

CSCI814 IT Project Management

Weeks 7-8

In-class exercise

This week's lab is about advanced scheduling techniques in MS Project.

1. Visit the following Web sites for a quick tutorial on advanced scheduling.

https://www.tutorialspoint.com/ms_project/ms_project_advanced_scheduling.htm

2. Please refer to Chapters 9 and 10 of the reference book MS Project 2016 Step by Step for details.

Some functions you will use:

- i. To see task relationships by using Task Path., in a Gantt chart view, click a task name. On the Format tab, in the Bar Styles group, click the Task Path button, and then click the options you want.
- ii. To change the type of task relationship between tasks, select a successor task that you want to change. On the task tab, in the Properties group, click the Information button to open the Task information dialog box. Click the predecessors tab, in the Type column for the predecessor task, select the relationship type you want between the tasks, and then click OK.
- iii. To add lead or lag time between linked tasks, select a successor task that you want to add lead or lag time. On the Task tab, in the Properties group, click Information. Click the Predecessors tab and then change the value in the Lag field. Lead values are entered as negative lag values.
- iv. To split a task in multiple segments, select the task you want to split. On the Task tab, click the Split Task button to display a ScreenTip and change the mouse pointer to task –splitting mode. Move the mouse pointer over the Gantt bar of the task until the start of the split you want appears in the ScreenTip. Click and then drag the mouse pointer to the right until the start date that you want for the new segment appears in the ScreenTip. Release the mouse button.
- v. To apply a base calendar to a task, select the name of the task. On the Task tab, click Information button to open the Task Information dialog box. Click the Advanced tab and select the calendar.
- vi. To enter a fixed cost amount and accrual method, on the View tab, in the Task Views group, select any task-centric view that includes a table, such as the Gantt chart, Task sheet, or Task usage view. In the Data group, click Tables and then click Cost. Enter the value in the Fixed cost field and choose the accrual method in the Fixed cost accrual field.
- vii. To display the plan's critical path, on the Format tab, in the Bar styles group, select the Critical Tasks check box.
- viii. To display slack for noncritical tasks, on the Format tab, in the Bar styles group, select the Slack Tasks check box.

3. Search the Internet and find the answers to the following questions.
- What are driving predecessor tasks of a task in MS Project? What are the driven successor tasks of a task in MS Project?
 - What are the four types of tasks dependencies in MS Project and how different dependencies will affect the tasks scheduling?
 - What are the lead time and lag time when two tasks have a finish-to-start relationship and how would they affect the task scheduling?
 - What are the following constraints in MS Project, Flexible constraints, semi-flexible constraints, and inflexible constraints? How do these constraints determine the degree to which an automatically scheduled task can be rescheduled?
 - In what conditions you might consider to split a task into two or more segments?
4. Download and open ViewTaskPath from Moodle and complete the following.
- Apply the Task Path command to task 29. What are the predecessors, the driving predecessors, the successors and the driven successors of the task?

The following two tasks will be marked by Week 8.

5. Download and open ScheduleTasksAdvanced from Moodle and complete the following. **(There is 1 mark for this task)**
- Add lag between task 31 and its predecessor task 30, so that task 31 starts three working days after task 30 finishes.
 - Overlap task 10 with its predecessor task 9, when task 9 is at the 25 percent remaining point of its duration.
 - Change the task relationship between task 14 and its predecessor task 13, to start-to-start (SS).
 - Apply a Start No Earlier Than (SNET) constraint of 20/7/2018 to task 16.
 - Point to the icon in the Indicators column to see the constraint details in a ScreenTip.
 - Split task 3 so that its first segment runs through the end of the day on Friday, April 13, and its second segment begins on Thursday, April 19.
 - Create a new base calendar named Mon-Wed Task Calendar. Set its weekly work settings so that Monday, Tuesday, and Wednesday are normal workdays, but Thursday and Friday (and weekends) are nonworking days.
 - Apply the Mon-Wed task Calendar base calendar to task 29.
 - Point to the calendar icon in the Indicator column to see the task's calendar details in a ScreenTip.
6. Download and open FineTuneTasks from Moodle and complete the following. **(There is 1 mark for this task)**
- Set a deadline date of 1/6/18 on task 5.

- b. Enter a fixed cost of \$500 on task 30. Set the fixed cost to accrue at the end of the task.
- c. Insert a new recurring task named Editorial staff meeting so that it appears above task 1. The recurring task should have a one-hour duration every Monday, starting on April 16, 2018 and ending by July 9, 2018.
- d. Assign the following resources to the summary recurring task:

Carole Poland

Hany Morcos

Jun Cao

- e. Display critical tasks in the plan.

7. Work on the group project if you still have time.