Resource overallocations can be resolved automatically using the Microsoft Project 2007 leveling command or manually using Project Management scheduling techniques. Once a project begins, the schedule must be continually checked for new overallocations. Any new overallocations should be resolved before they adversely affect the project.

Ideally, every overallocation should be resolved within a project schedule. However, some overallocations might be unavoidable or too insignificant to be resolved. In these cases, the reason for the overallocation and why it could not be resolved should be documented for future reference.

Using Leveling

Leveling is a strategy used to resolve resource overallocations by delaying or splitting tasks. Resource overallocations can be automatically leveled. With Project, you can examine each overallocation in a project by viewing task dependencies, slack time, dates, and priorities. You also can determine if a task can be delayed or split to resolve a resource conflict. When Project levels a resource, the resource's assignments are distributed and rescheduled according to the resource's work capacity, assignment units, and calendar, in addition to the task's duration and constraints.

NEW TERMS

overallocation The result of assigning more tasks to a resource than the resource can accomplish in the working time available.

underallocation The result of assigning fewer tasks to a resource than the resource can accomplish in the working time available

The Resource Leveling dialog box is used to perform leveling adjustments. There are three setting areas in the Resource Leveling dialog box: leveling calculations, leveling range, and resolving overallocations. The leveling calculations determine how leveling is performed and on what time period basis. The leveling range determines if the entire project or a specific date range is leveled. The resolving overallocations area sets the order and how to handle slack, individual assignments, and splitting of tasks during leveling.

Leveling changes made are viewed in the Leveling Gantt view. Bars that represent changes made to tasks and resource assignments during leveling are displayed in the Leveling Gantt view. Green Gantt bars indicate the scheduled start and finish dates for a task before leveling occurred. Blue Gantt bars represent the new scheduled start and finish dates for the tasks after leveling. The olive lines indicate delay, and the aqua lines indicate slack.

Sometimes the leveling changes made to the schedule are unacceptable due to project restrictions or preferences. When this occurs, the leveling changes can be removed using the Clear Leveling command in the Resource Leveling dialog box.

Prepare to level the schedule

This step is simply to see the affect leveling will have on the project finish date.

1. Choose **Project: Project Information.**

2. View the current project finish date, and click **Cancel**.

3. Verify that the bottom pane is the active view.

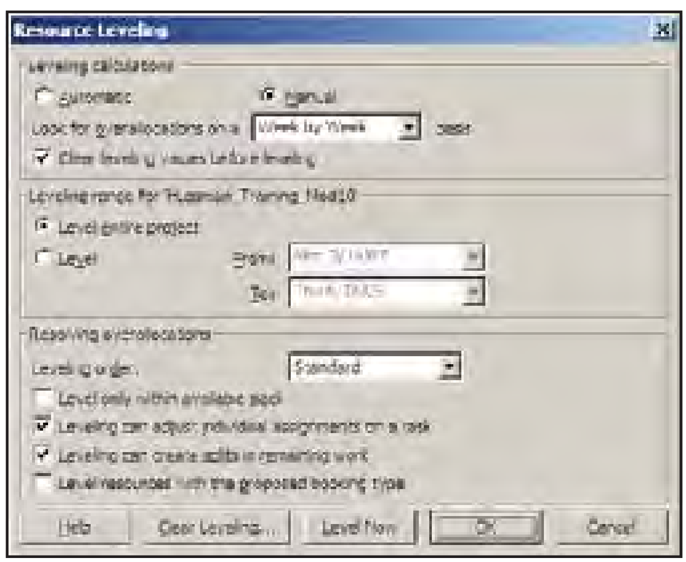
4. Choose **Tools: Level Resources.**

5. Verify that the **Manual** option is selected and verify that **Day By Day** is displayed in the Leveling Calculations area.

6. Verify that the **Level Entire Project** option is selected in the Leveling Range area.

7. Verify that **Standard** is displayed in the Leveling Order box in the Resolving Overallocations area.

8. Verify that the **Level Only Within Available Slack** check box is cleared.



Level the schedule

1. Click **Level Now.**

2. Scroll through the top pane, and verify that the Kim Ralls resource has been leveled.

Review the leveling changes

In the Leveling Gantt view in the borrom pane, green is before and blue is after the leveling.

1. Choose **Project:Project Information.**

2. View the current project finish date, and click **Cancel.**

Remove leveling

1. Verify that the bottom pane is the active pane.

2. Choose **Tools: Resource Leveling.**

3. Click **Level Resources.**

4. Verify that the **Entire Project** option is selected, and click **OK.**

Manually Resolving Overallocations

Using Project to level might not always be enough to completely resolve all resource conflicts, or the leveling action taken might be unacceptable. When this occurs, scheduling techniques can be used to manually resolve the overallocations. When deciding the best way to manually resolve resource overallocations, consider the following: the reason for the overallocation, project budget, resource availability, task flexibility, and adjustments most acceptable to the project. The following table describes project management techniques that can be used to resolve overallocations.

Project Management Techniques

- Increase the maximum units of the resource
- Reschedule the task that has created the overallocation
- Add overtime
- Adjust task dependencies
- Remove a resource if it isn't important to the task
- Replace the overallocated resource with an underallocated resource
- Make calendar adjustments to extend the working days and/or hours for the project or resource
- Decrease the amount of work assigned to the resource

■ Increase resource maximum units

1. Verify that the **project manager** resource is selected in the top pane.

2. Double-click the **project manager** resource**.**

3. Verify that the **General** tab is selected.

4. Click the **Max Units Available** up arrow until **200%** is displayed.

5. Click **OK**.

■ Replace one resource with another

1. Verify that the top pane is active, press [**F5**], type **3** and press [**ENTER**].

2. Click anywhere in the bottom pane.

3. Press [**ALT HOME**] to verify that the timescale is scrolled all the way to the left.

4. Scroll in the bottom pane, and click task 11, Review software specifications.

5. Click the **Go To Selected Task** button.

6. Locate the **Assign Resources** button on the Standard toolbar.

7. Click the **Assign Resources** button.

8. Click on **Kim Ralls** and click **Replace**.

9. Click on **Steve Masters** click **OK,** and click **Close**.

10. Save and Close the file.

Module 10 Recap Quiz

1. What toolbar can you use to see resources that are overallocated and their assignments from a single window?

2. How does MS Project tell you that a resource is overallocated in the Resource Sheet?

3. Name at least two Project Management techniques to manually resoolve overallocations

Microsoft Project 2007
Fundamentals

Module 11-Settings Constraints and Deadlines

Performance Objectives

In this module, you gain confidence in your ability to:

- Apply task constraints to impose date limitations on the scheduling of tasks and indicate deadlines

Exercise File

MP07Fund_ModuleEleven.mpp

Restricting Task Dates

All tasks in Microsoft Project 2007 are scheduled by default to occur As Soon As Possible (ASAP) based on task dependencies, resource assignments, and calendar dates. This is the most effective way of scheduling a project because it incorporates flexibility. However, sometimes the schedule needs to reflect real-world time constraints, such as deadlines and delivery dates. A constraint is a restriction or limitation imposed on the start or finish date of a task.

Each task is initially assigned the default constraint of As Soon As Possible. In addition to the default constraint, a task can be constrained so that it starts or finishes on or near a specific date or as late as possible. A constraint can be either flexible or inflexible.

NEW TERMS

constraint A restriction or limitation that is set on the start or finish date of a task.

flexible constraint A constraint, such as As Soon As Possible and As Late As Possible

inflexible constraint A constraint, such as Must Finish On and Must Start On, that ties a task to date. Also known as a hard constraint

deadline A target date indicating when you want a task to be completed. If the deadline date passes and the task is not completed, Project displays an indicator.

The As Soon As Possible constraint is the default task constraint when a project is being scheduled from the start date. The As Late As Possible constraint is the default task constraint when a project is being scheduled from the finish date. Neither constraint displays a constraint indicator in the Indicators field.

The Indicators field displays a constraint icon when a constraint has been applied to a task. If the constraint icon contains a blue square, the constraint is flexible. If the constraint icon contains a red square, the constraint is inflexible.

Although task constraints are necessary in most projects, they should be used only when necessary. If a scheduling conflict exists between a constraint and a task dependency, the task is scheduled according to the constraint by default. Fixed date constraints prevent the start and finish date of a task from being recalculated when the schedule changes.

Open the Project File

1. Locate the **Open** button on the Standard toolbar.

2. Click the **Open** button.

3. Open **MP07Fund_ModuleEleven.mpp.**

Save a file with a new name

1. Choose **File: Save As.**

2. Verify that you are in the **MP07_Fundamentals** folder.

3. Type **My_MP07Fund_ModuleEleven.mpp**.

4. Click **Save.**

Apply a flexible constraint

1. Press [F5], type **8** and press [**ENTER**]**.**

2. Double-click task 8, **Conduct needs analysis.**

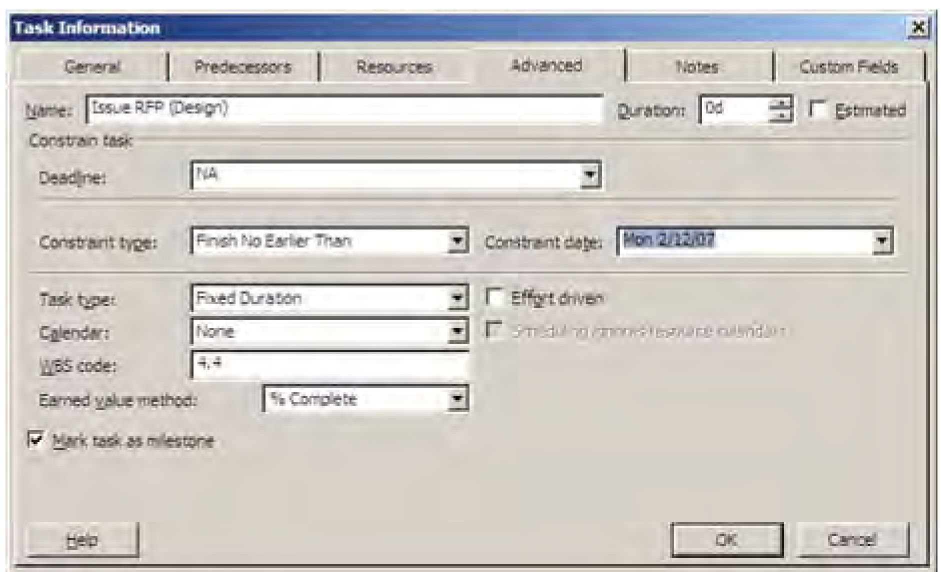
3. View the currently scheduled start date and finish date for the task.

4. Click the **Advanced** tab.

5. Click the **Contraint Type** drop down arrow in the Constrain Task area.

6. Click **Finish No Earlier Than.**

7. Click the **Contraint Date** drop down arrow**.**



8. Select **January 11th 2010**.

9. Click **OK**.

Apply an inflexible constraint

1. Press [F5], type **18** and click **OK.**

2. Double-click task 18, **Review preliminary software.**

3. Click the **General** tab, and view the currently scheduled start date and finish date for the task.

4. Click the **Advanced** tab.

5. Click the **Contraint Type** drop down arrow, and click **Must Start On**.

6. Click the **Constraint Date** drop down arrow, select **January 25th 2010,** and click **OK**.

Apply a deadline

1. Press [F5], type **24** and click **OK.**

2. Double-click task 24, **Design Complete.**

3. Click the **Advanced** tab.

4. Click the **Deadline** down arrow, and click **2/15/2010**.

5. Click **OK**.

Module 11 Recap Quiz

1. What is the default constraint type?

2. Where do you apply a constaint?

3. How can you tell a deadline has been set in the Gantt Chart?

Microsoft Project 2007
Fundamentals

Module 12-Tracking Project Progress

Performance Objectives

In this module, you gain confidence in your ability to:

- Track actual task information to indicate progress on the project

Exercise File

MP07Fund_ModuleTwelve

Setting the Project Baseline

Once a project schedule is created and the resource and task conflicts have been resolved, the current schedule represents the best estimate of how the project should proceed and what resources it will take to accomplish the project goal. Before the first task in the project begins, a baseline should be set. A baseline is a record, or snapshot, taken of the schedule at a specific point in time.

Setting the baseline is a critical step in the scheduling process. As a project progresses, the start dates, finish dates, and resource assignments can change. A baseline is useful for comparing the planned schedule with later progress of the project to see what changes have occurred. When a baseline is set, those dates, resources, and other critical pieces of schedule data are stored and do not change.

A project baseline should be viewed as a learning tool. The information gathered by comparing the baseline date to the actual progress on a project might be used to identify upcoming problems, prevent problems, establish better task duration estimates, or make more accurate resource assignments on future projects. Baseline data is also used in formulas when displaying graphical elements in fields such as red-yellow-green stop light indicators.

NEW TERMS

baseline The original project plan used to track progress during a project. The baseline plan includes start dates, finish dates, resources, and cost information before progress is tracked.

interim plan A set of task start dates and finish dates that is saved at a certain stage of a project.

Open the Project File

1. Locate the **Open** button on the Standard toolbar.

2. Click the **Open** button.

3. Open **MP07Fund_ModuleTwelve.mpp.**

Save a file with a new name

1. Choose **File: Save As.**

2. Verify that you are in the **MP07_Fundamentals** folder.

3. Type **My_MP07Fund_ModuleTwelve.mpp**.

4. Click **Save.**

Set the baseline

1. Choose **Tools:Tracking: Set Baseline.**

2. Verify that the **Set Baseline** option is selected**.**

3. Verify that the **Entire Project** option is selected in the For area.

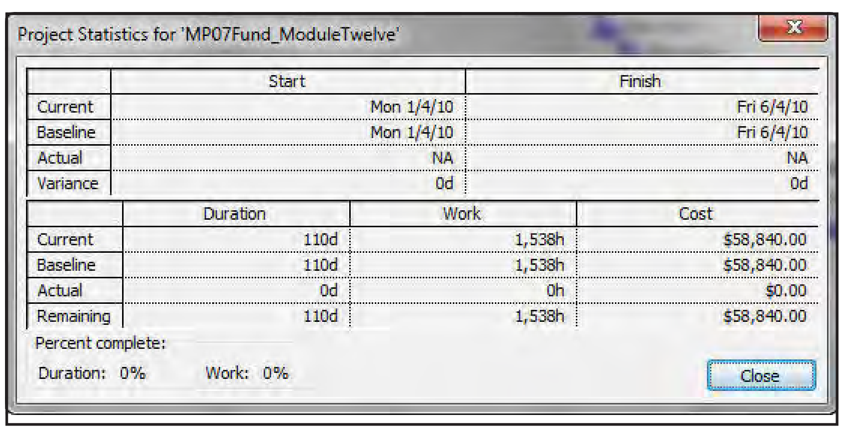
4. Click **OK.**

View the baseline statistics

1. Choose **Project: Project Information.**

2. Click **Statistics.**

3. Click **Close.**


Project Statistics for 'MP07Fund_ModuleTwelve'

	Start	Finish
Current	Mon 1/4/10	Fri 6/4/10
Baseline	Mon 1/4/10	Fri 6/4/10
Actual	NA	NA
Variance	0d	0d

	Duration	Work	Cost
Current	110d	1,538h	$58,840.00
Baseline	110d	1,538h	$58,840.00
Actual	0d	0h	$0.00
Remaining	110d	1,538h	$58,840.00

Percent complete:

Duration: 0% Work: 0%

Close

Tracking Task Progress

Once work begins on a project, it is time to start tracking the progress of tasks. Progress should be tracked throughout the project. The frequency of updates depends on the control needed over the project. If progress is tracked often, it is easier to identify problems and take corrective action. The frequency by which you capture updates from the team members will be based on your organizational processes. A best practice is to recieve updates from members of the project team every week.

Tasks that do not occur as scheduled should be tracked manually by entering actual progress information for the individual tasks. These tasks might have start and finish dates that occur later or earlier than scheduled or durations that run longer or shorter. Even in the best planned schedules, new tasks might be identified after the project begins. All of these situations affect the remaining tasks in a project. When the actual task progress is entered, the project is automatically recalculated, and tasks that haven't started are rescheduled based on the actual data, task dependencies, resources, and constraints.

As tasks are tracked, the Gantt Chart reflects the progress. The Gantt bars contain progress bars that indicate the progress of each task. Tasks that are 100 percent complete are removed from the critical path because they can no longer impact the project finish date. The critical path is recalculated as progress is entered. Completed tasks also have a check mark in the Indicators field.

NEW TERMS

tracking The process of gathering and entering task information, such as actual start dates and actual finish dates.

progress bar On the Gantt Chart, a bar that shows how much of a task has been completed. The progress bar is overlaid on the Gantt bar for all tasks that are in progress or that have been completed.

Updating Tasks

There are five types of actual data that can be entered for a task: actual start and finish dates, percentage complete, actual duration and remaining duration, actual and remaining work, and actual and remaining costs. Project calculates actual data based on what information is entered for a task. The following table provides examples of how information provided is used to calculate remaining information.

Actual task data can be entered using several different features, such as the Update Tasks dialog box, the Task Information dialog box, the Tracking table, and the Tracking toolbar. For tracking day-to-day progress, use the Task Usage view and the Resource Usage view.

Display the Tracking toolbar and switch views

1. Right-click any toolbar, and choose **Tracking.**

2. Click the **View bar** down arrow until the **Tracking Gantt** icon is displayed, and then click the **Tracking Gantt** icon.

3. Press [F5], type **1** and press [**ENTER**].

Enter an actual task finish date

1. Click task 2, Determine project scope.

2. Locate the **Update Tasks** button on the Tracking toolbar.

3. Click the **Update Tasks** button.

4. Click the **Finish** down arrow in the Actual area.

5. Select **1/4/2010**.

6. Click **OK**.

Enter actual duration

1. Press [**F5**], type 8 and press [**ENTER**].
2. Click the **Update Tasks** button.
3. Click the **Actual Duration** field and type **3d**.
4. Click **OK.**
5. Click the **Update Tasks** button**.**
6. Click **Cancel.**

All of the other field values have been filled out.

Enter actual and remaining duration

1. Press [**F5**], type **9** and press [**ENTER**]**.**
2. Click the **Update Tasks** button.
3. Press [**TAB**] to the Actual Dur box, and type 2.
4. Press [**TAB**] to the Remaining Dur box, and type 2 and click **OK**.
5. Click the **Update Tasks** button.
6. Click **Cancel**.

■ Use percentage complete

1. Press [**F5**], type 3 and press [**ENTER**].

2. Locate the **100% Complete** button on the Tracking toolbar.

3. Click the **100% Complete** button.

4. Click the **Update Tasks** button.

5. Click **Cancel.**

■ Enter actual work

1. Click the **Task Usage** icon on the View bar.

2. Choose **Format: Details: Actual Work.**

3. Drag the vertical split bar to the left until the Start column is hidden.

4. Press [**F5**], type **10** and press [**ENTER**].

5. Click in the Act. W values field for Rob Young on task 10, Develop preliminary proposal, on 1/19/2010.

6. Type 8 and hit [**ENTER**]

7. Click in the Act. W values field for Kim Ralls on task 10, Develop preliminary proposal, on 1/20/2010.

8. Type **4**.

9. Click in the **4h** field in the Work cell for 1/21/2010 and type **0** for Kim Ralls.

	8h	4h	
	8h	4h	
	8h		
	8h		
	0h	4h	
	0h	4h	

The task is now marked complete

10. Click the **Tracking Gantt** icon on the View bar.

Updating the Remaining Schedule

Tasks that did not occur as scheduled should be entered before updating the remaining schedule. Tasks that occur as scheduled can be updated at the same time based on their scheduled data. Multiple tasks or the entire project can be updated using the Update Project dialog box or the Update As Scheduled button on the Tracking toolbar.

The Update Project dialog box can be set to update selected tasks or the entire project from 0 to 100 percent complete or as either 0 or 100 percent complete based on an entered date or the current date. Using the Update As Scheduled button, tasks are automatically updated from 0 to 100 percent complete based on the status date. The status date must be changed in the Project Information dialog box prior to updating the project if a date other than the current date is to be used.

Update the remaining tasks as scheduled

1. Press [**F5**], type **1** and press [**ENTER**].

2. Choose **Tools: Tracking: Update Project.**

3. Verify that the **Update Work As Complete Through** option is selected.

4. Click the **Update Work As Complete Through** down arrow, and select 1/22/2010.

5. Verify that the **Set 0% - 100% Complete** option is selected.

6. Verify that the **Entire Project** option is selected and click **OK**.

Splitting Tasks

A task can be split or rescheduled to interrupt the work and then resume the remainder of the work later in the schedule. If it is known that a task will be interrupted, the task can be split when it is created. If an interruption occurs after the task has started it can be split where the work is stopped and the remainder of the task can be rescheduled.

NEW TERMS

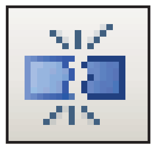
split To schedule an interruption in the work on a task.

A task can be split many times to create gaps in work of any size. When a task is split, the Gantt Chart displays a gap in the Gantt bar for the task. The width of the gap represents the length of the interruption in work. When a task is partially complete, there is actually a split made that is not visible. Project automatically splits the task between the completed work and the remaining work. The split is not visible on the Gantt Chart because there is no gap between the actual work and remaining work.

Split a task

1. Click the Gantt Chart view.

2. Locate the **Split Tasks** button on the Standard toolbar**.**



3. Click the **Split Task** button.

4. Position the pointer on the Gantt bar for task 9, Draft Preliminary software specifications.

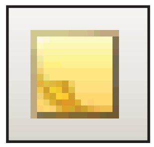
5. Move the pointer over the Gantt bar until the start date of 1/15/2010 is displayed on the Screen Tip.

6. Move the pointer over the Gantt bar until the start date of 1/15/2010 is displayed on the Screen Tip and then release the mouse.

Add a task note

1. Verify that task task 9, Draft Preliminary software specifications, is selected.

2. Locate the **Task Notes** button on the Standard toolbar.



3. Click the **Task Notes** button.

4. Click in the **Notes** box.

5. Type **We had an Internet connectivity issue and this delayed the completion**.

6. Click **OK**.

Comparing Baseline and Actual Data

The project baseline provides the basis for comparing costs, work, and dates for all tasks and resources. By comparing the project progress to the baseline, the project can be monitored to ensure tasks are on schedule, resources are completing the work, and costs are not exceeding the budget.

Project baselines and actual data can be viewed graphically in charts, such as the Tracking Gantt, or numerically in tables, such as the Variance table. There are also filters, such as Work Overbudget, that provide valuable comparison data.

■ View the project statistics

1. Choose **Project: Project Information.**
2. Click **Statistics.**
3. View the Project Statistics.
4. Click **Close**.

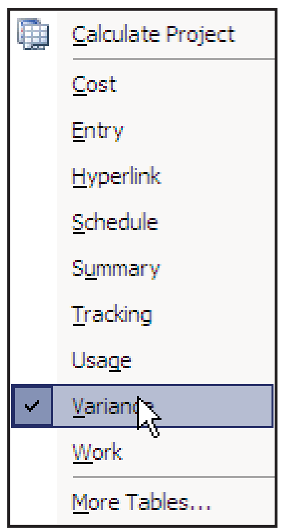
Apply tables of project data

1. Click the **View bar** down arrow until the **More Views** icon is displayed, and click the **More Views** icon.

2. Click **Task Sheet** in the Views box, and click **Apply.**

3. Choose **View: Table: Cost.**

4. Right-click the **Select All** button**.**



5. Choose **Variance.**

6. Switch to the **Gantt Chart** view**.**

Module 12 Recap Quiz

1. Decribe the benefits of setting a baseline?

2. What toolbar can you use when tracking progress on a project?

3. What is the best way to represent an interruption in a task?

Microsoft Project 2007
Fundamentals

Module 13-Reporting in Project

Performance Objectives

In this module, you gain confidence in your ability to:

- Use built-in and customized reports and print options to print schedule information

Exercise File

MP07Fund_ModuleThirteen.mpp

Customizing a Report

To manage and report on a project effectively, the project information needs to be communicated to a variety of people, such as management, resources, and any other individual involved in the project. To communicate the project information, views, tables, and reports can be printed. Microsoft project 2007 provides 22 predefined task, resource, and crosstab reports, which are divided into five report groups: Overview, Current Activities, Costs, Assignments, and Workload.

NEW TERMS

crosstab Printed information about tasks and resources over a specified time period. At the intersection of a row and a column, the information is calculated for the time period

In addition to using predefined reports, you can create new reports from scratch, edit an existing report, or create a report from a copy of an existing report. New reports are created by using one of four report templates: task, resource, monthly calendar, and crosstab.

The Report dialog box is used to create or edit a report using the Definition, Details and Sort tabs. The Definition tab selections vary slightly among task, resource, and crosstab reports, but generally include the report name, time period, table, and filter used. The Details tab is used to select options such as notes, costs, and work. The Sort tab is used to define the sort order of the data presented.

Open the Project File

1. Choose **Start: Programs: Microsoft Project**.

2. Locate the **Open** button on the Standard toolbar.

3. Click the **Open** button.

4. Open **MP07Fund_ModuleThirteen.mpp.**

Save a file with a new name

1. Choose **File: Save As.**

2. Verify that you are in the **MP07_Fundamentals** folder.

3. Type **My_MP07Fund_ModuleThirteen.mpp**.

4. Click **Save.**

Preview a predefined report

1. Choose **View:Reports.**

2. Double-click the **Costs** box**.**

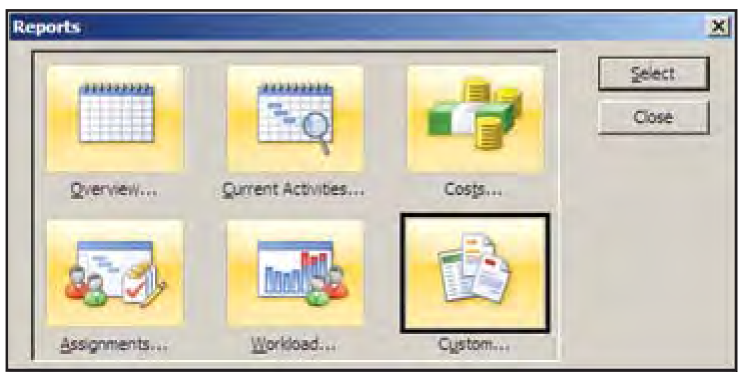
3. Double-click the **Cash Flow** box.

4. Click below the title of the report to Zoom In.

5. Click **Close**.

Customize a predefined report

1. Double-click the **Custom.**



It is a best practice to make a copy of an existing report rather than editing a built in one.

2. Click **Cash Flow,** and click **Copy.**

3. Select the text in the Name box, and type **Monthly Cash Flow**.

4. Click the Column down arrow, and click **Months**.

5. Click the **Details tab**.

6. Clear the **Summary Tasks** check box in the Show area.

7. Click the **Sort** tab.

8. Click the **Sort By** down arrow, type **c** and click **Cost**.

9. Select the Descending option, and click **OK.**

10. Verify that Monthly Cash Flow is selected, and click **Preview.**

11. Click below the title of the report to Zoom in.

12. Click **Close.**

Printing the Gantt Chart

There are many views, tables, and reports that can be printed in Project. The Gantt Chart is one view that combines table data and a graphical representation of the data.

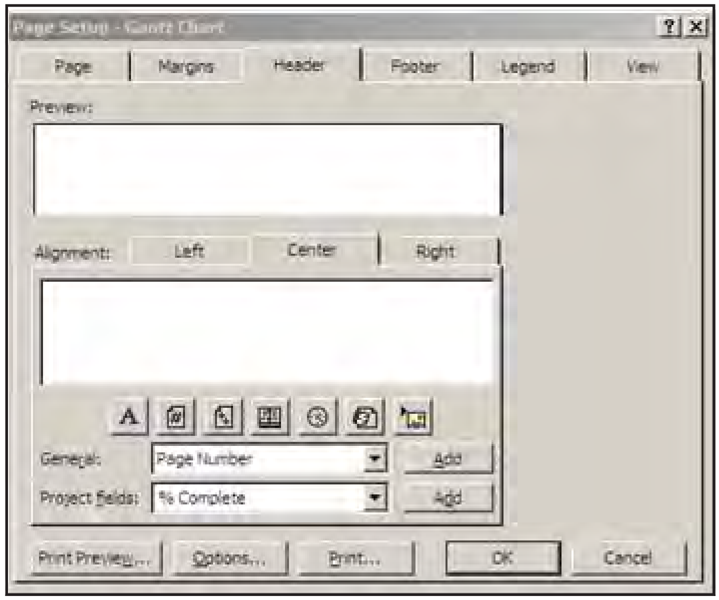
When printing the Gantt Chart or any view, headers and footers can be added to display additional information. A header displays information at the top of every page, and a footer displays information at the bottom of every page. You use the Page Setup dialog box to add headers and footers to a printed view and to make changes to margins, page header and footer, legend, and view settings. Information stored in the Properties dialog box can be displayed in a printed view using field codes as well.

When adding additional information to a printed view, the page breaks must also be considered to control the flow of information from one page to another. Print preview can be used to determine where page breaks should occur before printing.

Create a header

1. Choose **File: Page Setup.**

2. Click the **Header** tab**.**



3. Verify that the **Center** tab is active, and click in the Text box.

4. Click the **General** down arrow.

5. Click **Project Title**, click **Add**, and press the [**SPACEBAR**].

6. Click **General** down arrow, click **Subject**, and click **Add.**

Preview the Gantt Chart

1. Locate the **Print Preview** button on the Standard toolbar.

2. Click the **Print Preview** button**.**

3. Click **Close**.

Module 13 Recap Quiz

1. Where do you find the built-in reports in MS Project 2007?

2. How do you add the Project Managers name to a Gantt Chart report?

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