

## Exercise Business Informatics 2 (PWIN) Winter Term 2019/20

Exercise IV:  
 Management of IT Projects &  
 Software Engineering

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The InstaMatch scenario is required in order to solve some of exercises. It can be found in a separate document.

## Management of IT Projects

### Exercise 1: IT Project Management

Explain what is meant by ‘magic triangle of project management’.

### Exercise 2: IT Project Management

What are the ‘SMART’ project objectives? Explain them at the example of the InstaMatch Service.

### Exercise 3: Network Plan and Gantt Chart

The project manager of a software company wants you to prepare a network plan for an upcoming software development project. His assistant has gathered the activity time estimates and their dependencies shown below.

Activity ID	Activity Description	Duration (days)	Preceding Activities
A	Feasibility Analysis	4	-
B	Requirements Engineering	7	{ A }
C	Documentation	32	{ B }
D	Hardware Procurement	3	{ B }
E	Implementation	40	{ D, F }
F	Architectural Design	5	{ B }
G	Testing	28	{ D, F }
H	Software Delivery	5	{ C, E, G }

- a) Build a network plan according to the following schema and determine the critical path using activity slack calculations. Estimate how long the project will take.

Activity Description		
Earliest start time	Duration	Earliest end time
Latest start time	Slack time	Latest end time

- b) How long can activity “D: Hardware Procurement” be delayed?
- c) Because of some internal problems with the procurement process, the project manager now expects activity D to require 12 days. Rebuild the network plan, highlight the critical path and describe the impact on the project schedule.
- d) The project manager now asks you to develop a Gantt chart based on the updated network plan.
- e) How could you improve the visualisation of Gantt charts?

## Software Engineering

### Exercise 5: Software Development Process Models

Name and describe three software development process models and select one of them for the InstaMatch Service. Motivate your choice.