Software-Engineering 2

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OVERVIEW

Overview

- Continuation of the lecture Software-Engineering from our Bachelors Course in Computer Science
- 2 parts, each 50%
  - Part Wanner
    - Implementation techniques
    - Model driven development
    - Quality management
    - Large-scale software systems
  - Part Deininger
    - Test
    - Design Patterns
    - (Application performance management)
    - Large scale agile projects
- 50% lectures, 50% work at the computer (exercises).

Topics – Part Wanner

- Implementation techniques
  - Architectural Principles
  - Change- and configuration-management
    - Automated build systems, Continuous integration
- Model Driven Software Development (MDSD)
- Domain Driven Design (DDD)
- Quality management
  - Investigation of software-architectures
- Large-scale software systems
  - Large-scale software systems with Java.

Course Documents

- All documents are available in *Moodle*
  - Script
  - Exercises
  - Solutions
  - Additional documents
  - Software/License codes (partly)

→ *Software Engineering 2*

→ *Password: cleancode*

Software

- All Software used in the exercises is open source or available free for educational use
  - Eclipse Modeling Project, Xtext
  - PMD, Checkstyle
  - Sonargraph
  - ant, Maven, Gradle
  - Jenkins
  - Plant UML, draw.io

➔ It's possible that you download the software and install it on your own machine to do the exercises.

Examination

- Examination, 120 min
  - 50% Deininger, 50% Wanner (120 points overall)
  - Allowed is one double-sided sheet A4 handwritten
  - No books, no lecture notes, no computer, no other printouts
- Covers all mentioned topics
  - See also Moodle→ Old examinations.

Miscellaneous

- Important!
  - Some things in our exercises are really complicated
  - It's not possible to solve all configuration problems in the lab hours
  - Exercises often will be homework
    - It's absolutely necessary that you solve the exercises as one part of your preparation for the examination
- Literature
  - Each lecture (presentation) closes with interesting/recommended literature/weblinks.