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Java Enterprise Edition and Design Patterns

Exercise 9 – The Course Manager

For the rest of the JEE exercises you will realize a bigger enterprise application. The system you will plan and develop in groups, will be used to manage students, courses, groups and deliverables. Your system has to fulfill the following tasks:

- Manage student data including pcn, firstname, lastname, email and cohort
- Manage course data including id, name, description, tutor
- Manage group lists of students
- Manage deliverables, e.g. source code and PDFs

There will be two different kinds of clients. First a webclient for students to attend to courses, take part in groups and deliver documents. And second a Java Swing client for the tutor to view and manage the data and work with the deliverables.

In the last lesson you saw an example for doing dependency injection in Enterprise Java Beans using own annotations, life-cycle interceptors and reflection.

- 1) What steps have to be taken in order to implement own dependency injections in tagged fields?
- 2) Download the EJB3 final specification from <http://jcp.org/aboutJava/communityprocess/final/jsr220/index.html>. Read the chapter about Interceptors. Are there any life-cycle interceptors additional to those you heard about in the lesson? If so, why do they make sense?
- 3) Write a standalone client for your CourseManager application. For students, the client must be suitable for uploading deliverables for a student-group, or for an individual. Tutors get a cleverly sorted and arranged list of deliverables and can then choose one or multiple deliverables for storage on the local file system. The client(s) can be either webclients, or console applications, or both. Assume, that courses, students and groups already exist in a database.

Have fun