Software Engineering

Project Management

3 Ba INF 2018-2019

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1 Practical

- Deadline: **November 4, 23u55**

- Extra files can be downloaded from Blackboard

2 Context

Project Management is one of the key factors in determine the success or failure of a software project. It is important to be able to make a realistic planning of all tasks that have to be done together with being able to detect risky paths in the process to be able to tackle problems as soon as possible. These exercises will make you familiar with setting up a planning (using PERT charts), dividing your resources (using Gantt charts) and detecting risks in the project.

3 Assignment

3.1 PERT charts

1. Calculate the *earliest start date* and *latest end date* for the following PERT chart. Also indicate the *critical path* and describe the importance of this path.
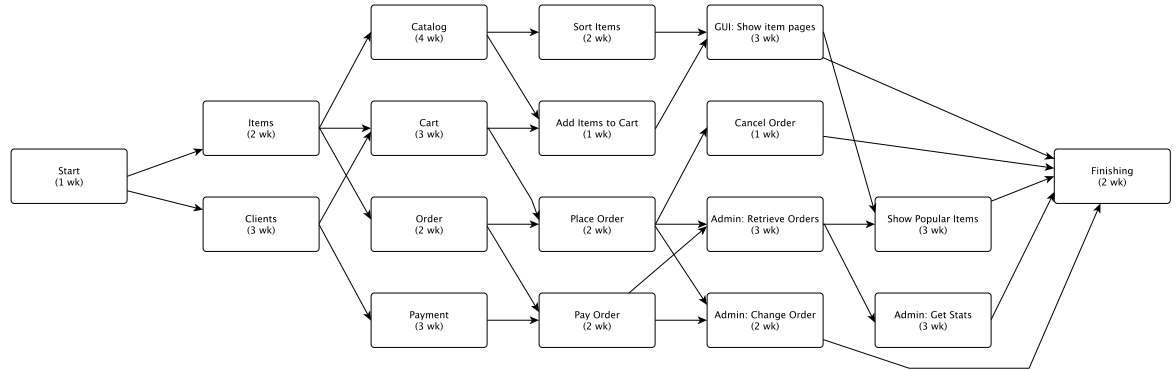
3.2 Gantt charts

1. Use the tasks from the previous exercise to create a Gantt chart (cfr. slide 2.13), you do not have to take slack time into account. Use to provided Excel sheet (gantt.xls) to start from.

2. Allocate the resources in the case of an infinite number of programmers.

3. Allocate the resources in the case that you have 3 junior and 3 senior developers in your team. What is the effect on the duration of the project?

3.3 Risk analysis

1. Create an Excel (or OpenOffice) spreadsheet that calculates the risk for the different paths (cfr slide 2.23). Use the following information:

	OT	LT	PT
Start	1	1	1
Items	1	2	3
Clients	3	3	4
Catalog	3	4	6
Cart	3	3	5
Order	2	2	2
Payment	2	3	5
Sort Items	2	2	2
Add Items to Cart	1	1	2
Place Order	2	2	2
Pay Order	2	2	4
Gui: Show item pages	3	3	4
Cancel Order	1	1	2
Admin: Retrieve Orders	3	3	3
Admin: Change Order	1	2	2
Show Popular Items	2	3	6
Admin: Get Stats	2	3	4
Finishing	2	2	4

3.4   Report

Make sure to add some context on what the different graphs are representing and how they should be used or interpreted. Give enough explanation about the Risk Analysis findings you had.

Read the paper "Construction Process Modeling: Representing Activities, Items and Their Interplay" from Elisa Marengo et al. Explain if this paper can be interesting for Software Engineering. If so, also explain how you could translate the proposed method and how you could use the techniques proposed in the paper. If not, clearly state why this is not possible (difference in complexity, lack of support for a certain aspect of software, . . .).