Software Development Project 1

Welcome to the Software Development Project 1 course!

Agile software development and Scrum

- During this week, we will learn:
  - What is the course about?
  - How is the course assessed?
  - What is the course schedule?
  - What is agile software development?
  - What is software development licecycle?
  - What is Scrum?
  - How software requirements are managed in an agile software development process?

About the course

- So far during the studies we have mostly worked on fairly small applications *by ourselfs*.
- Different kind of problems arise while we work on more complicated applications *in a software development team*.
- These problems aren't *only technical*, the *management* of the software development process can be quite tricky.
- During this course, we will learn how to *manage the software development process* and how to *work as a member of a software development team*.
- We will learn these skills in practice by developing a *software development project* in groups of 4-5 students.

About the course

- Each group will be developing a project described on the course page.
- The project is a web application implemented with *Java* programming language using the *Spring Boot framework*.
- *JavaScript* and *React* is used as a frontend technology.
- The development of the project is split into *three* two-week iterations called *Sprints*.
- Each Sprint has high-level requirements, but groups should make most of the technical decisions themselves.
- The project starts on week three.

Course assesment

- The assessment is based on the *group's project* and the *personal contributions* of a group member.
- The project assessment is based on the following aspects:
  - Technical implementation.
  - Project management.
  - Documentation.
  - Following the schedule.
- Each of the three Sprints is assessed based on the Sprint requirements.
- The group can earn up to 10 points from each Sprint which adds up to the maximum number of 30 points from the project.

Course assesment

- Each group member’s personal assessment is based on the following aspects:
  - Activity in group work.
  - Technical contributions.
  - Project management and documentation contributions.
  - Exercise submissions.
- The personal assessment is done based on the teacher’s observations and peer reviews from the group members.
- Each group member can earn up to 10 points based on their personal efforts towards the project.

Course assesment

- The final grade (1-5) is composed of the project points (maximum of 30 points) and the personal points (maximum of 10 points).
- The following are necessary to pass the course:
  - At least 70% of the first two week's exercises have to be completed before their deadlines to pass the course.
  - Written peer review for each group member.
  - Passing grade from the peer reviews.

Course schedule

- There's weekly sessions during which we will cover different topics.
- Attendance on weekly sessions is *mandatory*.
- During the first two weeks, we will cover topics that are important to grasp before starting to work on the project.
- The group work with the project starts on week three.
- During the group work we will learn about new topics, but most importantly we will learn how to apply our new knowledge in practice.
- Both individual exercises and project exercises have *deadlines*.
- The detailed schedule can be found on the course page.

Agile software development

> *able to move quickly and easily*
>
> – Dictionary definition for the word *agile*

- The word *agile* is often used in many industries to describe the way of working in organizations.
- The word is commonly used in a positive manner, for example, "we are an *agile* organization", or "we work in a *agile* manner".
- In *agile software development*, the development process follows values and principles that have been found to lead to successful software development projects.
- These values and principles have been constituted and written down as the *Manifesto for Agile Software Development* by famous software development pioneers

Agile software development

- One of the key value is the attitude towards *change*.
- For example, there is often need to change the software's requirements during the development process.
- Agile software development process should welcome any kind of change with open arms.
- That is, because *change is inevitable and frequent* in many business environments.
- The Manifesto for Agile Software Development doesn't go into details on how to actually *implement* these values in practice.
- Different Agile software development process frameworks, such as *Scrum* and *SAFe* describe a detailed process that follows these values.

Software development lifecycle

Scrum

Agile requirement specification