Course title: System Development (ID013)

Lecturer(s): Mirjana K. Ivanović, Srđan M. Škrbić

Status: elective

ECTS:7

Requirements: none

Learning objectives

The objective is the synthesis and taxonomy of many techniques of (software) systems development. The methodological aspects of development are also covered.

Learning outcome

At the end of the course it is expected from a successful student to be able to:

- critically asses and research key concepts in software system development
- critically asses alternatives in system development, dependant on the requirements
- apply research methods in the field of system development

Syllabus

Theory

Review of research in this field: theoretical bases, elements, software tools - CASE (Computer-aided software engineering) tools and components. Current trends in the research area, for example. Model-Driven Development MDD, aspect-oriented programming, methodologies for developing agent systems. Overview of different development frameworks and platforms, security and testing of software systems. Domain-specific languages. Artifact based system development.

Practice

Recommended literature

1. Len Bass, Rick Kazman, Paul Clements, Software Architecture in Practice, Addison Wesley, second edition.
2. UML 2.1.1, http://www.omg.org/technology/documents/formal/uml.htm
3. OMG Model Driven Architecture, http://www.omg.org/mda
4. Bordini, R.H., Dastani, M., Dix, J., Seghrouchni, A.E.F. (Eds.): Multi-Agent Programming: Languages, Tools and Applications, Springer (2009)

Weekly teaching load	Lectures:2	Student research:0

Teaching methodology

Lectures are organized using classic teaching methods with use of a projector. Students independently explore various research topics, present and discuss results with other students and the lecturer.

Grading method (maximal number of points 100)

Seminar paper 60 points, Oral examination 40 points