



INF5750/9750

Introduction

INF5750/9750 - Lecture 1 (Part I)

Lecturers:

- Saptarshi Purkayastha: sunbiz@gmail.com
- Lars Kristian Roland: roland@ifi.uio.no

Lecture 1 - overview

- Course content
- Assignments and group work
- Maven build system
- Revision control system
- Introduction to doing a master in DHIS

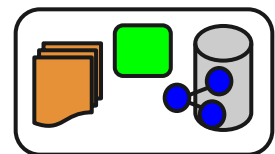
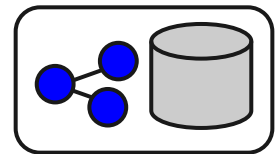
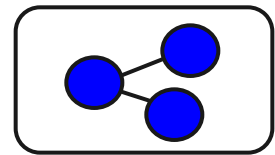
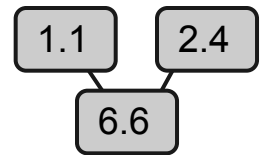
- Prerequisites
 - Thorough general programming
 - Java programming

Course content

- ... develop a software system in a team ...
- ... web-enabled software using common software components such as Spring and Hibernate.
- ... information system architectures...
- basic understanding of HTML5 ...
- basic understanding of mobile app development ...
- ... open source licensing and the consequences...
- be able to participate in developing DHIS2, one of the largest health information systems in the world.

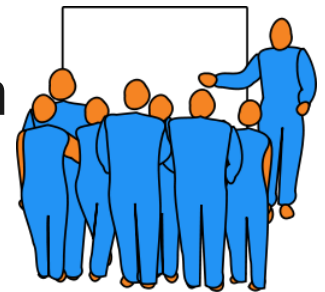
The course in 1 minute

- Bazaar: version control system. Keeps versions/backups and helps you share.
- Maven is a build tool. It helps you organize modules and build them.
- Spring: object framework. Configure objects & how they connect at runtime.
- Hibernate maps your relational database into Java objects, and back.
- Model View Controller separates user interface, controllers and data model.



Approach

- Lectures
 - Saptarshi Purkayastha: sunbiz@gmail.com
 - Lars Kristian Roland: roland@ifi.uio.no
- Lab sessions
 - 3 obligatory assignments (individual)
- Lecture notes are made available online as course progresses
- Considerable amount of self-study



Evaluation

- Individual assignment 1 (Deadline: 13th Sept)
- Individual assignment 2 (Deadline: 4th Oct)
- Individual assignment 3 (Deadline: 18th Oct)

- Group project work
 - 3 milestones and final delivery Dec 7
- Group presentation
 - Early December
- Individual essay
- Pass/fail - all deliverables must be passed

Lab sessions

- Group 1 - Wed 1415-1600 Khiem-Kim Ho Xuan
- Group 2 - Fri 1215-1400 Khiem-Kim Ho Xuan
- Group 3 - Tue 1015-1200 Simen S Russnes
- Group 4 - Wed 1415-1600 Namrata Nehete

Attend lab sessions.

Bring your laptop!



Assignment 1

- Get development environment installed
 - Eclipse, Maven, Launchpad etc.
- Create a simple Eclipse project
- Include Spring components
- Include Hibernate components
- Run it to make sure it works
- Check into revision control
- Tips
 - Use own laptop may be simpler.
 - You need extra space on computer account.
 - The assignment is ahead of the course content!

Assignment 2

- You will get a web based user interface and API model for a student system
- You must implement the database model using Hibernate and and implement test classes
- Prerequisites:
 - Eclipse, Maven etc set up (assignment 1)
 - Need extra space on your university account

Assignment 3

- Scope to be decided
 - Implement a REST based interface
 - Implement a web/mobile client
 -

Group project

- Develop functionality for DHIS2
 - A real-life open source project
- Objective
 - Learn the most common open source components within the open source community and industry
 - Learn to collaborate in teams
 - Learn to develop in teams, sharing code
 - Learn to document
- Several groups will be working on the same project assignment.
- **Contest - Best Group Project [presentation + app + teamwork]**

Essay

The last deliverable will be an individual essay, outlining your efforts during the course, what you have learnt and feedback on improvements etc.

Learning resources

- Online documentation and examples for Spring, Hibernate and Maven are good
- Note that some examples are old and do not use all capabilities that are now possible
- Book: Manning. “Spring in action” (you should read the whole book) <http://www.manning.com/walls5/>
- other ‘... in action’ books.

