Module II.3506

Advanced Web Technologies

Person in charge: Mohamed SELLAMI

Prerequisite: II.2306/II.2406 : WebTechnologies

Organization: Lectures; Practical sessions/project

Evaluation: Continuous assessment (25%) + project (65%) + exam (10%)

ECTS: 5 credits

Context

The globalization of enterprises and their information systems requires the implementation of comprehensive systems and services on complex infrastructures. In this context, a number of platforms provide essential services for the integration and deployment of enterprise applications by following N-tiers architectures. Concepts addressed in this module are part of this problem.

Objectives

This module enables future IS architects and developers to implement distributed N-tiers enterprise applications that manage transactions and ensure data persistence, flexibility, security, and performance.

Skills

In terms of skills, this module aims to enable students to design a complex enterprise application offering safe and standardized operations.

Knowledge

This module enables students to develop the following concepts and skills.

- **Concepts**
  - Enterprise application architecture (JEE, .Net)
  - Software factories and release management
  - Maven
  - JEE
    - Servlets and JSP (Java Server Page)
    - Portlets
    - Application servers

        - JEE Frameworks (Spring, Grails, Spring ROO)
        - Data persistence (Hibernate, TopLink, EclipseLink)
        - Web services (REST and SOAP)
- **Know-How**
    - Use of integrated development environments (IDE) such as Eclipse and Netbeans with plugins
    - Application servers and Web servers (e.g., Tomcat, Glass Fish, and Grizzly)
    - Automation of compilation, execution, testing and deployment of software applications via Maven
    - Application building via tools based on the JEE specification (e.g., Spring)

Pedagogical Approach

Alternating courses and practical work using theoretical concepts. A project will be carried out in teams of 2 or 3 students.