

Web Engineering

Winter Semester 2015/2016

Homework #5 (contains 3 exercises – 25 points)

Due on 14.01.2016, 12:00

Please submit your solutions (.pdf) using the repository, in the folder that is provided for your group (ass05).

In Team: <https://ist.uni-koblenz.de/teams/de/user/registration/s84gfhesga> you can click on “Link zum SVN-Repository” (folder icon) in front of your group name to directly go to your own folder in the repository to submit the exercises.

You have to submit your solutions till the mentioned deadline (14.01.2016, 12:00). Submitting the solutions of the exercises and reaching **50% of the total points (which will be 150 points over the course of the semester)** of the exercises are mandatory **to be able to take part in the final exam**.

Bonus System: By reaching 75% of the total points of the exercises, increase your point score by 5% of the total number of points that can be reached in the exam.

By reaching 90% of the total points of the exercises, increase your point score by another 5% of the total number of points that can be reached in the exam.

We will discuss the solutions of this exercise in the exercise group. Each group should present their results at least two times over the course of the semester.

Exercise 1:

- a) Is it possible to consider Model-View-Controller (MVC) as a layered architecture? Why? (3 points)
- b) Which architectural style would be more suitable to develop following web application categories, please explain: (9 points)
 - Social Web Applications
 - Transactional Web Applications
 - Collaborative Web Applications
- c) What do you understand under the terms “high cohesion” and “low coupling”? Why are these terms important for software architectures? Please explain. (3 points)

Exercise 2:

- a) What kind of design pattern (book: Design Patterns: Elements of Reusable Object-Oriented Software) is used in Model-View-Controller? Please explain where and how this pattern is used. (1 point)
- b) Please explain the design pattern that you have found above. For a better explanation, please use relevant UML models of the pattern. (4 points)
- c) What are the advantages of design patterns? Please explain. (2 points)

Exercise 3:

- a) Is there a relation between the technology JSP and the architectural style MVC? Please explain. (3 points)