

**Microsoft**

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5927A

**Microsoft® Office Project 2007, Managing  
Projects**

*Companion Content*

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# Module 2

## Creating and Defining Projects

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# Lab Answer Keys

## Lab: Creating and Defining Projects

### Exercise 1: Entering Project File Properties

#### ► Task 1: Complete project information

1. On the **File** menu, click **Open**, browse to **D:\MOC 5927A\Lab files**, and then double-click **5927A\_Mod02\_Lab.mpp**.
2. On the Project menu, click Project Information.
3. In the **Project Information** dialog box, in the **Start date** box, type **Jun 1 '11**.
4. In the **Schedule from** list, click **Project Start Date**, and then click **OK**.

#### ► Task 2: Complete file information

1. On the **File** menu, click **Properties**.
2. Enter the following information in the appropriate fields, and then click **OK**.

Field	Project Information
Title	New Product Development
Author	Your Name
Company	Trey Research
Comments	The purpose of this project is to develop a new product. This fits with our strategic goal to introduce one new product every 2 to 3 years.

### Exercise 2: Setting Appropriate Schedule Options

#### ► Task 1: Control the display of assignment units

1. Continue with **5927A\_Mod02\_Lab.mpp**.
2. On the **Tools** menu, click **Options**.
3. On the **Schedule** tab, in the **Show assignment units as a** field, select **Decimal**, and then click **OK**.

#### ► Task 2: Set task types for new tasks

1. On the **Tools** menu, click **Options**.
2. On the **Schedule** tab, in the **Default task type** field, select **Fixed Duration**, and then click **OK**.

#### ► Task 3: Set task types for existing tasks

1. Click the row heading for **Task ID 1**, hold SHIFT and click the row heading for **Task ID 103**. This should select all of the tasks in your project.
2. On the **Project** menu, click **Task Information** .

3. In the **Multiple Task Information** dialog box, click the **Advanced** tab.
4. In the **Advanced** tab, in **Task type**, click **Fixed Duration**, and then click **OK**.

### Exercise 3: Setting Corporate Holidays

#### ► Task 1: Set exception days

1. Continue with **5927A\_Mod02\_Lab.mpp**.
2. On the **Tools** menu, click **Change Working Time**.
3. In the **Change Working Time** dialog box, click the **Exceptions** tab.
4. In the **Name** field, on the first blank row, type **Independence Day**.
5. In the **Start** field, type or select **Jul 4 '11**.
6. In the **Finish** field, type or select **Jul 4 '11**, and then click **Details**.
7. In the **Details for 'Independence Day'** dialog box, under **Set working times for these exceptions**, select **Nonworking**, and then click **OK**.
8. Repeat these steps 3 through 6 for each of the following holidays:
  - a. Labor Day – type or select **Sep 5 '11**.
  - b. Thanksgiving Day – type or select **Nov 24 '11**.
  - c. Christmas Day Observed – type or select **Dec 26 '11**.
  - d. New Year's Day Observed – type or select **Jan 2 '12**.
  - e. Memorial Day – type or select **May 28 '12**.
  - f. Independence Day – type or select **Jul 4 '12**.
  - g. Labor Day – type or select **Sep 3 '12**.
  - h. Thanksgiving Day – type or select **Nov 22 '12**.
  - i. Christmas Day – type or select **Dec 25 '12**.
  - j. New Year's Day – type or select **Jan 1 '13**.

#### ► Task 2: Synchronize calendar hours

1. In the **Change Working Time** dialog box, click the **Options** button.
2. Verify the working times match the standard work week hours, and then click **OK**.
3. In the **Change Working Time** dialog box, click **OK**.

### Exercise 4: Importing Data from Office Excel

#### ► Task 1: Open the file in Project 2007

1. On the **File** menu, click **New**, and then click **Blank Project** on the **New Project** panel located to the left of the Task table.
2. In the **Project Information** dialog box, click **OK** to accept the current start date.
3. On the **Tools** menu, click **Options**.

4. In the **Options** dialog box, on the **Security** tab, under **Legacy Formats**, select **Prompt when loading files with legacy or non default file format**, and then click **OK**.
5. On the **File** menu, click **Open**.
6. In the **Open** dialog box, browse to **D:\MOC 5927A\Lab files**, and in the **Files of type** list, click **Microsoft Excel Workbooks (\*.xls)**.
7. Click **5927A\_Mod02\_Lab.xls** in the available files list, and then click **Open**.

► **Task 2: Complete the import process**

1. In the **Import Wizard**, click **Next**.
2. On the **Import Wizard – Map** page, select **New Map**, and then click **Next**.
3. On the **Import Wizard – Import Mode** page, select **As a new project**, and then click **Next**.
4. On the **Import Wizard – Map Options** page, select **Tasks**, select **Import includes headers**, and then click **Next**.
5. On the **Import Wizard – Task Mapping** page, in the **Source worksheet name** field, select **Sheet1** from the list. The Microsoft® Office Excel® column name will populate in the From Excel Field.
6. In the **To Microsoft Office Project Field** indicated as (not mapped), type **name**, and then click **Next**.
7. Click **Save map** to save your custom mapping, type a map name, click **Save**, and then click **Finish** to begin the import. Notice that the Office Excel data is imported into the Task table in the Gantt Chart view.

**Note:** A Microsoft Office Project 2007 dialog box may be displayed if you are trying to open a file saved in an older file format. If this occurs, click Yes to continue the import.

8. On the **File** menu, click **Close**.
9. In the **Microsoft Office Project** dialog box, click **No** to close the file without saving the changes.

## Exercise 5: Updating a Task List

► **Task 1: Delete a task**

1. Continue with **5927A\_Mod02\_Lab.mpp**.
2. Right-click the row heading for **Task ID 30**, and then click **Delete Task**.

► **Task 2: Add a task**

1. At the end of the tasks list, add **Task ID 103**.
2. Enter the **Task name** of **Stakeholder Acceptance/Project Finish**.
3. Accept the default duration and start dates for this task.

► **Task 3: Move a task**

1. Click the row heading for **Task ID 84** to select the entire row.
2. On the **Standard** toolbar, click **Cut Task**.

3. Click the row heading for **Task ID 77**, and then click **Paste** .

► **Task 4: Copy a task**

1. Click the row heading for **Task ID 58** to select the entire row.
2. On the **Standard** toolbar, click **Copy Task** .
3. Click the row heading for **Task ID 80**, and on the **Standard** Toolbar, click **Paste** .
4. Double-click the **Task name** for **Task ID 80**.
5. In the **Task Information** dialog box, on the **General** tab, change **Name** to **Commercialization stage**, and then click **OK**.

## Exercise 6: Creating a Multilevel Outline

► **Task 1: Create summary tasks at outline level 1**

1. Continue with **5927A\_Mod02\_Lab.mpp**.
2. Click the row heading for **Task ID 2**, hold down SHIFT, and then click the row heading for **Task ID 6**. This should select Task ID 2 through Task ID 6.
3. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them subtasks of **Task ID 1**.
4. Repeat the above steps 2 and 3 for the following tasks:
  - a. Select **Task ID 8** through **Task ID 24**. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them subtasks of **Task ID 7**.
  - b. Select **Task ID 26** through **Task ID 58**. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them subtasks of **Task ID 25**.
  - c. Select **Task ID 60** through **Task ID 80**. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them subtasks of **Task ID 59**.
  - d. Select **Task ID 82** through **Task ID 97**. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them subtasks of **Task ID 81**.
  - e. Select **Task ID 99** through **Task ID 104**. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them subtasks of **Task ID 98**.

► **Task 2: Create summary tasks at outline level 2**

1. Click the row heading for **Task ID 13**, hold down SHIFT, and then click the row heading for **Task ID 15**. This should select Task ID 13 through Task ID 15.
2. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them level 2 subtasks of **Task ID 12**.
3. Repeat the above steps 1 and 2 for the following tasks:
  - a. Select **Task ID 28** through **Task ID 31**. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them level 2 subtasks of **Task ID 27**.

- b. Select **Task ID 33** through **Task ID 44**. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them level 2 subtasks of **Task ID 32**.
  - c. Select **Task ID 46** through **Task ID 56**. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them level 2 subtasks of **Task ID 45**.
  - d. Select **Task ID 63** through **Task ID 70**. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them level 2 subtasks of **Task ID 62**.
  - e. Select **Task ID 72** through **Task ID 80**. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them level 2 subtasks of **Task ID 71**.
  - f. Select **Task ID 83** through **Task ID 91**. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them level 2 subtasks of **Task ID 82**.
  - g. Select **Task ID 93** through **Task ID 97**. On the **Formatting** toolbar, click **Indent**  to indent the tasks and make them level 2 subtasks of **Task ID 92**.
- ▶ **Task 3: Create milestone tasks**
1. In the row for **Task ID 6**, in the **Duration** cell, type **0** days.
  2. In the row for **Task ID 24**, in the **Duration** cell, type **0** days.
  3. In the row for **Task ID 58**, in the **Duration** cell, type **0** days.
  4. In the row for **Task ID 80**, in the **Duration** cell, type **0** days.
  5. In the row for **Task ID 97**, in the **Duration** cell, type **0** days.
  6. In the row for **Task ID 104**, in the **Duration** cell, type **0** days.
- ▶ **Task 4: Turn on the overall project summary task**
1. On the **Tools** menu, click **Options**.
  2. On the **View** tab, click **Show project summary task**, and then click **OK**.
- ▶ **Task 5: Save and close**
1. On the **File** menu, click **Save**.
  2. On the **File** menu, click **Close**.

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# Module 3

## Working with Estimates and Dependencies

### Contents:

Lab Answer Keys

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# Lab Answer Keys

## Lab: Working with Estimates and Dependencies

### Exercise 1: Entering a Duration or Work Estimate

#### ► Task 1: Enter task durations

1. On the **File** menu, click **Open**, browse to **D:\MOC 5927A\Lab files**, and then double-click **5927A\_Mod03\_Lab.mpp**.
2. On the **View** menu, click **Gantt Chart**.
3. In the row for **Task ID 15**, in the **Duration** cell, type **5** days.
4. In the row for **Task ID 16**, in the **Duration** cell, type **5** days.
5. In the rows for **Task IDs 19, 21, and 23**, in the **Duration** cell, type **10** days.
6. In the rows for **Tasks IDs 49, 50, and 51**, in the **Duration** cell, type **10** days.
7. In the row for **Task ID 90**, in the **Duration** cell, type **40** days.
8. In the rows for **Task IDs 99 and 100**, in the **Duration** cell, type **60** days.

#### ► Task 2: Enter work estimates

1. Click the **Duration** column heading.
2. On the **Insert** menu, click **Column**.
3. In the **Column Definition** dialog box, in **Field name**, select **Work**, and then click **OK**.
4. In the row for **Task ID 42**, in the **Work** cell, type **30** hours.
5. In the row for **Task ID 97**, in the **Work** cell, type **8** hours.

### Exercise 2: Creating Links Between Tasks

#### ► Task 1: Create task dependencies

1. Continue with **5927A\_Mod03\_Lab.mpp**.
2. On the **View** menu, click **Gantt Chart**.
3. Click the row heading for **Task ID 2**, hold down SHIFT and click the row heading for **Task ID 6**.
4. On the **Standard** toolbar, click **Link Tasks** .
5. Click the row heading for **Task ID 99**, hold down CTRL and click the row heading for **Task ID 100**.
6. On the **Standard** toolbar, click **Link Tasks** .
7. Double-click the row heading for **Task ID 20**.
8. In the **Task Information** dialog box, on the **Predecessors** tab, on separate rows, in the **ID** column, type 16, 17, and 18, and then click **OK**.
9. Double-click the row heading for **Task ID 57**.

10. In the **Task Information** dialog box, on the **Predecessors** tab, on separate rows, in the **ID** column, type **54**, **55**, and **56** and then click **OK**.
11. Click the row heading for **Task ID 83**, hold **SHIFT**, and click the row heading for **Task ID 91**.
12. In the **Standard** toolbar, click **Link Tasks** .

► **Task 2: Modify link types**

1. Double-click the row heading for **Task ID 17**.
2. In the **Task Information** dialog box, on the **Predecessors** tab, in the **Type** field, select **Start-to-Start (SS)**, and then click **OK**.
3. Double-click the row heading for **Task ID 18**.
4. In the **Task Information** dialog box, on the **Predecessors** tab, in the **Type** field, select **Start-to-Start (SS)**, and then click **OK**.
5. Double-click the row heading for **Task ID 19**.
6. In the **Task Information** dialog box, on the **Predecessors** tab, in the **Type** field, select **Start-to-Start (SS)**, and then click **OK**.

### Exercise 3: Adding Lag and Lead Times

► **Task 1: Add lag or lead time based on the situation**

1. Continue with **5927A\_Mod03\_Lab.mpp**.
2. Double-click the row heading for **Task ID 16**.
3. In the **Task Information** dialog box, on the **Predecessors** tab, in the **Lag** field, type **5d**, and then click **OK**.
4. Double-click the row heading for **Task ID 52**.
5. In the **Task Information** dialog box, on the **Predecessors** tab, in the **Lag** field, type **50%**, and then click **OK**.

### Exercise 4: Displaying Links in Network Diagram View

► **Task 1: Review several of the links for tasks in Exercise 2 and 3**

1. Continue with **5927A\_Mod03\_Lab.mpp**.
2. On the **View** menu, click **Network Diagram**.
3. On the **Standard** Toolbar, click **Zoom In** until the text within the task nodes is readable. Review the links created in Exercises 2 and 3.

► **Task 2: Save and close**

1. On the **File** menu, click **Save**.
2. On the **File** menu, click **Close**.

# Module 4

## Working with Deadlines, Constraints, and Task Calendars

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# Question and Answers

## Lesson 1: Introducing Deadlines, Constraints, and Task Calendars

### Discussion: When to Use Deadlines, Constraints, and Task Calendars

- Q** Recall a project that required schedule restrictions. Which of the three headings identifies the best solution for restricting the task scheduling in your project?
- A** Answers may vary.
- Q** Consider a project where an entire office is being moved. However, use of the office building's freight elevator is limited to weekends. In this case, which heading represents the correct solution for restricting the task scheduling?
- A** In this case, you would pick the task calendars heading because using a task calendar would be the best solution.
- Q** Consider a project plan designed for a trade show convention. The date of the trade show needs to be restricted in the project schedule. Which heading represents the correct match?
- A** In this case, the use of constraints would be the best match.
- Q** Consider a project plan for publishing a book with a target date set for first draft review. The first draft's target date must be entered to restrict the task's scheduling. Under which heading does this one belong?
- A** This scenario belongs under the Deadlines heading.
- Q** Consider a project plan to create a financial budget. The budget date must be entered to control the task scheduling. What type of scheduling restriction is needed in this situation; in other words, what heading represents the best choice?
- A** In this situation, using constraints is the best choice.

## Lesson 2: Creating and Modifying Deadlines

### Discussion: Implications That Deadline Dates Have for the Critical Path

- Q** Do deadline dates usually affect the project schedule?
- A** No. Deadlines do not usually affect the project schedule. They simply indicate target dates. Tasks with deadlines are scheduled like any other task, but when a task finishes after its deadline date, Office Project 2007 displays an indicator that the deadline was missed.
- Q** Can deadline dates affect the critical path?
- A** Yes. Deadline dates can affect total slack, which defines the critical path. If the date of a deadline occurs within a task's total slack, then the total slack is recalculated using the deadline date rather than the task's late finish date. In this situation, if total slack reaches zero, the deadline date causes the task to become critical.

- Q** Is there any situation in which deadline dates can affect how tasks are scheduled?
- A** Yes. Deadline dates can affect how tasks are scheduled if a deadline is set on a task with an As Late As Possible (ALAP) constraint. The task is actually scheduled to finish on the date of the deadline; however, the task could still finish after the deadline date if the task's predecessors are delayed.

## Lesson 3: Creating and Modifying Constraints

### Demonstration: Creating and Using Constraints

- Q** What is an accidental constraint?
- A** An accidental constraint is any constraint that appears in the project schedule unintentionally.
- Q** What are some ways accidental constraints can appear in the project schedule?
- A** Answers will vary. Answers should involve those situations in which constraints are applied automatically, such as:
- When you manually enter a start or finish date for a task, a constraint is automatically applied.
  - If the pointer is used to create a new task within the chart portion of the Gantt Chart view, Office Project 2007 automatically assigns a constraint to the new task. If the project is using forward scheduling, a Start No Earlier Than (SNET) constraint is automatically applied. If the project is using backward scheduling, a Start No Later Than (SNLT) constraint is automatically applied.
- Q** How can you help prevent the creation of accidental constraints?
- A** Hide the Start date and Finish date columns in task-based views.
- Q** Will hiding the Start date and Finish date columns always prevent the creation of accidental constraints?
- A** No. Accidental constraints can still be created within the chart portion of the Gantt Chart view. Awareness of the automatic constraint creation feature within Office Project 2007 is the best prevention.

## Lab: Working with Deadlines, Constraints, and Task Calendars

### Lab Discussion

- Q** What happens to the critical path displayed in the Gantt Chart when the list of critical tasks changes?
- A** When the list of critical tasks changes due to changing task drivers and adjustments in the project schedule, the Gantt Chart display of the critical path is dynamically updated to show only the most current critical tasks.
- Q** When triggered, how do deadlines and constraints differ in their effects on the project schedule?

- A** When triggered, a deadline normally has no effect on the project schedule. However, an inflexible or semi-flexible constraint will restrict the slippage or movement of a task to the constraint's date. The restricted task will subsequently limit the dynamic flow of all other dependent tasks within the project schedule.
- Q** How can the Task Drivers pane be used to help a project manager better manage a project schedule?
- A** The Task Drivers pane displays the specific task drivers that control the scheduling of any selected task. As this information can be otherwise difficult to determine, the Task Drivers pane makes the project manager's job of determining task drivers quick and easy.

# Lab Answer Keys

## Lab: Working with Deadlines, Constraints, and Task Calendars

### Exercise 1: Displaying the Critical Path

#### ► Task 1: Select the Detail Gantt view

1. On the **File** menu, click **Open**, browse to **D:\MOC 5927A\Lab files**, and then click **5927A\_Mod04\_Lab.mpp**.
2. On the **View** menu, click **More Views**, select **Detail Gantt**, and then click **Apply**.
3. On the **View** menu, click **Zoom**, select **Entire project**, and then click **OK**.

#### ► Task 2: Run the Gantt Chart Wizard

1. On the **View** menu, click **Gantt Chart**.
2. On the **Format** menu, click **Gantt Chart Wizard** .
3. In the **Gantt Chart Wizard**, click **Next** to continue.
4. Click **Critical path**, and then click **Next**.
5. Click **Resources and dates**, and then **Next**.
6. Click **Yes**, click **Next**, click **Format It**, and then click **Exit Wizard**.

#### ► Task 3: Modify a critical task

1. Click the row heading for **Task ID 76**.
2. On the **Standard** Toolbar, click **Scroll to Task**. Notice the Task bar is red.
3. Click the row heading for **Task ID 77**. Notice the Task bar is blue.
4. In the row for **Task ID 77**, in the **Duration** field, type **20**, and then press ENTER. Notice Task ID 77 is now critical (red) and Task ID 76 is non-critical (blue).
5. On the **File** menu, click **Save**.

### Exercise 2: Setting a Deadline

#### ► Task 1: Create deadlines

1. Continue with **5927A\_Mod04\_Lab.mpp**.
2. Double-click the row heading for **Task ID 6**.
3. In the **Task Information** dialog box, on the **Advanced** tab, in **Deadline**, select **Jun 24 '11**, and then click **OK**.
4. Double-click the row heading for **Task ID 61**.
5. In the **Task Information** dialog box, on the **Advanced** tab, in **Deadline**, select **Apr 28 '15**, and then click **OK**.

#### ► Task 2: Modify a deadline

1. Double-click the row heading for **Task ID 61**.

2. In the **Task Information** dialog box, on the **Advanced** tab, in **Deadline**, select **May 1 '15**, and then click **OK**.
3. On the **File** menu, click **Save**.

### Exercise 3: Setting a Constraint

#### ► Task 1: Create constraints

1. Continue with **5927A\_Mod04\_Lab.mpp**.
2. Double-click the row heading for **Task ID 23**.
3. In the **Task Information** dialog box, on the **Advanced** tab, in **Constraint type**, select **Must Finish On**, in **Constraint date**, select **Dec 29 '11**, and then click **OK**.
4. If the **Planning Wizard** appears, click **Continue**, and then click **OK**.
5. Double-click the row heading for **Task ID 57**.
6. In the **Task Information** dialog box, on the **Advanced** tab, in **Constraint type**, select **Finish no later than**, in **Constraint date**, select **Nov 13 '14**, and then click **OK**.
7. If the **Planning Wizard** appears, choose **Continue**, and then click **OK**.
8. Double-click the row heading for **Task ID 80** to open the **Task Information** dialog box, on the **Advanced** tab, in **Constraint type** select **Finish no later than**, in **Constraint date**, select **Apr 29 '16**, and then click **OK**.
9. If the **Planning Wizard** appears, choose **Continue**, and then click **OK**.

#### ► Task 2: Modify a constraint

1. Double-click the row heading for **Task ID 23**.
2. In the **Task Information** dialog box, on the **Advanced** tab, in **Constraint type**, select **Finish no later than**, and then click **OK**.

Point to the **constraint indicator** in the first Column and read the additional information.

3. On the **File** menu, click **Save**.

### Exercise 4: Responding to Situations That Affect Deadlines and Constraints

#### ► Task 1: Trigger a deadline

1. Continue with **5927A\_Mod04\_Lab.mpp**.
2. Click the row heading for Task ID 5, in Duration, type 7 days. This is the predecessor task to the deadline. Changing this duration will trigger the deadline for you.
3. If the Planning Wizard appears, click Continue, and then click OK.

#### ► Task 2: Review a triggered deadline situation

- In the row for **Task ID 6**, in the **Indicators** column, point to the indicator to read the new deadline information.

#### ► Task 3: Respond to a triggered deadline situation

1. No response is necessary for a triggered deadline situation. If the deadline date passes and the task is incomplete, the remaining project schedule will adjust automatically.

2. On the **Edit** menu, click **Undo**. The Duration of this task should now be 6 days.

▶ **Task 4: Trigger constraints**

- In the row for **Task ID 21**, in **Duration**, type **15** days.

▶ **Task 5: Review triggered constraint situations**

- Click the row heading for **Task ID 21**. Notice the dates of the successor tasks have not changed. This is because a constraint is stronger than a task dependency.

▶ **Task 6: Respond to triggered constraint situations**

1. On the **Edit** menu, click **Undo**. The Duration of this task should now be 10 days.
2. On the **File** menu, click **Save**.

## Exercise 5: Creating and Applying a Task Calendar to Meet a Deadline

▶ **Task 1: Create a task calendar**

1. Continue with **5927A\_Mod04\_Lab.mpp**.
2. On the **Tools** menu, click **Change Working Time**.
3. In the **Change Working Time** dialog box, click **Create New Calendar**.
4. In the **Create New Base Calendar** dialog box, in **Name**, type **Environmental Labs**, click **Make a copy of Standard calendar**, and then click **OK**.
5. In the **Change Working Time** dialog box, click the **Work Weeks** tab, and then click **Details**.
6. In the **Details** dialog box, under **Select day(s)**, select **Monday** through **Friday**, click **Set day(s) to these specific working times**, and type the following values.
  - In row 1, in the **From** column, type **8:00 AM**, and in the **To** column, type **12:00 PM**.
  - In row 2, in the **From** column, type **4:00 PM**, and in the **To** column, type **8:00 PM**, and then click **OK**.
  - In the **Change Working Time** dialog box, click **OK**.

▶ **Task 2: Apply a task calendar**

1. On the **View** menu, click **Gantt Chart**.
2. Double-click the row heading for **Task ID 18**.
3. In the **Task Information** dialog box, on the **Advanced** tab, in the **Calendar** field, select **Environmental Labs**, and then click **OK**.
4. If the **Planning Wizard** appears, click **Continue**, and then click **OK**.
5. Double-click the row heading for **Task ID 50**.
6. In the **Task Information** dialog box, on the **Advanced** tab, in the **Calendar** field, select **Environmental Labs**, and then click **OK**.
7. If the **Planning Wizard** appears, click **Continue**, and then click **OK**.

► **Task 3: Review effects from a task calendar**

1. In the row for **Task ID 50**, in the **Indicators** column, point to the indicator to read the **Task calendar** information.
2. On the **File** menu, click **Save**.

## Exercise 6: Finding Constraints in a Schedule and Removing Them

► **Task 1: Find constraints**

1. Continue with **5927A\_Mod04\_Lab.mpp**.
2. On the **View** menu, click **Gantt Chart**.
3. On the **Project** menu, point to **Filtered for All Tasks**, and then click **More Filters**.
4. In the **More Filters** dialog box, click **Tasks With Fixed Dates**, and then click **Apply**. The filtered list shows only fixed date tasks. There are no Actual dates, so this is the list of tasks with constraints.

► **Task 2: Remove constraints**

1. Double-click the row heading for **Task ID 23**.
2. In the **Task Information** dialog box, on the **Advanced** tab, in **Constraint type**, select **As Soon As Possible**, and then click **OK**.
3. Double-click the row heading for **Task ID 57**.
4. In the **Task Information** dialog box, on the **Advanced** tab, in **Constraint type**, select **As Soon As Possible**, and then click **OK**.
5. Double-click the row heading for **Task ID 80**.
6. In the **Task Information** dialog box, on the **Advanced** tab, in **Constraint type**, select **As Soon As Possible**, and then click **OK**.
7. On the **Project** menu, point to **Filtered for Tasks With Fixed Dates**, and then click **All Tasks**.
8. On the **File** menu, click **Save**.

## Exercise 7: Activating and Using Task Drivers

► **Task 1: Activate the Task Drivers pane**

1. Continue with **5927A\_Mod04\_Lab.mpp**.
2. On the **View** menu, click **Gantt Chart**.
3. On the **Project** menu, click **Task Drivers**. The Task Drivers pane is displayed.

► **Task 2: Review the Task Drivers pane**

1. For each of the following tasks, select the task and then record the driver information from the **Task Drivers** pane.

Task	Driver Information
2 – New product opportunity identified	Project Start: Jun 1 '11

17 – Determine safety issues	Predecessor Tasks ID 16
50 – Perform environmental review	Predecessor Tasks ID 47

2. On the **View** menu, click **Network Diagram**.
3. For each of the following tasks, select the task and then record the driver information from the **Task Drivers** pane.

Task	Driver Information
0 – New Product Development Template	Subtasks: 1 - Initial New Product Screening Stage 81 - Commercialization Stage
7 – Preliminary Investigation Stage	Subtasks: 8 - Assign resources to preliminary investigation

► **Task 3: Deactivate the Task Drivers pane**

1. On the **Task Drivers** pane, use the **close** button in the upper-right corner of the pane to close the pane.
2. On the **View** menu, click **Gantt Chart**.

► **Task 4: Save and close**

1. On the **File** menu, save **New Product\_Mod4.mpp**.
2. On the **File** menu, click **close**.

# Module 5

## Working with Resources

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# Question and Answers

## Lesson 3: Creating and Modifying Resource Assignments

### What Are Maximum Units?

- Q** If you change maximum units, are assignment units changed?
- A** On any task where a resource is already assigned, assignment units will not change. This is to avoid problems with tasks in progress or tasks that have already been planned. If you make a new assignment, the assignment units will be affected by the change in maximum units following the information provided in the previous two paragraphs.
- Q** If I have a resource that is set at 1 maximum units, can I assign that resource to a task at 1.5 or 2.0?
- A** Office Project 2007 does not stop you from overallocating a resource because it is making the assumption that resources are unlimited and can be acquired at any time. Obviously this assumption may not reflect reality in your organization.

### Lab: Working with Resources

#### Lab Discussion

- Q** What do you do to make a cost resource become a budget item that only works on the project summary task?
- A** Set the budget attribute by double-clicking the cost resource name and selecting budget on the general tab.
- Q** Why is the advantage of the new cost resource on a task and why would an organization use it?
- A** The cost resource allows an individual or project manager to record an estimated cost on a task that will account for other expenses related to getting the resource to work on the task such as travel cost.
- Q** What is the difference between changing the maximum units on the resource sheet and changing the assignment units on an individual task?
- A** Changing maximum units will change a resource's project availability, while changing the assignment units will change a resource's availability for that specific task.
- Q** Why would you enter new resources on the resource sheet instead of entering new resources in the assign resources dialog box?
- A** Entering on the resource sheet will remind you to enter all the properties for that resource including their standard rate. If you enter a resource on the assign resources dialog box, you may not be reminded that this is a new resource. A simple spelling mistake could indicate a new hire for the project, which may not be your intent.

# Lab Answer Keys

## Lab: Working with Resources

### Exercise 1: Adding Resources to the Resource Sheet View

#### ► Task 1: Set the general options

1. On the **File** menu, click **Open**, browse to **D:\MOC 5927A\Lab files**, and then double-click **5927A\_Mod05\_Lab.mpp**.
2. On the **Tools** menu, click **Options**.
3. In the **Options** dialog box, on the **General** tab, select **Automatically add new resources and tasks**.
4. In **Default standard rate**, type **\$50/h**.
5. In **Default overtime rate**, type **\$75/h**, and then click **OK**.

#### ► Task 2: Enter resources

1. On the **View** menu, click **Resource Sheet**.
2. Enter the following **Resource Names** and **Types**.

Resource Name	Type
Budget-Travel	Cost
Airfare	Cost
Meals	Cost
Office Supplies Paper	Material
Mike	Work
Mary	Work
Roy	Work
Office Supplies Ink	Material
Programmer	Work

#### ► Task 3: Enter resource rates

- In the table for the **Resource Sheet** view, for the following **Resource Names**, type the accompanying **Rates**.

Resource Name	Standard Rate	Overtime Rate
Office Supplies Paper	\$50	
Office Supplies Ink	\$75	

Mike	\$65	\$65
Mary	\$65	\$75

► **Task 4: Set cost resource to budget**

1. Click the row heading for the **Budget-Travel** resource.
2. On the **Project** menu, click **Resource Information**.
3. In the **Resource Information** dialog box, on the **General** tab, in **Type**, click **Cost**, select **Budget**, and then click **OK**.

## Exercise 2 Creating and Modifying Resource Assignments

► **Task 1: Create resource assignments**

1. Continue with **5927A\_Mod05\_Lab.mpp**.
2. On the **View** menu, click **Gantt Chart**.
3. On the **Tools** menu, click **Options**.
4. In the **Options** dialog box, on the **View** tab, select **Show project summary task**, and then click **OK**.
5. Click the row heading for **Task ID 4**, hold down CTRL and click on the row headings for **Task IDs 5** and **8**. All three rows should be selected.
6. On the **Standard** toolbar, click **Assign Resources**.
7. In the **Assign Resources** dialog box, under **Resource Name**, click on **Mike**, and then click **Assign**. Do not close the dialog box yet. The resource named Mike is now assigned to the selected tasks.
8. Repeat steps 5 through 7 to make the following assignments:

Resource	Task
Roy	5, 6, 8, 9, and 10
Mary	6, 10, and 11
Budget-Travel	0
Airfare	4, 5, and 6
Meals	4, 5, and 6
Programmer	13
Office Supplies Ink	8, 9, 10, and 11
Office Supplies Paper	8, 9, 10, and 11

9. In the **Assign Resources** dialog box, click **Close**.

► **Task 2: Modify resource availability**

1. On the **View** menu, click **Resource Sheet**.
2. In the row for the resource **Mary**, in **Max Units**, type **0.5**.

► **Task 3: Modify resource assignments**

1. On the **View** menu, click **Gantt Chart**.
2. Click the row heading for **Task ID 6**, hold down CTRL and click on the row headings for **Task IDs 9** and **10**. All three rows should be selected.
3. On the **Standard** Toolbar, click **Assign Resources**.
4. In the **Assign Resources** dialog box, under **Resource Name**, click on **Roy**, and then click **Replace**.
5. In the **Replace Resource** dialog box, under **Resource Name**, click **Mike**, and then click **OK**.
6. In the **Assign Resources** dialog box, click **Close**.
7. On the **File** menu, click **Save**.

### Exercise 3: Entering Project Costs and Project Budgets

► **Task 1: Enter cost for budget tracking purposes**

1. Continue with **5927A\_Mod05\_Lab.mpp**.
2. On the **View** menu, click **Gantt Chart**.
3. Double-click the row heading for **Task ID 6**.
4. In the **Task Information** dialog box, on the **Resource** tab, under **Resource Name**, in the row for **Meals**, in **Cost**, type **\$65.00**, and then click **OK**.
5. Repeat steps 3 and 4 to type the following task costs:

Task ID	Resource	Cost
4	Airfare	\$1,000.00
4	Meals	\$100.00
5	Airfare	\$1,200.00
5	Meals	\$75.00
6	Airfare	\$1,300.00

► **Task 2: Enter project budgets**

1. On the **View** menu, click **Task Usage**.
2. Click on the column heading for **Duration**, and in the **Insert** menu, click **Column**.
3. In the **Column Definition** dialog box, in **Field name**, type or select **Budget Cost**, and then click **OK**.

4. Below the row for **Task ID 0**, in the row for the resource **Budget-Travel**, under **Budget Cost**, type **\$4,000.00**.

▶ **Task 3: Compare total budget with total cost**

1. On the **View** menu, click **Task Usage**.
2. Click on the column heading for **Duration**, and in the **Insert** menu, click **Column**.
3. In the **Column Definition** dialog box, in **Field name**, select **Cost**, and then click **OK**. You can now compare budget costs and total costs.

▶ **Task 4: Save and close**

1. On the **File** menu, save **5927A\_Mod05\_Lab.mpp**.
2. On the **File** menu, click **Close**.

# Module 6

## Understanding Task Types and the Scheduling Formula

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# Question and Answers

## Lesson 1: Using Task Type and the Scheduling Formula for Effective Calculations

### Discussion: How to Use Task Types and the Scheduling Formula

- Q** What are the default task type and effort-driven setting for a newly created schedule (assuming that Office Project 2007 has not been customized in any way)?
- A** Task type—fixed units. Effort driven selected.
- Q** What task types and effort-driven settings are recommended when estimating a task?
- A** For a task containing an estimated duration value—fixed duration selected and effort driven cleared. For a task containing an estimated work value—fixed work and effort driven selected.
- Q** Is fixed units recommended when you are in the planning stage of a schedule?
- A** Fixed units is not recommended when you are in the planning stage of a schedule because setting fixed units initially means you intend to fix the number of resources. During the initial planning of a schedule, resources usually have not yet been defined.

The following scenarios will illustrate how Office Project 2007 applies the scheduling formula and automatically calculates the third variable.

- Scenario 1—A fixed-work task with the effort-driven setting selected is entered. A work estimate is provided, resources are assigned, and duration will be calculated.
- Scenario 2—A fixed-duration task with the effort-driven setting cleared is entered. A duration estimate is provided, resources are assigned, and work will be calculated.

## Lesson 3: Applying Task Type to Produce Predictable Behavior

### Discussion: Decision Making for Predictable Behavior

#### Scenario 1

- Q** Which task type setting and effort-driven settings should be applied initially to the task and why?
- A** Set the task type initially to fixed work selected and effort-driven selected. In this scenario you have been given a work variable and the resources can work together, which implies effort driven on.
- Q** Should the task type and effort-driven settings be changed when more resources become available and why?
- A** You do not need to change the task type or effort-driven settings to change the number of resources. You still want to fix the work variable.

## Scenario 2

- Q** What task type and effort-driven settings should be applied initially to the task and why?
- A** Set the task initially to fixed duration/effort-driven off. You have been given a duration value for the initial estimate, and you know that adding more resources to this task will not affect the time the jar must sit on the shelf.
- Q** Should the task type and effort-driven settings be changed before modifying this task and why?
- A** In the scenario, you have been told that you need to change the duration. One of the guidelines provided is not to change the variable that is fixed, so choosing another task type is recommended.
- Q** Which variable should be fixed before you apply the 8 week change and why?
- A** You need to change the task type to fixed units/effort-driven off to lock down the number of resource units. Remember that one variable must be fixed, and the scenario indicates that Lab Storage resource units should be fixed.
- Q** Once you set the appropriate task type, which variable should you change to get the 8week result?
- A** Change the duration to 8 weeks.

## Scenario 3

- Q** What task type and effort-driven settings should be applied initially to the task and why?
- A** Set the task initially to fixed work selected and effort-driven selected. You have been given an initial work estimate, and you know that network engineers can work together.
- Q** Should the task type and effort-driven settings be changed when you apply 4 network engineers to the task and why?
- A** No, the overall work has not changed because you are simply increasing the units available for this task.
- Q** Before you change the work estimate, which variable should be fixed and why?
- A** Now the only fixed variable is the number of network engineers, so you should set fixed units/effort-driven cleared before changing the work estimate.
- Q** Once you have set the appropriate task type, which variable should you change to get the 50 hour result?
- A** Change the work to 50 hours.

# Lab Answer Keys

## Lab: Understanding Task Types and the Schedule Formula

### Exercise 1: Identifying the Fixed Variable in a Task and How It Affects the Schedule Formula

#### ► Task 1: Create resource assignments

1. On the **File** menu, click **Open**, browse to **D:\MOC 5927A\Lab files**, and then double-click **5927A\_Mod06\_Lab.mpp**.
2. On the **Window** menu, click **Split**.
3. Click the row heading for **Task ID 26**.
4. On the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Mary**, and then click **OK**.
5. On the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Roy**, and then click **OK**. For each of the two resources, you should see 2,112 hours in Work.

#### ► Task 2: Create resource assignments on multiple tasks

1. On the **Window** menu, click **Remove Split**.
2. Click the row heading for **Task ID 28**, press **SHIFT**, and then click the row heading for **Task ID 31**.
3. On the **Standard** toolbar, click the **Task Information** button .
4. In the **Multiple Task Information** dialog box, on the **Resources** tab, under **Resource name**, in the first empty cell, type or select **Mike**, and then click **OK**.

#### ► Task 3: Apply additional resources

1. In the row for **Task ID 33**, in **Duration** type **0** days.
2. Double-click the row heading for **Task ID 33**.
3. In the **Task Information** dialog box, on the **Advanced** tab, in **Task type**, click **Fixed Units**, select the **Effort driven** check box, and then click **OK**.
4. In the row for **Task ID 33**, in **Work**, type **200h**.
5. Click the row heading for **Task ID 33**, on the **Standard** toolbar, click **Task Information** .
6. In the **Task Information** dialog box, on the **Resources** tab, under **Resource Name**, in the first empty cell type or select **Programmer**, and then click **OK**.
7. On the **Tools** menu, select **Options**.
8. In the **Options** dialog box, on the **Schedule** tab, in **Show assignment units as**, click **Decimal**, and then click **OK**.
9. Double-click the row heading for **Task ID 33**.

10. In the **Task Information** dialog box, on the **Resources** tab, under **Resource Name**, in the row for **Programmer**, in **Units**, type **40**, and then click **OK**. The final duration is 0.63 days in the Duration field.

► **Task 4: Modify resource assignments**

1. On the **Window** menu, select **Split**.
2. Click the row heading for **Task ID 34**.
3. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Mary**, and then click **OK**.
4. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Mike**, and then click **OK**.
5. In the **Task Form**, in the row for **Mary**, in **Work** type **8h**, and then click **OK**. Initially each resource is set at 16 hours for a total of 32 hours. When you change Mary's hours to 8, the resulting total hours is 24, but the duration remains at 2 days.

► **Task 5: Create resource assignments**

1. In the **Gantt Chart view**, click the row heading for **Task ID 35**.
2. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Mary**, and then click **OK**.
3. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Mike** and then click **OK**.
4. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Roy** and then click **OK**.
5. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Programmer**, and then click **OK**.
6. In the **Task Form**, in the row for **Programmer**, in **Units**, type **2**, and then click **OK**. Total work increases to 400 in the Work field.

► **Task 6: Correct mistakes in task planning**

1. In the **Gantt Chart** view, click the row heading for **Task ID 42**.

On this task, both a duration and work estimate have been entered. This is incorrect. The task type shows fixed duration, effort driven off, which tends to imply that the task should have been estimated by duration, but it is not clear. The solution is to delete the duration variable, and change the task type to fixed work, effort driven on.
2. In the **Gantt Chart** view, in the row for **Task ID 42**, click in the **Duration** cell, and then press DELETE.
3. In the **Task Form**, in **Task type**, click **Fixed Work**, and then click **OK**.

## Exercise 2: Making Decisions about Task Type and Effort Driven Settings

► **Task 1: Make the appropriate changes for the situation**

1. Continue with **5927A\_Mod06\_Lab.mpp**.
2. On the **Window** menu, select **Split**, if it is not already turned on.

3. Click the row heading for **Task ID 30**.
  4. In the **Task Form**, in **Task type**, click **Fixed Work**, and then click **OK**.
  5. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Mary**, and then click **OK**. In the Duration field, the new duration is 2.5 days.
- ▶ **Task 2: Predict what will happen in this situation before making any changes and verify the result**
1. In the **Gantt Chart** view, click the row heading for **Task ID 33**.
  2. In the **Task Form**, in the row for **Programmer**, in **Units**, type **30** and then click **OK**.  
The duration increases to 0.83 days in the Duration field. The task duration is probably not realistic since getting 30 or 40 people to work on one program and have all the pieces tied together in less than one day would be very difficult, if not impossible.
- ▶ **Task 3: Predict what will happen in this situation before making any changes and verify result**
1. In the **Gantt Chart** view, click the row heading for **Task ID 37**.
  2. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Roy**, and then click **OK**.
  3. In the **Task Form**, in **Task type**, click **Fixed Units**, clear the **Effort driven** check box, and then click **OK**.
  4. In the **Gantt Chart** view, in the row for **Task ID 37**, in the **Duration** cell, type **15d**, and then click **OK**. The result is 120 hours of work in the Work field for Task ID 37.
- ▶ **Task 4: Make the appropriate changes for this situation**
1. In the **Gantt Chart** view, click the row heading for **Task ID 38**.
  2. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Mary**, and then click **OK**.
  3. In the **Task Form**, in **Task type**, click **Fixed Units**, and then clear the **Effort driven** check box.
  4. In the **Task Form**, in the row for **Mary**, in **Work** type **60h**, and then click **OK**. The Duration field is recalculated to 7.5 days.
- ▶ **Task 5: Make the appropriate changes for this situation**
1. In the **Gantt Chart** view, click the row heading for **Task ID 39**.
  2. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Programmer**, and then click **OK**.
  3. In the **Task Form**, in **Task type**, click **Fixed Work**, and then click **OK**.
  4. In the **Task Form**, in the row for **Programmer**, in **Units**, type **0.5**, and then click **OK**. The duration becomes 184 days in the Duration field.
- ▶ **Task 6: Make the appropriate changes for this situation**
1. In the **Gantt Chart** view, click the row heading for **Task ID 40**.

2. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Mike**, and then click **OK**.
3. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Roy**, and then click **OK**.
4. In the **Task Form**, in **Task type**, click **Fixed Work**, and then click **OK**.
5. In the **Task Form**, in the row for **Roy**, in **Units**, type **.5** and then click **OK**. The duration becomes 20 days in the Duration field.

► **Task 7: Make the appropriate changes for this situation**

1. In the **Gantt Chart** view, click the row heading for **Task ID 41**.
2. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Mary**, and then click **OK**.
3. In the **Task Form**, in the row for **Mary**, in **Work**, type **60h**, and then click **OK**. The Units should recalculate to 0.50 in the Units field.

► **Task 8: Make the appropriate changes for this situation**

1. In the **Gantt Chart** view, click the row heading for **Task ID 42**.
2. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Mike**, in **Units**, type **1**, and then click **OK**.
3. In the **Task Form**, in **Task type**, click **Fixed Duration**, clear the **Effort driven** check box, in **Work**, type **40h**, and then click **OK**. The Units should recalculate to 1.33 in the Units field.

► **Task 9: Make the appropriate changes for this situation**

1. In the **Gantt Chart** view, click the row heading for **Task ID 43**.
2. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Programmer**, in **Units**, type **4**, and then click **OK**.
3. In the **Task Form**, in **Task type**, click **Fixed Units**, clear the **Effort driven** check box, and then click **OK**.
4. In the **Task Form**, in **Work**, type **600h**, and then click **OK**. Duration becomes 18.75 in the Duration field.

► **Task 10: Make the appropriate changes for this situation**

1. In the **Gantt Chart** view, click the row heading for **Task ID 46**.
2. In the **Task Form**, in **Task type**, click **Fixed Work**, and then click **OK**.
3. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Roy**, in **Units**, type **0.5**, in **Work**, type **150h**, and then click **OK**. Duration becomes 37.50 in the Duration field.

### Exercise 3: Predicting the Scheduling Formula When Changing Variables

► **Task 1: Analyze and correct the given situation**

1. Continue with **5927A\_Mod06\_Lab.mpp**.
2. On the **Window** menu, select **Split**, if it is not already turned on.

3. In the **Gantt Chart** view, click the row heading for **Task ID 44**.
  4. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Programmer**, and then click **OK**.
  5. Under **Resource Name**, in the first empty cell, type or select **Mike**, and then click **OK**.
  6. In the **Task Form**, in the row for **Programmer**, in **Units**, type **1.5**, and then click **OK**. Notice that the duration does not change in the Duration field.
  7. Under **Resource Name**, click the row for **Mike**, press DELETE and then click **OK**. The alternative approach would have been to use the task type Fixed Work.
  8. Under **Resource Name**, in the row for **Programmer**, in **Units**, type **2**, and then click **OK**. The duration returns back to 10 days in the Duration field.
- ▶ **Task 2: Analyze and correct the given situation**
1. In the **Gantt Chart view**, click the row heading for **Task ID 47**.
  2. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Roy**.
  3. In **Units**, type **0.5**.
  4. In **Work**, type **8h**, and then click **OK**. The duration stays 2 days in the Duration field.
- ▶ **Task 3: Analyze and correct the given situation**
1. In the **Gantt Chart view**, click the row heading for **Task ID 47**.
  2. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Mary**, and then click **OK**.
  3. In **Task type**, click **Fixed Work**, and then click **OK**. Notice nothing changes, as the formula is still balanced.
  4. In **Duration**, type **4d**, and then click **OK**. Notice the units of the resources changed.
  5. Under **Resource Name**, in the row for **Roy**, in **Units**, type **.5**, and then click **OK**.
- ▶ **Task 4: Analyze and correct the given situation**
1. In the **Gantt Chart view**, click the row heading for **Task ID 48**.
  2. In the **Task Form**, under **Resource Name**, in the first empty cell, type or select **Mike**, and then click **OK**. The Task type is currently Fixed Duration. Before changing units to calculate a new value for duration, you need to change the Task type to Fixed Units.
  3. In **Task type**, click **Fixed Units**, clear **Effort driven**, and then click **OK**.
  4. In **Duration**, type **40d**, and then click **OK**. The work becomes 320 in the Work field.
- ▶ **Task 5: Save and close**
1. On the **File** menu, save **5927A\_Mod06\_Lab.mpp**.
  2. On the **File** menu, click **Close**.

# Module 7

## Customizing and Formatting

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## Question and Answers

### Lesson 3: Creating and Modifying Fields, Tables, and Formulas

#### Practice: Creating and Modifying Fields, Tables, and Formulas

- Q** What is the only field type that cannot contain a formula?
- A** The outline codes field is the only field type that cannot contain a formula.
- Q** The value of a formula is limited to two values. (True or False?)
- A** False.

### Lesson 4: Creating and Modifying Filters and Groups

#### Practice: Creating and Modifying Filters and Groups

- Q** You can apply a filter or group to a view. (True or False?)
- A** False. You apply a filter or group to a table.
- Q** Data does not need to be present in the current view for a filter or group to work. (True or False?)
- A** True. Data must be present in the table, but not in the view.

# Lab Answer Keys

## Lab: Customizing and Formatting

### Exercise 1: Modifying a Template to Include Corporate Standards

#### ► Task 1: Create a new template

1. On the **File** menu, click **Open**, browse to **D:\MOC 5927A\Lab files**, and then double-click **5927A\_Mod07\_Lab.mpp**.
2. On the **File** menu, click **Save As**.
3. In the **Save As** dialog box, in **Save as type**, click **Template (\*.mpt)**.
4. In the **My Places** bar, click **My Documents**.
5. In **File name**, type **My Template**, and then click **Save**.
6. In the **Save As Template** dialog box, select the following check boxes:
  - **Values of all baselines**
  - **Actual Values**
  - **Resource Rates**
  - **Fixed Costs**
  - **Whether tasks have been published to Project Server**
7. Click **Save**.

#### ► Task 2: Modify the task bar format

1. On the **View** menu, click **Gantt Chart**.
2. On the **Format** menu, click **Bar Styles**.
3. In the **Bar Styles** dialog box, under **Name**, in the row for **Task**, click in the **Appearance** field.
4. On the **Bars** tab, in the **Middle** section, in the **Color** list, click **Teal**.
5. On the **Text** tab, in the row for **Right**, select or type **Finish**, and then click **OK**.
6. On the **Standard** toolbar, click **Save**  .

### Exercise 2: Creating Simple and Complex Custom Fields

#### ► Task 1: Create a new task text field

1. Continue with **My Template.mpt**.
2. On the **Tools** menu, point to **Customize**, and then click **Fields**.
3. In the **Custom Fields** dialog box, in the **Field** list, click **Text1**, and then click **Rename**.
4. In the **Rename Field** dialog box, in **New Name for Text1**, type **Test Date**, and then click **OK**.
5. In the **Custom Fields** dialog box, click **OK**.
6. Click the column heading for **Task Name**.

7. On the **Insert** menu, click **Column**.
8. In the **Column Definition** dialog box, in the **Field name** list, click **Test Date (Text1)**, and then click **OK**.

► **Task 2: Define a formula**

1. On the **Tools** menu, point to **Customize**, and then click **Fields**.
2. In the **Custom Fields** dialog box, in the **Field** list, click **Test Date (Text1)**.
3. In the **Values to display** section, click **Data**.
4. In the **Custom attributes** section, click **Formula**.
5. In the **Formula for 'Test Date'** dialog box, type **IIf(Now())>[Finish],”past due”,“on or ahead”)**, and then click **OK**.
6. In the **Microsoft Office Project** dialog box, click **OK**.
7. In the **Custom Fields** dialog box, click **OK**. You may need to widen the Test Date column.
8. On the **Standard** toolbar, click **Save** .

### Exercise 3: Populating a New Table with Existing and Custom Fields

► **Task 1: Create a new table**

1. Continue with **My Template.mpt**.
2. On the **View** menu, point to **Table**, and then click **More Tables**.
3. In the **More Tables** dialog box, click **Entry**, and then click **Copy**.
4. In the **Table Definition in 'My Template.mpt'** dialog box, in the **Name** field, type **My Table1**, and then click **OK**.
5. In the **More tables** dialog box, click **Apply**.

► **Task 2: Add a custom field with a formula**

1. Click the column heading for **Task Name**.
2. On the **Insert** menu, click **Column**.
3. In the **Column Definition** dialog box, in the **Field name** list, click **Test Date (Text1)**, and then click **OK**.

### Exercise 4: Developing a New Filter and Group

► **Task 1: Create a new filter**

1. Continue with **My Template.mpt**.
2. On the **Project** menu, point to **Filtered for**, and then click **More Filters**.
3. In the **More filters** dialog box, click **New**.
4. In the **Filter Definition in 'My Template.mpt'** dialog box, in **Name**, type **Duration greater than 4 days**.
5. In the first empty cell under **Field name**, type or select **Duration**.

6. In the first empty cell under **Test**, type or select **is greater than**.
7. In the first empty cell under **Value**, type **4d**, and then click **OK**.
8. In the **More Filters** dialog box, click **Apply**.

► **Task 2: Create a new group**

1. On the **Project** menu, point to **Group by**, and then click **More Groups**.
2. In the **More Groups** dialog box, click **New**.
3. In the **Group Definition in 'My Template.mpt'** dialog box, in the **Name** field, type **By Finish Date**.
4. In the row for **Group By**, in the **Field Name** field, type or select **Finish**.
5. In the row for **Group By**, in the **Field Type** field, type or select **Task**.
6. In the row for **Group By**, in the **Order** field, type or select **Ascending**, and then click **OK**.
7. In the **More Groups** dialog box, click **Apply**.

► **Task 3: Create a new view**

1. On the **View** menu, click **More Views**.
2. In the **More Views** dialog box, click **Gantt Chart**, and then click **Copy**.
3. In the **View Definition in 'My Template.mpt'** dialog box, in the **Name** field, type **My Gantt Chart**.
4. In the **Table** field, click **My Table1**.
5. In the **Group** field, click **By Finish Date**.
6. In the **Filter** field, click **Duration greater than 4 days**, and then click **OK**.
7. In the **More Views** dialog box, click **Apply**.

## Exercise 5: Moving an Object from a Project to the Global.mpt

► **Task 1: Move an object to another project schedule**

1. Continue with **My Template.mpt**.
2. On the **Tools** menu, click **Organizer**.
3. In the **Organizer** dialog box, on the **Views** tab, under **My Template.mpt**, click **My Gantt Chart**, and then click **Copy**.
4. In the **Organizer** dialog box, on the **Filters** tab, under **My Template.mpt**, click **Duration greater than 4 days**, and then click **Copy**.
5. In the **Organizer** dialog box, on the **Groups** tab, under **My Template.mpt**, click **By Finish Date**, and then click **Copy**.
6. In the **Organizer** dialog box, on the **Tables** tab, under **My Template.mpt**, click **My Table 1**, click **Copy**, and then click **Close**.
7. On the **Standard** toolbar, click **New**.
8. On the **Project** menu, point to **Filters for**, and then click **More Filters**.

9. In the **More Filters** dialog box, locate the **Duration greater than 4 days** filter in the list, and then click **Apply**.
  10. On the **Project** menu, point to **Group by**, and then click **More Groups**.
  11. In the **More Groups** dialog box, locate the **By Finish Date** group in the list, and then click **Apply**.
  12. On the **View** menu, point to **Table**, and then click **More Tables**.
  13. In the **More Tables** dialog box, click **My Table1** in the list, and then click **Apply**.
- **Task 2: Save and close**
1. On the **File** menu, click **Save**.
  2. On the **File** menu, click **Close**.

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# Module 8

## Analyzing Resource Utilization

### Contents:

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# Lab Answer Keys

## Lab: Analyzing Resource Utilization

### Exercise 1: Reading and Interpreting Resource Allocation Views

► **Task 1: Determine which resources are overallocated**

1. On the **File** menu, click **Open**, browse to **D:\MOC 5927A\Lab files**, and then double-click **5927A\_Mod08\_Lab.mpp**.
2. On the **View** menu, click **Resource sheet**.
3. On the **Project** menu, point to **Filtered for**, and then click **Overallocated Resources**. Notice that Mike, Roy, and Programmer are overallocated.
4. On the **Project** menu, point to **Filtered for**, and then click **All Resources**. The filter is removed, and all resources are once again displayed.

► **Task 2: Determine remaining availability**

1. On the **View** menu, click **Resource Usage**.
2. On the **Format** menu, click **Detail Styles**.
3. In the **Detail Styles** dialog box, in **Available fields**, click **Remaining Availability**, click **Show**, and then click **OK**.
4. Under **Resource Name**, click the row heading for **Mary**.
5. On the **Standard** toolbar, click **Zoom In**  until you can view **May 2011**. Notice that Mary has remaining availability of 176 hours; or 8 hours each day, in May 2011.

► **Task 3: Determine which resource group will cost the most**

1. On the **View** menu, click **Resource sheet**.
2. Under **Resource Name**, locate the row for **Budget-Travel**, in **Group**, type **Expense**. Repeat for all resources with a value of Cost in the Type column.
3. Under **Resource Name**, locate the row for **Office supplies Paper**, in **Group**, type **Supply**. Repeat for all resources with a value of Material in the Type column.
4. Under **Resource Name**, locate the row for **Mike**, in **Group**, type **Marketing**.
5. Under **Resource Name**, locate the row for **Mary**, in **Group**, type **Engineering**.
6. Under **Resource Name**, locate the row for **Roy**, in **Group**, type **Marketing**.
7. Under **Resource Name**, locate the row for **Programmer**, in **Group**, type **Engineering**.
8. On the **View** menu, click **Resource Usage**.
9. On the **Project** menu, point to **Group by**, and then click **Resource Group**. Notice that the resources are now grouped. The group costs may or may not look accurate.

► **Task 4: Determine when you will run out of a material resource**

1. On the **View** menu, click **Resource Usage**.
2. On the **Project** menu, point to **Group by**, and then click **No Group**.

3. Hold down CTRL and press HOME. The view scrolls to the top of the table.
4. On the **Edit** menu, click **Find**.
5. In the **Find** dialog box, in the **Find what** box, type **Office supplies Paper**, click **Find Next**, and then click **Close**.
6. On the **Standard** toolbar, click **Zoom Out**  until the bottom tier of the timescale displays months.
7. On the **Standard** toolbar, click **Scroll to Task**. Notice that in the Timesheet area, the first month with work is July 2011. Accumulating the work units for the following months shows that the paper will run out at the end of September 2011.

## Exercise 2: Changing Resource Availability and Interpreting Results

### ► Task 1: Interpret resource availability changes

1. Continue with **5927A\_Mod08\_Lab.mpp**.
2. On the **View** menu, click **Task Usage**.
3. On the **Format** menu, click **Detail Styles**.
4. In the **Detail Styles** dialog box, on **Usage Details**, under **Available fields**, select:
  - a. **Overallocation**
  - b. **Peak units**
  - c. **Percent allocation**
5. Click **Show**, and then click **OK**. You may need to widen the Details column.
6. On the **Standard** toolbar, click **Zoom Out**  until the timescale is zoomed out as far as possible.
7. Click the row heading for **Task ID 26**.
8. On the **Standard** toolbar, click **Scroll to Task**. Notice under Task ID 26, that both Mary and Roy have no overallocations for 2012.
9. On the **View** menu, click **Resource sheet**.
10. Under **Resource Name**, locate the row for **Mary**, in **Max Units**, type **.5**.
11. On the **View** menu, click **Task Usage**.
12. Click the row heading for **Task ID 26**. Notice under Task ID 26, that now Mary does have overallocations for 2012.
13. On the **View** menu, click **Resource sheet**.
14. Under **Resource Name**, locate the row for **Mary**, in **Max Units**, type **1**.

### ► Task 2: Create a hiring recommendation

1. On the **View** menu, click **Resource sheet**.
2. On the **Project** menu, point to **Filtered for**, and then click **Overallocated Resources**. Notice that Mike, Roy, and the Programmer resource are overallocated.

3. Under **Resource Name**, on the row for **Mike**, click in the **Max Units** cell, record the original value, increase the value for **Max Units**, and then press ENTER. Repeat this step until the entire row for this resource is no longer highlighted in red, and then record the new value for Max Units.
4. Repeat the above step for Roy and the Programmer resource, recording both the original and final values for Max Units. The recorded values should be as follows:

Resource Name	Original Max Units	Final Max Units	Needed Units
Mike	1	2	1
Roy	1	2	1
Programmer	1	30	29

5. Undo the changes made to the **Max Units** field on the **Resource** sheet.
6. On the **Project** menu, point to **Filtered for**, and then click **All Resources**. The filter is removed and all resources are once again displayed.

► **Task 3: Interpret resource availability changes**

1. On the **View** menu, click **More Views**.
2. In the **More Views** dialog box, click **Resource Allocation**, and then click **Apply**. Make sure all resource groups are expanded.
3. On the **Edit** menu, click **Find**.
4. In the **Find** dialog box, in **Find what**, type **Mike**, click **Find next**, and then click **Close**.
5. On the **Standard** toolbar, click **Zoom In**  until you can view weeks in the bottom tier of the timescale, and then scroll to the week of **Feb 3 '13**. Notice the red text in the timesheet indicating that Mike is over allocated for this time frame.
6. On the **Window** menu, click **Remove Split**.
7. On the **View** menu, select **Resource Sheet**.
8. Under **Resource Name**, in the row for **Mike**, in the **Max Units** cell, type **2**.
9. On the **View** menu, click **More Views**.
10. In the **More Views** dialog box, click **Resource Allocation**, and then click **Apply**. Make sure all resource groups are expanded.
11. On the **Edit** menu, click **Find**.
12. In the **Find** dialog box, in **Find what**, type **Mike**, click **Find next**, and then click **Close**. Notice that Mike is no longer over allocated in this time frame.
13. On the **Window** menu, click **Remove Split**.
14. On the **View** menu, click **Resource Sheet**.
15. Under **Resource Name**, in the row for **Mike**, in the **Max Units** cell, type **1**.
16. On the **View** menu, click **More Views**.

17. In the **More Views** dialog box, click **Resource Allocation**, and then click **Apply**. Make sure that all of the resource groups are expanded.
18. On the **Edit** menu, click **Find**.
19. In the **Find** dialog box, in **Find what**, type **Mike**, click **Find next**, and then click **Close**.
20. On the **Leveling Gantt Chart** in the lower pane, double-click the row heading for **Task ID 28**.

**Note:** If you receive an error message, click **Continue**, and then click **OK**.

21. In the **Task Information** dialog box, on the **Resources** tab, under **Resource Name**, in the row for **Mike**, in the **Units** cell, type **0.5**, and then click **OK**.
22. On the **Leveling Gantt Chart** in the lower pane, double-click the row heading for **Task ID 35**.

**Note:** If you receive an error message, click **Continue**, and then click **OK**.

23. In the **Task Information** dialog box, on the **Resources** tab, under **Resource Name**, in the row for **Mike**, in the **Units** cell, type **0.5**, and then click **OK**. Notice that the difference between changing Mike's Max Units field and assigned Units is that one affects the maximum availability for the entire project and the other affects maximum availability for the specific task assignments.

### Exercise 3: Identifying and Correcting Causes of Resource Overallocation

#### ► Task 1: Manually correct an overallocation

1. Continue with **5927A\_Mod08\_Lab.mpp**.
2. Click anywhere in the upper pane.
3. On the **View** menu, click **More Views**.
4. In the **More Views** dialog box, click **Resource Allocation**, and then click **Apply**. Make sure all resource groups are expanded.
5. Click the row heading for the first visible row, and then hold CTRL and press HOME. The view should scroll to the top row.
6. On the **Edit** menu, click **Find**.
7. In the **Find** dialog box, in **Find what**, type **Roy**, click **Find next**, and then click **Close**.
8. Scroll the timesheet to the week **Jan 27 '13**. Notice that during this week, Roy is assigned to two tasks, Task IDs 35 and 37; and that the resource is overallocated on Wednesday, Thursday, and Friday.
9. On the **Leveling Gantt** chart in the lower pane, double-click the row heading for **Task ID 35**.
10. In the **Task Information** dialog box, on the **Resources** tab, under **Resource Name**, in the row for **Roy**, in the **Units** cell, type **0.5**, and then click **OK**.
11. On the **Leveling Gantt** chart in the lower pane, double-click the row heading for **Task ID 37**.

12. In the **Task Information** dialog box, on the **Resources** tab, under **Resource Name**, in the row for **Roy**, in the **Units** cell, type **0.5**, and then click **OK**. Notice that by reducing Roy's total assigned units for these tasks to less than or equal to his maximum units, he is no longer overallocated in the time frame.

► **Task 2: Manually correct an overallocation**

1. Click anywhere in the upper pane.
2. On the **View** menu, click **More Views**.
3. In the **More Views** dialog box, click **Resource Allocation**, and then click **Apply**. Make sure all resource groups are expanded.
4. Click the row heading for the first visible row, and then hold CTRL and press HOME. The view should scroll to the top row.
5. On the **Edit** menu, click **Find**.
6. In the **Find** dialog box, in **Find what**, type **Programmer**, click **Find next**, and then click **Close**.
7. On the **Leveling Gantt** chart in the lower pane, in the row for **Task ID 35**, in **Leveling Delay**, type **10ed**, and then press ENTER. Notice that this appears to resolve the overallocation. However, by scrolling to the task, 10 days to the right, you can see the overallocation for the Programmer resource was only postponed.

**Note:** If you receive an error message, click **Continue**, and then click **OK**.

8. In the upper pane, click the row heading for the first visible row, and then hold CTRL and press HOME. The view scrolls to the top row.
9. On the **Edit** menu, click **Find**.
10. In the **Find** dialog box, in **Find what**, type **Mike**, click **Find next**, and then click **Close**. Notice that the original overallocation of Mike on Task ID 35 has been resolved by the leveling delay.
11. On the **Leveling Gantt** chart in the lower pane, in the row for **Task ID 35**, in **Leveling Delay**, type **0ed**.
12. In the **Leveling Gantt** chart in the lower pane, double-click the row heading for **Task ID 35**.
13. In the **Task Information** dialog box, click the **Resources** tab. Notice that the Programmer resource has been assigned 2 Units. Recall from the Resource Sheet, that the Programmer resource's Max Units is 1, which explains this resource's overallocation.
14. Under **Resource Name** in the **Resources** section, in the **Programmer** row, in the **Units** column, type or select **1**, and then click **OK**.

► **Task 3: Manually correct an overallocation**

1. On **Resource Usage** in the upper pane, click on the row heading for **Mike**.
2. On the **Leveling Gantt** chart in the lower pane, click on the row heading for **Task ID 34**.
3. On the **Standard** toolbar, click **Scroll to Task**, and then **Zoom In** until you can see a daily view. Notice in the timesheet on Monday, January 28, 2013, that Mike has a total work value of only 5.33 hours. Also notice that this value is displayed in red, indicating an overallocation.

Mike is overallocated because his total assigned Units exceed his available Max. Units for the day.

4. On **Resource Usage** in the upper pane, under **Resource Name**, below **Mike**, locate and double-click on the row heading for **Develop prototype process**.
5. In the **Assignment Information** dialog box, on **General**, in **Work contour**, click **Bell**, and then click **OK**.
6. On **Resource Usage** in the upper pane, under **Resource Name**, click the row heading for **Mike**. Notice that this has resolved the Overallocation for Mike on Task ID 34 for Monday, but has not fixed the overallocations of the remainder of the task.

Alternatively you could have delayed the task or reduced the assigned units for Mike.

7. On **Resource Usage** in the upper pane, under **Resource Name**, below **Mike**, locate and double-click the row heading for **Develop prototype process**.
8. In the **Assignment Information** dialog box, on **General**, in **Work contour**, click **Flat**, and then click **OK**.

#### ► Task 4: Manually correct an overallocation

1. Click the row heading for the first visible row. Hold CTRL and press HOME. The view should scroll to the top row.
2. On the **Edit** menu, click **Find**.
3. In the **Find** dialog box, in **Find what**, type **Office supplies Paper**, click **Find next**, and then click **Close**.
4. On the **Standard** toolbar, click **Zoom Out**  until the timescale displays Years over Quarters.
5. On the **Standard** toolbar, click **Scroll to Task**. Notice in the timesheet, below the Q3 of 2011, for the Office supplies Paper resource, the work value is 3. This indicates that 3 Units (i.e. reams) of paper have been allocated. Notice that the Remaining Availability fields for the material resources have been left blank. This is because material resources can not be overallocated.

**Note:** In Project 2007, it is assumed that there is an unlimited supply of material resources. Project does not track the remaining availability for material resources. So, in this case an extra ream of paper would only be tracked after you assign it to a task.

#### ► Task 5: Apply leveling

1. On the **View** menu, click **Resource Sheet**.
2. On the **Window** menu, click **Remove Split**.
3. Click the row heading for **Mike**.
4. On the **Tools** menu, click **Level Resources**.
5. In the **Resource Leveling** dialog box, under **Resolving overallocations**, select **Level only within available slack**, and then click **Level Now**.
6. In the **Level Now** dialog box, click **Selected resources**, and then click **OK**.

7. In the **Microsoft Office Project** dialog box, click **Skip All**. Notice that Mike is still overallocated. This may be due to any number of factors. However, it is most likely that Mike still has conflicting task assignments that could not be fully separated. Either due to the constraint of Leveling only within available slack or due to parallel paths of work effort in two or more branches of the networked dependencies.

► **Task 6: Apply the leveling feature**

1. On the **View** menu, click **Gantt Chart**.
2. Click the row heading for **Row 0**.
3. Record the Duration, Start Date, and Finish Date. The values you record should be as follows:

**Note:** If necessary to view the values in a column, widen the column: Point to the right gridline for the column heading you need to widen. When the mouse pointer becomes a double-headed arrow, drag to the right until the data is visible.

Field Name	Value
Duration	1205 days
Start Date	Jun 1' 11
Finish Date	Jan 12' 16

4. On the **Tools** menu, click **Level Resources**.
5. In the **Resource Leveling** dialog box, under **Resolving overallocations**, clear **Level only within available slack**, and then click **Level Now**.
6. In the **Microsoft Office Project** dialog box, click **Skip All**.
7. Record changes to the Duration, Start Date, and Finish Date. The values should be as follows:

**Note:** If necessary to view the values in a column, widen the column: Point to the right gridline for the column heading you need to widen. When the mouse pointer becomes a double-headed arrow, drag to the right until the data is visible.

Field Name	Value
Duration	1219.5 days
Start Date	Jun 1' 11
Finish Date	Feb 2' 16

Notice that some resources are still overallocated. This may be due to any number of factors. However, it is most likely that these resources still have conflicting task assignments that could not be fully separated, possibly due to parallel paths of work effort in two or more branches of the networked dependencies.

► **Task 7: Save and close**

1. On the **File** menu, click **Save**.
2. On the **File** menu, click **Close**.

# Module 9

## Tracking Progress

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# Lab Answer Keys

## Exercise 1: Setting and Revising a Baseline

### ► Task 1: Set and display an interim plan

1. On the **File** menu, click **Open**, browse to **D:\MOC 5927A\Lab files**, and then double-click **5927A\_Mod09\_Lab.mpp**.
2. On the **View** menu, click **Tracking Gantt**.
3. On the **Tools** menu, point to **Tracking**, and then click **Set Baseline**.
4. In the **Set Baseline** dialog box, click **Set interim plan**.
5. In **Copy**, click **Start/Finish**.
6. In **Into**, click **Start1/Finish1**.
7. Under **For**, click **Entire Project**, and then click **OK**.
8. On the **Format** menu, click **Bar Styles**.
9. In the **Bar Styles** dialog box, under **Name**, in the row for **Baseline**, in **From**, type or select **Start1**, in **To**, type or select **Finish1**, and then click **OK**. The interim plan should be visible as a grey bar below the red and blue task bars.

### ► Task 2: Set and display multiple baselines

1. On the **View** menu, click **Tracking Gantt**.
2. On the **Tools** menu, point to **Tracking**, and then click **Set Baseline**.
3. In the **Set Baseline** dialog box, click **Set Baseline**, and click **Baseline1**, in **For**, click **Entire Project**, and then click **OK**.
4. If prompted to overwrite data in this baseline, click **Yes**.
5. On the **Format** menu, click **Bar Styles**.
6. In the **Bar Styles** dialog box, under **Name**, in the row for **Baseline**, in **From**, click **Baseline 1 Start**, in **To**, click **Baseline 1 Finish**, and then click **OK**. The alternate baseline plan should be visible as a grey bar below the red and blue task bars.

### ► Task 3: Add new work and revise a baseline

1. On the **Tools** menu, click **Options**.
2. In the **Options** dialog box, on the **Schedule** tab, select **Autolink inserted or moved tasks**, and then click **OK**.
3. Click the row heading for **Task ID4**.
4. On the **Insert** menu, click **New Task**.
5. In the new row for **Task ID 4**, in **Task Name**, type **Get preliminary approval**, and then press ENTER.
6. If the Planning Wizard displays, click **Continue. Allow the scheduling conflict**, and then click **OK**. The new task has now been created and automatically linked into the schedule between Task IDs 3 and 5.

7. Click the row heading for **Task ID4**, and then press ALT+F10.
8. In the **Assign Resources** dialog box, in **Resource Name**, click **Mike**, click **Assign**, and then click **Close**. The task now has Mike assigned to it.
9. On the **Tools** menu, point to **Tracking**, and then click **Set Baseline**.
10. In the **Set Baseline** dialog box, click **Set Baseline**, and then select **Baseline1** from the list.
11. Under **For**, click **Selected Tasks**.
12. Under **Roll up baselines**, select **To all summary tasks**, and then click **OK**.
13. If prompted to overwrite data in this baseline, click **Yes**. Note that this will allow Baseline 1 to be updated for just the new task. Notice that the new task now has a matching grey bar below its task bar. Also, its successor tasks show discrepancies between their task bars and grey bars.

► **Task 4: Establish a rolling wave schedule**

1. On the **Tools** menu, point to **Tracking**, and then click **Clear Baseline**.
2. In the **Clear Baseline** dialog box, click **Clear baseline plan**, and then click **Baseline**.
3. Under **For**, click **Entire project**, and then click **OK**.
4. On the **Project** menu, click **Project Information**.
5. In the **Project Information** dialog box, in **Start date**, type or select **Jun 30 '11**, and then click **OK**. Notice that all tasks now have discrepancies between their task bars and grey bars.
6. Click the row heading for **Task ID 1**, hold down SHIFT and then click the row heading for **Task ID 7**. Notice that all of the tasks in the approved New Product Screening Stage are now selected.
7. On the **Tools** menu, point to **Tracking**, and then click **Set Baseline**.
8. In the **Set Baseline** dialog box, click **Set Baseline**, and then select **Baseline**.
9. Under **For**, click **Selected Tasks**.
10. Under **Roll up baselines**, select **To all summary tasks**, and then click **OK**.
11. If prompted to overwrite data in this baseline, click **Yes**. Notice that this allows the baseline to be revised for just the approved tasks. The new baseline is not yet displayed. You first need to revise the bar styles.
12. On the **Format** menu, click **Bar Styles**.
13. In the **Bar Styles** dialog box, under **Name**, in the row for **Baseline**, in **From**, click **Baseline Start**, in **To**, click **Baseline Finish**, and then click **OK**. Notice that the baseline plan is now visible as grey bars below the red task bars of the first group of approved tasks, Task IDs 1 through 7. Also, all other tasks in subsequent groups have no grey baseline task bars.
14. Click the row heading for **Task ID 1**.
15. On the **Standard** toolbar, click **Task Information**.
16. In the **Task Information** dialog box, on the **Notes** tab, in the **Notes** section, type **This Stage is Approved**, and then click **OK**.

## Exercise 2: Entering Actual Results Updates for Tasks and Resources

### ► Task 1: Enter task updates by using actual durations

1. Continue with **5927A\_Mod09\_Lab.mpp**.
2. On the **Project** menu, click **Project Information**.
3. In the **Project Information** dialog box, in the **Current date** box, type or select **Aug 1 '11**.
4. In the **Status date** box, type or select **Jul 21 '11**, and then click **OK**.
5. On the **View** menu, point to **Table**, and then click **Tracking**.
6. On the **Format** menu, click **Gridlines**.
7. In the **Gridlines** dialog box, under **Line to change**, click **Status Date**.
8. Under **Normal**, in the **Type** list, click the **solid line**, in the **Color** list, click **Purple**, and then click **OK**.
9. Right-click the column heading for **% Comp.**, and then click **Hide Column**.
10. Right-click the column heading for **Phys. % Comp.**, and then click **Hide Column**.
11. Click the column heading for **Act. Start**.
12. On the **Insert** menu, click **Column**.
13. In the **Column Definition** dialog box, in the **Field name** list, click **Type**, and then click **OK**. Notice that you may need to widen the column.
14. Click on the column heading for **Act. Start**.
15. On the **Insert** menu, click **Column**.
16. In the **Column Definition** dialog box, in the **Field name** list, click **Effort driven**, and then click **OK**.
17. In the row for **Task ID 2**, in **Type**, click **Fixed Units**, and then press ENTER. Notice that the task type is changed to fixed units before entering actual results. This allows both the duration and work values to recalculate if necessary, while the number of units remains fixed.
18. In the row for **Task ID 2**, in **Actual Start**, type or select **Jul 5 '11**, and then press ENTER.
19. In the row for **Task ID 2**, in **Actual Duration**, type **12**, and then press ENTER. Notice that in the chart area next to the task bar, the task is marked 100 percent complete.
20. In the row for **Task ID 2**, in **Remaining Duration**, type **3**, and then press ENTER. Notice that in the chart area next to the task bar that the task is no longer marked 100 percent complete.
21. In the row for **Task ID 2**, in **Type**, click **Fixed Duration**. Notice that the task type changed to fixed duration before rescheduling the remaining work, so that the task's duration remains fixed while being rescheduled.
22. On the **View** menu, point to **Toolbars**, and then click **Tracking**, if it isn't already selected.
23. Click the row heading for **Task ID 2**.
24. On the **Tracking** toolbar, click **Reschedule Work**. Notice in the chart area that the task bar for Task ID 2 has now split; with all remaining work being moved (out of the past) to the right of the status date guideline.

► **Task 2: Enter resource updates by using actual work and overtime**

1. On the **View** menu, click **Task Usage**.
2. On the **View** menu, click **Table**, and then click **Tracking**.
3. Move the **Vertical** split bar until all the columns in the **Tracking** table are visible.
4. On the **Format** menu, click **Detail Styles**.
5. In the **Detail Styles** dialog box, on **Usage Details**, under **Available Fields**, click **Actual Work**, hold CTRL and click **Actual Overtime Work**, and then click **Show**.
6. On **Usage Properties**, clear **Display short detail header names**, and then click **OK**. You may need to widen the Details column.
7. On the **Format** menu, click **Timescale**.
8. In the **Timescale** dialog box, on **Bottom Tier**, under **Bottom tier formatting**, in **Units**, click **Hours**, and in **Count**, type **1**.
9. On **Middle Tier**, under **Middle tier formatting**, in **Units**, click **Days**, in **Count**, type **1**, in **Align**, click **Center**, and then click **OK**.
10. In the **Tracking** table, in the row for **Task ID 3**, in **Type**, click **Fixed Units**.
11. In the **Tracking** table, below **Task ID 3**, under **Task Name**, in the row for **Mike**, in **Act. Start**, type or select **Jul 8 '11**, and then press ENTER.
12. In the **Tracking** table, below **Task ID 3**, under **Task Name**, click the row heading for **Mike**.
13. On the **Standard** toolbar, click **Scroll to Task**.
14. Across from the row for **Mike**, in the **Time Sheet**, in the row for **Actual Work**, under, **Jul 8 '11**, in the cell for **10AM**, type **1h**. Notice that in the Tracking table, in the Actual Work column, 1 hour has been added for Mike.
15. In the **Tracking** table, double-click the row heading for **Mike**.
16. In the **Assignment Information** dialog box, on **Tracking**, in **Remaining work**, type **5h**, and then click **OK**. Notice in the Tracking table, in the row for Task ID 3, in the Rem Dur. Column, the new value is 0.63 days. This completes the entering of the Mike resource's actual and remaining work for Task ID 3.
17. Click in the column heading for the **Act. Work**.
18. On the **Insert** menu, click **Column**.
19. In the **Column Definition** dialog box, in **Field name**, click **Actual Overtime Work**, and then click **OK**.
20. In the **Tracking** table, in the row for **Task ID 4**, in **Type**, click **Fixed Units**.
21. In the **Tracking** table, below **Task ID 4**, under **Task Name**, in the row for **Mike**, in **Act. Start**, type or select **Jul 8 '11**, and then press ENTER.
22. In the **Tracking** table, below **Task ID 4**, under **Task Name**, click the row heading for **Mike**.
23. Across from the row for **Mike**, in the **Time Sheet**, in the row for **Actual Overtime Work**, under, **Jul 8 '11**, in the cell for **8AM**, type **1h**. Notice that in the Tracking table, in the Actual Overtime Work column, 1 hour has been added for Mike.

24. In the **Tracking** table, double-click the row heading for **Mike**.
  25. In the **Assignment Information** dialog box, on **Tracking**, in **Actual finish**, type **Jul 8 '11**, and then click **OK**. Notice in the Tracking table, in the row for Task ID 4, in the Rem Dur Column, the new value is zero days. This completes the entering of Mike's actual overtime work and actual finish for Task ID 4.
  26. In the **Tracking** table, in the row for **Task ID 5**, in **Type**, click **Fixed Units**.
  27. Click the row heading for **Task ID 5**.
  28. On the **Tracking** toolbar, click **Update Tasks**.
  29. In the **Update Tasks** dialog box, in the **% Complete** list, click **10%**.
  30. In the **Actual** section, in the **Start** box, type or select **Jul 8 '11**, and then click **OK**.
  31. On the **Standard** toolbar, click **Task Information**.
  32. In the **Task Information** dialog box, on the **General** tab, in the **Percent complete** box, read the value, and then click **OK**. Notice that for Task ID 5, the Percent Complete value is now 10%. This completes the entry of Mike's percent complete for Task ID 5.
- **Task 3: Enter cost updates by using material and cost resources**
1. On the **View** menu, click **Resource Sheet**.
  2. On the first empty row, in **Resource Name**, type **Brochures**, in **Std Rate**, type **1**.
  3. On the **View** menu, click **Gantt chart**.
  4. Double-click the row heading for **Task ID 2**.
  5. In the **Task information** dialog box, on the **Resources** tab, under **Resource Name**, in the first empty row, type or select **Brochures**, and then in **Units**, type **10**.
  6. In the first empty row, type or select **Budget-Airfare**, and then click **OK**.
  7. On the **View** menu, click **Task Usage**.
  8. Under **Task Name**, below **Task ID 2**, double-click the row heading for **Budget- Airfare**.
  9. In the **Assignment Information** dialog box, in **Tracking**, in **Actual Cost**, type **400**, and then click **OK**.
  10. Save and close all project files.

### Exercise 3: Controlling Projects by Finding Variance and Suggesting Corrective Action

- **Task 1: Identify variances**
1. Continue with **5927A\_Mod09\_Lab.mpp**.
  2. On the **View** menu, click **Tracking Gantt**.
  3. Click the row heading for **Task ID 2**, hold down SHIFT and then click the row heading for **Task ID 7**.
  4. On the **Tracking** toolbar, click **Reschedule Work**. Notice in the chart area that the task bar for Task IDs 1 through 7 have now become split; with all remaining work being moved (from the past) to the right of the status date gridline.

5. On the **Tools** menu, point to **Tracking**, and then click **Progress lines**.
6. In the **Progress Lines** dialog box, select **Always display current progress line**, click at **project status date**, and then click **OK**. Notice that relative to the status date, the progress line indicates which tasks are behind schedule, on schedule, and ahead of schedule.

▶ **Task 2: Adjust resource assignments**

1. On the **View** menu, click **Gantt Chart**. Notice that Mike and Roy have been assigned to the predecessor task.
2. On the **View** menu, click **Resource Sheet**. Notice that Mike is over allocated. This would indicate the need for an alternative resource.

▶ **Task 3: Adjust task estimates and settings**

- On the **View** menu, click **Gantt Chart**. Notice that the work breakdown structure (WBS) has Task IDs 5, 6, and 7 that are all very similar. These tasks could be consolidated.

▶ **Task 4: Generate and interpret earned value analysis reports**

1. On the **Report** menu, click **Visual Reports**.
2. In the **Visual Reports** dialog box, on the **Assignment Usage** tab, click **Earned Value Over Time Report**, and then click **View**. Notice in the Earned Value Overtime Report, that BCWP (also known as Earned Value or EV), has been far exceeded by Accumulative Cost (AC).
3. Save and close all project files.

## Exercise 4: Applying Techniques to Shorten Duration, Reduce Work and Reduce Cost

▶ **Task 1: Apply techniques to shorten duration**

### Methods to Shorten Duration

- Involving increased costs; answers may vary. Examples would include:
  - Applying effort-driven tasks
  - Adding additional resources
  - Fast tracking dependencies
- Involving decreased scope; answers may vary. Examples would include:
  - Reducing number of deliverables
  - Reducing quality of deliverables

▶ **Task 2: Apply techniques to reduce work**

### Methods to Reduce Work

- Involving decreased cost; answers may vary. Examples would include:
  - Reducing resources
  - Reducing number of deliverables

- Reducing quality of deliverables
- Involving decreased duration; answers may vary. Examples would include:
  - Leverage technology
  - Reducing number of deliverables
  - Reducing quality of deliverables

► **Task 3: Apply techniques to reduce cost**

**Methods to Reduce Cost**

- Involving decreased scope; answers may vary. Examples would include:
  - Reducing number of deliverables
  - Reducing quality of deliverables
- Involving increased duration; answers may vary. Examples would include:
  - Reducing deadlines
  - Reducing quality of deliverables

# Module 10

## Creating Reports

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# Question and Answers

## Lesson 2: Configuring Print and Page Setup Options

### Discussion: Which Types of Views Would Typically Be Printed?

- Q** What type of view would you typically print for team members?
- A** Assignments and workload reports.
- Q** What type of view would you typically print for resource managers?
- A** Assignments and workload reports.
- Q** What type of view would you typically print for project managers?
- A** Overview, current activities, and costs reports.
- Q** What type of view would you typically print for project sponsors?
- A** Overview, current activities, and costs reports.
- Q** What type of view would you typically print for contractors?
- A** Assignments and workload reports.

## Lesson 3: Setting Options to Correct Printing Issues

### Discussion: List Common Printing Issues

- Q** From your own experience, what are some common printing issues?
- A** Answers may vary.
- Q** Given the list of common printing issues we have identified, what are the symptoms of each issue in the current list?
- A** Answers may vary.
- Q** What are the known fixes for each issue on the list of printing issues and their symptoms that have been identified?
- A** Answers will vary. Reference the next topic in this module: Guidelines for Fixing Common Printing Issues.

## Lab: Creating Reports

### Lab Discussion

- Q** For what audiences are the basic reports intended?

- A** Basic reports are intended for all project stakeholders. The project information communicated in basic reports can be used by project team members (resources), resource managers, project managers, project management office staff, contractors, executives, and project sponsors. The main advantage of basic reports is their quick access and simple, consistent formats.
- Q** Which of the printing scenarios presented in the lab are preventable?
- A** All of the printing scenarios presented in the lab are preventable. All printouts should be thoroughly checked in Print Preview to make sure their contents are complete and accurate. The costs and effort associated with printing issues far exceeds the cost and effort required to prevent them.
- Q** When are custom maps required for exporting project information?
- A** When exporting project information, custom maps can be created to help address unique situations not covered by the existing maps. Customized reporting needs for viewers such as in-house executives and project sponsors, and specific data migration requirements for unique software applications can all be accommodated by creating and using custom maps.
- Q** What are the Office applications that work with visual reports template?
- A** The new visual reporting feature in Office Project 2007 interfaces with both: Office Excel to create PivotCharts, and Office Visio to create PivotDiagrams.

# Lab Answer Keys

## Lab: Creating Reports

### Exercise 1: Applying Solutions to Various Printing Scenarios

#### ► Task 1: Adjust the Gantt Chart timescale for printing

1. On the **File** menu, click **Open**, browse to **D:\MOC 5927A\Lab files**, and then double-click **5927A\_Mod10\_Lab.mpp**.
2. On the **View** menu, click **Gantt Chart**.
3. On the **Standard** toolbar, click **Print Preview**, and then click **Multiple Pages** to preview the changes. Count the total number of pages.
4. Click **Close** to return to the **Gantt Chart** view.
5. On the **Standard** toolbar, click **Zoom Out** a number of times to reduce the timescale and length of the task bars.
6. On the **Standard** toolbar, click **Print Preview**, and then click **Multiple Pages** to preview the changes. Count the total number of pages. Note that there are fewer pages.
7. Click **Close** to return to the **Gantt Chart** view.

#### ► Task 2: Insert page breaks for printing

1. Click the row heading for **Task ID 81**.
2. On the **Insert** menu, click **Page Break**. Notice that a page break is inserted above the selected task.
3. On the **Standard** toolbar, click **Print Preview**, and then click **Multiple Pages** to preview the changes. Notice the affect of the page break above Task ID 81.
4. Click **Close** to return to the **Gantt Chart** view.

#### ► Task 3: Show all sheet (table) columns for printing

1. On the **File** menu, click **Page Setup**.
2. In the **Page Setup - Gantt Chart** dialog box, on the **View** tab, select the **Print all sheet columns** check box, click **Print Preview**, and then click **Multiple Pages** to preview the changes. Notice that all sheet (Table) columns are now in the printout.
3. Click **Close** to return to the **Gantt Chart** view.

#### ► Task 4: Select notes for printing

1. On the **File** menu, click **Page Setup**.
2. In the **Page Setup - Gantt Chart** dialog box, on the **View** tab, select **Print notes**, click **Print Preview**, and then click **Multiple Pages** to preview the changes. Notice the notes on the last page of the printout.
3. Click **Page Setup** to return to the **Page Setup** dialog box.

► **Task 5: Prevent the output of blank pages for printing**

1. In the **Page Setup - Gantt Chart** dialog box, on the **View** tab, clear **Print blank pages**, click **Print Preview**, and then click **Multiple Pages** to preview the changes. Notice that there are now no blank pages in the printout.
2. Click **Page Setup** to return to the **Page Setup** dialog box.

► **Task 6: Fit the timescale to end of the page for printing**

1. In the **Page Setup - Gantt Chart** dialog box, on the **View** tab, select **Fit timescale to end of the page**, click **Print Preview**, and then click **Multiple Pages** to preview the changes. Notice that the timescale has been scaled to fit to the right edge of the page.
2. Click **Close** to return to the **Gantt Chart** view.
3. On the **File** menu, click **Save**.

## Exercise 2: Running Basic Reports That Summarize Data by Project, by Resource, by Task, or by Cost

► **Task 1: View a basic report, summarized by project**

1. On the **File** menu, click **New**.
2. In the **New Project** task pane, under **Templates**, click **On computer**.
3. In the **Templates** dialog box, on the **Project Templates** tab, double-click **Annual Report Preparation**.
4. On the **Report** menu, click **Reports**, click **Overview**, and then click **Select**.
5. Click **Project Summary**, and then click **Select**.

**Note:** You may wish to zoom in and scroll through the report to examine its contents.

6. In **Print Preview**, click **Close** after you are finished previewing the report.

► **Task 2: View a basic report, summarized by resource**

1. In the **Reports** dialog box, click **Workload**, and then click **Select**.
2. Click **Resource Usage**, and then click **Select**.

**Note:** You may wish to zoom in and scroll through the report to examine its contents.

3. In **Print Preview**, click **Close** when you are finished previewing the report.

► **Task 3: View a basic report, summarized by task**

1. In the **Reports** dialog box, click **Workload**, and then click **Select**.
2. Click **Task Usage**, and then click **Select**.

**Note:** You may wish to zoom in and scroll through the report to examine its contents.

3. In **Print Preview**, click **Close** when you are finished previewing the report.

► **Task 4: View a basic report, summarized by cost**

1. In the **Reports** dialog box, click **Costs**, and then click **Select**.
2. Click **Budget**, and then click **Select**.

**Note:** You may wish to zoom in and scroll through the report to examine its contents.

3. In **Print Preview**, click **Close** when you are finished previewing the report.
4. In the **Reports** dialog box, click **Close**.

### Exercise 3: Developing a New Basic Report

► **Task 1: Define a new basic report**

1. Continue with **Annual Report Preparation.mpp**.
2. On the **Report** menu, click **Reports**, click **Custom**, and then click **Select**.
3. In the **Custom Reports** dialog box, click **New**.
4. In the **Define New Report** dialog box, in **Report type**, click **Task**, and then click **OK**.
5. In the **Task Report** dialog box, on the **Definition** tab, in **Name**, type **Quarterly Task Costs**.
6. In **Period**, click **Quarters**.
7. In **Table**, click **Cost**, and then click **OK**.

► **Task 2: View a new basic report**

1. In the **Custom Reports** dialog box, click **Preview**. This will display the Quarterly Task Costs report.

**Note:** You may wish to zoom in and scroll through the report to examine its contents.

2. Click **Close**. In the **Custom Reports** dialog box, click **Close**.
3. In the **Reports** dialog box, click **Close**.
4. On the **File** menu, click **Close**. Do not save changes.

### Exercise 4: Exporting Data Using a Custom Map to Merge With Data in an Existing Excel Spreadsheet

► **Task 1: Use the Export Wizard**

1. Continue with **5927A\_Mod10\_Lab.mpp**.
2. On the **Tools** menu, click **Options**.
3. In the **Options** dialog box, on **Security**, select **Allow loading files with legacy or non-default file formats**, and then click **OK**.
4. On the **File** menu, click **Save As**.
5. In the **Save As** dialog box, in **Save as type**, type or select **Microsoft Excel Workbook (\*.xls)**, and then click **Save**.

6. In the **Export Wizard**, click **Next** to continue.
7. On the **Export Wizard – Data** page, click **Project Excel Template**, and then click **Finish**. The Project files data are exported to a Microsoft® Office Excel® workbook file. You may wish to open the new workbook file to view the exported project data.

► **Task 2: Create a custom map**

1. In the **Entry** table, click **Select All**.

**Note:** The Select All button is located in the upper left corner of the table.

2. On the **File** menu, click **Save As**.
3. In **Save as type**, select **Microsoft Excel Workbook (\*.xls)**, and then click **Save**. If prompted to overwrite the existing file, click **Yes**.
4. In the **Export Wizard**, click **Next**.
5. On the **Export Wizard – Data** page, click **Selected Data**, and then click **Next**.
6. On the **Export Wizard - Map** page, click **New Map**, and then click **Next**.
7. On the **Export Wizard – Map Options** page, select **Tasks**, and then click **Next**.
8. On the **Export Wizard - Task Mapping** page, in **Destination worksheet name**, type **Deliverables**.
9. In **Export filter**, type or select **Summary Tasks**.
10. In the first cell under **From Microsoft Office Project**, type or select **Name**.
11. In the first cell under **To Excel**, type **Deliverables**, and then click **Next**.
12. Click **Save Map**, and in **Map name**, type **Deliverables**.
13. Click **Save** and then click **Finish**. The selected project files data are mapped to the new field names and exported to the new Excel workbook file. You may wish to open the new workbook file to view the exported project data.

## Exercise 5: Running Visual Reports That Summarize Data by Project, by Resource, by Task, or by Cost

► **Task 1: View a visual report, summarized by project**

1. Continue with **5927A\_Mod10\_Lab.mpp**.
2. On the **Report** menu, click **Visual Reports**.
3. In the **Visual Reports – Create Report** dialog box, on the **All** tab, click **Baseline Work Report**, and then click **View**. Notice that a Microsoft® Office Excel® PivotChart® view of the selected data is created and displayed in Office Excel
4. In **Excel**, on the **Office** menu, click **Exit**. Do not save changes.

► **Task 2: View a visual report, summarized by task**

1. In the **Visual Reports - Create Report** dialog box, on the **All** tab, click **Earned Value Over Time Report**, and then click **View**. A PivotChart view of the selected data is created and displayed in Office Excel.

2. In **Excel**, on the **Office** menu, click **Exit**. Do not save changes.

► **Task 3: View a visual report, summarized by resource**

1. In the **Visual Reports - Create Report** dialog box, on the **All** tab, click **Resource Work Summary Report**, and then click **View**. Notice that a PivotChart view of the selected data is created and displayed in Office Excel.
2. In **Excel**, on the **Office** menu, click **Exit**. Do not save changes.

► **Task 4: View a visual report, summarized by cost**

1. In the **Visual Reports - Create Report** dialog box, on the **All** tab,, click **Budget Cost Report**, and then click **View**. Notice that a PivotChart view of the selected data is created and displayed in Office Excel.
2. In **Excel**, on the **Office** menu, click **Exit**. Do not save changes.
3. In the **Visual Reports - Create Report** dialog box, click **Close**.

## Exercise 6: Developing a New Visual Report Template

► **Task 1: Develop a new visual report template**

1. Continue with **5927A\_Mod10\_Lab.mpp**.
2. On the **Report** menu, click **Visual Reports**, and then click **New Template**.
3. In the **Visual Reports - New Template** dialog box, click **Excel**.
4. In the **Select Data Type** section, type or click **Task Summary**, and then click **OK**. The new Task Summary Report template will open in Excel.
5. In the **PivotTable Field List**, in the **Values** section, click **Budget Cost**, **Cost Variance**, and **Remaining Cost**. These three fields will be added to the Data area in the Microsoft Office Excel PivotTable® on the Worksheet.
6. In the **PivotTable Field List**, in the **Tasks** section, click **Tasks**. The Tasks Row heading is added to the Drop Row Fields Here area in the PivotTable on the Worksheet.
7. In the **PivotTable**, in the **Row** heading on the **Tasks** list, expand **New Product Development Template**, select all six boxes in the next level of the Tasks list, and then click **OK**.
8. In the **PivotTable Tools** group, click **Options**.
9. In the **Options** group, click **PivotChart**, and then click **OK**. The PivotChart and the PivotChart Filter pane appear.
10. Close the **PivotChart Filter** pane.
11. In the **PivotChart**, right-click the outer edge of the **PivotChart**.
12. On the **Shortcut** menu, click **Move Chart**.
13. In the **Move Chart** dialog box, click **New sheet**, and then click **OK**.
14. In the **PivotTable Tools** group, click **Layout**, under **Labels**, click **Chart Title**, and then click **Above Chart**.
15. On the **PivotChart**, click **Chart Title**, and then type **Costs by Deliverables**.

16. Clear the **Chart Title** check box.
17. On the **Office** menu, click **Save**.
18. In the **Save** dialog box, in **File name**, type **Costs by Deliverables**.
19. In **Save as type**, type or select **Excel Template**, and then click **Save**.
20. If prompted to clear the data before saving the template, click **Yes**.
21. On the **Office** menu, click **Exit Excel**.

► **Task 2: View a new visual report template**

1. In the **Visual Reports - Create Report** dialog box, on the **Task Summary** tab, click **Costs by Deliverables** report template, and then click **View**.
2. On the **Office** menu, click **Exit Excel**. Do not save changes.
3. In the **Visual Reports** dialog box, click **Close**.

► **Task 3: Save and close**

1. On the **File** menu, click **Save**.
2. On the **File** menu, click **Close**.

# Module 11

## Managing Multiple Projects

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# Question and Answers

## Lab: Managing Multiple Projects

### Lab Discussion

- Q** How do you display a multiple critical path in a master project?
- A** First you use the Gantt Chart Wizard to format the Gantt Chart view to show critical tasks and a critical path. Then on the Tools menu, in the Options dialog box, on the Calculation tab, under Calculation options, you clear the Inserted projects are calculated like summary tasks check box. This will cause Office Project 2007 to calculate a separate critical path for each subproject.
- Q** What does it mean if no resources display when you open a Sharer project file?
- A** This typically means that the resource pool Project file is not open. Open the resource pool and the resources appear again in the Sharer Project file.

# Lab Answer Keys

## Exercise 1: Inserting Subprojects into a Master Project

### ► Task 1: Create a master project

- On the **File** menu, click **Open**, browse to **D:\MOC 5927A\Lab files**, and then double-click **5927A\_Mod11\_Lab\_Master Project.mpp**.

### ► Task 2: Insert subprojects into a master project

1. In the **Entry** table, click the row heading for the first blank row.
2. On the **Insert** menu, click **Project**.
3. In the **Insert Project** dialog box, browse to **D:\MOC 5927A\Lab files**, click **5927A\_Mod11\_Lab\_Planning.mpp**, and then click **Insert**.
4. In the **Entry** table, click the row heading for the next blank row.
5. On the **Insert** menu, click **Project**.
6. In the **Insert Project** dialog box, browse to **D:\MOC 5927A\Lab files**, and then double-click **5927A\_Mod11\_Lab\_Initiation.mpp**.
7. In the **Entry** table, click the row heading for the next blank row.
8. On the **Insert** menu, click **Project**.
9. In the **Insert Project** dialog box, browse to **D:\MOC 5927A\Lab files**, hold down CTRL and click **5927A\_Mod11\_Lab\_Execution.mpp** and **5927A\_Mod11\_Lab\_RTM.mpp**, and then click **Insert**.
10. On the **Tools** menu, click **Options**.
11. In the **Options** dialog box, on the **View** tab, in the **Outline Options for 'Project'** list, select **Show project summary task**, and then click **OK**.
12. On the **Formatting** toolbar, click **Scroll to Task**. Notice that all of the inserted subprojects are displayed as individual summary tasks.
13. On the **View** menu, click **Resource Sheet**. The Resource Sheet view appears. Notice that there are no resources listed.
14. On the **View** menu, click **Gantt Chart**. The Gantt Chart view reappears.
15. In the **Entry** table, on the row of the last subproject, in **Task Name**, click the **plus sign (+)** in front of **Task Name**. Detailed tasks within the subproject are displayed.
16. On the **View** menu, click **Resource Sheet**. The Resource Sheet view reappears. Notice there are now resources displayed which were added from the expanded subproject.
17. On the **View** menu, click **Gantt Chart**.
18. On the **Standard** toolbar, click **Save**.
19. If prompted to save changes to **5927A\_Mod11\_Lab\_RTM.mpp**, click **Yes**.

## Exercise 2: Creating Links Across Projects and Manage Changes to Linked Tasks

### ► Task 1: Link tasks across subprojects in a master project

1. Continue with **5927A\_Mod11\_Lab\_Master Project.mpp**.
2. On the **Formatting** toolbar, click **Show**.
3. In the **Show** list, click **Outline Level 9**.
4. In the **Entry** table, in the **5927A\_Mod11\_Lab\_Planning.mpp** subproject, click the row heading for **Task ID 11**.
5. In the **5927A\_Mod11\_Lab\_Initiation.mpp** subproject, hold CTRL and click the row heading for **Task ID 1**.
6. On the **Standard** toolbar, click **Link Tasks** .
7. In the **5927A\_Mod11\_Lab\_Initiation.mpp** subproject, click the row heading for **Task ID 24**.
8. In the **5927A\_Mod11\_Lab\_Execution.mpp** subproject, hold down CTRL and click the row heading for **Task ID 2**.
9. On the **Standard** toolbar, click **Link Tasks** .
10. In the **5927A\_Mod11\_Lab\_Execution.mpp subproject**, click the row heading for **Task ID 25**.
11. In the **5927A\_Mod11\_Lab\_RTM.mpp** subproject, hold CTRL and click the row heading for **Task ID 2**.
12. On the **Standard** toolbar, click **Link Tasks** .
13. Repeat the linking process for each of the following task pairs:

Predecessor task in the phase 2 initiation subproject	Successor task in the phase 3 execution subproject
Task ID 24	Task ID 13
Task ID 24	Task ID 15
Task ID 24	Task ID 16
Task ID 24	Task ID 18
Task ID 24	Task ID 20
Task ID 24	Task ID 22
Task ID 24	Task ID 24

14. In the **Entry** table, in the **5927A\_Mod11\_Lab\_RTM.mpp** subproject, click the row heading for **Task ID 6**.
15. On the **Standard** toolbar, click **Task Information** .

16. In the **Task Information** dialog box, on the **Predecessors** tab, click the first cell in the **ID** column, type **D:\MOC 5927A\Lab files \5927A\_Mod11\_Lab\_Execution.mpp\25**, and then press ENTER.
17. Repeat this alternative method of declaring external predecessors, but instead of typing the paths, use cut and paste for each of the following task pairs:

Predecessor Task in the Phase 3 Execution subproject	Successor Task in the Phase 4 Release to Manufacture subproject
Task ID 25	Task ID 8
Task ID 25	Task ID 10

18. Save your changes. If prompted to save changes to **5927A\_Mod11\_Lab\_Master Project.mpp**, click **Yes to All**.

► **Task 2: Modify the linked tasks of subprojects in a master project**

1. In the **Entry** table, in the **5927A\_Mod11\_Lab\_RTM.mpp** subproject, in the row for **Task ID 3**, click the **Predecessors** cell.
2. In the **Edit bar**, at the end of the long pathname, change the **Task ID** from **25** to **30**, and then press ENTER.
3. Apply this change to **Task IDs 7, 9, and 11** in the **5927A\_Mod11\_Lab\_RTM.mpp** subproject, which are linked to the external predecessor Task ID 25.
4. On the **Formatting** toolbar, click **Show**, and in the **Show** list, click **Outline Level 1**.
5. Press CTRL+HOME and on the **Standard** toolbar, select **Save**.
6. In the **Microsoft Office Project** dialog box, click **Yes to All**.
7. On the **File** menu, click **Open**, browse to **D:\MOC 5927A\Lab files**, and then double-click **5927A\_Mod11\_Lab\_Initiation.mpp**.
8. In the **Tools** menu, click **Links Between Projects**.
9. In the **Links Between Projects** dialog box, on the **External Predecessors** tab, in the **Task** column, click **Planning COMPLETE**. The path and filename of the project file containing this task are displayed at the bottom of the dialog box.
10. Record the path and filename in the table provided in the Student Workbook..

Predecessor Task Name	Path and Filename
<b>Planning COMPLETE</b>	D:\MOC 5927A\Lab files\5927A_Mod11_Lab_Planning.mpp

11. On the **External Successors** tab, in the **Task** column, click **Implement change control**. The path and filename of the project file containing this task are displayed at the bottom of the dialog box.
12. Record the path and filename in the table provided in the Student Workbook.

Successor Task Name	Path and Filename
<b>Implement change control</b>	D:\MOC 5927A\Lab files\5927A_Mod11_Lab_Execution.mpp

13. In the **Links Between Projects** dialog box, click **Close**.
14. Save and close all open project files.

### Exercise 3: Displaying the Critical Path in a Master Project

#### ► Task 1: Display a single critical path in a master project

1. Continue with **5927A\_Mod11\_Lab\_Master Project.mpp**.
2. On the **Formatting** toolbar, click **Show**, and in the **Show** list, click **Outline Level 9**.
3. On the **Formatting** toolbar, click **Gantt Chart Wizard** .
4. In the **Gantt Chart Wizard**, click **Next** to continue.
5. On the **Gantt Chart Wizard** page, click **Critical path**, and then click **Next**.
6. Click **Next** twice, click **Format It**, and then click **Exit Wizard**.

#### ► Task 2: Display multiple critical paths in a master project

1. In the **Entry** table, click the **Duration** column heading.
2. On the **Insert** menu, click **Column**.
3. In the **Column Definition** dialog box, in **Field name**, click **Total Slack**, and then click **OK**.
4. On the **Tools** menu, click **Options**.
5. In the **Options** dialog box, on the **Calculation** tab, under **Calculation options for '5927A\_Mod11\_Lab\_Master Project.mpp'**, clear the **Inserted projects are calculated like summary tasks** check box, and then click **OK**.
6. Save and close all open project files.

### Exercise 4: Creating and Sharing a Resource Pool

#### ► Task 1: Create a shared resource pool

1. Continue with **5927A\_Mod11\_Lab\_Master Project.mpp**.
2. On the **View** menu, click **Resource Sheet**.
3. In the **Resource Sheet** table, click **Select All** in the upper left corner of the table.
4. On the **Standard** toolbar, click **Copy Resource**.
5. On the **Standard** toolbar, click **New** .
6. On the **View** menu, click **Resource Sheet**.
7. On the **Standard** toolbar, click **Paste** .
8. On the **File** menu, click **Save As**.
9. In the **Save As** dialog box, in **File name**, type **ResourcePool**, and then click **Save**.

► **Task 2: Utilize a shared resource pool**

1. On the **Tools** menu, point to **Resource Sharing**, and then click **Share Resources**.
2. In the **Share Resources** dialog box, under **Resources for '5927A\_Mod11\_Lab\_Master Project'**, click **Use resources**, and in **From**, select **ResourcePool**, and then click **OK**.
3. On the **View** menu, click **Resource Sheet**.
4. Click the **Resource Name** column heading.
5. On the **Insert** menu, click **Column**.
6. In the **Column Definition** dialog box, in **Field name**, click **Project**, and then click **OK**.
7. Double-click the right edge of the **Project** column heading.
8. Browse to **D:\MOC 5927A\Lab files**, and then open the following subproject files:
  - **5927A\_Mod11\_Lab\_Planning.mpp**
  - **5927A\_Mod11\_Lab\_Initiation.mpp**
  - **5927A\_Mod11\_Lab\_Execution.mpp**
  - **5927A\_Mod11\_Lab\_RTM.mpp**
9. For each of these four subproject files, repeat steps 2 through 6. As with the Master project, make each subproject a sharer file, add the Project (field) column to the Resource Sheet view, and then save each subproject file after making these changes.
10. Save and close all open project files.

## Exercise 5: Reading and Interpreting Resource Usage Across Multiple Projects

► **Task 1: Open multiple project files**

- Browse to **D:\MOC 5927A\Lab files**, and then open the following project files:
  - **ResourcePool.mpp**
  - **5927A\_Mod11\_Lab\_Master Project.mpp**
  - **5927A\_Mod11\_Lab\_Planning.mpp**
  - **5927A\_Mod11\_Lab\_Initiation.mpp**
  - **5927A\_Mod11\_Lab\_Execution.mpp**
  - **5927A\_Mod11\_Lab\_RTM.mpp**

► **Task 2: Display resource usage across multiple projects from a master project**

1. In the **5927A\_Mod11\_Lab\_Master Project.mpp** file, on the **View** menu, click **Resource Usage**.
2. In the **Usage** table, click the **Resource Name** column heading.
3. On the **Insert** menu, click **Column**.
4. In the **Column Definition** dialog box, in **Field name**, click **Project**, and then click **OK**.
5. In the **Usage** table, double-click the right edge of the **Project** column heading.

- In the **Usage** table, double-click the right edge of the **Resource Name** column heading.

► **Task 3: Interpret resource usage across multiple projects from a master project**

- On the **Formatting** toolbar, click **AutoFilter** .
- In the **Project** column heading, click the **AutoFilter** arrow.
- In the **Project** column AutoFilter list, click **5927A\_Mod11\_Lab\_Planning**. The AutoFilter is applied to the Usage table that now shows only the assignments for the 5927A\_Mod11\_Lab\_Planning subproject.
- In the **Project** column heading, click the **AutoFilter** arrow.
- In the **Project** column AutoFilter list, click **(All)**. The AutoFilter is removed from the Usage table that now shows all of the assignments for all of the subprojects.
- In the table provided in the student workbook, record the total number of resource assignment hours for these resources in each phase of the Product Launch Master project listed. Use the AutoFilter in the Project column to filter the view for each phase in the Product Launch Master project.

Subproject	Engineering	Marketing	Sales
5927A_Mod11_Lab_Planning	0.13	24.25	0.5
5927A_Mod11_Lab_Initiation	8.25	40.5	9
5927A_Mod11_Lab_Execution	8	72	8

► **Task 4: Display resource usage across multiple projects from a resource pool**

- In **ResourcePool.mpp**, on the **View** menu, click **Resource Usage**.
- In the **Usage** table, click the **Resource Name** column heading.
- On the **Insert** menu, click **Column**.
- In the **Column Definition** dialog box, in **Field name**, click **Project**, and then click **OK**.
- In the **Usage** table, double-click the right edge of the **Project** column.
- In the **Usage** table, double-click the right edge of the **Resource Name** column heading.

► **Task 5: Interpret resource usage across multiple projects from a resource pool**

- In the **Project** column heading, click the **AutoFilter** arrow.
- In the **Project** column AutoFilter list, click **5927A\_Mod11\_Lab\_Planning**. The AutoFilter is applied to the Usage table that now shows only the assignments for the 5927A\_Mod11\_Lab\_Planning subproject.
- In the **Project** column heading, click the **AutoFilter** arrow.
- In the **Project** column AutoFilter list, click **(All)**. The AutoFilter is removed from the Usage table that now shows all the assignments for all the subprojects.
- In the table provided in your student workbook, record the total number of resource assignment hours for these resources in each phases of the Product Launch Master project

listed. Use the AutoFilter in the Project column to filter the view for each phase in the Product Launch Master project.

Subproject	Engineering	Marketing	Sales
5927A_Mod11_Lab_Initiation	8.25	40.5	9
5927A_Mod11_Lab_Execution	8	72	8
5927A_Mod11_Lab_RTM	0.13	0.25	8.5

6. Save and close all project files.

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# Resources

## **Contents:**

Internet Links

**2**

## Internet Links

The Web sites listed below provide additional resources.

- [Microsoft Corporation](#)
- [Microsoft Developer Network](#)
- [Microsoft Internet Explorer](#)
- [Microsoft Learning](#)
- [Microsoft Product Support Services](#)
- [Microsoft Security](#)
- [Microsoft Visual Studio®](#)
- [Microsoft Windows®](#)

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