Microsoft Project Managment

Tracking Progress on Tasks

introduction

Until now, you have focused on project *planning*—developing and communicating the details of a project plan before actual work begins. When work begins, so does the next phase of project management: *tracking* progress. Tracking means recording project details such as when the work was done, and at what cost. These details are often called *actuals.*

introduction

Tracking actuals is essential to properly managing, as opposed to just planning, a project. The project manager must know how well the project team is performing and when to take corrective action. Properly tracking project performance and comparing it with the original plan allows you to answer such questions as the following:

- Are tasks starting and finishing as planned? If not, what will be the impact on the project's finish date?
- Are *resources* spending more or less time than planned to complete tasks?
- Are higher-than-anticipated task costs driving up the overall cost of the project?

introduction

before you begin tracking progress, you should determine the level of detail you need. The different levels of tracking detail include the following:

- Record project work as scheduled. This level works best if everything in the project occurs exactly as planned.
- Record each task's percentage of completion, as increments such as 25, 50, 75, or 100 percent.
- Record the actual start, actual finish, actual work, and actual and remaining duration for each task or assignment.

Because different portions of a project might have different tracking needs, you might need to apply a combination of these approaches within a single project plan.

Saving a Project Baseline

After developing a project plan, one of a project manager's most important activities is to record actuals and evaluate project performance. To judge project performance properly, it is helpful to compare it with your original plan. This original plan is called the **baseline plan**, or just **the baseline**. A baseline is a collection of important values in a project plan such as the planned start dates, finish dates, and costs of the tasks, resources, and assignments. When you save a baseline, Project takes a "snapshot" of the existing values and saves it in your Project plan for future comparison.

Saving a Project Baseline

Project supports not just 1 but up to 11 baselines in a single plan. The fist one is called Baseline, and the rest are Baseline 1 through Baseline 10. Saving multiple baselines can be useful for projects with especially long planning phases in which you might want to compare different sets of baseline values. For example, you might want to save and compare the baseline plans every month as the planning details change.

Saving a Project Baseline

The specific values saved in a baseline include the task, resource, and assignment fields, as well as the timephased fields.

Task Fields	Resource Fields	Assignment Fields
Start	Work and timephased work	Start
Finish	Cost and timephased cost	Finish
Duration		Work and timephased work
Work and timephased work		Cost and timephased cost

Tip *Timephased* fields show task, resource, and assignment values distributed over time. For example, you can look at a task with five days of work planned at the weekly, daily, or hourly level and see the specific baseline work values per time increment.

Saving a Project Baseline

then follow these steps.

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

Project displays the Save As dialog box.

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

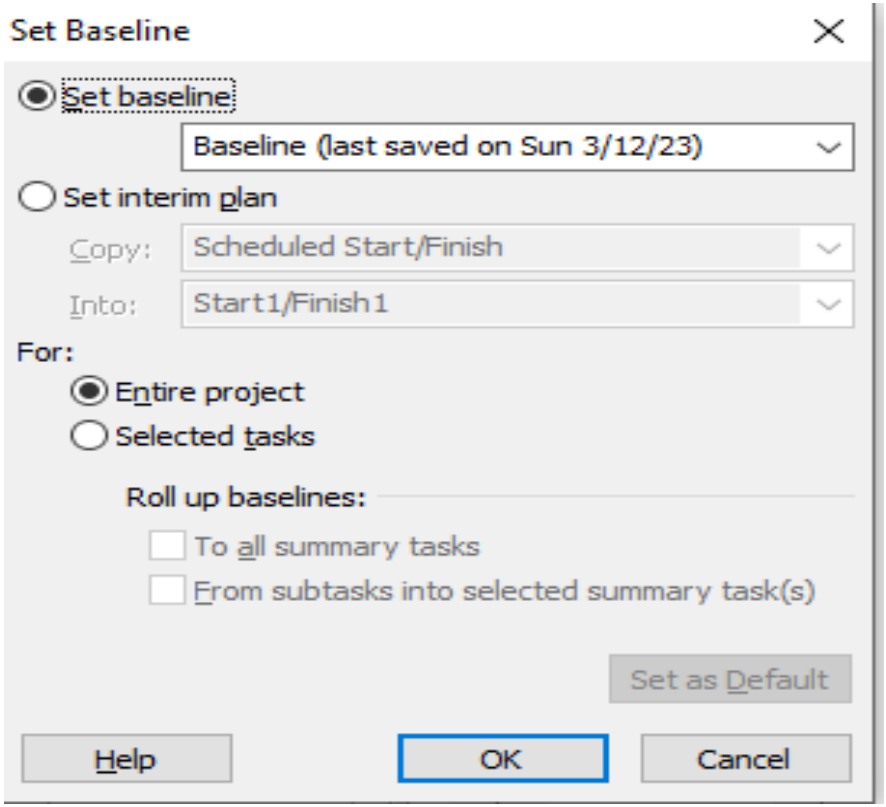
3. On the **Project** tab, in the **Schedule** group, click **Set Baseline**, and then click **SetBaseline**.

The Set Baseline dialog box appears.

4. Click **OK**.

Project saves the baseline, even though there's no indication in the Gantt Chart view that anything has changed. You will now see some of the changes caused by saving the baseline.

Saving a Project Baseline



5. On the View tab, in the Task Views group, click Other Views and then click Task Sheet.

Saving a Project Baseline

The Task Sheet view appears. Now you'll switch to the Variance table in the Task Sheet view. The Variance table is one of several predefined tables that include baseline values.

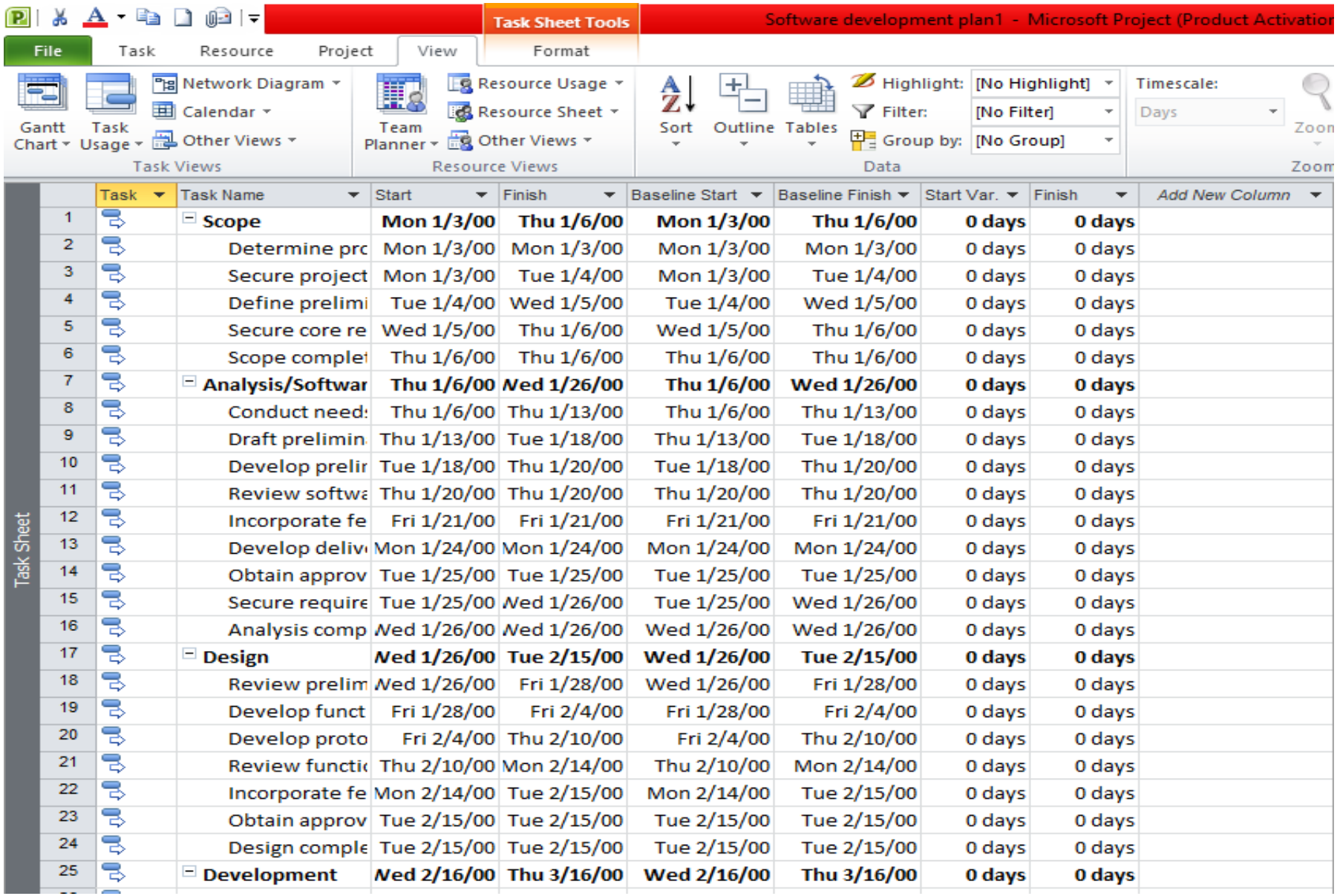
6. On the **View** tab, in the **Data** group, click **Tables**.

In the listed tables, note the check mark next to Entry. This means that the Entry
table is currently displayed in the Task Sheet view.

7. Click **Variance**.

This table includes both the scheduled and baseline start and finish columns, shown side by side for easy comparison.

Saving a Project Baseline



	Task	Task Name	Start	Finish	Baseline Start	Baseline Finish	Start Var.	Finish	Add New Column
1		**Scope**	**Mon 1/3/00**	**Thu 1/6/00**	**Mon 1/3/00**	**Thu 1/6/00**	**0 days**	**0 days**	
2		Determine prc	Mon 1/3/00	Mon 1/3/00	Mon 1/3/00	Mon 1/3/00	0 days	0 days	
3		Secure project	Mon 1/3/00	Tue 1/4/00	Mon 1/3/00	Tue 1/4/00	0 days	0 days	
4		Define prelimi	Tue 1/4/00	Wed 1/5/00	Tue 1/4/00	Wed 1/5/00	0 days	0 days	
5		Secure core re	Wed 1/5/00	Thu 1/6/00	Wed 1/5/00	Thu 1/6/00	0 days	0 days	
6		Scope complet	Thu 1/6/00	Thu 1/6/00	Thu 1/6/00	Thu 1/6/00	0 days	0 days	
7		**Analysis/Softwar**	**Thu 1/6/00**	**Wed 1/26/00**	**Thu 1/6/00**	**Wed 1/26/00**	**0 days**	**0 days**	
8		Conduct needs	Thu 1/6/00	Thu 1/13/00	Thu 1/6/00	Thu 1/13/00	0 days	0 days	
9		Draft prelimin	Thu 1/13/00	Tue 1/18/00	Thu 1/13/00	Tue 1/18/00	0 days	0 days	
10		Develop prelir	Tue 1/18/00	Thu 1/20/00	Tue 1/18/00	Thu 1/20/00	0 days	0 days	
11		Review softwa	Thu 1/20/00	Thu 1/20/00	Thu 1/20/00	Thu 1/20/00	0 days	0 days	
12		Incorporate fe	Fri 1/21/00	Fri 1/21/00	Fri 1/21/00	Fri 1/21/00	0 days	0 days	
13		Develop deliv	Mon 1/24/00	Mon 1/24/00	Mon 1/24/00	Mon 1/24/00	0 days	0 days	
14		Obtain approv	Tue 1/25/00	Tue 1/25/00	Tue 1/25/00	Tue 1/25/00	0 days	0 days	
15		Secure require	Tue 1/25/00	Wed 1/26/00	Tue 1/25/00	Wed 1/26/00	0 days	0 days	
16		Analysis comp	Wed 1/26/00	Wed 1/26/00	Wed 1/26/00	Wed 1/26/00	0 days	0 days	
17		**Design**	**Wed 1/26/00**	**Tue 2/15/00**	**Wed 1/26/00**	**Tue 2/15/00**	**0 days**	**0 days**	
18		Review prelim	Wed 1/26/00	Fri 1/28/00	Wed 1/26/00	Fri 1/28/00	0 days	0 days	
19		Develop funct	Fri 1/28/00	Fri 2/4/00	Fri 1/28/00	Fri 2/4/00	0 days	0 days	
20		Develop proto	Fri 2/4/00	Thu 2/10/00	Fri 2/4/00	Thu 2/10/00	0 days	0 days	
21		Review functi	Thu 2/10/00	Mon 2/14/00	Thu 2/10/00	Mon 2/14/00	0 days	0 days	
22		Incorporate fe	Mon 2/14/00	Tue 2/15/00	Mon 2/14/00	Tue 2/15/00	0 days	0 days	
23		Obtain approv	Tue 2/15/00	Tue 2/15/00	Tue 2/15/00	Tue 2/15/00	0 days	0 days	
24		Design comple	Tue 2/15/00	Tue 2/15/00	Tue 2/15/00	Tue 2/15/00	0 days	0 days	
25		**Development**	**Wed 2/16/00**	**Thu 3/16/00**	**Wed 2/16/00**	**Thu 3/16/00**	**0 days**	**0 days**	

Saving a Project Baseline

Because no actual work has occurred yet and no changes to the scheduled work have been made, the values in the Start and Baseline Start fields are identical, as are the values in the Finish and Baseline Finish fields. After actual work is recorded or later schedule adjustments are made, the scheduled start and finish values might differ from the baseline values. You would then see the differences displayed in the variance columns.

8. On the **View** tab, in the **Task Views** group, click **Gantt Chart**. The Gantt Chart view appears.

Tracking a Project as Scheduled

The simplest approach to tracking progress is to report that the actual work is proceeding exactly as planned. For example, if the fist month of a fie-month project has elapsed and all its tasks have started and finished as scheduled, you can quickly record this in the Update Project dialog box. When you record progress through a specific date, Project calculates actual duration, remaining duration, actual costs, and other values up to the date you entered.

Tracking a Project as Scheduled

In this exercise, you record project actuals by updating work to a specific date.

1. On the **Project** tab, in the **Status** group, click **Update Project**.

The Update Project dialog box appears.

2. Make sure the **Update work as complete through** option is selected. In the adjacent date box, type or select the date for example: **1/11/12**

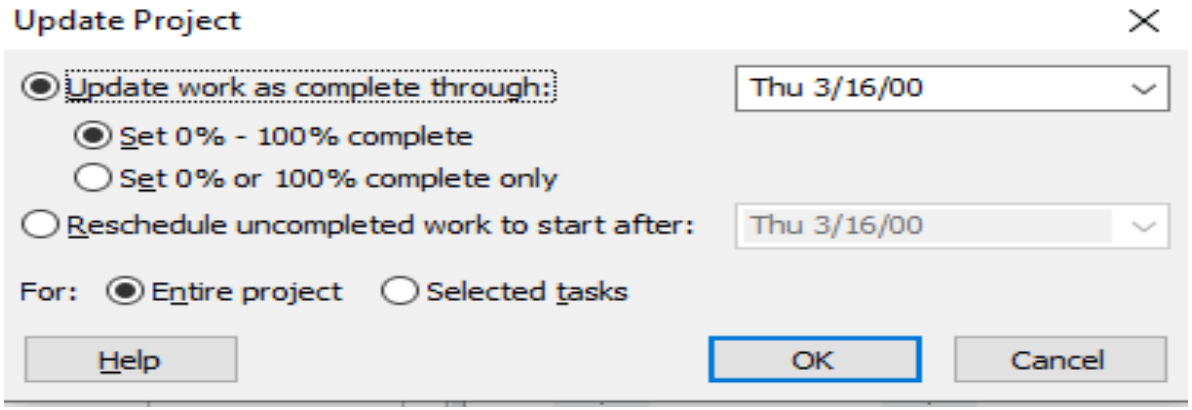
Tracking a Project as Scheduled

In this exercise, you record project actuals by updating work to a specific date.

1. On the **Project** tab, in the **Status** group, click **Update Project**.

The Update Project dialog box appears.

2. Make sure the **Update work as complete through** option is selected. In the adjacent date box, type or select the date for example: **3/16/2000**



Tracking a Project as Scheduled

3. Click **OK**.

Project records the completion percentage for the tasks that were scheduled to start before **3/16/2000**. It displays that progress by drawing *progress bars* in the Gantt bars for those tasks.

Entering a Task's Completion Percentage

After work has begun on a task, you can quickly record its progress as a percentage.

When you enter a completion percentage other than 0, Project changes the task's actual start date to match its scheduled start date.

For example, if you specify that a four-day task is 50 percent complete,

Project calculates that it has had two days of actual duration and has two days of remaining duration.

Entering a Task's Completion Percentage

Here are some ways of entering completion percentages:

- Use the 0%, 25%, 50%, 75%, and 100% Complete buttons in the Schedule group of the Task tab.
- Enter any percentage value you want in the Update Tasks dialog box (to access this dialog box, on the **Task tab**, in the **Schedule group**, click the down arrow to the right of the Mark on Track, and then click Update Tasks).

Entering a Task's Completion Percentage

Tip:

You can also set percent complete by pointing to a Gantt bar (or progress bar within a Gantt bar).

When the mouse pointer changes to a percent symbol and right arrow,
drag the mouse pointer from left to right within the Gantt bar.

As you do so, note the "complete through" date value that appears in a ScreenTip.

Entering Actual Values for Tasks

A more detailed way to keep your schedule up to date is to record what actually happens for each task in your project. You can record each task's actual start, finish, work,
and duration values. When you enter these values, Project uses the following rules:

- When you enter a task's actual start date, Project moves the scheduled start date to match the actual start date.

- When you enter a task's actual finish date, Project moves the scheduled finish date to match the actual finish date and sets the task to 100% complete.

- When you enter a task's actual duration, if it is less than the scheduled duration, Project subtracts the actual duration from the scheduled duration to determine the remaining duration.

Entering Actual Values for Tasks

- When you enter a task's actual duration, if it is equal to the scheduled duration, Project sets the task to 100% complete.
- When you enter a task's actual duration, if it is longer than the scheduled duration, Project adjusts the scheduled duration to match the actual duration and sets the task to 100% complete.

In this exercise, you record actual work values for some tasks as well as start dates and durations for other tasks.

1. On the **View** tab, in the **Data** group, click **Tables** and then click **Work**. The Work table appears.

Setting Task Constraints

Every task that you enter into Project has some type of constraint applied to it. A constraint controls the start or finish date of a task and the degree to which that task can be rescheduled. There are three categories of constraints:

Flexible constraints Project can change the start and finish dates of a task. The default constraint type in Project is that tasks start as soon as possible. This type of flexible constraint is called As Soon As Possible, or ASAP for short. No constraint date is associated with flexible constraints. Project does not display any special indicator in the Indicators column for flexible constraints.

Setting Task Constraints

Inflexible constraints A task must begin or end on a certain date. For example, you can specify that a task must end on November 9, 2012. Inflexible constraints are sometimes called hard constraints. When an inflexible constraint has been applied to a task, Project displays a special indicator in the Indicators column. You can point to a constraint indicator.

Semi-flexible constraints A task has a start or finish date boundary. However, within that boundary, Project has the scheduling flexibility to change the start and finish dates of a task. For example, let's say a task must finish no later than April 15,2023. However, the task could finish before this date. Semi-flexible constraints are sometimes called soft or moderate constraints. When a semi-flexible constraint has been applied to a task, Project displays a special indicator in the Indicators column.

Setting Task Constraints

This constraint category	Includes these constraint types	And means
Flexible	As Soon As Possible (ASAP)	Project will schedule a task to occur as soon as it can occur. This is the default constraint type applied to all new tasks when scheduling from the project start date. There is no constraint date for an ASAP constraint.
	As Late As Possible (ALAP)	Project will schedule a task to occur as late as it can occur. This is the default constraint type applied to all new tasks when scheduling from the project finish date. There is no constraint date for an ALAP constraint.

Setting Task Constraints

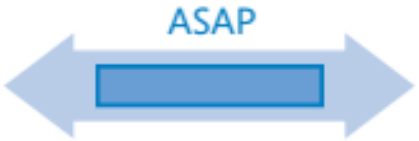
Semi-flexible	Start No Earlier Than (SNET)	Project will schedule a task to start on or after the constraint date that you specify. Use this constraint type to ensure that a task will not start before a specific date.
	Start No Later Than (SNLT)	Project will schedule a task to start on or before the constraint date that you specify. Use this constraint type to ensure that a task will not start after a specific date.
	Finish No Earlier Than (FNET)	Project will schedule a task to finish on or after the constraint date that you specify. Use this constraint type to ensure that a task will not finish before a specific date.
	Finish No Later Than (FNLT)	Project will schedule a task to finish on or before the constraint date that you specify. Use this constraint type to ensure that a task will not finish after a specific date.

Setting Task Constraints

Inflexible	Must Start On (MSO)	Project will schedule a task to start on the constraint date that you specify. Use this constraint type to ensure that a task will start on an exact date.
	Must Finish On (MFO)	Project will schedule a task to finish on the constraint date that you specify. Use this constraint type to ensure that a task will finish on an exact date.

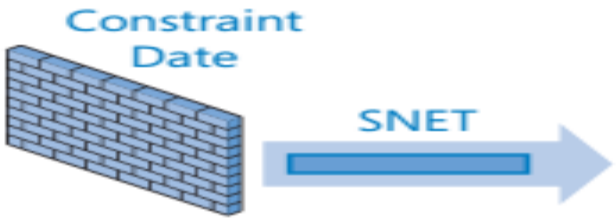
These three constraint categories have very different effects on the scheduling of tasks:

- **Flexible constraints**, such as ASAP, allow tasks to be scheduled without any limitations other than their predecessor and successor relationships, and the project's start date (for ASAP task constraints) or finish date (for ALAP task constraints). No fixed start or end dates are imposed by these constraint types. Use these constraint types whenever possible.



Setting Task Constraints

- **Semi-flexible constraints**, such as Start No Earlier Than or Start No Later Than, limit the rescheduling of a task within the date boundary that you specify.



● **Inflexible constraints**, such as Must Start On, prevent the rescheduling of a task. Use these constraint types only when absolutely necessary.

Note You cannot change the constraint type or set a constraint date for a manually scheduled

Setting Task Constraints

In this exercise, you apply a constraint to a task.

1. Select the name of task.

2. On the **Task** tab, in the **Editing** group, click **Scroll to Task**

The resource that work on this task , informed you that due to his travel schedule, he will be unable to start the task (before April 18—later than currently scheduled.(**Train support staff** 17-21 April)

3. On the **Task** tab, in the **Properties** group, click **Information**.

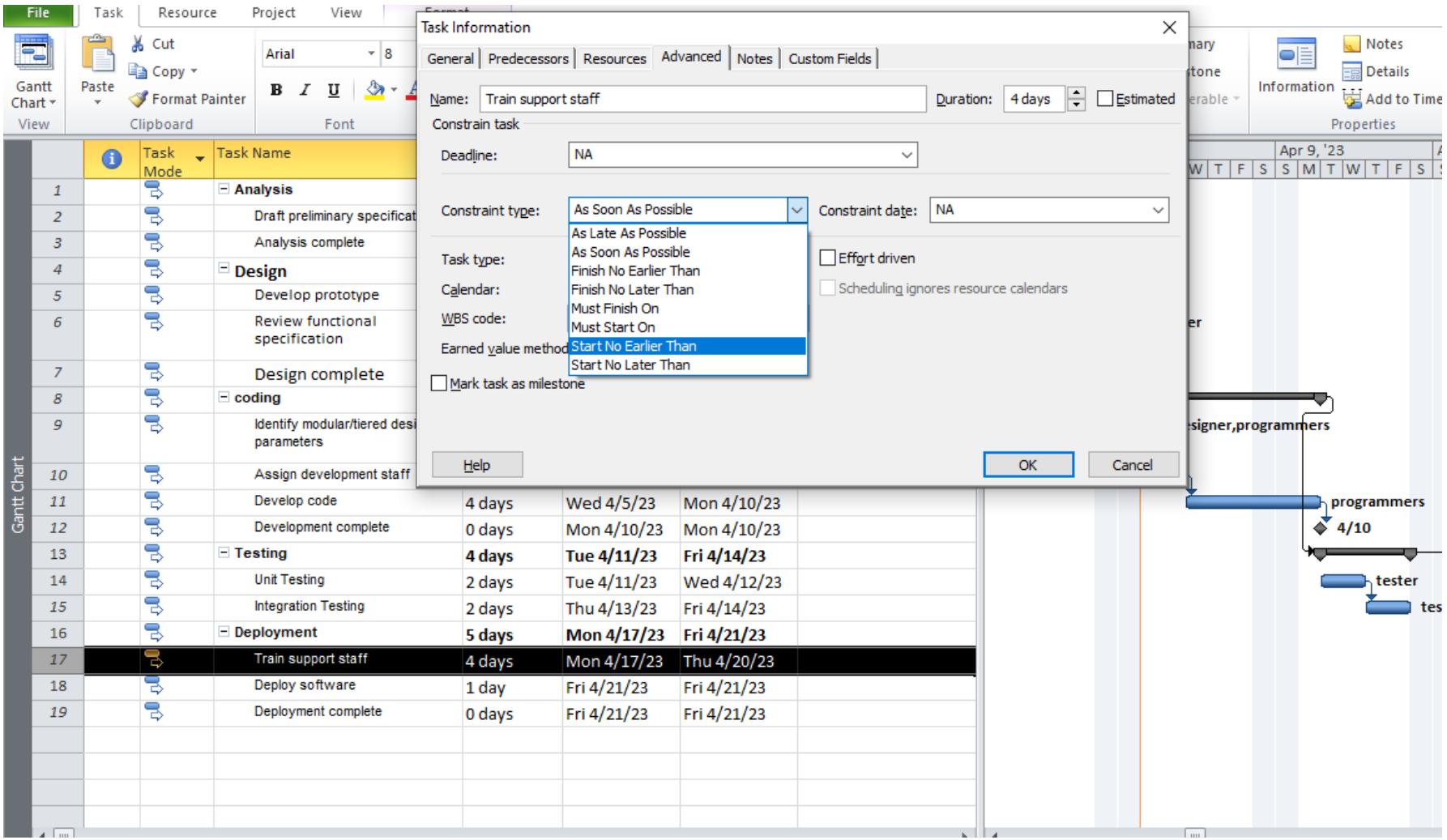
4. In the **Task Information** dialog box, click the **Advanced** tab.

5. In the **Constraint Type** box, select **Start No Earlier Than**.

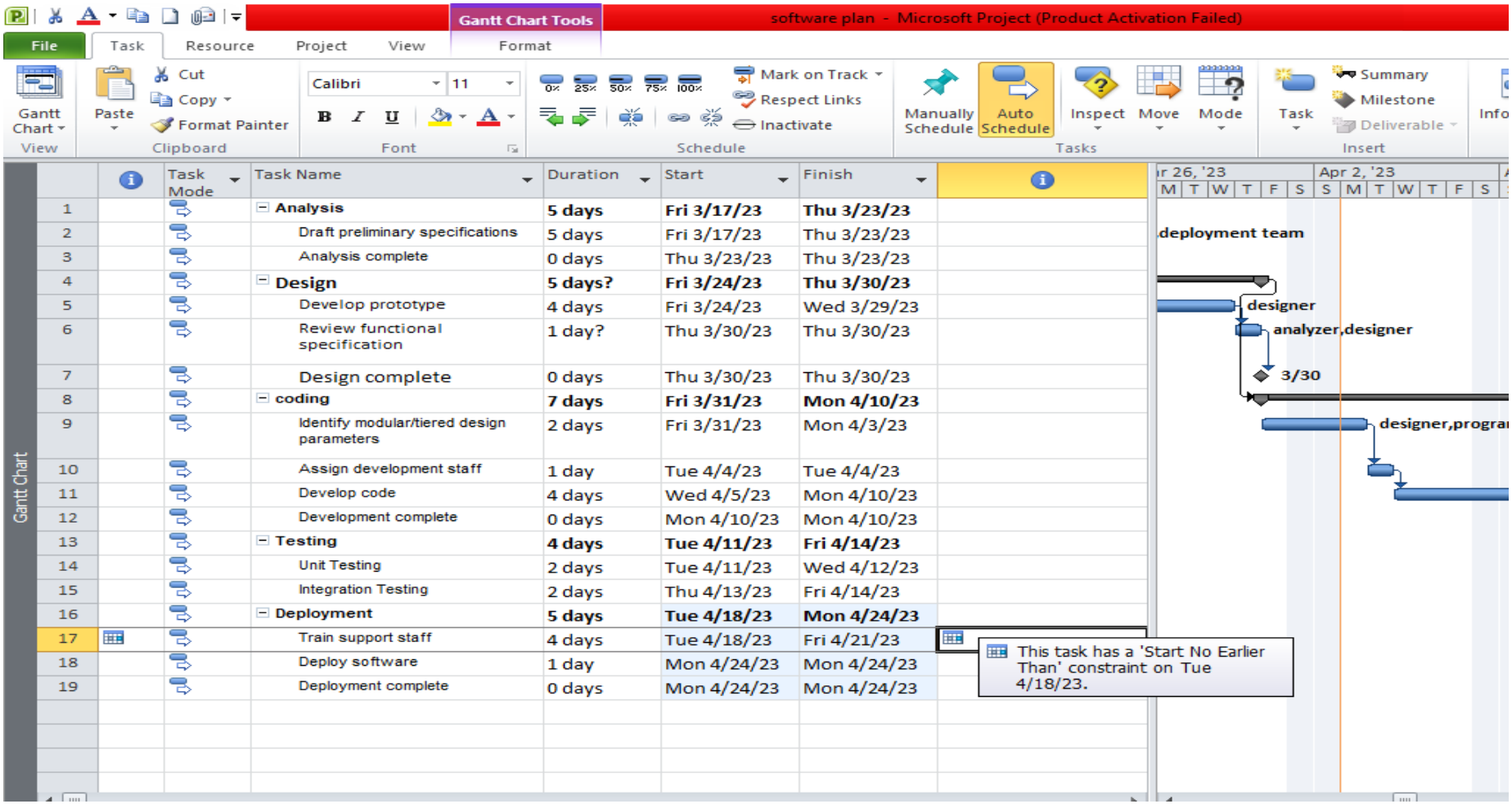
6. In the **Constraint Date** box, type or select **13/4/2023**, and then click **OK**.

Setting Task Constraints

Type 18-4-2023 in constraint date

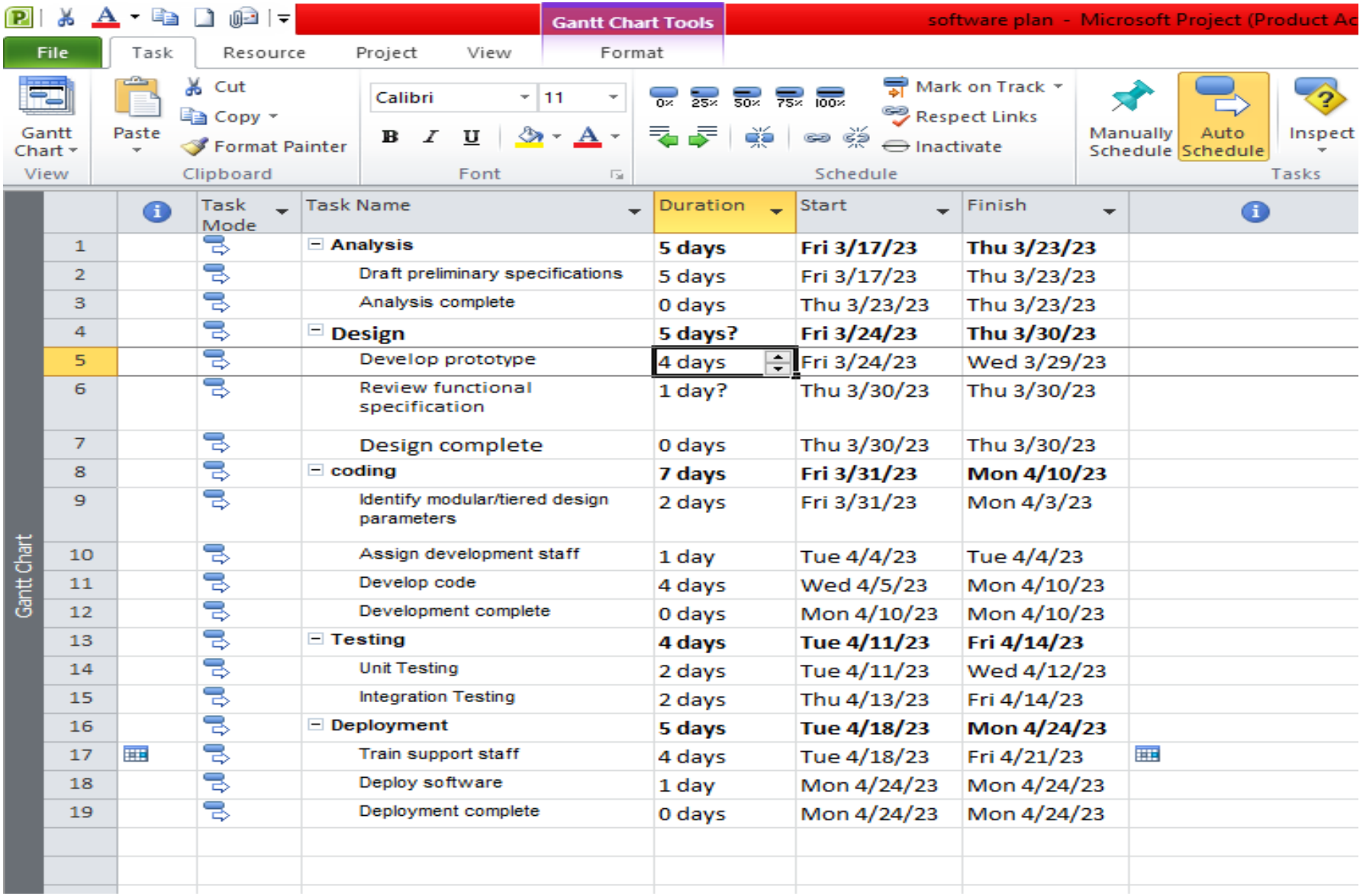


Setting Task Constraints



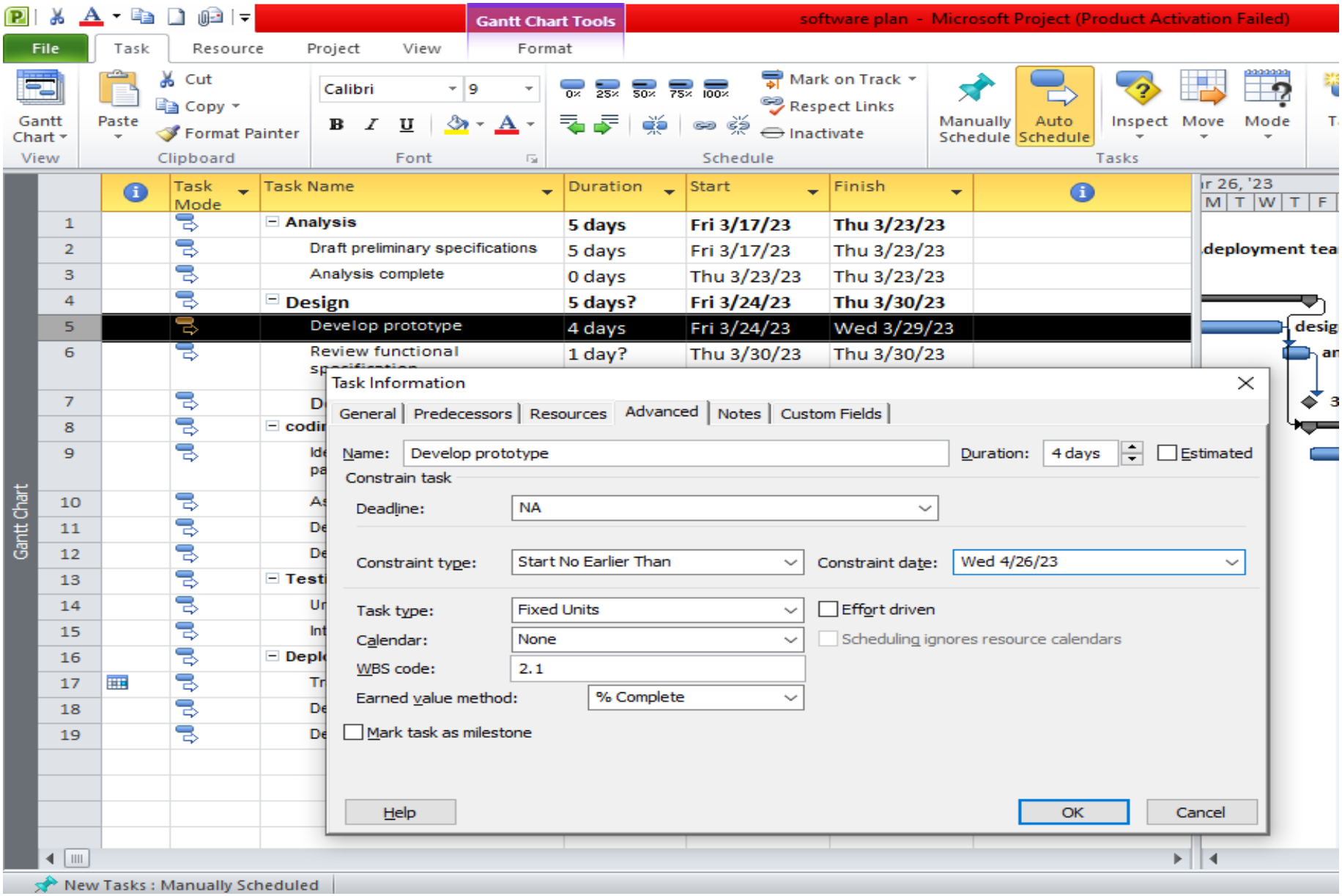
ملاحظة انه تمت اعادة الجدولة لهذه المهمة وللـ summery task التابعة لها، ولو كان هناك مهام تعتمد على هذه المهمة ، فكل المهام سيتم اعادة جدولتها ويظهر عليها تظليل

Setting Task Constraints

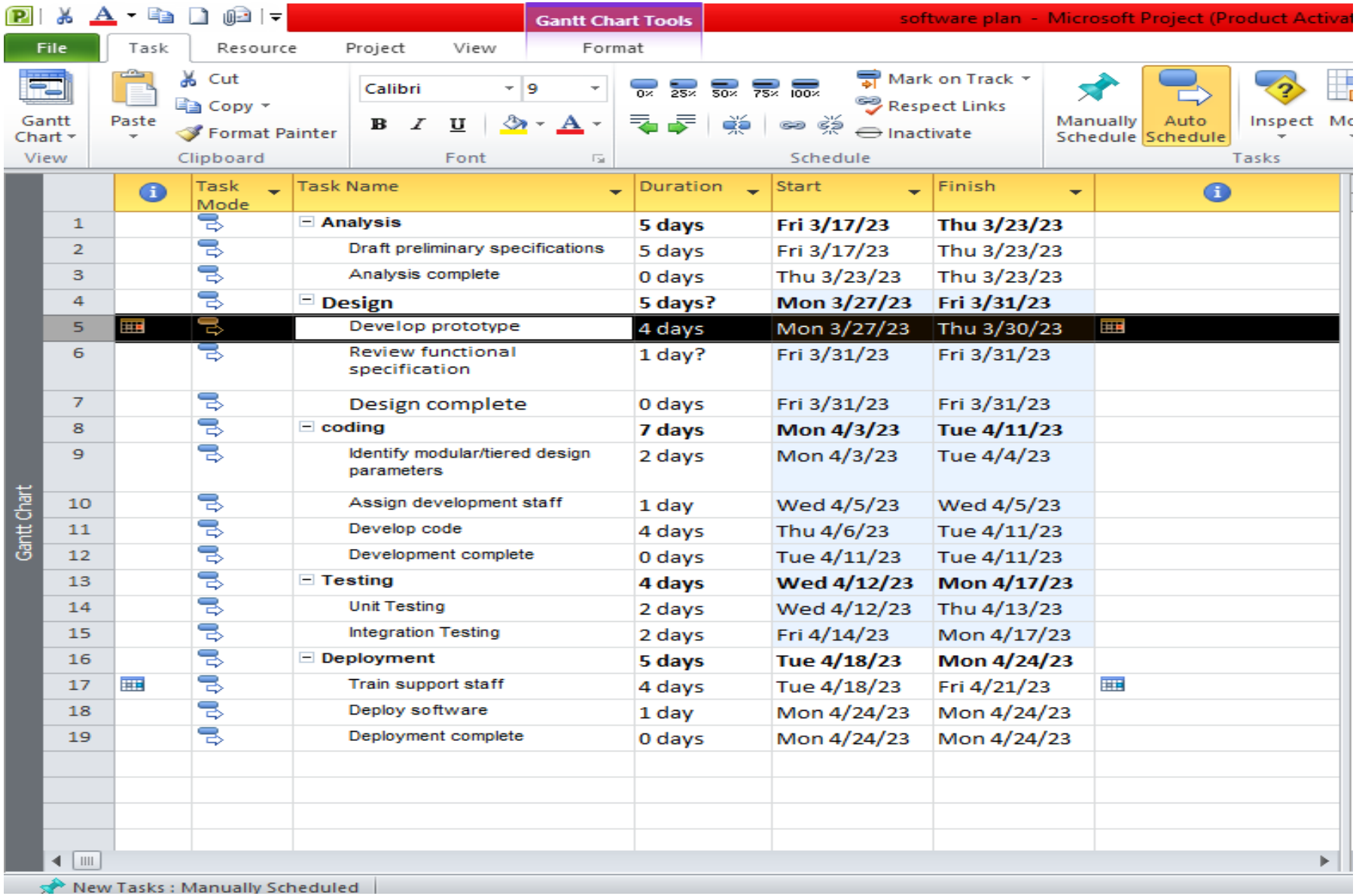


	Task Mode	Task Name	Duration	Start	Finish
1		**Analysis**	**5 days**	**Fri 3/17/23**	**Thu 3/23/23**
2		Draft preliminary specifications	5 days	Fri 3/17/23	Thu 3/23/23
3		Analysis complete	0 days	Thu 3/23/23	Thu 3/23/23
4		**Design**	**5 days?**	**Fri 3/24/23**	**Thu 3/30/23**
5		Develop prototype	4 days	Fri 3/24/23	Wed 3/29/23
6		Review functional specification	1 day?	Thu 3/30/23	Thu 3/30/23
7		Design complete	0 days	Thu 3/30/23	Thu 3/30/23
8		**coding**	**7 days**	**Fri 3/31/23**	**Mon 4/10/23**
9		Identify modular/tiered design parameters	2 days	Fri 3/31/23	Mon 4/3/23
10		Assign development staff	1 day	Tue 4/4/23	Tue 4/4/23
11		Develop code	4 days	Wed 4/5/23	Mon 4/10/23
12		Development complete	0 days	Mon 4/10/23	Mon 4/10/23
13		**Testing**	**4 days**	**Tue 4/11/23**	**Fri 4/14/23**
14		Unit Testing	2 days	Tue 4/11/23	Wed 4/12/23
15		Integration Testing	2 days	Thu 4/13/23	Fri 4/14/23
16		**Deployment**	**5 days**	**Tue 4/18/23**	**Mon 4/24/23**
17		Train support staff	4 days	Tue 4/18/23	Fri 4/21/23
18		Deploy software	1 day	Mon 4/24/23	Mon 4/24/23
19		Deployment complete	0 days	Mon 4/24/23	Mon 4/24/23

Setting Task Constraints



Setting Task Constraints



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1		**Analysis**	**5 days**	**Fri 3/17/23**	**Thu 3/23/23**
2		Draft preliminary specifications	5 days	Fri 3/17/23	Thu 3/23/23
3		Analysis complete	0 days	Thu 3/23/23	Thu 3/23/23
4		**Design**	**5 days?**	**Mon 3/27/23**	**Fri 3/31/23**
5		Develop prototype	4 days	Mon 3/27/23	Thu 3/30/23
6		Review functional specification	1 day?	Fri 3/31/23	Fri 3/31/23
7		Design complete	0 days	Fri 3/31/23	Fri 3/31/23
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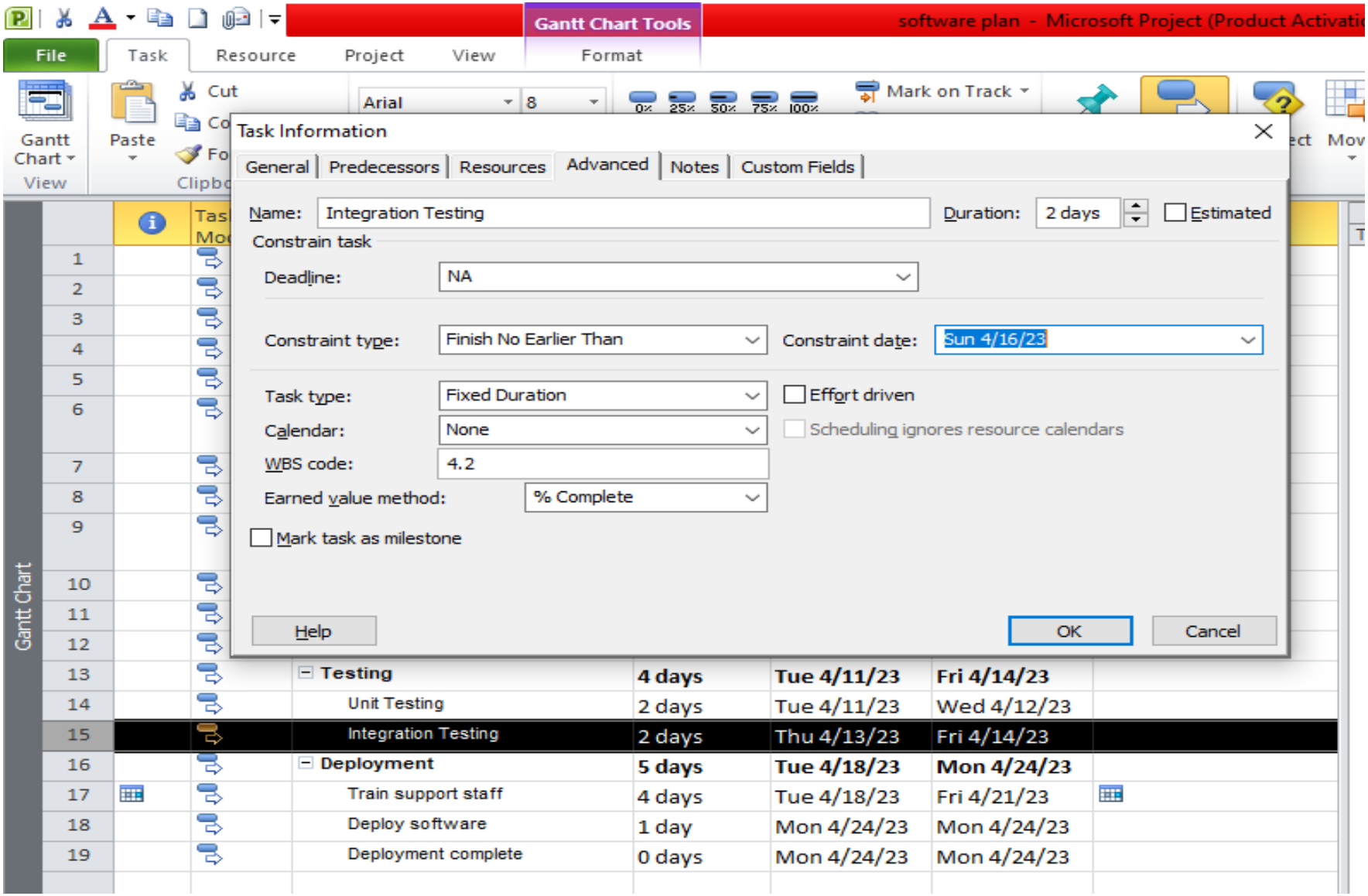
Setting Task Constraints



Setting Task Constraints

Gantt Chart

			Task Name	Duration	Start	Finish	
9			Identify modular/tiered design parameters	2 days	Fri 3/31/23	Mon 4/3/23	
10			Assign development staff	1 day	Tue 4/4/23	Tue 4/4/23	
11			Develop code	4 days	Wed 4/5/23	Mon 4/10/23	
12			Development complete	0 days	Mon 4/10/23	Mon 4/10/23	
13			**Testing**	**4 days**	**Tue 4/11/23**	**Fri 4/14/23**	
14			Unit Testing	2 days	Tue 4/11/23	Wed 4/12/23	
15			Integration Testing	2 days	Thu 4/13/23	Fri 4/14/23	
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19			Deployment complete	0 days	Mon 4/24/23	Mon 4/24/23	

Gantt Cha

			Task Name	Duration	Start	Finish	
10			Assign development staff	1 day	Tue 4/4/23	Tue 4/4/23	
11			Develop code	4 days	Wed 4/5/23	Mon 4/10/23	
12			Development complete	0 days	Mon 4/10/23	Mon 4/10/23	
13			**Testing**	**4 days**	**Tue 4/11/23**	**Sun 4/16/23**	
14			Unit Testing	2 days	Tue 4/11/23	Wed 4/12/23	
15			Integration Testing	2 days	Thu 4/13/23	Sun 4/16/23	
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18			Deploy software	1 day	Mon 4/24/23	Mon 4/24/23	
19			Deployment complete	0 days	Mon 4/24/23	Mon 4/24/23	