

Web Technologies

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Prerequisite: II.1101 / II1201 Base de données and technologies Web (APP), II.1102 / II.1202 Algorithmique et programmation

Organization: Lectures/practical sessions 25h; project 28 h

Evaluation: Continuous assessment (40%) + project and defense (40%) + examination (20%)

ECTS: 5 credits

Context

Most of current Web applications are developed using Web libraries and frameworks, and aim at being attractive, safe, and reachable from different devices. A new generation of technologies and methodologies allows the development of Web applications and improving their usability. Moreover, the advent of smartphones and tablets “are pushing” us to use novel adapted paradigms and tools. This module focuses on the development of such Web applications both from client-side and server-side.

Objectives

This module aims at presenting the basic concepts related to the development of a Web application using server-side Java technologies and client-side Web standards.

Skills

In terms of skills, this module aims to enable students to:

- Develop a Web application using:
 - Server-side Java technologies, and
 - Client-side Web standards.
- Take advantage of new HTML5 features.
- Build responsive Web sites

Knowledge

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

- **Concepts**
 - Web application (server side)
 - Java Servlet
 - Java Server Pages
 - Java Beans, JDBC
 - Cookies, Sessions
 - MVC
 - Web application (client side)
 - HTML, CSS, JavaScript
 - HTML5, CSS3/4
 - JQuery
 - AJAX
 - JSON
 - Responsive design

- **Know-How**
 - Ability to choose the right language/framework for next generation Web applications
 - Design and realize Web applications accessible from different devices
 - Use a high-level abstraction layer to access any type of database

Pedagogical Approach

Presentation of fundamentals as lectures illustrated with exercises. Implementation in the form of practical work initially, then in the form of a group project.