University of Stirling
Computing Science and Mathematics
CSCU9P5 Software Engineering I   **Autumn 2018**

Practical 4

This practical introduces the GanttProject project planning tool. You are encouraged to use this tool for planning/recording your group project activity. **You will need headphones for part of this lab.**

GanttProject is a cross-platform desktop tool for project scheduling and management. It runs on Windows, Linux and MacOSX. It is free, its code is open source and is written in Java. GanttProject is available from `http://www.ganttproject.biz` , and is already installed on the lab PCs.

Launching GanttProject and viewing tutorials

1. To launch GanttProject, click on the **Start** menu, type **GanttProject** into the Windows 7 search box, and then launch the application.

2. GanttProject's **Edit** menu contains a **Settings** option, where you can control various aspects of the functioning of the application. You might find them useful, but no specific changes are required right now.

3. There are many Web resources on Gantt charts in general, but in particular there are two YouTube videos giving tutorials for this specific application:
    - `http://www.youtube.com/watch?v=5rHCSa5ad34` is the "official" tutorial, referenced from the Web site. It is a little slow to begin with, but covers a lot in 15 minutes. The details for creating a project start at about minute 3.
    - `http://www.youtube.com/watch?v=OX-Iz3DxSdw` is shorter, at 7 minutes, with the first minute or so just covering installation and launching.
    Watch the second video now, and perhaps the other one later. We are going to focus on the task scheduling aspects in this practical, so you do not need to give too much attention to the Resource allocation description.

4. Referring back to the video as necessary, create a new Gantt chart project, pick today as the start date, and build a Gantt chart for the following tasks with the given durations and dependencies:

    - Task 1: Duration 8 days; depends on the completion of no other tasks.
    - Task 2: Duration 15 days; depends on the completion of no other tasks.
    - Task 3: Duration 15 days; depends on the completion of task 1.
    - Task 4: Duration 10 days; depends on the completion of no other tasks.
    - Task 5: Duration 10 days; depends on the completion of tasks 2 and 4.
    - Task 6: Duration 5 days; depends on the completion of tasks 1 and 2.
    - Task 7: Duration 20 days; depends on the completion of task 1.
    - Task 8: Duration 25 days; depends on the completion of task 4.
    - Task 9: Duration 15 days; depends on the completion of tasks 3 and 6.
    - Task 10: Duration 15 days; depends on the completion of tasks 5 and 7.
    - Task 11: Duration 7 days; depends on the completion of task 9.
    - Task 12: Duration 10 days; depends on the completion of task 11.

5. Make sure that you **Save** your Gantt project.   PTO

6. GanttProject can find the *critical path* through your project – try that.

7. Save a printable image of your Gantt chart (**Project** menu, **Export**).

8. Convert your Gantt chart into a PERT chart (**View** menu). A PERT chart can give you a more succinct overview of the tasks and dependencies in your project than a Gantt chart.

9. Improvise your own Gantt chart for preparing a simple meal, including resource allocation for the required cooking facilities.

    • Make sure that there are some tasks that cannot be started until one or more others have been completed (for example: toast cannot be buttered until after it has been toasted).

    • Make sure that there are some tasks that can take place simultaneously to other tasks (for example: boiling a kettle and toasting bread).

That's all.